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104TH CONGRESS, 1st Session | HOUSE OF REPRESENTATIVES | REPORT 104–233

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AUTHORIZATION ACT, FISCAL YEAR 1996

AUGUST 4, 1995.—Committed to the Committee of the Whole House on the State of the Union and ordered to be printed

Mr. WALKER, from the Committee on Science, submitted the following

R E P O R T

together with

ADDITIONAL AND DISSENTING VIEWS

and

THE TRANSCRIPTS OF THE LEGISLATIVE MARKUPS OF THE SUBCOMMITTEE ON SPACE AND AERONAUTICS AND THE COMMITTEE ON SCIENCE

[To accompany H.R. 2043]

[Including cost estimate of the Congressional Budget Office]

The Committee on Science, to whom was referred the bill (H.R. 2043) to authorize appropriations to the National Aeronautics and Space Administration for human space flight, science, aeronautics, and technology, mission support, and Inspector General, and for other purposes, having considered the same, reports favorably thereon with an amendment and recommends that the bill as amended do pass.

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I. AMENDMENT

The amendment is as follows:

Strike out all after the enacting clause and insert in lieu thereof the following:

SECTION 1. SHORT TITLE.

This Act may be cited as the "National Aeronautics and Space Administration Authorization Act, Fiscal Year 1996".

SEC. 2. FINDINGS.

The Congress makes the following findings:

(1) The National Aeronautics and Space Administration has failed to request sufficient funds to perform all missions it has proposed in annual budget requests. For fiscal year 1996, the budget requested is $140,000,000 below the amount required to fulfill program commitments made by the fiscal year 1995 budget approved by Congress. The request for fiscal year 1996 proposes continued underfunding of the requirements of the National Aeronautics and Space Administration by $439,000,000 for fiscal year 1997, $847,000,000 for fiscal year 1998, $1,189,000,000 for fiscal year 1999, and $1,532,000,000 for fiscal year 2000.

(2) In order to close the gap between projected program requirements and the underfunding requested, the National Aeronautics and Space Administration should aggressively pursue actions and reforms directed at reducing institutional costs, including management restructuring, facility consolidation, procurement reform, personnel base downsizing, and convergence with other defense and private sector systems.

(3) While institutional reforms, restructurings, and downsizing hold the promise of comporting the projected needs of the National Aeronautics and Space Administration with funding levels requested by the Administration, such reforms provide no guarantee against cancellation of missions in the event reform efforts fail to achieve cost reduction targets.

(4) The National Aeronautics and Space Administration must reverse its current trend toward becoming an operational agency, and return to its proud history as the Nation's leader in basic scientific air and space research.

(5) Commercial space activity is in a delicate stage of growth but has the potential to eclipse Federal space activity in its economic return to the Nation if not stifled.

(6) The United States is on the verge of creating and using new technologies in microsatellites, information processing, and space launch that could radically alter the manner in which the Government approaches its space mission.

(7) The overwhelming preponderance of the Federal Government's requirements for routine, nonemergency manned and unmanned space transportation can be most effectively, efficiently, and economically met by a free and competitive market in privately developed and operated launch services.

(8) In formulating a national space transportation service policy, the National Aeronautics and Space Administration should agressively pursue reverse contracting opportunities to support the private sector development of advanced space transportation technologies including reusable space vehicles, single-stage-to-orbit vehicles, and manned space systems.

(9) International cooperation in space exploration and science activities serves the United States national interest—

(A) when it—

(i) reduces the cost of undertaking missions the United States Government would pursue unilaterally;

(ii) enables the United States to pursue missions that it could not otherwise afford to pursue unilaterally; or

(iii) enhances United States capabilities to use and develop space for the benefit of United States citizens; and

(B) when it does not—

(i) otherwise harm or interfere with the ability of United States private sector firms to develop or explore space commercially;

(ii) interfere with the ability of Federal agencies to use space to complete their missions;

(iii) undermine the ability of United States private enterprise to compete favorably with foreign entities in the commercial space arena; or

(iv) transfer sensitive or commercially advantageous technologies or knowledge from the United States to other countries or foreign entities

except as required by those countries or entities to make their contribution to a multilateral space project in partnership with the United States, or on a quid pro quo basis.

(10) The National Aeronautics and Space Administration and the Department of Defense can cooperate more effectively in leveraging their mutual capabilities to conduct joint space missions that improve United States space capabilities and reduce the cost of conducting space missions.

SEC. 3. DEFINITIONS.

For purposes of this Act—

(1) the term "Administrator" means the Administrator of the National Aeronautics and Space Administration; and

(2) the term "institution of higher education" has the meaning given such term in section 1201(a) of the Higher Education Act of 1965 (20 U.S.C. 1141(a)).

TITLE I—AUTHORIZATION OF APPROPRIATIONS

Subtitle A—Authorizations

SEC. 101. HUMAN SPACE FLIGHT.

(a) AUTHORIZATIONS.—There are authorized to be appropriated to the National Aeronautics and Space Administration for fiscal year 1996 for Human Space Flight the following amounts:

(1) For Space Shuttle Operations, $2,341,800,000.

(2) For Space Shuttle Safety and Performance Upgrades, $837,000,000.

(3) For Payload and Utilization Operations, $315,000,000.

(4) For Russian Cooperation, $100,000,000.

(b) CONSTRUCTION OF FACILITIES.—(1) Of the funds authorized to be appropriated under subsection (a)(2), $5,000,000 are authorized for modernization of the Firex System, Pads A and B, Kennedy Space Center.

(2) Of the funds authorized to be appropriated under subsection (a)(2), $7,500,000 are authorized for replacement of the Chemical Analysis Facility, Kennedy Space Center.

(3) Of the funds authorized to be appropriated under subsection (a)(2), $4,900,000 are authorized for replacement of the Space Shuttle Main Engine Processing Facility, Kennedy Space Center.

SEC. 102. SCIENCE, AERONAUTICS, AND TECHNOLOGY.

(a) AUTHORIZATIONS.—There are authorized to be appropriated to the National Aeronautics and Space Administration for fiscal year 1996 for Science, Aeronautics, and Technology the following amounts:

(1) For Space Science, $1,995,400,000, of which—

(A) $1,167,600,000 are authorized for Physics and Astronomy, of which $51,500,000 shall be for the Gravity Probe B, except that no funds are authorized for the Space Infrared Telescope Facility; and

(B) $827,800,000 are authorized for Planetary Exploration, of which $30,000,000 shall be for the New Millennium Spacecraft, including $5,000,000 for the National Aeronautics and Space Administration's participation in Clementine 2 (Air Force Program Element 0603401F Advanced Spacecraft Technology).

(2) For Life and Microgravity Sciences and Applications, $293,200,000.

(3) For Mission to Planet Earth, $1,013,100,000, of which $21,500,000 shall only be for activities described in section 208(b)(7)(A), except that no funds are authorized for the Consortium for International Earth Science Information Network (except as provided in section 107) or the Topex Poseidon Follow-On mission. Funds authorized by this paragraph may not be expended to duplicate private sector or other Federal activities or to procure systems to provide data unless the Administrator certifies to Congress that no private sector or Federal entity can provide suitable data in a timely manner. Notwithstanding any other provision of law, funds in excess of those authorized by this paragraph may not be obligated for Mission to Planet Earth.

(4) For Space Access and Technology, $639,800,000 of which—

(A) $193,000,000 are authorized for Advanced Space Transportation;

(B) $10,000,000 are authorized to be made available for defraying the costs of converting or redesigning commercially inconsistent elements of

former Federal facilities or to take actions required for conformance with Federal laws or regulations relating to commercial space transportation infrastructure, to remain available until expended;

(C) $20,000,000 shall be for continuing the Launch Voucher Demonstration Program authorized under section 504 of the National Aeronautics and Space Administration Authorization Act, Fiscal Year 1993 (15 U.S.C. 5803); and

(D) $33,900,000 are authorized for the Small Spacecraft Technology Initiative, except that funds for such Initiative may not be expended to duplicate private sector activities or to fund any activities that a private sector entity is proposing to carry out for commercial purposes. No funds are authorized under this paragraph for the Partnership for Next Generation Vehicle.

(5) For Aeronautical Research and Technology, $826,900,000, of which—

(A) $354,700,000 are authorized for Research and Technology Base activities;

(B) $245,500,000 are authorized for High Speed Research;

(C) $133,000,000 are authorized for Advanced Subsonic Technology, except that no funds are authorized for concept studies for Advanced Traffic Management and Affordable Design and Manufacturing;

(D) $40,200,000 are authorized for High-Performance Computing and Communications; and

(E) $48,100,000 are authorized for Numerical Aerodynamic Simulation.

(6) For Mission Communication Services, $461,300,000.

(7) For Academic Programs, $102,200,000.

(b) CONSTRUCTION OF FACILITIES.—(1) Of the funds authorized to be appropriated under subsection (a)(3), $17,000,000 are authorized for construction of the Earth Systems Science Building, Goddard Space Flight Center.

(2) Of the funds authorized to be appropriated under subsection (a)(5), $5,400,000 are authorized for modernization of the Unitary Plan Wind Tunnel Complex, Ames Research Center.

(3) Of the funds authorized to be appropriated under subsection (a)(2), $3,000,000 are authorized for the construction of an addition to the Microgravity and Development Laboratory, Marshall Space Flight Center.

SEC. 103. MISSION SUPPORT.

There are authorized to be appropriated to the National Aeronautics and Space Administration for fiscal year 1996 for Mission Support the following amounts:

(1) For Safety, Reliability, and Quality Assurance, $37,600,000.

(2) For Space Communication Services, $319,400,000.

(3) For Construction of Facilities, including land acquisition, $152,600,000, of which—

(A) $6,300,000 shall be for restoration of Flight Systems Research Laboratory, Ames Research Center;

(B) $3,000,000 shall be for restoration of chilled water distribution system, Goddard Space Flight Center;

(C) $4,800,000 shall be for replacing chillers, various buildings, Jet Propulsion Laboratory;

(D) $1,100,000 shall be for rehabilitation of electrical distribution system, White Sands Test Facility, Johnson Space Center;

(E) $4,200,000 shall be for replacement of main substation switchgear and circuit breakers, Johnson Space Center;

(F) $1,800,000 shall be for replacement of 15kV load break switches, Kennedy Space Center;

(G) $9,000,000 shall be for rehabilitation of Central Air Equipment Building, Lewis Research Center;

(H) $4,700,000 shall be for restoration of high pressure air compressor system, Marshall Space Flight Center;

(I) $6,800,000 shall be for restoration of Information and Electronic Systems Laboratory, Marshall Space Flight Center;

(J) $1,400,000 shall be for restoration of canal lock, Stennis Space Center;

(K) $2,500,000 shall be for restoration of primary electrical distribution system, Wallops Flight Facility;

(L) $30,000,000 shall be for repair of facilities at various locations, not in excess of $1,500,000 per project;

(M) $30,000,000 shall be for rehabilitation and modification of facilities at various locations, not in excess of $1,500,000 per project;

(N) $2,000,000 shall be for minor construction of new facilities and additions to existing facilities at various locations, not in excess of $750,000 per project;

(O) $10,000,000 shall be for facility planning and design not otherwise provided for; and

(P) $35,000,000 shall be for environmental compliance and restoration.

(4) For Research and Program Management, including personnel and related costs, travel, and research operations support, $2,094,800,000.

SEC. 104. INSPECTOR GENERAL.

There are authorized to be appropriated to the National Aeronautics and Space Administration for Inspector General, $17,300,000 for fiscal year 1996.

SEC. 105. TOTAL AUTHORIZATION.

Notwithstanding any other provision of this title, the total amount authorized to be appropriated to the National Aeronautics and Space Administration under this Act shall not exceed $11,547,400,000 for fiscal year 1996.

SEC. 106. ADDITIONAL AUTHORIZATION AND CORRESPONDING REDUCTION.

(a) AUTHORIZATION.—In addition to amounts authorized by section 102(a)(3), there are authorized to be appropriated to the National Aeronautics and Space Administration for fiscal year 1996 for Mission to Planet Earth $274,360,000, to be derived from amounts otherwise authorized by this Act.

(b) OPERATING PLAN.—The Administrator shall, within 30 days after the later of—

(1) the date of the enactment of this Act; and

(2) the date of the enactment of the Act making appropriations for the National Aeronautics and Space Administration for fiscal year 1996,

transmit to the Committee on Science of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate an operating plan which identifies which amounts will be transfered purusant to subsection (a).

(c) LIMITATION ON OBLIGATION AND EXPENDITURE.—None of the funds authorized by subsection (a) shall be available for obligation or expenditure until—

(1) the National Academy of Sciences has conducted a comprehensive review of the Mission to Planet Earth program as part of its study of the United States Global Change Research Program;

(2) the Administrator has reported to the Committee on Science of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate a plan for implementing the study's recommendations and a formal request for all or part of such funds; and

(3) 90 legislative days have passed after the report is transmitted under paragraph (2).

SEC. 107. LIMITED AVAILABILITY.

Nothing in this Act shall interfere with the rights of any parties under contracts. Nothing in this Act shall preclude the Consortium for International Earth Science Information Network from receiving a contract awarded following a full and open competition.

Subtitle B—Restructuring the National Aeronautics and Space Administration

SEC. 111. FINDINGS.

The Congress finds that—

(1) the restructuring of the National Aeronautics and Space Administration is essential to accomplishing the space missions of the United States while simultaneously balancing the Federal budget;

(2) to restructure the National Aeronautics and Space Administration rapidly without reducing mission content and safety requires objective financial judgment;

(3) no effort has been undertaken by the National Aeronautics and Space Administration to perform a formal economic review of its missions and the Federal assets that support them;

(4) therefore it is premature and unwarranted to attempt closing any National Aeronautics and Space Administration field center until an asset-based review of United States space missions and capabilities to support them is performed; and

(5) cost savings from the closing of National Aeronautics and Space Administration field centers are speculative and potentially injurious to mission goals, unless derived from an asset-based analysis.

SEC. 112. ASSET-BASED REVIEW.

(a) REQUEST FOR PROPOSALS.—Not later than 30 days after the date of the enactment of this Act, the Administrator shall publish in the Commerce Business Daily a request for proposals to perform a National Aeronautics and Space Administration asset-based review.

(b) QUALIFIED PROPOSALS.—Qualified proposals to perform the asset-based review under this section shall be from United States persons whose primary business is corporate financial strategy, investment banking, accounting, or asset management. All proposals shall, at a minimum, propose to review, for each capital asset owned by the National Aeronautics and Space Administration—

(1) its primary function or purpose in relationship to a program, mission, or activity of the National Aeronautics and Space Administration;

(2) the existence of other capital assets which duplicate or overlap with such function or purpose;

(3) the Federal and non-Federal users thereof; and

(4) its necessity to carry out a program, mission, or activity of the National Aeronautics and Space Administration.

(c) REPORT.—The contractor selected to perform the asset-based review under this section shall complete such review and transmit to the Administrator and the Congress, no later than July 31, 1996, a report containing, at a minimum—

(1) for each National Aeronautics and Space Administration field center facility—

(A) a list of capital assets that should be permanently retired or disposed of;

(B) a list of capital assets that may be transferred to non-Federal institutions and corporations, if the transfer of such asset is cost effective; and

(C) a list of capital assets essential to the conduct of National Aeronautics and Space Administration programs, missions, or activities, and a justification for retaining the asset;

(2) for each National Aeronautics and Space Administration program element—

(A) a list of capital assets essential to the conduct of the program element; and

(B) a plan for achieving the most cost-effective consolidation and efficient use of necessary capital assets to support such program element, including the use of non-Federal assets where appropriate; and

(3) for each National Aeronautics and Space Administration capital asset—

(A) the total annual cost of maintaining and operating such capital asset, including Federal employee and contractor costs;

(B) the depreciated cost, replacement cost, and salvage value; and

(C) the most cost-effective strategy for maintaining, replacing, upgrading, or disposing of the capital asset, as appropriate.

(d) IMPLEMENTATION.—The Administrator shall consider the results of the asset-based review conducted under this section, and based on the Administrator's recommendations, the President shall propose to Congress legislation required to implement those recommendations no later than September 30, 1996.

(e) CLOSING OF FIELD CENTERS.—The Administrator shall not close any National Aeronautics and Space Administration field center until after the asset-based review report is transmitted under subsection (c), and may only close field centers that would become obsolete as a result of the implementation of the Administrator's recommendations, and may do so only after enactment of legislation implementing those recommendations.

Subtitle C—Limitations and Special Authority

SEC. 121. USE OF FUNDS FOR CONSTRUCTION.

(a) AUTHORIZED USES.—Funds appropriated under sections 101(a), 102(a), and 103 (1) and (2), and funds appropriated for research operations support under section 103(4), may be used for the construction of new facilities and additions to, repair of, rehabilitation of, or modification of existing facilities at any location in support of the purposes for which such funds are authorized.

(b) LIMITATION.—None of the funds used pursuant to subsection (a) may be expended for a project, the estimated cost of which to the National Aeronautics and

Space Administration, including collateral equipment, exceeds $500,000, until 30 days have passed after the Administrator has notified the Committee on Science of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate of the nature, location, and estimated cost to the National Aeronautics and Space Administration of such project.

(c) TITLE TO FACILITIES.—If funds are used pursuant to subsection (a) for grants to institutions of higher education, or to nonprofit organizations whose primary purpose is the conduct of scientific research, for purchase or construction of additional research facilities, title to such facilities shall be vested in the United States unless the Administrator determines that the national program of aeronautical and space activities will best be served by vesting title in the grantee institution or organization. Each such grant shall be made under such conditions as the Administrator shall determine to be required to ensure that the United States will receive therefrom benefits adequate to justify the making of that grant.

SEC. 122. AVAILABILITY OF APPROPRIATED AMOUNTS.

To the extent provided in appropriations Acts, appropriations authorized under subtitle A may remain available without fiscal year limitation.

SEC. 123. REPROGRAMMING FOR CONSTRUCTION OF FACILITIES.

(a) IN GENERAL.—Appropriations authorized under any paragraph of section 101(b), 102(b), or 103(3)—

(1) may be varied upward by 10 percent in the discretion of the Administrator; or

(2) may be varied upward by 25 percent, to meet unusual cost variations, after the expiration of 15 days following a report on the circumstances of such action by the Administrator to the Committee on Science of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate.

The aggregate amount authorized to be appropriated under sections 101(b), 102(b) and 103(3) shall not be increased as a result of actions authorized under paragraphs (1) and (2) of this subsection.

(b) SPECIAL RULE.—Where the Administrator determines that new developments in the national program of aeronautical and space activities have occurred; and that such developments require the use of additional funds for the purposes of construction, expansion, or modification of facilities at any location; and that deferral of such action until the enactment of the next National Aeronautics and Space Administration Authorization Act would be inconsistent with the interest of the Nation in aeronautical and space activities, the Administrator may use up to $10,000,000 of the amounts authorized under section 101(b), 102(b), or 103(3) for each fiscal year for such purposes. No such funds may be obligated until a period of 30 days has passed after the Administrator has transmitted to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science of the House of Representatives a written report describing the nature of the construction, its costs, and the reasons therefor.

SEC. 124. CONSIDERATION BY COMMITTEES.

Notwithstanding any other provision of law—

(1) no amount appropriated to the National Aeronautics and Space Administration may be used for any program for which the President's annual budget request included a request for funding, but for which the Congress denied or did not provide funding;

(2) no amount appropriated to the National Aeronautics and Space Administration may be used for any program in excess of the amount actually authorized for the particular program by subtitle A; and

(3) no amount appropriated to the National Aeronautics and Space Administration may be used for any program which has not been presented to the Congress in the President's annual budget request or the supporting and ancillary documents thereto,

unless a period of 30 days has passed after the receipt by the Committee on Science of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate of notice given by the Administrator containing a full and complete statement of the action proposed to be taken and the facts and circumstances relied upon in support of such proposed action. The National Aeronautics and Space Administration shall keep the Committee on Science of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate fully and currently informed with respect to all activities and responsibilities within the jurisdiction of those committees. Except as otherwise provided by law, any Federal department, agency, or independent establishment shall furnish

any information requested by either committee relating to any such activity or responsibility.

SEC. 125. LIMITATION ON OBLIGATION OF UNAUTHORIZED APPROPRIATIONS.

(a) REPORTS TO CONGRESS.—Not later than 30 days after the later of the date of enactment of an Act making appropriations to the National Aeronautics and Space Administration for fiscal year 1996 and the date of enactment of this Act, the Administrator shall submit a report to Congress and to the Comptroller General which specifies—

(1) the portion of such appropriations which are for programs, projects, or activities not authorized under subtitle A of this title, or which are in excess of amounts authorized for the relevant program, project, or activity under this Act; and

(2) the portion of such appropriations which are authorized under this Act.

(b) FEDERAL REGISTER NOTICE.—The Administrator shall, coincident with the submission of the report required by subsection (a), publish in the Federal Register a notice of all programs, projects, or activities for which funds are appropriated but which were not authorized under this Act, and solicit public comment thereon regarding the impact of such programs, projects, or activities on the conduct and effectiveness of the national aeronautics and space program.

(c) LIMITATION.—Notwithstanding any other provision of law, no funds may be obligated for any programs, projects, or activities of the National Aeronautics and Space Administration for fiscal year 1996 not authorized under this Act until 30 days have passed after the close of the public comment period contained in the notice required in subsection (b).

SEC. 126. USE OF FUNDS FOR SCIENTIFIC CONSULTATIONS OR EXTRAORDINARY EXPENSES.

Not more than $30,000 of the funds appropriated under section 102 may be used for scientific consultations or extraordinary expenses, upon the authority of the Administrator.

SEC. 127. LIMITATION ON TRANSFERS TO RUSSIA.

(a) LIMITATION.—No funds authorized to be appropriated to the National Aeronautics and Space Administration for fiscal year 1996 may be paid or otherwise transferred to Russia unless—

(1) the payment or transfer is authorized by this Act;

(2) the payment or transfer is made in exchange for goods or services that have been provided to the National Aeronautics and Space Administration in accordance with a written agreement between the National Aeronautics and Space Administration and Russia;

(3) the Government of the Russian Federation agrees to provide a monthly report to the National Aeronautics and Space Administration during the term of such written agreement, that fully accounts for the disposition of the funds paid or transferred, including information with respect to the preceding month on—

(A) the amount of the funds received, and the date of receipt;

(B) the amount of the funds converted from United States currency, the currency into which the funds have been converted, and the date and rate of conversion;

(C) the amount of non-United States currency, and of United States currency, that is disbursed to any contractor or subcontractor, the identity of such contractor or subcontractor, and the date of disbursement; and

(D) the balance of the funds not disbursed as of the date of the report;

(4) Russia has provided all monthly reports with respect to which an agreement was made pursuant to paragraph (3); and

(5) the President, before such payment or transfer and annually upon submission of the President's budget request for fiscal years after fiscal year 1996, has certified to the Congress that—

(A) the presence of any troops of the Russian Federation or the Commonwealth of Independent States; and

(B) any action by the Russian Federation or the Commonwealth of Independent States,

in Estonia, Latvia, Lithuania, or any other independent state of the former Soviet Union do not violate the sovereignty of those independent states.

(b) DEFINITION.—For purposes of this section, the term "Russia" means the Government of the Russian Federation, the Russian Space Agency, or any agency or instrumentality of the Government of the Russian Federation or the Russian Space Agency.

TITLE II—MISCELLANEOUS PROVISIONS

SEC. 201. COMMERCIAL SPACE LAUNCH AMENDMENTS.

(a) AMENDMENTS.—Chapter 701 of title 49, United States Code, is amended—

(1) in the table of sections—

(A) by amending the item relating to section 70104 to read as follows:

"70104. Restrictions on launches, operations, and reentries.";

(B) by amending the item relating to section 70108 to read as follows:

"70108. Prohibition, suspension, and end of launches, operation of launch sites and reentry sites, and reentries.";

and

(C) by amending the item relating to section 70109 to read as follows:

"70109. Preemption of scheduled launches or reentries.";

(2) in section 70101—

(A) by inserting "microgravity research," after "information services," in subsection (a)(3);

(B) by inserting ", reentry," after "launching" both places it appears in subsection (a)(4);

(C) by inserting ", reentry vehicles," after "launch vehicles" in subsection (a)(5);

(D) by inserting "and reentry services" after "launch services" in subsection (a)(6);

(E) by inserting ", reentries," after "launches" both places it appears in subsection (a)(7);

(F) by inserting ", reentry sites," after "launch sites" in subsection (a)(8);

(G) by inserting "and reentry services" after "launch services" in subsection (a)(8);

(H) by inserting "reentry sites," after "launch sites," in subsection (a)(9);

(I) by inserting "and reentry site" after "launch site" in subsection (a)(9);

(J) by inserting ", reentry vehicles," after "launch vehicles" in subsection (b)(2);

(K) by striking "launch" in subsection (b)(2)(A);

(L) by inserting "and reentry" after "commercial launch" in subsection (b)(3);

(M) by striking "launch" after "and transfer commercial" in subsection (b)(3); and

(N) by inserting "and development of reentry sites," after "launch-site support facilities," in subsection (b)(4);

(3) in section 70102—

(A) by inserting "from Earth" after "and any payload" in paragraph (3);

(B) by redesignating paragraphs (10) through (12) as paragraphs (14) through (16), respectively;

(C) by inserting after paragraph (9) the following new paragraphs:

"(10) 'reenter' and 'reentry' mean to return or attempt to return, purposefully, a reentry vehicle and its payload, if any, from Earth orbit, from exo-atmospheric flight, or from outer space to Earth.

"(11) 'reentry services' means—

"(A) activities involved in the preparation of a reentry vehicle and its payload, if any, for reentry; and

"(B) the conduct of a reentry.

"(12) 'reentry site' means the location on Earth to which a reentry vehicle is intended to return (as defined in a license the Secretary issues or transfers under this chapter).

"(13) 'reentry vehicle' means a vehicle designed to return from Earth orbit or outer space to Earth, or a reusable launch vehicle designed to return from outer space or exo-atmospheric flight to Earth, substantially intact."; and

(D) by inserting "or reentry services" after "launch services" each place it appears in paragraph (15), as so redesignated by subparagraph (B) of this paragraph;

(4) in section 70103(b)—

(A) by inserting "AND REENTRIES" after "LAUNCHES" in the subsection heading;

(B) by inserting "and reentries" after "space launches" in paragraph (1); and

(C) by inserting "and reentry" after "space launch" in paragraph (2);

(5) in section 70104—

(A) by amending the section designation and heading to read as follows:

"§ 70104. Restrictions on launches, operations, and reentries";

(B) by inserting "or reentry site, or reenter a reentry vehicle," after "operate a launch site" each place it appears in subsection (a);

(C) by inserting "or reentry" after "launch or operation" in subsection (a)(3) and (4);

(D) in subsection (b)—

(i) by striking "launch license" and inserting in lieu thereof "license";

(ii) by inserting "or reenter" after "may launch"; and

(iii) by inserting "or reentering" after "related to launching"; and

(E) in subsection (c)—

(i) by amending the subsection heading to read as follows: "PREVENTING LAUNCHES AND REENTRIES.—";

(ii) by inserting "or reentry" after "prevent the launch"; and

(iii) by inserting "or reentry" after "decides the launch";

(6) in section 70105—

(A) by inserting "or reentry site, or reentry of a reentry vehicle," after "operation of a launch site" in subsection (b)(1); and

(B) by striking "or operation" and inserting in lieu thereof ", operation, or reentry" in subsection (b)(2)(A);

(7) in section 70106(a)—

(A) by inserting "or reentry site" after "observer at a launch site"; and

(B) by inserting "or reentry vehicle" after "assemble a launch vehicle";

(8) in section 70108—

(A) by amending the section designation and heading to read as follows:

"§ 70108. Prohibition, suspension, and end of launches, operation of launch sites and reentry sites, and reentries"*;*

and

(B) in subsection (a)—

(i) by inserting "or reentry site, or reentry of a reentry vehicle," after "operation of a launch site"; and

(ii) by inserting "or reentry" after "launch or operation";

(9) in section 70109—

(A) by amending the section designation and heading to read as follows:

"§ 70109. Preemption of scheduled launches or reentries"*;*

(B) in subsection (a)—

(i) by inserting "or reentry" after "ensure that a launch";

(ii) by inserting ", reentry site," after "United States Government launch site";

(iii) by inserting "or reentry date commitment" after "launch date commitment";

(iv) by inserting "or reentry" after "obtained for a launch";

(v) by inserting ", reentry site," after "access to a launch site";

(vi) by inserting ", or services related to a reentry," after "amount for launch services"; and

(vii) by inserting "or reentry" after "the scheduled launch"; and

(C) in subsection (c), by inserting "or reentry" after "prompt launching";

(10) in section 70110—

(A) by inserting "or reentry" after "prevent the launch" in subsection (a)(2); and

(B) by inserting "or reentry site, or reentry of a reentry vehicle," after "operation of a launch site" in subsection (a)(3)(B);

(11) in section 70111—

(A) by inserting "and reentry services" after "launch services" in subsection (a)(1)(B);

(B) by inserting "or reentry services" after "or launch services" in subsection (a)(2);

(C) by inserting "or reentry" after "commercial launch" both places it appears in subsection (b)(1);

(D) by inserting "or reentry services" after "launch services" in subsection (b)(2)(C);

(E) by striking "or its payload for launch" in subsection (d) and inserting in lieu thereof "or reentry vehicle, or the payload of either, for launch or reentry"; and

(F) by inserting ", reentry vehicle," after "manufacturer of the launch vehicle" in subsection (d);

(12) in section 70112—

(A) by inserting "or reentry" after "one launch" in subsection (a)(3);

(B) by inserting "or reentry services" after "launch services" in subsection (a)(4);

(C) by inserting "or reentry services" after "launch services" each place it appears in subsection (b);

(D) by striking ", Space, and Technology" in subsection (d)(1);

(E) by inserting "OR REENTRIES" after "LAUNCHES" in the heading for subsection (e); and

(F) by inserting "or reentry site or a reentry" after "launch site" in subsection (e);

(13) in section 70113(a)(1) and (d)(1) and (2), by inserting "or reentry" after "one launch" each place it appears;

(14) in section 70115(b)(1)(D)(i)—

(A) by inserting "reentry site," after "launch site,"; and

(B) by inserting "or reentry vehicle" after "launch vehicle" both places it appears;

(15) in section 70117—

(A) by inserting "or reentry site or reenter a reentry vehicle" after "operate a launch site" in subsection (a);

(B) by inserting "or reentry" after "approval of a space launch" in subsection (d);

(C) by amending subsection (f) to read as follows:

"(f) LAUNCH NOT AN EXPORT; REENTRY NOT AN IMPORT.—A launch vehicle, reentry vehicle, or payload that is launched or reentered is not, because of the launch or reentry, an export or import, respectively, for purposes of a law controlling exports or imports."; and

(D) in subsection (g)—

(i) by striking "operation of a launch vehicle or launch site," in paragraph (1) and inserting in lieu thereof "reentry, operation of a launch vehicle or reentry vehicle, or operation of a launch site or reentry site,";

(ii) by striking "or" at the end of paragraph (1);

(iii) by inserting "reentry," after "launch," in paragraph (2);

(iv) by striking the period at the end of paragraph (2) and inserting in lieu thereof "; or"; and

(v) by adding at the end the following new paragraph:

"(3) any amateur and similar small rocket activities, as defined by the Secretary by regulation.";

(16) in section 70119, by inserting the following after paragraph (2):

"There are authorized to be appropriated to the Secretary of Transportation $6,000,000 to carry out this chapter for fiscal year 1996. None of the funds authorized by this section may be expended for policy development or analysis activities not directly related to the Secretary's regulatory responsibilities under this chapter.".

(b) ADDITIONAL AMENDMENTS.—(1) Section 70105 of title 49, United States Code, is amended—

(A) by inserting "(1)" before "A person may apply" in subsection (a);

(B) by striking "receiving an application" both places it appears in subsection (a) and inserting in lieu thereof "accepting an application in accordance with criteria established pursuant to subsection (b)(2)(D)";

(C) by adding at the end of subsection (a) the following new paragraph:

"(2) In carrying out paragraph (1), the Secretary may establish procedures for certification of the safety of a launch vehicle, reentry vehicle, or safety system, procedure, service, or personnel that may be used in conducting licensed commercial space launch or reentry activities.";

(D) by striking "and" at the end of subsection (b)(2)(B);

(E) by striking the period at the end of subsection (b)(2)(C) and inserting in lieu thereof "; and";

(F) by adding at the end of subsection (b)(2) the following new subparagraph:

"(D) regulations establishing criteria for accepting or rejecting an application for a license under this chapter within 60 days after receipt of such application."; and

(G) by inserting ", or the requirement to obtain a license," after "waive a requirement" in subsection (b)(3).

(2) The amendment made by paragraph (1)(B) shall take effect upon the effective date of final regulations issued pursuant to section 70105(b)(2)(D) of title 49, United States Code, as added by paragraph (1)(F) of this subsection.

(3) Section 70102(5) of title 49, United States Code, is amended—

(A) by redesignating subparagraphs (A) and (B) as subparagraphs (B) and (C), respectively; and

(B) by inserting before subparagraph (B), as so redesignated by subparagraph (A) of this paragraph, the following new subparagraph:

"(A) activities directly related to the preparation of a launch site or payload facility for one or more launches;".

(4) Section 70103(b) of title 49, United States Code, is amended—

(A) in the subsection heading, as amended by subsection (a)(4)(A) of this section, by inserting "AND STATE SPONSORED SPACEPORTS" after "AND REENTRIES"; and

(B) in paragraph (1), by inserting "and State sponsored spaceports" after "private sector".

(5) Section 70105(a)(1) of title 49, United States Code, as amended by subsection (b)(1) of this section, is amended by inserting at the end the following: "The Secretary shall submit to the Committee on Science of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate a written notice not later than 7 days after any occurrence when a license is not issued within the deadline established by this subsection.".

(6) Section 70111 of title 49, United States Code, is amended—

(A) in subsection (a)(1), by inserting after subparagraph (B) the following: "The Secretary shall establish criteria and procedures for determining the priority of competing requests from the private sector and State governments for property and services under this section.";

(B) by striking "actual costs" in subsection (b)(1) and inserting in lieu thereof "additive costs only"; and

(C) by inserting after subsection (b)(2) the following new paragraph:

"(3) The Secretary shall ensure the establishment of uniform guidelines for, and consistent implementation of, this section by all Federal agencies.".

(7) Section 70112 of title 49, United States Code, is amended—

(A) in subsection (a)(1), by inserting "launch, reentry, or site operator" after "(1) When a";

(B) in subsection (b)(1), by inserting "launch, reentry, or site operator" after "(1) A"; and

(C) in subsection (f), by inserting "launch, reentry, or site operator" after "carried out under a".

SEC. 202. OFFICE OF AIR AND SPACE COMMERCIALIZATION AUTHORIZATION.

There are authorized to be appropriated to the Secretary of Commerce for the activities of the Office of Air and Space Commercialization, $457,000 for fiscal year 1996.

SEC. 203. REQUIREMENT FOR INDEPENDENT COST ANALYSIS.

The Chief Financial Officer for the National Aeronautics and Space Administration shall be responsible for conducting independent cost analyses of all new projects estimated to cost more than $5,000,000 and shall report the results annually to Congress at the time of the submission of the President's budget request. In developing cost accounting and reporting standards for carrying out this section, the Chief Financial Officer shall, to the extent practicable and consistent with other laws, solicit the advice of expertise outside of the National Aeronautics and Space Administration.

SEC. 204. NATIONAL AERONAUTICS AND SPACE ACT OF 1958 AMENDMENTS.

(a) DECLARATION OF POLICY AND PURPOSE.—Section 102 of the National Aeronautics and Space Act of 1958 (42 U.S.C. 2451) is amended—

(1) by striking subsection (e) and redesignating subsections (f) through (h) as subsections (e) through (g), respectively; and

(2) in subsection (g), as so redesignated by paragraph (1) of this subsection, by striking "(f), and (g)" and inserting in lieu thereof "and (f)".

(b) REPORTS TO THE CONGRESS.—Section 206(a) of the National Aeronautics and Space Act of 1958 (42 U.S.C. 2476(a)) is amended—

(1) by striking "January" and inserting in lieu thereof "May"; and

(2) by striking "calendar" and inserting in lieu thereof "fiscal".

(c) DISCLOSURE OF TECHNICAL DATA.—Section 303 of the National Aeronautics and Space Act of 1958 (42 U.S.C. 2454) is amended—

(1) in subsection (a)(C), by inserting "or (c)" after "subsection (b)"; and

(2) by adding at the end the following new subsection:

"(c)(1) The Administration may delay for a period not to exceed 5 years the unrestricted public disclosure of technical data in the possession of, or under the control of, the Administration that has been generated in the performance of experimental, developmental, or research activities or programs funded jointly by the Administration and the private sector.

"(2) Within 1 year after the date of the enactment of the National Aeronautics and Space Administration Authorization Act, Fiscal Year 1996, the Administrator shall issue regulations to carry out this subsection. Paragraph (1) shall not take effect until such regulations are issued.

"(3) Regulations issued pursuant to paragraph (2) shall include—

"(A) guidelines for a determination of whether data is technical data within the meaning of this subsection;

"(B) a requirement that a determination described in subparagraph (A) that particular data is technical data shall be reported to the Committee on Science of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate;

"(C) provisions to ensure that technical data is available for dissemination within the United States to United States persons and entities in furtherance of the objective of maintaining leadership or competitiveness in civil and governmental aeronautical and space activities by the United States industrial base; and

"(D) a specification of the period or periods for which the delay in unrestricted public disclosure of technical data is to apply to various categories of such data, and the restrictions on disclosure of such data during such period or periods, including a requirement that the maximum 5-year protection under this subsection shall not be provided unless at least 50 percent of the funding for the activities or programs is provided by the private sector.

"(4) Along with the initial publication of proposed regulations under paragraph (2), the Administrator shall include a list of those experimental, developmental, or research activities or programs conducted by, or funded in whole or in part by, the Administration that may result in products or processes of significant value in maintaining leadership or competitiveness in civil and governmental aeronautical and space activities by the United States industrial base. Such list shall be updated biannually.

"(5) For purposes of this subsection, the term 'technical data' means any recorded information, including computer software, that is or may be directly applicable to the design, engineering, development, production, manufacture, or operation of products or processes that may have significant value in maintaining leadership or competitiveness in civil and governmental aeronautical and space activities by the United States industrial base.".

SEC. 205. PROCUREMENT.

(a) PROCUREMENT DEMONSTRATION PROGRAM.—

(1) IN GENERAL.—The Administrator shall establish within the Office of Space Access and Technology a program of expedited technology procurement for the purpose of demonstrating how innovative technology concepts can rapidly be brought to bear upon space missions of the National Aeronautics and Space Administration.

(2) PROCEDURES AND EVALUATION.—The Administrator shall establish procedures for actively seeking from persons outside the National Aeronautics and Space Administration innovative technology concepts relating to the provision of space hardware, technology, or services to the National Aeronautics and Space Administration, and for the evaluation of such concepts by the National Aeronautics and Space Administration's Advisory Council against mission requirements.

(3) REQUIREMENT.—At least 1 percent of amounts authorized to be appropriated under section 102(a)(4) shall be used for innovative technology procurements that are determined under paragraph (2) of this subsection to meet mission requirements.

(4) SPECIAL AUTHORITY.—In order to carry out this subsection the Administrator shall recruit and hire for limited term appointments persons from outside the National Aeronautics and Space Administration with special expertise and experience related to the innovative technology concepts with respect to which procurements are made under this subsection.

(5) SUNSET.—This subsection shall cease to be effective 10 years after the date of its enactment.

(b) TECHNOLOGY PROCUREMENT INITIATIVE.—

(1) IN GENERAL.—The Administrator shall coordinate National Aeronautics and Space Administration resources in the areas of procurement, commercial programs, and advanced technology in order to—

(A) fairly assess and procure commercially available technology from the marketplace in the most efficient manner practicable;

(B) achieve a continuous pattern of integrating advanced technology from the commercial sector, and from Federal sources outside the National Aeronautics and Space Administration, into the missions and programs of the National Aeronautics and Space Administration;

(C) incorporate private sector buying and bidding procedures, including fixed price contracts, into procurements; and

(D) provide incentives for cost-plus contractors of the National Aeronautics and Space Administration to integrate commercially available technology in subsystem contracts on a fixed-price basis.

(2) CERTIFICATION.—Upon solicitation of any procurement for space hardware, technology, or services that are not commercially available, the Administrator shall certify, by publication of a notice and opportunity to comment in the Commerce Business Daily, for each such procurement action, that no functional equivalent, commercially available space hardware, technology, or service exists and that no commercial method of procurement is available.

SEC. 206. ADDITIONAL NATIONAL AERONAUTICS AND SPACE ADMINISTRATION FACILITIES.

The Administrator shall not construct or enter into a new lease for facilities to support National Aeronautics and Space Administration programs unless the Administrator has certified to the Congress that the Administrator has reviewed existing National Aeronautics and Space Administration and other federally owned facilities, including military facilities scheduled for closing or reduction, and found no such facilities appropriate for the intended use.

SEC. 207. PURCHASE OF SPACE SCIENCE DATA.

(a) IN GENERAL.—To the maximum extent possible, the National Aeronautics and Space Administration shall purchase from the private sector space science data. Examples of such data include scientific data concerning the elemental and mineralogical resources of the moon and the planets, Earth environmental data obtained through remote sensing observations, and solar storm monitoring.

(b) COMPETITIVE BIDDING.—(1) Contracts for the purchase of space data under this section shall be awarded in a process of full, fair, and open competitive bidding.

(2) Submission of cost data, either for the purposes of supporting the bid or fulfillment of the contract, shall not be required of bidders.

(3) Conformance with military specifications (Milspec) or National Aeronautics and Space Administration specifications systems with respect to the design, construction, or operation of equipment used in obtaining space science data under contracts entered into under this section shall not be a requirement for a commercial provider bidding to provide such services.

(4) Contracts under this section shall not provide for the Federal Government to obtain ownership of data not specifically sought by the Federal Government.

SEC. 208. REPORT ON MISSION TO PLANET EARTH.

(a) REQUIREMENT.—The Administrator shall, within 6 months after the date of the enactment of this Act, transmit to the Congress a report on Mission to Planet Earth.

(b) CONTENTS.—The plan required by subsection (a) shall include—

(1) an analysis of Earth observation systems of other countries and the ways in which the United States could benefit from such systems, including by eliminating duplication of effort;

(2) an analysis of how the Department of Defense's airborne and space sensor programs could be used in Mission to Planet Earth;

(3) a plan for infusing advanced technology into the Mission to Planet Earth program, including milestones and an identification of available resources;

(4) a plan to solicit proposals from the private sector on how to innovatively accomplish the most critical research on global climate change;

(5) an integrated plan for research in the Scientific Research and Mission to Planet Earth enterprises of the National Aeronautics and Space Administration;

(6) a plan for developing metrics and milestones to quantify the performance of work on Mission to Planet Earth; and

(7) an analysis of how the United States Government can—

(A) most effectively utilize space-based and airborne Earth remote sensing data, services, distribution, and applications provided by the United States private sector to meet Government goals for Mission to Planet Earth; and

(B) evaluate and foster commercial data sources, commercial archiving services, commercial applications, and commercial distribution of Mission to Planet Earth data.

SEC. 209. SHUTTLE PRIVATIZATION.

(a) POLICY AND PREPARATION.—The Administrator shall prepare for an orderly transition from the Federal operation, or Federal management of contracted operation, of space transportation systems to the Federal purchase of commercial space transportation services for all nonemergency launch requirements, including human, cargo, and mixed payloads. In those preparations, the Administrator shall take into account the need for short-term economies, as well as the goal of restoring the National Aeronautics and Space Administration's research focus and its mandate to promote the fullest possible commercial use of space. As part of those preparations, the Administrator shall plan for the potential privatization of the Space Shuttle program.

(b) REQUEST FOR PROPOSALS.—Within 30 days after the date of the enactment of this Act, the Administrator shall publish in the Commerce Business Daily a request for proposals to achieve a single prime contract for the space shuttle program. The request for proposals shall include—

(1) a timetable and milestones for selecting a single prime contractor not later than September 30, 1996;

(2) criteria for selection of the single prime contractor;

(3) the annual target cost to be achieved by the single prime contractor;

(4) proposed terms and conditions of the single prime contract, including fee and incentives for achieving the target cost, and for savings below the target cost; and

(5) a requirement that each proposal be accompanied by a plan by the proposer to privatize the space shuttle program.

(c) PRIVATIZATION PLANS.—The Administrator shall forward all privatization plans received pursuant to subsection (b)(5) to the Congress not later than 30 days after the deadline for submitting proposals under subsection (b).

(d) LIMITATION ON USE OF FUNDS.—None of the funds authorized by this Act shall be used to plan or prepare for Federal Government, or federally contracted, operation of the Space Shuttle beyond the year 2012, nor for studying, designing, or developing upgrades to the Shuttle whose sole purpose is to extend the operational life of the Space Shuttle system beyond 2012. Nothing in this Act shall preclude the Federal, or federally contracted, operation of the Space Shuttle through the year 2012, or the privatized operation of the Space Shuttle after the year 2012.

SEC. 210. AERONAUTICAL RESEARCH AND TECHNOLOGY FACILITIES.

Notwithstanding any other provision of law, no funds may be obligated for fiscal year 1996 for Aeronautical Research and Technology programs of the National Aeronautics and Space Administration in excess of amounts authorized by this Act, except to the extent that the Administrator receives from non-Federal sources full reimbursement of such excess amounts through payment of costs associated with research at the aeronautical research and technology facilities of the National Aeronautics and Space Administration.

SEC. 211. LAUNCH VOUCHER DEMONSTRATION PROGRAM AMENDMENTS.

Section 504 of the National Aeronautics and Space Administration Authorization Act, Fiscal Year 1993 (15 U.S.C. 5803) is amended—

(1) in subsection (a)—

(A) by striking "the Office of Commercial Programs within"; and

(B) by striking "Such program shall not be effective after September 30, 1995.";

(2) by striking subsection (c); and

(3) by redesignating subsections (d) and (e) as subsections (c) and (d), respectively.

SEC. 212. PRIVATIZATION OF MICROGRAVITY PARABOLIC FLIGHT OPERATIONS.

(a) FINDING.—The Congress finds that no national security or mission critical justification exists for the National Aeronautics and Space Administration to maintain its own fleet of aircraft to provide a short duration microgravity environment via parabolic flight.

(b) PRIVATIZATION OF FLIGHT OPERATIONS.—(1) The Administrator shall privatize all parabolic flight aircraft operations conducted by or for the National Aeronautics and Space Administration in support of microgravity research, astronaut training, and other functions, through issuance of one or more long-term, renewable, block

purchase contracts for the performance of such operations by United States private sector providers.

(2) Within 30 days after the date of the enactment of this Act, the Administrator shall issue a request for proposals to provide services as described in paragraph (1). The Administrator shall coordinate the process of review of such proposals, and shall oversee the transfer of such operations to the private sector.

(3) Within 6 months after the issuance of a request for proposals under paragraph (2), the Administrator shall award one or more contracts for microgravity parabolic flight services, and shall cease all National Aeronautics and Space Administration-operated parabolic aircraft flights, and shall thereafter procure all microgravity parabolic flight services from private sector providers. National Aeronautics and Space Administration experimenters, and National Aeronautics and Space Administration-funded experimenters, who would otherwise use National Aeronautics and Space Administration-owned or operated microgravity parabolic flight aircraft, shall be issued vouchers for the procurement of microgravity parabolic flight services from the private sector.

SEC. 213. ELIGIBILITY FOR AWARDS.

(a) IN GENERAL.—The Administrator shall exclude from consideration for awards of financial assistance made by the National Aeronautics and Space Administration after fiscal year 1995 any person who received funds, other than those described in subsection (b), appropriated for a fiscal year after fiscal year 1995, from any Federal funding source for a project that was not subjected to a competitive, merit-based award process. Any exclusion from consideration pursuant to this section shall be effective for a period of 5 years after the person receives such Federal funds.

(b) EXCEPTION.—Subsection (a) shall not apply to awards to persons who are members of a class specified by law for which assistance is awarded to members of the class according to a formula provided by law.

SEC. 214. PROHIBITION OF LOBBYING ACTIVITIES.

None of the funds authorized by this Act shall be available for any activity whose purpose is to influence legislation pending before the Congress, except that this shall not prevent officers or employees of the United States or of its departments or agencies from communicating to Members of Congress on the request of any Member or to Congress, through the proper channels, requests for legislation or appropriations which they deem necessary for the efficient conduct of the public business.

SEC. 215. LIMITATION ON APPROPRIATIONS.

(a) EXCLUSIVE AUTHORIZATION FOR FISCAL YEAR 1996.—Notwithstanding any other provision of law, no sums are authorized to be appropriated for fiscal year 1996 for the activities for which sums are authorized by this Act unless such sums are specifically authorized to be appropriated by this Act.

(b) SUBSEQUENT FISCAL YEARS.—No sums are authorized to be appropriated for any fiscal year after fiscal year 1996 for the activities for which sums are authorized by this Act unless such sums are specifically authorized to be appropriated by Act of Congress with respect to such fiscal year.

SEC. 216. UNITARY WIND TUNNEL PLAN ACT OF 1949 AMENDMENTS.

The Unitary Wind Tunnel Plan Act of 1949 is amended—

(1) in section 101 (50 U.S.C. 511) by striking "transsonic and supersonic" and inserting in lieu thereof "transonic, supersonic, and hypersonic"; and

(2) in section 103 (50 U.S.C. 513)—

(A) by striking "laboratories" in subsection (a) and inserting in lieu thereof "laboratories and centers";

(B) by striking "supersonic" in subsection (a) and inserting in lieu thereof "transonic, supersonic, and hypersonic"; and

(C) by striking "laboratory" in subsection (c) and inserting in lieu thereof "facility".

II. PURPOSE OF THE BILL

The purpose of the bill is to authorize appropriations for fiscal year 1996 for all programs of the National Aeronautics and Space Administration, except the International Space Station; the Department of Transportation Office of Commercial Space Transportation; and, the Department of Commerce Office of Air and Space Commercialization. The International Space Station was authorized in

H.R. 1601, the International Space Station Authorization Act of 1995 (H.Rpt. 104–210, filed July 28, 1995). [see chart #1]

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION FISCAL YEAR 1996 ESTIMATES ANALYSIS OF AGENCY SUPPORT FOR SPACE STATION

[By fiscal year, in thousands of dollars]

	1994	1995	1996
Human Space Flight:			
Space station	1,939,200	1,889,600	1,833,600
Russian cooperation	70,800	50,100	29,200
Science, Aeronautics and Technology:			
Life and microgravity sciences and applications:			
Russian cooperation	52,900	55,600	53,100
(Life sciences)	(31,500)	(16,600)	(20,800)
(Microgravity)	(10,200)	(11,300)	(9,300)
(Spacelab mission management)	(11,200)	(27,700)	(23,000)
Space station facility payloads	37,000	90,500	137,300
Space station utilization:			
(Life sciences)	.....	500	4,200
(Microgravity)	6,100	11,800	16,200
Mission to planet earth space station attached payload	.....	.....	4,100
Space Access and Technology Space Station Utilization	.....	15,000	37,100
Total	2,106,000	2,113,100	2,114,800

Space station-related activities are funded in the Human Space Flight (HSF) appropriation and in the Science, Aeronautics & Technology (SAT) appropriation. Activities funded in the HSF appropriation include the development and operation of the Space Station, and the flight support component of the Russian cooperation program of joint flights to the Mir space Station. Both programs are managed by the Office of Space Flight. Space Station-related funding in the SAT appropriation provides for the development, operation and science research association with the scientific, technology and commercial payloads being built for utilization of the Space Station or in conjunction with the joint Mir program. The majority of these activities are managed by the Office of Life and Microgravity Sciences and Applications for these discipline-specific experiments. An externally-attached Space Station payload is being developed by the Mission to Planet Earth program. The Space Access and Technology program is providing technology and commercial payloads for both external and pressurized Space Station deployment.

III. Background and Need For Legislation

The U.S. space program is at a critical point in its history. With the collapse of the Cold War, it no longer serves the explicit geopolitical purposes for which it was created and subsequently, enjoys less popular support from a public that no longer sees the need for space activity to demonstrate superiority over the Soviet Union. At the same time, there is general support for civil space activities and the recognition that the civil space program's scientific and technical contributions to the country have been and will continue to be of great significance. Thus, the civil space program finds itself at a crossroads. It has completed its Cold War mission successfully and must seek to contribute to America's future in new ways.

Two other developments will affect the evolution of the U.S. space program. First, federal space policies and projects must be designed and implemented within the framework of progress towards and maintenance of a balanced federal budget, as well as other important economic, domestic, and foreign policy goals of the United States. Thus, federal outlays on the civil space program through NASA can be expected to decline for several years. As a result, NASA is in the midst of a reorganization to adjust to the end of the Cold War, accommodate lower budgets than anticipated in the late 1980s, and lay the foundation for a National Aeronautics and Space Administration that can take the United States into the next century. The Committee agrees with NASA Administrator Daniel Goldin that non-essential or obsolete programs, activities, and infrastructure should be redirected, privatized, or cancelled during the course of this reorganization.

Second, near-Earth space is no longer the completely unknown and foreign environment it was at the point of NASA's creation in 1958, but is rather a frontier with abundant energy and material resources analogous to the positive characteristics of the early American frontier. This is most apparent in the rapid and continuing rise of a commercial space industry and the transition of NASA from its scientific research and technology focus towards the orientation of an operational agency. These two developments are working at cross-purposes. The rise of a commercial space industry suggests that NASA no longer needs to operate large, continuous systems and can instead focus on leading-edge scientific research. H.R. 2043, the National Aeronautics and Space Administration Authorization Act, fiscal year 1996, begins the process of moving NASA in this direction.

IV. Summary of Hearings

The Subcommittee on Space and Aeronautics held two formal hearings during the early part of 1995. On February 13, NASA Administrator Daniel Goldin; Frank Weaver, Director of the Transportation Department's Office of Commercial Space Transportation; and, Keith Calhoun-Senghor, Director of the Commerce Department's Office of Air and Space Commercialization testified about their programs.

On March 16, David Moore, Congressional Budget Office; Wolfgang Demisch, Bankers Trust; Rick Tumlinson, President of the Space Frontier Foundation; Gerald May, The American Legion; Richard Kohrs, Center for International Aerospace Cooperation; Norman Parmet, Chairman of the NASA Aerospace Safety Advisory Panel; Hans Mark, Professor of Aerospace Engineering and Engineering Mechanics at the University of Texas; Maxime Faget, founder of Space Industries Inc.; Lori Garver, Executive Director of the National Space Society; Robert Minor, President of the Space Systems Division of Rockwell International Corporation; Jerry Pournelle, Citizen Advisory Council on National Space Policy; Bob Citron, President and CEO of Kistler Aerospace; Jerry Grey, American Institute of Aeronautics and Astronautics; Robert Spitzer, Vice President of Engineering for the Boeing Commercial Airplane Group; Scott Pace, National Space Society; Charles Hayes III, Cray Research; James Anderson, Harvard University; Eric Barron,

Pennsylvania State University; Jack Brock, the General Accounting Office; Edward Teller, Lawrence Livermore National Laboratory; Arthur Charo, Congressional Office of Technology Assessment; Francis Everitt, Stanford University; William Boynton and Chris Lewicki, University of Arizona; Dan Lester, University of Texas; and, David Gump, President of Luna Corporation, testified before the Subcommittee on Space and Aeronautics as outside experts on the U.S. space program.

At the February hearing, Mr. Goldin noted that President Clinton's undirected cut of $5 billion dollars from the agency's five-year budget plan was forcing him to completely rethink NASA's organization. He announced seven principles for restructuring, including: eliminating duplication; spinning functions off from the agency; turning some activities over to prime contractors; privatizing and commercializing; streamlining regulations; reducing the operations budget; and, emphasizing objective contracting. Administrator Goldin pledged to make NASA more of an R&D agency and less of an operations agency and indicated that NASA was in the midst of a managerial and organizational revolution.

Mr. Weaver indicated that his office has two responsibilities. First, as created by Congress in 1984 in the Commercial Space Launch Act, the Department of Transportation's Office of Commercial Space Transportation (OCST) is charged with regulating the commercial space transportation industry to protect public safety. Second, Mr. Weaver indicated that the President's National Space Transportation Policy of 1994 gave his office the responsibility for enhancing the competitiveness of the U.S. commercial space transportation industry.

Mr. Calhoun-Senghor testified that the Department of Commerce's Office of Air and Space Commercialization (OASC) was created for policy development in support of the commercial use of space. According to Mr. Calhoun-Senghor, OASC was instrumental in developing the commercial remote sensing policy and the National Space Transportation Policy.

The March hearing focused on expert testimony from outside the Executive Branch. David Moore of the Congressional Budget Office testified that NASA still faces its traditional problem of underfunding existing programs and that the agency's overhead as a portion of its total budget had fallen by a mere 1% between 1990 and 1995. Mr. Demisch, an investment banker, stated that NASA's budget cuts and consolidation did not constitute, in and of themselves, a major restructuring. He further observed that operating large, continuous systems undermined NASA's ability to do new, cutting-edge work and recommended that Congress prioritize NASA's activities. Mr. Tumlinson recommended a new thrust for the space program based on commercial activities and low-cost access to orbit.

Mr. Kohrs and Mr. Parmet summed up some of the ongoing studies of the shuttle's safety and workforce. Mr. Mark recommended moving shuttle operations to a single prime contractor and preserving safety as the first priority amid workforce reductions.

Mr. Minor testified about the benefits of the NASA-industry partnership on the X-34 program, while Mr. Pournelle and Mr. Citron testified about fully reusable spacecraft concepts.

Mr. Grey and Mr. Spitzer noted the aircraft industry's interest in wind tunnels. Mr. Pace noted that some of NASA's activities might be undertaken more effectively by other agencies and/or the private sector and commented that NASA could improve its cooperation with other government agencies or departments that have advanced space technology. Mr. Hayes noted the current and growing importance of supercomputers in NASA's operations.

Mr. Anderson testified about ozone depletion and Mr. Barron spoke about the Mission to Planet Earth's Earth Observing System and the importance of environmental prediction in preventing economic loss. Mr. Brock testified that Mission to Planet Earth's EOSDIS information distribution system was being designed with inadequate attention to the user community and with too much emphasis on near-term development. Mr. Teller spoke about the potential to reduce Mission to Planet Earth costs by using advanced microsatellites. Mr. Charo noted the lack of a stable government policy to support commercial remote sensing and commented that such instability could discourage the private sector from investing in space development.

Mr. Everitt testified about the status of Gravity Probe B. Mr. Boynton and Mr. Lewicki testified about the importance of funding new space science missions and the positive educational effects of launching missions at frequent intervals. Mr. Lester testified about the need to make infrared astronomical observations from above the atmosphere and the educational aspects of the Stratospheric Observatory for Infrared Astronomy (SOFIA) program. Mr. Gump testified about his experiences in attempting to finance commercial space science missions that were then preempted by NASA's announcement of its own mission.

V. Summary of Major Provisions of the Bill

In February 1995, the President transmitted to Congress a request of $14,260,000,000 for NASA for fiscal year 1996. The Committee recommends an authorization level of $13,662,200,000. This bill authorizes $11,547,400,000; $2,114,800,000 is authorized for the International Space Station in H.R. 1601, the International Space Station Authorization Act of 1995 (H.Rept. 104–210, filed July 28, 1995).

The Committee's recommendation is consistent with the amounts established in the House-passed Concurrent Resolution on the Budget for fiscal year 1996 (H. Con. Res. 67), as well as the conference report on the Resolution.

The major provisions of the bill are the following:

Authorizes appropriations for all NASA programs, except the International Space Station;

Authorizes appropriations for the Office of Commercial Space Transportation and the Office of Air and Space Commercialization;

Provides for a mechanism to restructure NASA through an asset-based review;

Amends the Commercial Space Launch Act to establish a statutory framework for the Office of Commercial Space Transportation to license commercial reentry activities;

Creates procurement initiatives to encourage NASA to take advantage of innovations in the private sector;

Encourages NASA to purchase space science data from the private sector instead of building complete systems to generate the data;

Requires the Administrator to submit a detailed report on Mission to Planet Earth; and,

Requires the Administrator to publish a Request for Proposals for a single prime contractor for the Space Shuttle program with a requirement that any proposal also contain a plan for privatization. [see chart #2]

	Fiscal year—			Comments
	1995 funding	1996 req	1996 auth	
HUMAN SPACE FLIGHT	3,575.2	3,646.8	3,593.8	Station authorized in H.R. 1601, multiyear authorization bill; $2,114,800,000.
SPACE SHUTTLE	3,155.1	3,231.8	3,178.8	
Shuttle operations	2,415.3	2,394.8	2,341.8	(−53M) savings from Iuka closure.
Safety/performance upgrades	739.8	837.0	837.0	
Payload Utilization & Operations	320.1	315.0	315.0	
Russian Cooperation	*100.0	*100.0	100.0	$100M in bill for Russian Cooperation outside of Station.
SCIENCE, AERO & TECH	5,770.2	5,754.0	5,331.9	
Physics and Astronomy	1,195.5	1,131.1	1,167.6	(+36.5M) add $51.5M for GPB; eliminate SIRTF $15M.
Planetary Exploration	817.1	827.8	827.8	
Life & Microgravity	*324.7	*293.2	*293.2	
Mission to Planet Earth	1,340.1	*1,337.0	*1,013.1	(−323.9M) rescope; program includes $21.5M for commercial data buy; NASA Administrator may reprogram up to an additional $274.4M to this account 90 legislative days after a formal request;.
Space Access & Technology	*627.4	*668.5	*639.8	(−28.7) Tech Transfer −$30.4M; Clean Car −$7M; Laucnh Vouchers + $20M flatline Earth Applications Systems −$21.3M; Federal Spaceport Costs +$10M.
Aero Research & Technology	882.0	917.3	826.9	(−90.4M) New Starts −$25M; HPCC −$35M; Advanced Subsonic −$30.4M.
Mission Comm. Services	481.2	461.3	461.3	
Academic Programs	102.2	118.7	102.2	(−16.5M) reduce to fy 95 level.
MISSION SUPPORT	2,589.2	2,726.2	2,604.4	
SRQA (safety)	38.7	37.6	37.6	
Space Comm. Services	226.5	319.4	319.4	
Research & Pgm Mgt	2,189.0	2,202.8	2,094.8	(−108M) NASA estimate; buyout savings.
Construction of Facilities	135.0	166.4	152.6	(−13.8M) general reduction.
INSPECTOR GENERAL	16.0	17.3	17.3	
Natl Aeronautical Facilities (wind tunnels).	400.0	.....	.....	
Total	12,350.6	12,145.2	11,547.4	13,662.2 −2,114.8 (Station) = 11,547.4.
OCST	.....	6.5	6.0	(−.5M) general reduction.
Air & Space Commercialization	.....	0.5	0.5	
NASA # for fy 96: $13,662.2M	.....	.....	.....	

*Excludes $ for Space Station.

VI. Sectional Analysis and Committee Views

SECTION 1. SHORT TITLE

This Act may be referred to as the "National Aeronautics and Space Administration Authorization Act, Fiscal Year 1996."

SECTION 2. FINDINGS

Sectional analysis and recommendation

The Congress finds that: NASA has failed to request sufficient funds to perform all missions proposed in annual budget requests; NASA should pursue reforms to reduce institutional costs; NASA must return to its role as the Nation's leader in basic aeronautics and space research; NASA should pursue reverse contracting opportunities to support private sector development of advanced space transportation technologies; international cooperation in space exploration and science should be pursued when it satisfies particular conditions; and NASA and the Department of Defense can reduce the cost of space missions by more effectively leveraging their mutual capabilities.

Committee views

For years, NASA has underfunded programs due to unrealistic cost estimates about programs and the expectation that Congress would provide additional funding. For fiscal year 1996, for example, NASA requested a budget some $140,000,000 less than is required to complete those programs approved in 1995. The mismatch only worsens to $439,000,000 in fiscal year 1997 and $847,000,000 in fiscal year 1998. By fiscal year 2000, the underfunding is projected to be over $1,500,000,000. When budgetary decisions must be made, Congress has unreliable information about the scope of NASA activities and the agency's ability to pay for its programs. Furthermore, underfunding forces cost-increasing delays in NASA programs. In the past, Congress has been culpable because of its tolerance of this situation. The Committee recommends that Congress refuse to tolerate such underfunding. In order to restore fiscal responsibility, Congress should work with NASA, using realistic budget projections, to identify shortfalls, reduce overhead, and restructure or cancel programs.

The Committee further finds that the United States is on the verge of a veritable revolution in the way space activity is conducted. First, new information and microsatellite technologies are maturing to the point where they can be applied to space missions, radically lowering costs and moving the United States away from launching large spacecraft and towards launching constellations of small spacecraft that cooperate with one another. Second, after years of promise the commercial space sector is rapidly maturing and moving into new activities, such as remote sensing. This industry is still at a delicate stage, however. Consequently, government space policy and activity must take into account the interests and fragility of the commercial space sector when conceiving, planning, developing, launching, and operating new space missions.

In the area of space transportation, the Committee finds that private sector investment in new expendable and reusable launch ve-

hicles and the emerging commercial sector are altering the supply and demand of space launch capabilities. In order to reduce costs, the Committee seeks to encourage a free market in commercial space transportation services, which could meet most routine government launch requirements.

The Committee commends NASA and its international partners for their many cooperative ventures. These include the International Space Station, the exploration of Mars and Saturn, and the study of the Earth from space. The Committee, however, does not view international cooperation as an end in itself. Rather, the Committee supports international cooperation for the specific benefits it brings to the United States and its international partners, including a lowering of national space costs; an increase in U.S. space capabilities; and an enhancement in the pace of scientific progress. The Committee also notes that international cooperation can do net harm to all of these interests by increasing mission complexity and U.S. costs, undermining U.S. space capabilities in the government and U.S. private sector, and/or transferring commercially or militarily advantageous technology from the United States to the world market without an offsetting return to the United States. Consequently, the Committee directs NASA to consider these secondary effects of international space cooperation before entering into new agreements with foreign partners. Furthermore, the Committee expects that NASA will not enter into such agreements when the disadvantages outweigh the benefits.

Finally, the Committee notes anecdotal evidence of successful cooperation between NASA and the Departments of Defense and Energy. The Committee supports such interagency cooperation because it lowers costs, eliminates duplication, and facilitates the transfer of technology among agencies and the private sector. In the past, such cooperation has been difficult due to the Cold War limitations on access to defense-related space technology. The Committee notes that those limitations are breaking down and directs NASA to make use of defense-related technologies for civil space missions as appropriate.

SECTION 3. DEFINITIONS

Throughout the Act and Committee report, the term "Administrator" refers to the Administrator of the National Aeronautics and Space Administration and the phrase "institution of higher education" refers to the meaning of this phrase given in section 1201(a) of the Higher Education Act of 1965 (20 U.S.C. 1141(a)).

Title I.—Authorization of Appropriations

Subtitle A.—Authorizations

SECTION 101. HUMAN SPACE FLIGHT

Sec. 101(a)(1)(2) and (3) The Space Shuttle Program

Sectional analysis and recommendation

$2,341,800,000 is authorized for Space Shuttle operations in fiscal year 1996. This represents a reduction of $53,000,000 from the request due to the closure of the Iuka facility in Mississippi. The

Committee concurs with the request of $837,000,000 for safety and performance upgrades, and $315,000,000 for payload and utilization operations.

Program description

The objective of the Space Shuttle program is to support the nation's launch requirements while balancing the goal of mission accomplishment with the primacy of program safety. Because of its unique capabilities, the Space Shuttle remains the cornerstone of America's space program. The Shuttle Orbiter is the world's first reusable space vehicle which can be reconfigured for a variety of payloads and missions. In addition to the transportation of personnel and equipment to orbit, the Space Shuttle stands alone among the world's space systems, due to its ability to retrieve material from space for repair or return to Earth. The Space Shuttle will serve as the primary transportation system for the assembly and operation of the International Space Station.

Committee views

The Shuttle program is in a period of transition for many reasons. Numerous reviews conducted both within NASA and external to the agency have addressed subjects ranging from program safety to the status of the shuttle workforce. Due to current budgetary constraints, there has been considerable effort on the part of the agency and outside groups to find ways to achieve cost savings within the program. The Committee recognizes that effort and commends the Administrator for the agency's difficult work in streamlining shuttle operations without compromising safety.

The Kraft report, Shuttle Workforce Review, and the annual report by the Aerospace Safety Advisory Panel have been presented to the Committee in response to its oversight of the overall safety and integrity of the program. It is noted that, though the annual launch-rate of the shuttle has been reduced to seven launches per year, the total annual workload has not decreased correspondingly, requiring that it be re-distributed among the remaining flights. Further, shuttle launches are not scheduled at even intervals, which may lead to peak operating periods in excess of the average annual rate. For instance, a period of 60 days could pass without a launch which is followed by a second 60 days wherein there are three launches scheduled. Though the annual rate may not have been exceeded, the operational tempo for the shuttle workforce for the second 60 day period would equal that of an 18 launch annual rate. The Committee therefore urges the Administrator and shuttle program managers to approach the schedule of station assembly mindful of periodic operational tempo increases. In addition, the Committee encourages the NASA Administrator to continue to take positive steps towards the stability of the shuttle workforce.

There has been a significant decrease in NASA's budget resulting in the agency's efforts to streamline programs to achieve cost savings. The zero-based review and the Kraft report point to potentially large cost savings within the shuttle program, but without sufficient details on where they will be found. The Committee remains enthusiastic that cost savings can be realized and expects that the level of detail of their sources can be clarified.

Sec. 101 (a)(4). Russian Cooperation

Sectional analysis and recommendation

$100,000,000 is authorized for Russian Cooperation, fully funding the President's request for fiscal year 1996.

Program description

The Russian Cooperation line pays the Russian Space Agency and Russian space enterprises under its jurisdiction for necessary designs, data, and support services required to carry out the Joint Statement on Space Cooperation of the U.S. Joint Commission on Economic and Technological Cooperation, under the terms of NASA Contract #NAS15-10110, entered into on June 23, 1994. The firm fixed-price contract provides for the U.S. purchase of discrete technological products, services, and space hardware, not to exceed $400,000,000 during fiscal years 1994 through 1997. The annual request of $100,000,000 is consistent with these contract terms.

Committee views

The Committee strongly commends the Administrator for conceiving of, and successfully executing, the visionary program of human space flight cooperation represented by this element of the President's request. Rarely has the Committee seen a program initiative achieve its promised results as quickly as the U.S.- Russian space cooperation agreements. On December 16, 1993, the legal agreement providing for up to ten Shuttle-Mir docking missions was signed by the Administrator and the Director General of the Russian Space Agency. In less than two years, on June 29, 1995, the first docking took place flawlessly.

The primary purpose of the $400,000,000 contract is to combine U.S. and Russian human space flight operations, although a small portion of the deliverables under contract exclusively support the International Space Station program, which is authorized by the Committee in H.R. 1601, the International Space Station Authorization Act of 1995 (H. Rept. 104–210, filed July 28, 1995). The Committee does not consider it necessary to authorize appropriations for different parts of the contract under separate measures.

Insofar as the $400 million contract is concerned, the Committee notes that no funds appropriated and obligated pursuant to this authorization are transferred to Russian entities until the U.S. has received deliverable items in good condition, inspected them, and accepted them. It is not possible under the terms of this contract for NASA to pay for something it does not receive, does not want, or cannot use. The Committee commends NASA for negotiating these terms of the contract, and appreciates the Russian Space Agency's agreement to abide by such terms.

However, as referred to in Sec. 127 of this bill, Limitation on Transfers to Russia, the terms of this contract do not require the Russian Space Agency to account for the use of NASA funds once a transfer is made. The Committee observes that some of the Russian deliverables under contract are overdue at this time, and have in some instances been months late, in spite of the built-in contractual incentive to complete delivery and hasten acceptance. The Russian government has argued that providing an accounting of

U.S. funds should not be of concern to the program or Congress. To the contrary, the Committee believes that it has a strong interest in knowing whether the individual firms or persons responsible for fulfillment of the $400 million contract are, in fact, being paid for their efforts. In light of the tight schedule established for future docking missions and other preparatory work for the International Space Station, the Committee believes establishing a clear relationship between the work performed under the contract and payment to the responsible entities will help to assure the timely completion of contract tasks.

Sec. 101(b) 1–3. Construction of Facilities

Of the funds authorized to be appropriated under subsection (a)(2), Space Shuttle Safety and Performance Upgrades: (1) $5,000,000 are authorized for modernization of the Firex System, Pads A and B; (2) $7,500,000 are authorized for replacement of the Chemical Analysis Facility; and, (3) $4,900,000 are authorized for replacement of the Space Shuttle Main Engine Processing Facility, all at the Kennedy Space Center.

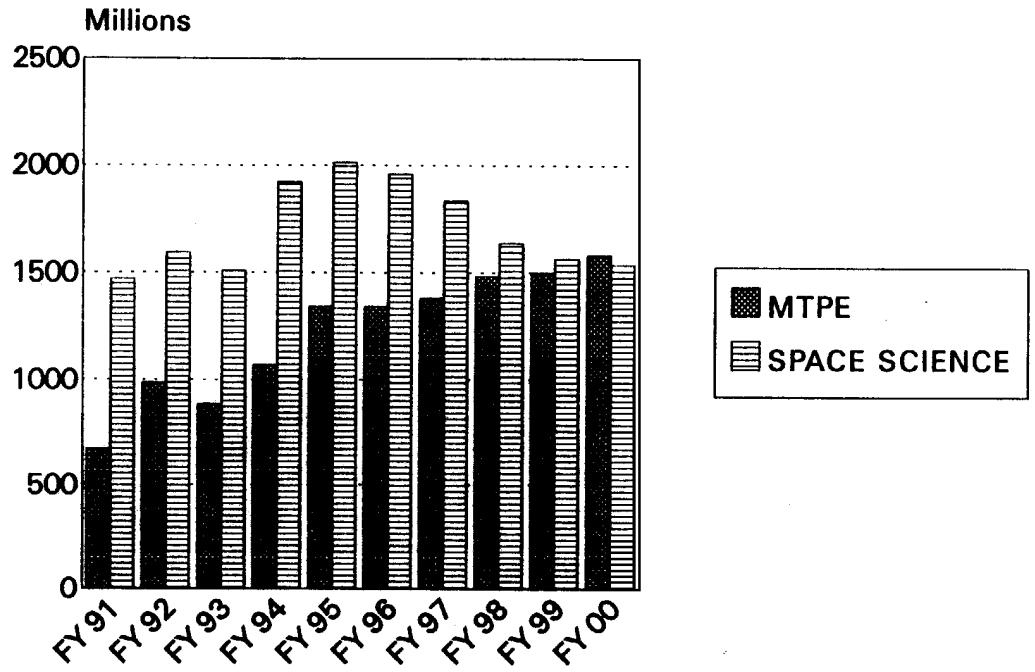
SECTION 102. SCIENCE, AERONAUTICS, AND TECHNOLOGY

Sec. 102 (a)(1) Space Science

The Committee considers space science to be basic scientific research, and thus, one of the highest priority missions of NASA. The Committee views with concern the trend of Mission to Planet Earth consuming ever increasing amounts of the Space Science budget. The Committee seeks to rectify this trend by fully authorizing Space Science missions and restructuring the Mission to Planet Earth program.

Chart #3

MISSION TO PLANET EARTH VS. SPACE SCIENCE



A. PHYSICS AND ASTRONOMY

Sectional analysis and recommendation

$1,167,600,000 is authorized for Physics and Astronomy, including $51,500,000 to continue progress on Gravity Probe B. The Committee does not recommend funding for the Space Infrared Telescope Facility (SIRTF) at this time due to the program's large funding bow wave, which cannot be sustained by budgets anticipated over the next few years. The total recommendation represents an increase of $36,500,000 over the President's request for Physics and Astronomy, reflecting the President's failure to provide offsets for Gravity Probe B funding and the Committee's prioritization of space science as a key NASA mission.

Program description

The core physics and astronomy missions include the Advanced X-Ray Astrophysics Facility (AXAF) a Hubble-class observatory for scanning the cosmos; Gravity Probe B, a space experiment of Einstein's theory of relativity; the Explorer program to develop small to mid-sized astrophysics and space physics missions; the Stratospheric Observatory for Infrared Astronomy, an airborne telescope that benefits from the cooperation of international partners; and a suborbital program that supplements these activities. Launch support, mission operations, and scientific data analysis of mission results are also funded within this program.

Committee views

The Committee recommends continued funding of AXAF and Gravity Probe B (GPB) in order to maintain these programs on schedule and on budget. Both are well along in their development. The Committee further supports continued funding for complete mission operations, research, and data analysis in order to take advantage of the scientific research opportunities created by the funding of space science missions such as the Hubble Space Telescope.

Gravity probe B

Gravity Probe B is a science mission designed to test Einstein's theory of General Relativity. According to the latest Space Studies Board review of Gravity Probe B (GPB), dated May 1995, the majority of reviewers considered GPB well worth its remaining cost to completion. This is one of the few space missions NASA has conducted with relevance to fundamental physics. This science mission has had a total of 18 National Research Council reviews at the request of NASA. Each time the National Research Council has recommended proceeding with GPB. The Committee supports the continued funding of GPB through completion.

Global geospace science (GGS) and collaborative solar terrestrial research (COSTR) programs

The Committee supports the GGS and COSTR activities as fundamental scientific research consistent with the goal of making NASA build on its strengths. GGS and COSTR also take advantage of the benefits of international cooperation in space science to improve capabilities and lower U.S. costs of expanding the frontiers

of human knowledge. Moreover, the Committee finds that the GGS program, which focuses on the Earth-sun energy budget, may supplement Mission to Planet Earth requirements to understand the Earth-sun system as a baseline driver of global climate.

Explorer

The Committee commends NASA for continuing its Explorer program to launch small, low-cost, highly-focused space missions exploring the realm of space physics and astrophysics. The Committee also agrees with NASA's finding that the Explorer program represents an opportunity to develop new technologies for low-cost, high-capability spacecraft. In this endeavor, the Explorer program can make use of, and contribute to, the New Millennium technology development program. Therefore, the Committee expects that NASA's Explorer program will also take advantage of miniaturized spacecraft technologies developed in the Departments of Defense and Energy, as well as the private sector. The Committee is concerned that Explorer missions are almost entirely managed as in-house projects at the Goddard Space Flight Center. In the past, Congress has directed NASA to make greater use of the talents, capabilities, and resources available outside of the agency to conduct space missions. The desirability of going outside the agency for contributions to NASA's goals were recently underscored in the NASA Federal Laboratory Review and the National Research Council report Technology for Small Spacecraft, which recommended that NASA make better use of externally-developed technology and capabilities. The Committee notes that the New Millennium and Discovery programs are seeking to exploit these non-NASA resources and expects to see the Explorer program take similar steps.

SOFIA

The Committee supports full funding for the Stratospheric Observatory for Infrared Astronomy (SOFIA). SOFIA is an airborne telescope that will replace the Kuiper Airborne Observatory (KAO), which is nearing the end of its useful lifespan. In order to take effective measurements of infrared radiation, it is necessary to lift the observing telescope above the thickest parts of the atmosphere, which block infrared radiation. Thus, infrared observations cannot be made from the ground. SOFIA will carry a 2.5 meter telescope aloft 160 times a year for twenty years to collect images in the infrared. (By contrast, the Kuiper Observatory carries a 0.9 meter telescope.) Moreover, SOFIA will carry on the Kuiper Observatory's strong educational component by providing flight opportunities for college-age students and primary school science teachers. Finally, SOFIA represents an important collaborative effort with international partners in Germany, who are contributing approximately 20% of the platform's cost. The Committee is impressed by the fact that the researchers who use KAO are willing to forgo data from KAO observations while SOFIA is constructed and KAO's operating costs are used to fund SOFIA.

Suborbital programs

The Committee also recommends complete funding for NASA's suborbital programs in space science. While these programs often

receive less attention than their space-based counterparts, they represent an important opportunity to conduct frequent, low-cost, scientific research. NASA has an accomplished history of using high-altitude balloons and sounding rockets in addition to airborne platforms such as SOFIA or the Kuiper Observatory. With that in mind, the Committee urges NASA to conduct studies and explore technologies that increase the utility of suborbital programs. The Committee is aware of interest from the scientific community in a high-altitude tethered aerostat as a long-endurance platform that could carry payloads for astronomical observation or earth environmental monitoring. Given past investments by the Department of Defense in such technologies and the Ballistic Missile Defense Organization's $1 billion investment in adaptive optics useful on such platforms, the Committee directs NASA to explore the potential use of high-altitude, tethered aerostats to supplement observations from SOFIA and NASA's space-based observatories at a very low cost and report its findings back to the Committee by June 31, 1996.

B. PLANETARY EXPLORATION

Committee authorization and recommendation

$827,800,000 is authorized for Planetary Exploration, including $30,000,000 for the New Millennium program, of which $5,000,000 is for NASA's participation in the Department of Defense Clementine 2 mission. This represents full funding of the President's request.

Program description

NASA's planetary exploration activities include the Cassini probe to Saturn, which is more than halfway completed; the Mars Surveyor program, which presents a significant opportunity to acquire the benefits of international cooperation; and the Discovery and New Millennium programs, along with the associated costs of launch, data analysis, research, and mission operations.

Committee views

The Committee recommends full authorization of the request for Planetary Exploration. This mission is one of NASA's traditional strengths, and, together with other basic scientific research activities, represents a positive direction on which the agency can focus its energies.

Cassini

The program for fiscal year 1996 continues the development of the Cassini mission to Saturn. This mission is a joint program with the European Space Agency (ESA), which is providing the Huygens Probe to study Saturn's moon Titan. An extensive cruise period is required to reach Saturn, during which the spacecraft will fly by Venus, Earth, and Jupiter to gain sufficient velocity to reach its destination and release the probe. Upon its arrival at Saturn in June 2004, the spacecraft will begin a four-year study of the Saturnian system that will provide intensive, long- term observations of Saturn's atmosphere, rings, magnetic field, and moons.

In fiscal year 1996, Cassini subsystem hardware fabrication and testing will be completed. The Committee concurs with a May 1995 GAO report recommending further reductions in the launch costs of Cassini. The Committee is concerned about NASA's use of a solid rocket motor upgrade (SRMU) for the Cassini launch. The GAO report noted that SRMU will have undergone only three launches prior to the launch of Cassini, which does not leave room for extensive testing of the SRMU. The Committee is concerned that NASA may be unnecessarily increasing the risk to Cassini.

Discovery

The Committee commends NASA for continuing the Discovery program to promote low-cost exploration of the solar system, and endorses the program because it is demonstrating a real commitment to innovative management techniques that lower the costs of space exploration. Furthermore, the Discovery program addresses the problems associated with NASA's recent approach to space exploration, which relied on large, expensive spacecraft in development for a decade or more. Consequently, the Committee recommends full funding for the Lunar Prospector, a low-cost science probe to the moon which will build on the Defense Department's successful Clementine mission of 1994 and now has a strong educational component provided separately by the private sector. Lunar Prospector represents the type of resource-leveraging that NASA must perform in an era of constrained budgets.

New Millennium

NASA's briefing to the Committee "Exploration for the 21st Century: The New Millennium," indicates that New Millennium intends to create new-capability space missions at a reduced cost and increased flight rate through improvements in key technology areas, including micro-electronics, autonomy, and instruments. While the Committee commends NASA for recognizing that these technologies are necessary to lower costs, it also notes that the Departments of Defense and Energy have been working on such technologies since at least the late 1980s.

While recognizing that DoD and NASA are making greater efforts to work together in order to reduce the cost of government space activity and achieve the maximum return from space missions, the Committee finds that NASA and the Department of Defense do not adequately leverage the opportunities to conduct joint missions that contribute to national goals and interests in space. The Committee agrees with the findings of the NASA Federal Laboratory Review, the National Research Council report Technology for Small Spacecraft, and hearing witnesses Dr. Scott Pace of the National Space Society and Dr. Edward Teller of the Lawrence Livermore National Laboratory that NASA can, and should, make better use of technology resources from outside the agency, including those of the Departments of Defense and Energy and their private sector suppliers. The few programs in which NASA and DOD have attempted to complement one another, such as the testing of the DC–X technology demonstrator, suggest that greater cooperation is possible if bureaucratic interests can be set aside in favor of overarching national goals. NASA's New Millennium program

has considerable potential to meet its goals if NASA and DOD work together. Furthermore, this section is consistent with the Technology Procurement Initiative goal outlined in Title II, Sec. 205 (b): "achieve a continuous pattern of integrating advanced technology from the commercial sector and from federal sources outside NASA. . . ."

The Committee finds that NASA can reduce the cost of New Millennium while increasing and accelerating the benefits of New Millennium if it takes advantage of the miniaturized technologies already paid for by the U.S. taxpayer and developed in the Departments of Defense and Energy. To the degree that NASA demonstrates technological cooperation with the microsatellite technology programs in DoD and DoE, the Committee expects that New Millennium will meet its programmatic goals and serve the national interest. Therefore, the Committee directs NASA to prepare a report for Congress detailing the manner in which NASA will make use of the technology, personnel, facilities, and expertise related to New Millennium program goals within the USAF Phillips Laboratory Space Experiments Directorate, the Lawrence Livermore National Laboratory Physics and Space Technology Directorate, and the Naval Research Laboratory Naval Center for Space Technology in conjunction with NASA's own capabilities and those of the private sector, prior to obligating any funds for the New Millennium program. The Committee commends NASA for the willingness and desire to work directly with DoD and DoE personnel on New Millennium programs, as expressed in briefings to Committee staff, and will closely monitor this program's progress in promoting NASA cooperation with DoD and DoE. The Committee further finds that failure to achieve such cooperation will result in wasteful duplication of capabilities and may give cause to terminate the New Millennium program.

Furthermore, as indicated in this bill, Congress directs NASA to contribute to the Department of Defense's Clementine 2 mission to develop technology for small and miniaturized satellites, including the flight demonstration of several microsatellites. This is not a new-start for NASA, but an opportunity to leverage Department of Defense technologies for NASA's New Millennium program. In the 103rd Congress, the House Appropriations Committee and House Armed Services Committee recommended a Clementine 2 mission. This Congress is acting on those recommendations. The Committee commends the Senate Armed Services Committee and the Senate Appropriations Committee for authorizing and appropriating funds for this second, low-cost mission in the Clementine program to develop defense-related microsatellite technologies while performing space science missions. The Committee believes NASA's technology and space science programs can also benefit from the mission at a remarkably low cost and directs NASA to play a role in defining science goals and providing a science team for Clementine 2, consistent with the mission's defense technology development mission. In FY1997 and FY1998, the Committee strongly encourages NASA to contribute communication and tracking resources, as well as analysis of science data and sensor calibration. Because Clementine 2 will rendezvous with two near-Earth asteroids, NASA will thus be able to improve U.S. understanding of near-Earth objects at a

cost significantly less than that required to fund its own mission. Moreover, NASA participation in Clementine 2 will enable it to build on research conducted under its Near-Earth Asteroid Rendezvous mission.

Sec. 102 (a)(2) Life and Microgravity Sciences and Applications

Sectional Analysis and Committee Recommendation

$293,200,000 is authorized for the Office of Life and Microgravity Sciences and Applications (OLMSA). The $210,800,000 of remaining activities of OLMSA which relate to the International Space Station are fully funded in H.R. 1601, the International Space Station Authorization Act of 1995 (H.Rept. 104–210, filed July 28, 1995). These figures total the entire amount requested by the President.

Program Description

OLMSA conducts the basic research required to enable human space flight and is responsible for the health of astronaut crews who live and work in space. As a function of this, OLMSA performs a wide variety of life sciences research that use the absence of gravity as a medium for understanding the human immune system; the development and loss of bone mass and connective tissues; and, human and plant adaptation to zero gravity, including their attending cellular and molecular effects. OLMSA is responsible for carrying out the NASA-National Institutes of Health (NIH) Protocol, which has served to make space-based biomedical research relevant to other basic health research. OLMSA is also NASA's occupational health program office, which promotes the health and safety of all NASA employees. On the microgravity sciences front, OLMSA is responsible for programs to discover new space-based manufacturing processes, the study of materials and fluids in space, and other gravitational research programs.

Committee View

The Committee believes that OLMSA is responsible for some of the most important science programs of NASA. The foundational research to enable better human adaptation to weightlessness has yielded profound research on all aspects of human physiology. Accordingly, the Committee urges NASA and the National Institutes of Health to continue and expand the partnership begun under the NASA–NIH protocol to the fullest extent possible.

The Committee regards OLMSA's upcoming Neurolab mission, the final Spacelab module flight, to be an extremely important life sciences mission and commends NASA for initiating this mission with NIH.

Sec. 102 (a)(3) Mission to Planet Earth

Sectional Analysis and Recommendation

$1,013,100,000 is authorized for Mission to Planet Earth, except that no funds are authorized for the Consortium for International Earth Science Information Network (except as provided in sec. 107) or the Topex-Poseidon Follow-On. $4,100,000 of this account is authorized in H.R. 1601, the International Space Station Authoriza-

tion Act of 1995 (H.Rept. 104–210, filed July 28, 1995). This authorization represents a decrease of $323,900,000 from the President's request. Funds may not be expended to duplicate private sector or other federal activities or to procure systems to provide data, unless the Administrator certifies that no private sector or federal entity can provide suitable data in a timely manner. Funds in excess of $1,013,100,000 may not be obligated for Mission to Planet Earth.

Program Description

In 1990 the federal government initiated the interagency U.S. Global Change Research Program (USGCRP) at a time when NASA's budget was expected to increase 10% per year. NASA's contribution to this effort is Mission to Planet Earth (MTPE), which averages 70% of the total USGCRP and applies NASA's sensor technologies to the purpose of monitoring Earth's environment. The main elements of MTPE are the Earth Observing System (EOS) and the Earth Observing System Data Information System (EOSDIS). EOS consists of a series of satellites with various instruments to observe the Earth continuously for 15 years. EOSDIS is the data collection and management system for the constellation of satellites.

The three main EOS spacecraft groups are: morning (AM), afternoon (PM), and the Chemistry series. Each series has 3 satellites that will fly for six years. For example, AM–1 flies in 1998; AM–2 flies in 2004, and AM–3 flies in 2010. Each series contains a different suite of instruments to observe different parts of the Earth and its atmosphere. The AM series will cross the equator in the morning when cloud cover is at a minimum so it can observe terrestrial surface features. The PM series will focus on cloud formation, precipitation and radiative properties; thus, an afternoon equatorial crossing is preferred. PM–1 is scheduled for launch in 2000. The Chemistry series will study atmospheric chemical species and their transformations. Chem-1 is scheduled for launch in 2002.

The original program has undergone restructuring three times since its approval in 1990. The program was originally estimated to cost $17 billion through the year 2000, and it was to fly six large polar-orbiting satellites, two at a time, over 15 years. In the summer of 1991, the program was brought down to $11 billion at the request of the Office of Management and Budget and the National Space Council. In the fall of 1992, the program was further reduced to $8 billion. Last year, the program was reduced to $7.25 billion through the year 2000 (this figure represents about two-thirds of MTPE). The program is expected to run until 2022. Funding for MTPE from fiscal year 1991–2000 is expected to be over $12 billion.

EOSDIS will be the first data information system to collect such immense quantities of data, which will result in a very complex system. It is estimated that when MTPE is fully operational, the instruments will generate an average of 2100 gigabytes (gigabyte = 1 billion bytes of data) per day. Data from other U.S. and foreign satellite systems could double this amount. The architecture of EOSDIS is intended to be decentralized through the use of nine interconnected Distributed Active Archive Centers (DAACs). These

DAACs are located across the United States and they each have a different function.

Committee views

The Committee is concerned with several elements of the Mission to Planet Earth program. First, it is not clear that MTPE is an affordable program over the long term. According to the General Accounting Office (GAO), EOS represents two-thirds of the $12.1 billion MTPE budget through fiscal year 2000. Assuming the current EOS baseline program is continued through 2022, GAO estimates the total funding requirement at about $33 billion.

NASA has been very reluctant to reveal the cost estimates for the program beyond the year 2000, as indicated by its failure to provide projections in response to written questions submitted at the February oversight hearing. The Committee is concerned that MTPE not displace space science as a NASA priority during a period of stringent budget constraints, especially since the assumption, made at the time of Mission to Planet Earth's initiation, of an annual 10% increase in the agency's budget is no longer realistic.

Second, Mission to Planet Earth has a significant international component, portions of which involve flying NASA sensors on foreign spacecraft. Finalizing and maintaining NASA's current international partnerships continues to present a challenge. Most of the international agreements to pursue MTPE have not been finalized. None cover the necessary 15-year data sets. Inevitably, if the foreign satellites and launches do not materialize, NASA will have to fund a completely new MTPE mission, or delete the relevant instruments from its MTPE goals.

Third, it remains to be demonstrated that MTPE as currently organized has the proper scientific focus and priorities. According to several scientists interviewed by the Committee, NASA did not ask itself which scientific questions were most important before it started designing the MTPE satellite constellations. For example, there has not been a comprehensive review of the data types other countries are gathering and whether the U.S. may be duplicating their efforts. Furthermore, some of the data from these foreign systems will be released within three years, after which it will be too late to restructure MTPE in response to foreign findings.

Fourth, the Committee has several important questions about the scientific content of MTPE that remain unanswered. The Committee Chairman requested an outside prioritization of unanswered scientific questions about global warming from the George C. Marshall Institute, an independent organization led by such prestigious scientists as Frederick Seitz, a past President of the National Academy of Sciences (NAS); William Nierenberg, who chaired several NAS studies on global warming; and Robert Jastrow, former Director of the NASA Goddard Institute for Space Studies. Under the Institute's auspices, Drs. Jastrow and Seitz, joined by their colleagues Sallie Baliunas, Albert Arking, and Chauncey Starr, concluded that the three greatest sources of uncertainty in current estimates of global climate change are (1) upper tropospheric water vapor (2) clouds and, (3) aerosols. While noting that climate research requires stability to succeed, these prominent scientists also cautioned that "Fundamental research on global climate change can

become entangled with the temptation to support pre-ordained answers that may be linked to the process of securing continuing funding. This perversion of the scientific process could undermine the most important element of research in global climate change: obtaining the best affordable research on the fundamental physics of global climate." (Emphasis added) The Committee is concerned that current and future budget pressures will deny MTPE, as it is currently structured, the funding stability needed for success, which could preclude answering these priority scientific questions.

NASA has indicated that MTPE data will be used to improve the predictive capability of climate models, both in terms of reliability and regional effects. While the Committee recognizes that there is substantial room and need for improvement in computer models of the climate system, the Committee notes that such models are only as good as the theory behind them. This gives rise to the concern that MTPE funds are being used disproportionately to improve models rather than theory, the latter of which is clearly more important and does not always require billions of dollars of investments in data collection and management systems.

Fifth, the Committee is concerned about EOSDIS. According to NASA, the system will download some 2100 gigabytes of new data from MTPE sensors every day. This amounts to about 766,500 gigabytes of data per year. NASA estimates a user community of some 10,000 investigators will use this data, meaning each one would have to completely analyze 210 megabytes of data every day of the year in order to use each byte of data just once. A GAO official testified that EOSDIS will be the largest civil data management and distribution system ever attempted and could accumulate data amounting to 1,000 times the entire printed contents of the Library of Congress over its lifetime.

The Committee is concerned that NASA may be spending hundreds of millions of dollars to acquire data that will never be used. For example, NASA's estimate of 10,000 earth science investigators is vastly over-estimated. In fact, this represents the total membership of earth and environmental science professional associations and societies and their undergraduate students and graduate-level teaching assistants. According to the GAO, NASA has just 500 principal investigators to examine EOS data for specific investigations. GAO investigators also commented that NASA's investment in EOSDIS focused on near-term development of systems and formats for a small group of primary users, without much regard to the needs of secondary and tertiary users. EOSDIS was not downsized when EOS restructuring took place. Additionally, the GAO noted that information technologies change very rapidly; thus, NASA's over-emphasis on EOSDIS development at the beginning of Mission to Planet Earth may preclude using more capable and affordable information technologies available when the EOS satellites actually begin collecting data after the turn of the century.

Moreover, the Committee is concerned that MTPE lacks a solid scientific balance. The Office of Technology Assessment indicated some concern about the lack of a robust program of air and ground-based measurements of Earth systems within the U.S. Global Climate Change Research Program. Similarly, the Earth System

Science and Applications Advisory Committee (ESSAAC) reported on November 8, 1994 that it does not see strong evidence of a viable strategy of support for a proper program of ground-based measurements necessary to provide overall balance and stability in the EOS plans.

Similarly, the NASA Federal Laboratory Review concluded that "while there is excellent science being pursued within MTPE, there is a lack of definition of scientific milestones and need dates that will provide the national policy process with the necessary information to make decisions in a timely manner." The Committee urges the Administrator of NASA to appoint a task force to determine the baseline scientific requirements for Mission to Planet Earth and transmit a report to Congress within six months after the date of enactment of this Act. The NASA Federal Laboratory Review recommends that relevant results from activities conducted within the Department of Defense should be integrated with MTPE. The Committee concurs with this recommendation and also supports greater use of data gathered from Department of Defense space-based sensors, which may ameliorate some MTPE data requirements. The Committee commends NASA's Environmental Research and Sensor Technology (ERAST) program for funding research into solar-electric, high-altitude, long-endurance Unmanned Aerial Vehicles (UAVs) such as Pathfinder. It is the Committee's understanding that NASA could use more advanced Pathfinder UAVs to conduct early research into the Arctic and Antarctic ice sheets (before FY2000) in order to supplement the earth science data it will gather with satellites after FY2000. The Committee supports the development of fuel-cell technology for the Pathfinder UAV, since such technologies will have applications to other NASA missions, including the International Space Station. The Committee fully supports this cost-effective use of the Pathfinder technology-development program to provide early data to Mission to Planet Earth and commends NASA for wisely sponsoring the program. Moreover, the Committee recommends that Mission to Planet Earth make better use of such capabilities.

The Committee is also concerned that inadequate attention has been paid to the structure and organization of MTPE relative to the activities of other federal agencies and other countries. The failure to survey foreign efforts has already been mentioned, but there are additional indications that point to substantive problems with the program.

In March of this year, NASA and NOAA embarked on a mission to explore ways to enhance interagency collaboration in global change research. The NASA Office of Mission to Planet Earth and NOAA National Environmental Satellite, Data and Information Service have established three working groups on collocation, technology infusion, and data and information systems. At the senior program level, a roundtable has been formed to monitor the activities of the working groups and is scheduled to report to the Administrators of NASA and NOAA on August 1. The Committee is encouraged by these activities to increase interagency collaboration. It is concerned, however, that the effort was solely prompted by the prospect of cuts to the respective elements of USGCRP; this coordi-

nation should have been ongoing since the inception of the USGCRP.

Some critical measurements to maintain are the observations of global temperature data taken by the NOAA Polar Orbiting Environmental Satellite (POES), yet it is not apparent that NASA planned to make effective use of such data as part of MTPE. The Committee recommends that NASA accord this activity a higher priority. Some have charged that satellite observations measure the temperature in the atmosphere rather than at ground level. However, the Marshall Institute report, The Global Warming Experiment, clearly indicates that a comparison of surface thermometer records with satellite-based observations are "close to perfect agreement." The House Budget Resolution and the authorization for POES contained in the NOAA Authorization Act of 1995, H.R. 1815, reported by the Committee, is adequate to continue the program. MTPE as currently designed will make significant demands on NASA resources for operations at a time when the agency must move away from being an operational organization and back into an R&D organization. MTPE must not be allowed to transform itself into an open-ended operational program that displaces the exploration of space or impedes reform efforts directed at transforming the agency into a cutting-edge R&D organization.

Finally, the Committee does not see sufficient evidence to conclude that NASA has adequately considered the emergence of a commercial remote sensing industry as a prospective source of environmental data. The Committee has frequently encouraged NASA to think more creatively about how to acquire environmental data, from straightforward purchases of privately-gathered data to leverage use of data already gathered for other purposes, such as weather records developed by the Department of Defense during the Cold War. While the agency has launched some commendable pilot programs to explore direct purchasing of commercial data, the Committee expects the agency to move more aggressively to capitalize on these emerging commercial capabilities in its reorganization of MTPE. Consequently, the Committee directs NASA's Mission to Planet Earth to spend $21,500,000 on a pilot program to study the use of commercially-generated Earth remote sensing data and actually purchase data for Mission to Planet Earth from the private sector. The aforementioned study should: (1) describe how NASA can evaluate and foster commercial data sources, archiving services, applications, and distribution for Mission to Planet Earth data; (2) identify means by which NASA can develop specific data applications which foster the use of commercial data for Mission to Planet Earth; (3) identify mechanisms by which NASA can demonstrate the performance of commercial solutions to Mission to Planet Earth requirements; (4) provide recommendations to Congress on the fundamental scientific research and technology development initiatives needed to meet Mission to Planet Earth data requirements not met by the U.S. private sector; (5) identify means of facilitating feedback from NASA to the private sector on opportunities for enhanced provision of commercial services that meet Mission to Planet Earth requirements; and (6) identify existing policy, regulatory, and/or legislative barriers to implementing an effective partnership between the private and public sectors in meeting Mis-

sion to Planet Earth data requirements. This study should go into greater detail on commercial solutions for Mission to Planet Earth data requirements than the overall review of Mission to Planet Earth required in Section 208.

The Committee notes that NASA's Commercial Remote Sensing Program within the Office of Space Access and Technology has the most experience in working with the private sector in acquiring and applying commercially-generated data and directs the NASA Administrator to conduct this pilot program under the management of the Commercial Remote Sensing Program, based at Stennis Space Center.

Committee action and intent

The bill reduces the MTPE program request by $323,900,000 in fiscal year 1996. The Committee intends that the PM-1 and Chem-1 satellites be delayed to allow several different things to happen. The review of the U.S. Global Change Program by the National Academy of Sciences should be completed in September of 1995, providing input about the direction of the overall program. This delay will also give NASA time to survey and assess foreign systems and the Department of Defense's airborne and space-based sensor programs to avoid duplication and a waste of taxpayer dollars. A delay will also allow time for NASA to develop its "faster, cheaper and better" spacecraft under the New Millennium program and the Small Satellite Technology Initiative and incorporate these new technologies into PM-1 and Chem-1. Furthermore, such a delay will give NASA adequate time to assess and explore the use of commercially-gathered data to meet its scientific requirements. By making greater use of commercial data suppliers, NASA could further reduce the costs of MTPE and encourage the development of commercial remote sensing. These delays in the PM and Chemistry series of EOS satellites also will enable NASA to delay funding for EOSDIS, data analysis, and program management.

In imposing a delay on PM-1 and Chem-1, the Committee retains funding to continue work on the sensors for PM-1, but eliminates all funding for Chem-1. As a result of these delays, the Committee also recommends a 25% ($21.3 million) reduction in expenditures on algorithms, the elimination of funding for the GLOBE program, a 30% ($86.9 million) reduction in EOSDIS funding, the elimination of $6 million in earmarked funding for the CIESIN program, and an additional $84.7 million from the Applied Research and Analysis function within Mission to Planet Earth.

Furthermore, the Committee recommends against funding for a follow-on Topex-Poseidon mission. As presented to Congress, NASA intended to spend $146,600,000 on a joint mission with France in which France would build the spacecraft and sensors instead of conducting a joint mission with the U.S. Navy which would have cost the government $134,000,000 for a spacecraft and sensors built in the United States. The Committee does not find it in the national interest for NASA to cooperate with a foreign government's efforts to start up a small satellite technology capability that will compete with the U.S. private sector in commercial space activities and place U.S. satellite and sensor manufacturing jobs at risk. Moreover, NASA had underfunded the program by requesting

just $7,400,000 for it in fiscal year 1996 when the program's cost was estimated at over $20,000,000 in fiscal year 1996.

Sec. 102(a)(4) Space Access and Technology

Sectional analysis and recommendation

$639,800,000 is authorized for Space Access and Technology, except that no funds are authorized for the Partnership for the Next Generation Vehicle. This represents a decrease of $28,700,000 from the President's request. An additional $37,100,000 is included in a separate bill, H.R. 1601, the International Space Station Authorization Act of 1995 (H.Rept. 104–210, filed July 28, 1995). Included in this authorization is $193,000,000 for Advanced Space Transportation; $10,000,000 for federal spaceport costs; $20,000,000 for continuing the Launch Voucher Demonstration program; and, $33,900,000 for the Small Spacecraft Technology Initiative. Commercial Technology Programs are reduced by $30,400,000 and Earth Applications Systems are reduced by $21,300,000.

Program description

Space Access and Technology operates numerous programs intended to provide new technologies for space activities and promote the commercial development of space. These include advanced space transportation, which includes NASA's X-33 and X-34 programs to produce reusable and partially reusable space launch vehicles and the DC-XA technology test-bed; spacecraft and remote sensing, which provides sensors and small spacecraft technology; a program for advanced small satellites, which includes the Lewis and Clark spacecraft; space processing and flight programs; commercial technology programs; and NASA's Small Business Innovative Research program.

Committee views

Advanced space transportation—in general

One of the government's goals for the Advanced Space Transportation program is to find an economical replacement for the nation's aging Space Shuttle fleet. This goal must be made to work in harmony with the nation's commercial need to develop the world's least expensive, most reliable payload delivery system. In a world where even nonmarket nations have gained access to the commercial space launch market, the most effective government incentive for private capital infusion into next-generation reusable launch systems is a solid technological investment to develop a new launch system that will surpass all current systems in terms of economy, reliability, and performance.

Traditionally, the government has taken the lead in developing new launch systems to meet national security requirements. But, as these strictly government demands have receded in recent years, new systems must instead base their capitalized cost on a highly competitive commercial market model. In order to facilitate such a large and essential private investment, NASA has been charged by the President's National Space Transportation Policy (released August 5, 1994) to provide up-front technological risk reduction suffi-

cient to enable private investors to assume a reasonable business risk to then proceed with building an operational launch vehicle.

The development of a Space Shuttle replacement, however, should not be confused with the risk reduction phase of this first process. Government requirements, including those associated with "man-rating" a space launch vehicle, must take a back seat to commercial launch market demands. The replacement of the Space Shuttle should be derived from commercial vehicles developed by the private sector as a result of the Reusable Launch Vehicle program. When a privately developed reusable launch vehicle has become operational, then consideration should be given to human space transportation requirements. While it may soon be possible for commercial companies to offer human transportation services, the distinction between developing human space flight vehicles and commercial payload delivery systems is important at this stage to focus NASA's RLV effort solely on reducing the risks and costs facing industry to develop and certify a commercial RLV.

The RLV programs

The Committee supports NASA's request to develop reusable launch vehicles under the terms of the industry-led cooperative agreements. The Committee believes the full-scale development and fleet operations of such vehicles, however, must be undertaken by private companies using risk capital. Accordingly, the business viability of the designs is as important as technological viability.

For several years the Committee has strongly supported technology development specifically aimed at achieving a single-stage-to-orbit, fully reusable launch vehicle even while NASA had no such program underway. Upon the successful testing of the DC- X prototype launcher by the Air Force, however, NASA and the Office of Science and Technology Policy determined that such a concept, if fully developed, could hold the promise of eventually replacing the Space Shuttle. Beginning in fiscal year 1995, NASA began to adopt the DC-X program for continued testing and issued the Cooperative Agreement Notices that led to formal agreements with industry to develop two Reusable Launch Vehicles, the X-33 and the X-34.

In presenting the President's request to Congress, NASA has labored to draw a clear technological connection between the X–33 and X–34. Although NASA has demonstrated the applicability of the X–34's enabling technologies and business strategy to further development of the X–33, the Committee notes the fundamental differences that exist between the X–33 and X–34 in terms of purpose and technological challenge. The X–34 is a small payload class reusable launch vehicle that employs multiple stages. The X–33 is planned to be a medium-payload class reusable launch vehicle using just one stage. It would be inappropriate to draw too close a connection between the X–33 and X–34 programs or suggest these programs are in a competitive relationship.

The Committee is aware that the model of traditional X-vehicle programs as conducted by NASA and the Air Force is not followed by the X–33 or the X–34. The reason for the different programmatic approach is due to the industry-led cooperative agreements. These agreements, unlike traditional X-programs, presume

business viability to be a leading design objective. The Committee notes this distinction only because NASA must strike a balance between pursuing purely technological goals that may conflict with market and competitive pricing requirements; which are of paramount importance to developing a financially self-supporting launch vehicle.

The X–34 program

The Committee recommends full funding of advanced space transportation programs for the X–33 and X–34 reusable space launch vehicles. These vehicles will be essential in building a space program for the next millennium that is affordable, responsive, and technologically advanced. Moreover, reusable launch vehicles which significantly lower the cost to access space will reinvigorate the U.S. commercial space transportation industry and could make current expendable launch vehicles virtually obsolete.

The Committee endorses NASA's X–34 program as a pathfinder initiative to demonstrate new ways of doing business between the government and private sector. The X–34 will put into effect an innovative process of "reverse contracting" through which industry will contract with NASA for the expertise and facilities that may be necessary to make the program a success. The Committee encourages this and other streamlined program management reforms that are an integral part of the X–34 program. The Committee welcomes the commitment of $100 million in private sector funding and affirms its understanding that NASA's total investment in X–34 will not exceed $70 million.

As a result of the cooperative agreement between NASA and industry for the X–34, industry retains managerial control over NASA inputs to the program. Accordingly, industry has agreed to pay for any unbudgeted cost increases which may occur, so long as it retains the power to control NASA's contributions. The Committee welcomes the commitment of $100 million in private sector funding and its leadership of the X–34 program. NASA's investment of $70 million is effectively capped as long as the "reverse contracting" features of the cooperative agreement are adhered to by both parties.

The Committee believes that these commitments from NASA and the private sector accurately reflect the potential value of the X–34 as a commercial space launch vehicle and a technology test bed that is complementary to the goal of the program. The Committee, therefore, approves the full NASA budget request of $30 million in X–34 funding for fiscal year 1996.

The X–33 program

The Committee also approves the full NASA budget request of $49 million in X–33 concept definition, design and demonstration funds for fiscal year 1996. The subprogram elements of technology development to support the X–33 and X–34 programs are also funded at the full amount requested.

The X–33 program is intended to answer the central question facing the space transportation community today: Can a launch vehicle be developed with propulsion so efficient, and weight so minimized, as to be able to carry a useful payload to orbit in a single

stage? In making this authorization, the Committee has expressed its optimism that Single Stage To Orbit (SSTO) launch vehicles could reduce the cost of launching payloads of all kinds by an order of magnitude.

The Committee believes the best way for NASA to help industry solve the mass fraction equation facing launch vehicles of this type is by building and flying experimental vehicles to test enabling SSTO technology. In other words, the traditional prototype development program aimed at an end-point design would be an unacceptable contribution from NASA. Instead it should encourage the contractors to demonstrate rapidly an intact abort capability throughout the flight profile, rapid turnaround for frequent flight, and flying higher and faster with the goal of demonstrating orbital flight.

The Committee commends the House National Security Committee for authorizing funds for a reusable rocket technology program at the U.S. Air Force's Phillips Laboratory. The Committee joins the National Security Committee in supporting a strong supportive role in NASA's DC–XA and X–33 programs by the Department of Defense's highly successful Single Stage Rocket Technology (SSRT) program team.

The Committee commends NASA for continuing these programs based on the DC–X prototype initiated in the Department of Defense. The Committee further recommends that the reusable launch vehicle program continue with complementary activities being undertaken within the Department of Defense, as called for by the President's Space Transportation Policy and testimony to the Congress from senior Defense Department officials. The Committee believes that a complementary technology program within the Department of Defense is necessary for successful completion of the reusable launch vehicle program and commends the House National Security Committee and House Appropriations Committee for funding supportive activities within the Department of Defense.

Spacecraft and remote sensing

The Committee supports NASA's activities in this area to produce advanced technology and spacecraft systems intended to reduce the cost of conducting space missions and to support the commercial development of space. The Partnership for the Next Generation Vehicle (PNGV) is included in this account. PNGV, which is intended to develop commercial automotive technologies, has minimal application to advanced spacecraft or the commercial development of space. Consequently, the Committee recommends that funding for the PNGV within NASA be eliminated.

Earth applications systems

Earth Applications Systems includes activities by the Office of Space Access and Technology to produce active sensors, such as space-based radars and lasers, that will be compact enough to fit on small spacecraft. The program also includes development of mechanisms to reduce spacecraft "jitter" and safer pyrotechnics. The budget request for fiscal year 1996 is $71,100,000, an increase of $21,300,000 over the fiscal year 1995 appropriation. The Committee does not recommend this increase and favors an appropria-

tion frozen at the FY1995 level, a reduction in the budget request of $21,300,000.

There are several reasons for this action. First, NASA has not indicated a major user requirement for small active sensors. While Mission to Planet Earth might be expected to use such sensors, the Committee notes that Mission to Planet Earth managers have offered no plans to use such technology. At the same time, the Committee believes that the private sector has an interest in improving spacecraft pyrotechnics on its own in order to reduce insurance costs.

NASA's Commercial Remote Sensing Program is also funded through Earth Applications Systems. The Committee endorses and fully supports this program, which seeks to work with private sector data suppliers to improve the application of earth remote sensing data and notes that it has directed the Commercial Remote Sensing Program to manage the pilot program to study and purchase commercially-provided data for Mission to Planet Earth.

The authorization does not preclude NASA from funding existing activities at their current level or reprioritizing among existing activities.

Space processing

The Committee supports continuing space processing activities to help develop new products in space, bring the private sector into commercial space activities, and provide opportunities for student-industry interaction in space processing experiments. This activity will also benefit the space station program by providing direction for the utilization programs aboard the station. The Committee is aware that some space processing proposals from the university community have commercial potential, but may lack mature business plans due to the research background of academic investigators. The Committee supports efforts by NASA to help individuals with good concepts for space processing to develop sound business plans and partnerships with the private sector.

NASA robotics engineering consortium

The Committee fully supports NASA's Robotics Engineering Consortium, which brings together NASA, academia, industry, and state and local government to promote research and development of robotics technologies with civil space and commercial applications. The Committee notes that industry contributions to the consortium are exceeding expectations and commends all those involved for bringing a successful partnership to fruition.

Small spacecraft technology initiative

The Committee supports the Small Spacecraft Technology Initiative (SSTI), as a low-cost means of developing and flight-qualifying small satellite technologies which industry and the government can then use. The Committee has some concerns, however, that NASA may offer services from Earth-remote sensing platforms built under the SSTI that compete with the private sector. Because the United States government should encourage the commercial development of space to lower government costs and promote the creation of high-technology aerospace jobs that do not depend on federal out-

lays for their existence, the bill precludes NASA from conducting space technology missions that will compete with or otherwise preempt, any private sector activities to develop space commercially.

Commercial technology programs

The Committee notes that this program has grown from $27,800,000 in fiscal year 1994 to $40,400,000 in the President's request for fiscal year 1996. While the Committee commends NASA's efforts to spin-off technology to the private sector, it finds that many of the activities within the Commercial Technology Program are better performed within the private sector. These include activities funded under "commercial applications, business practices, and metrics," in the President's request, an account which provides funding for NASA to perform market research, develop business plans for the private sector, and assist in raising capital. Similarly, the Committee does not recommend any funding for "civil systems" within the Commercial Technology Program. NASA requested funds for civil systems to support the AdaNET, a facility in West Virginia which recycles old software, and the National Technology Transfer Center (NTTC), a clearinghouse for federal technology, which is also located in West Virginia. The Committee included a reduction of $30,400,000 to the Commercial Technology Program and recommends that no NASA funds be used to support the NTTC or AdaNET and directs NASA to leverage the $10,000,000 authorized for Commercial Technology Programs among those other activities which bring the greatest benefit. These should include effective use of the Internet and media for technology dissemination and marketing and more effective use of the Regional Technology Transfer Centers. The Committee also expects NASA to provide assistance to the private sector on a cost-reimbursable basis so that those companies which increase their profit margin with government assistance bear the financial burden of such government assistance.

Federal spaceport costs

$10,000,000 is authorized for either (1) defraying the costs of converting or redesigning commercially inconsistent elements of former federal facilities or (2) complying with federal laws or regulations relating to commercial space transportation infrastructure.

Launch voucher demonstration program

$20,000,000 is authorized for the Launch Voucher Demonstration Program. This authorization allows for the continuation of the bipartisan experiment, first authorized by the fiscal year 1993 NASA Authorization Act (P.L. 102–588). The goal of the program is to privatize suborbital and small orbital scientific payloads by demonstrating that the private sector can provide cheaper and faster launch services for small NASA missions. The voucher program will further identify providers of launch or payload integration services. The first voucher demonstration will take place in early 1996.

Sec. 102(a)(5) Aeronautical Research and Technology

Sectional analysis and recommendation

$826,900,000 is authorized for Aeronautical Research and Technology. This authorization includes: $354,700,000 for Research and Technology Base; $245,500,000 for High Speed Research; $133,000,000 for Advanced Subsonic Technology, except that no funds are authorized for concept studies for Advanced Traffic Management and Affordable Design and Manufacturing; $40,200,000 for High Performance Computing and Communication; and, $48,100,000 for Numerical Aerodynamic Simulation.

The Committee does not recommend funding High Performance Computing and Communications at the requested amount as these activities are currently funded throughout the federal government in amounts totalling over $1 billion. Further, the Committee fails to find justification for extensive applied research in global climate modelling under this program. The Advanced Subsonic technologies program is not recommended for the significant increase in funding that was requested, and funding for the new initiatives Advanced Air Traffic Technologies and Affordable Design and Manufacturing programs are not recommended. The sum of $5,400,000 is recommended for construction of facilities.

Program description

The Research and Technology Base, High Speed Research, Advanced Subsonic Technologies, Numerical Aerodynamic Simulation, and the High Performance Computing and Communications programs form the bulk of NASA's aeronautical research efforts. The core of these programs can be found in the Research and Technology Base where the focus is leading-edge research in propulsion and structures. Overcoming the significant challenges in the development of a High Speed Civil Transport, specifically; a safe, environmentally friendly supersonic transport whose cost efficiencies rival today's subsonic long-range aircraft, is the focus of the High Speed Research program.

Committee views

The Committee supports the goals of The National Aeronautics and Space Administration's aeronautics programs to ensure that basic aeronautical research conducted within the United States is unsurpassed. During the 104th Congress, however, the Congressional Budget Office has been critical of NASA aeronautics programs, including the Advanced Subsonics Technologies (AST) program, as being beneficial primarily to airlines and aircraft manufacturers by way of the conduct of research more appropriately belonging in the private sector. The Committee does in fact view many of the elements of this program as more mature than basic research, and wishes to ensure that federal funding be invested in NASA programs which supports broad aeronautical research efforts. With that in mind, the Committee urges that elements of the AST program be reviewed for consideration for reimbursement by the private sector. Research programs or elements thereof which should be considered for reimbursement with non-federal funds include, but are not restricted to: Terminal Area Productivity, Inte-

rior Noise Reduction, Fly-by-Light/Power-by-Wire, Civil Tiltrotor, Technology Integration and Environmental Assessment, and Composite Wing.

The Committee recommends that funding levels for NASA polymer-matrix composite programs be revised to achieve a balance between composite and metallic technologies. Aluminum has been the material of choice for all significant commercial aircraft structures, and continues to offer opportunities for cost effective improvements in aircraft structural performance.

Sec. 102(a)(6) Mission Communication Services

Sectional analysis and recommendation

$461,300,000 is authorized for Mission Communication Services. This authorization represents no change from the President's request.

Program description

The Tracking and Data Relay Satellite System (TDRSS) activities most directly related to the support of NASA's science and aeronautics programs is contained in the Mission Communication Services program. TDRSS is a critical communications link placed in geostationary orbit with ground facilities at White Sands, New Mexico. TDRSS provides high volume, continuous communication capability for almost all low-Earth orbit missions, including the Space Shuttle and the Hubble Space Telescope. It is also used for transmission of data from science missions and classified satellites. In January 1995, the contract for TDRSS replenishment was issued. It was contested shortly thereafter and settled in July 1995. The cost to the agency has risen an estimated additional $10,000,000 due to the delay. The agency is renegotiating the fixed price contract, which increases the cost of the procurement substantially.

Committee views

The Committee recommends that NASA place Mission Communication Services (under Science, Aeronautics and Technology) and Space Communication Services (under Mission Support) under one account, as was the case in years previous to fiscal year 1995.

Sec. 102(a)(7) Academic Programs

Sectional analysis and recommendation

$102,200,000 is authorized for Academic Programs. This represents a reduction of $16,500,000 from the President's request, freezing this account at the level of the fiscal year 1995 appropriation.

Program description

The Committee views the dramatic increase in the Academic Programs over the last several years, with concern. The request for fiscal year 1996 is 320 percent of the appropriated level in fiscal year 1991.

Committee views

In order to support and stimulate the effectiveness of NASA academic funding, NASA is encouraged to work with non-profit organizations to enhance the development of aerospace education programs through state-based teacher outreach. The goal of such a partnership should be to streamline the administration of NASA education programs, resulting in personnel reductions at NASA headquarters and field centers; lower costs; stimulate state participation in the civil space program; evolve the role of aerospace science in the classroom; and support teacher training in aerospace science.

The Committee also believes that space education is essential. The Spaceweek International Association, for example, holds an annual event with government, industry, and education organizations across the United States to educate the public about space. The Committee supports initiatives such as this one and believes that scheduling this type of event during the school year will maximize student participation.

The Committee supports NASA's educational activities as an important means of generating student interest in mathematics and the hard sciences.

Sec. 102(b) 1–3. Construction of Facilities

1. Of the funds authorized to be appropriated under subsection (a)(3), Mission to Planet Earth, $17,000,000 are authorized for construction of the Earth Systems Science Building at the Goddard Space Flight Center. 2. Of the funds authorized to be appropriated under subsection (a)(5), Aeronautical Research and Technology, $5,400,000 are authorized for modernization of the Unitary Wind Tunnel Complex at Ames Research Center. 3. Of the funds authorized to be appropriated under subsection (a)(2), $3,000,000 are authorized for the construction of an addition to the Microgravity and Development Laboratory at the Marshall Space Flight Center.

SECTION 103. MISSION SUPPORT

Sec. 103(1) Safety, Reliability, and Quality Assurance

Sectional analysis and recommendation

$37,600,000 is authorized for Safety, Reliability, and Quality Assurance. This authorization represents no change from the President's request.

Program description

NASA's agency-wide efforts to develop policies and practices to ensure safe operations and practices, quality controls, and reliable flight systems are funded under this account.

Committee views

The Committee considers safety, reliability, and quality a high priority and recommends an authorization of $37,600,000 for Safety, Reliability, and Quality Assurance in fiscal year 1996. This equals the President's request.

Sec. 103(2) Space Communication Services

Sectional analysis and recommendation

$319,400,000 is authorized for Space Communication Services. This authorization represents no change from the President's request.

Program description

These support activities encompass all of NASA's strategic enterprises and are contained in the Space Communication Services program. All Space Network major development activities are contained in Mission Support.

Sec. 103(3) Construction of Facilities

$152,600,000 is authorized for Construction of Facilities. This represents a $13,800,000 decrease from the President's request due to a general reduction.

Sec. 103(4) Research and Program Management

$2,094,800,000 is authorized for Research and Program Management. This represents a reduction of $108,000,000 from the President's request based on estimates of cost savings from NASA due to the latest buyout.

SECTION 104. INSPECTOR GENERAL

Sectional analysis and recommendation

$17,300,000 is authorized in fiscal year 1996 for the Office of Inspector General. The authorization represents no change from the President's request.

Program description

Funding for this account supports activities of the NASA Office of Inspector General in carrying out its responsibilities under the Inspector General Act of 1978, including conduct of independent audits and investigations of agency programs and operations, prevention and detection of waste, fraud and abuse in agency activities, and promotion of economy and efficiency within the agency.

SECTION 105. TOTAL AUTHORIZATION

Sectional analysis and recommendation

The total amount authorized under this Act for NASA for fiscal year 1996 is $11,547,400,000. The authorization for the International Space Station for fiscal year 1996, $2,114,800,000, was included in H.R. 1601, the International Space Station Authorization Act of 1995 (H. Rept. 104–210, filed July 28, 1995).

SECTION 106. ADDITIONAL AUTHORIZATION AND CORRESPONDING REDUCTION

Sectional analysis

The Committee adopted an amendment to authorize up to an additional $274,360,000 for Mission to Planet Earth from within the total NASA authorization level of $11,547,400,000. This increase in

the MTPE authorization requires the NASA Administrator to identify offsets in other NASA programs and submit those offsets to Congress for reprogramming approval before increasing the MTPE authorization beyond the $1,013,100,000 authorized in Section 102. None of the additional funds may be obligated or expended until (1) the National Academy of Sciences has conducted a comprehensive review of Mission to Planet Earth as part of its study of the U.S. Global Change Research Program and formally reported the results to Congress; (2) the NASA Administrator has developed and reported a plan to Congress for implementing the study's recommendations and formally requested all or part of the additional funds authorized for Mission to Planet Earth in Section 106; and, (3) 90 legislative days have passed after the Administrator's report is received by Congress.

Committee views

Although Section 106 requires the Administrator to match each increase to MTPE above $1,013,100,000 with a corresponding reduction in a different NASA program, the Administrator is not required to request an increase in MTPE.

The Administrator's reprogramming request should identify the specific offsets NASA proposes in order to accommodate a higher MTPE budget authority and an assessment of the impact those offsets will have on the affected programs. It is not the Committee's intention to defer its policymaking authority, budgetary judgments about Mission to Planet Earth, or comprehensive NASA program priorities to the National Academy of Sciences or the NASA Administrator. Should the Administrator request additional funding for Mission to Planet Earth, the Committee reserves the right to review the proposed increases against the specific offsets.

SECTION 107. LIMITED AVAILABILITY

The Committee adopted an amendment which states that nothing in the Act will interfere with the rights of any parties under contracts and that nothing in the Act precludes the Consortium for International Earth Science Network (CIESIN) from competing for future contracts awarded following a full and open competition. Funds for CIESIN in fiscal year 1996 were specifically eliminated in section 102(a)(3). CIESIN is not prejudiced from competing for future contracts, subject to a full and open competition, using funds other than fiscal year 1996 funds.

Subtitle B.—Restructuring the National Aeronautics and Space Administration.

SECTION 111. FINDINGS

Sectional analysis

Section 111 finds that restructuring NASA is essential to accomplishing space missions while balancing the federal budget; restructuring requires objective financial judgement; no formal economic review of NASA's infrastructure has been conducted; it is premature to close centers until such a formal economic review of the infrastructure and missions supported is performed; and, cost sav-

ings derived from the closing of NASA field centers are speculative and may risk mission goals unless derived from an asset-based analysis.

SECTION 112. ASSET-BASED REVIEW

Sectional analysis

Section 112 initiates a formal asset-based review by requiring the Administrator, within 30 days after enactment of this Act, to issue a Request for Proposals to perform the review. Qualified proposals shall be from United States persons whose primary business is corporate financial strategy, investment banking, accounting, or asset management. The proposals, at minimum, shall propose to review, for each capital asset owned by NASA, the primary function of the asset in relation to a NASA program; the existence of duplicative assets; the federal and non-federal users of the asset; the asset's necessity for carrying out a NASA program.

Section 112 (c) requires a report to Congress and the Administration no later than July 31, 1996, providing NASA a field center-by-center analysis of excess assets, assets that may be transferred to non-federal institutions and corporations, and a list of capital assets considered essential to be retained by NASA to conduct its missions. The report shall also examine the use of such assets in NASA programs, and provide a plan for achieving the most cost-effective consolidation of assets to support programs, including using non-federal assets when appropriate. The report shall also analyze the assets themselves, from the standpoint of maintenance and operational costs, valuation of the assets, and the most cost-effective strategy for maintaining, replacing, upgrading or disposing of the asset.

Section 112 (d) implements the findings of the asset-based review by having the Administrator review the findings and requiring the President to propose implementing legislation to Congress not later than September 30, 1996. Section 112 (e) prohibits the Administrator from closing any NASA field center until after the asset-based review is completed and the report to Congress is transmitted. The Administrator may close only field centers that would become obsolete as a result of enactment of legislation to implement the Administrator's recommendations.

Committee views

NASA has formally proposed to cut more than $4,000,000,000 from its planned program cost over five years without cutting programs or missions, or closing any of its ten field center facilities. At first glance, this goal would seem impossible. The general methods for achieving cost savings of this magnitude are limited to actions that cut program content, reduce civil service employees, and close federal facilities. Efficiency improvements, quality and productivity efforts, process monitoring, and other management-driven reform programs have been initiated at NASA; unfortunately, these reforms take time and require some investment to achieve results. In any case, these kinds of reforms, while commendable as management initiatives, will not provide cost savings in addition to those previously baselined.

The Committee recognizes the commendable goals of maintaining programs and not closing field centers, and thus, has proposed the asset-based review. Instead of summarily closing some of NASA's field centers, the Committee intends for the asset-based review to take the next logical step between the NASA Federal Laboratory Review and closing NASA field centers. The NASA Federal Laboratory Review identified the strategic strengths of NASA field centers and proposed ways for reducing the breadth of activity undertaken by the centers. It also proposed additional management reforms and standardization of procedures between centers. The Committee notes that NASA's zero-based review, while basing much of its work on the NASA Federal Laboratory Review, only proposes the consolidation of activities in a particular strategic enterprise. This amounts to little more than relocating particular research disciplines from two or more centers into one or two. It is implied by the series of relocations that enough attrition of civil service employees might thereby occur to save significant funds. The Committee does not believe attrition from relocations will either produce sufficient cost savings or result in a NASA that maintains necessary skills for the conduct of its missions.

The asset-based review, on the other hand, will address the fundamental building blocks of the modern NASA budget: the assets which are owned by NASA, maintained and operated by civil servants, in the furtherance of NASA missions and programs. An analysis of NASA's cost structure based on programs and missions would be entirely misleading in today's NASA culture. The traditional impulse of NASA field center directors has been to justify annual budgets based on a comparatively subjective assessment of the center's importance or contribution to a particular program. This practice has resulted in centers obtaining work for part of a program in order to justify assets owned and resources to be consumed maintaining them, in the center's budget request submitted to headquarters. Alternatively, this practice resulted in each center acquiring new assets under the aegis of a program or mission, and which became duplicative of similar assets elsewhere in the NASA system.

The Committee firmly intends that the contractor selected to conduct the asset-based review be from outside the traditional NASA contracting community, (i.e., not an aerospace or engineering firm) rather, the Committee directs that qualified proposals shall be from U.S. persons whose primary business is "corporate financial strategy, investment banking, accounting, or asset management." The Committee intends that this review be conducted as dispassionately as possible, and without political considerations. In short, the review should be conducted as though a private investor had purchased NASA "lock, stock, and barrel" with the intention of turning it into a profitable business.

The Committee does not specify the scope of assets to be reviewed by the asset-based review contractor. The Committee believes some assets which drive large personnel costs are small, for instance some computer workstations. The Committee relies on the judgement of the contractor to target the range of assets that it believes will cause the greatest reduction in costs.

Ideally, the most productive civil servants are those who are responsible for assets representing many times their cost of employment. The individual who operates the crane in Kennedy Space Center's Vehicle Assembly Building, which lifts the $2 billion Space Shuttle Orbiter from the floor to be attached to the Shuttle's external tank, is arguably the single most productive person in the entire federal government by this standard.

The Committee observes how the aerospace industry has managed its own down-sizing and restructuring by engaging in formal economic reviews of its capital asset base. Each merger and divestment decision taken by the aerospace industry has been guided by the residual value and earnings potential of capital assets. The Committee believes NASA can act as a private corporation would in considering the contribution of each capital asset it owns to the missions it undertakes. As NASA's budgets have declined considerably since 1992, the assets supported and maintained have remained relatively constant. Any company facing a declining sales base would determine which assets should be retired, sold and leased back, or otherwise managed for maximum return.

A function of NASA's failure to manage according to assets is that resources to upgrade or modernize necessary assets are not made available by reducing unneeded assets. The asset-based review will provide the Administrator guidance for improving the use and utility of important assets, including strategies for upgrading or replacing these critical assets cost-effectively.

The Committee intends the asset-based review to provide Congress and the Administrator with objective information to use in making downsizing decisions while supporting all programs and missions approved by Congress. The Committee does not believe decisions to close NASA field centers can be made intelligently without having the formal economic analysis of center assets provided by this subtitle.

The Committee also believes a formal "Reduction In Force," if implemented under the present civil service system, would neither result in significant cost reduction nor provide necessary skills to conduct missions. The appropriate way to reduce employment is to reduce excess assets and, subsequently, the people charged with maintaining and operating unneeded assets.

Subtitle C.—Limitations and Special Authority

SECTION 121. USE OF FUNDS FOR CONSTRUCTION

This section authorizes the use of funds appropriated for program purposes other than construction of facilities and personnel and travel-related costs in the Human Space Flight; Science, Aeronautics and Technology; and Mission Support accounts, for the construction of new facilities or repair of existing facilities at any location. The authorization is subject to a limitation that funds may not be expended for projects exceeding $500,000 until 30 days have passed following a report to the House Committee on Science and to the Committee on Commerce, Science, and Transportation of the Senate. This section would also provide for vesting of legal title in the United States when funds are used under this section for grants to academic institutions for additional research facilities.

The Committee wishes to emphasize that the sole purpose of consolidating in one section the various provisions in previous authorization acts and bills concerning use of funds for construction of facilities purposes is to streamline and simplify the applicable legal authorities. This change from past practice should in no way be viewed as a dilution of the agency's authority to manage the construction of facilities program, or to realign the respective authorities and responsibilities of NASA Headquarters in relation to the Centers. With respect to the latter, the Committee expects the agency to establish the necessary internal procedures to ensure that construction of facilities decisions continue to be made in an orderly and fully justified manner.

SECTION 122. AVAILABILITY OF APPROPRIATED AMOUNTS

Section 122 provides for funds authorized for Human Space Flight; Science, Aeronautics, and Technology; Mission Support; and, Inspector General to remain available until expended.

SECTION 123. REPROGRAMMING FOR CONSTRUCTION OF FACILITIES

Section 123 establishes authority for the Administrator to vary upward the amount of funds authorized for specific construction of facilities projects, provided that the total authorization for construction of facilities is not increased as a result of such reprogramming actions. This section also authorizes the Administrator to use up to $10,000,000 of amounts authorized in this bill for construction of facilities for projects that result from new and unforeseen developments in the national civil space program, subject to notification to the House and Senate authorizing committees.

SECTION 124. CONSIDERATION BY COMMITTEES

Section 124 establishes a requirement that the Administrator report in advance to the respective House and Senate authorizing committees the use of appropriated funds for a program where the Congress did not provide funding as requested; the amount of funds proposed to be used exceeds the amount authorized for the program under subtitle A of this bill; or the program was not presented to the Congress in the President's budget request. This section also obliges NASA to keep the authorizing committees fully apprised of agency activities and responsibilities within the jurisdiction of those committees, including the provision of information requested by either committee that relates thereto.

SECTION 125. LIMITATION ON OBLIGATION OF UNAUTHORIZED APPROPRIATIONS

Section 125 requires the Administrator to submit a report to the Congress and to the Comptroller General on fiscal year 1996 appropriations for programs not authorized under subtitle A of this bill or that exceed authorized amounts for specific programs. The report is to be submitted within 30 days following enactment of an appropriations act for fiscal year 1996. Section 115 also requires the Administrator to publish a Federal Register notice seeking public comment on programs for which funds are appropriated but

which were not authorized in this bill, and limits the obligation of such funds until 30 days following close of the comment period.

SECTION 126. USE OF FUNDS FOR SCIENTIFIC CONSULTATIONS OR EXTRAORDINARY EXPENSES

Section 126 authorizes the Administrator to use funds appropriated for Science, Aeronautics, and Technology activities, in an amount not exceeding $30,000 per fiscal year, for scientific consultations or extraordinary expenses.

SECTION 127. LIMITATION ON TRANSFERS TO RUSSIA

The Committee prohibits the transfer of funds authorized to be appropriated under this Act to Russia unless the following conditions are met: (1) the payment or transfer is authorized by this Act; (2) the payment or transfer is made in accordance with a written agreement between NASA and Russia; (3) during the term of such written agreement, a monthly report to NASA that fully accounts for the deposition of U.S. funds, including information as to whom, when, in what currency the funds are paid to Russia contractors or subcontractors, and the balance of funds not disbursed at the time of the report; (4) Russia provides all reports as required by this section; and (5) the President of the United States has certified to Congress that the presence of any troops of either the Russian Federation or the Commonwealth of Independent States, or any action by the Russian Federation or the Commonwealth of Independent States, does not violate the sovereignty of the Baltic states, or any other independent state of the former Soviet Union. The section defines the term "Russia" to mean the Government of the Russian Federation, the Russian Space Agency, or any agency or instrumentality of the Government of the Russian Federation or the Russia Space Agency.

The Committee recognizes that the deliberately contractual nature of the agreements between NASA and the Government of the Russian Federation and the Russian Space Agency (RA) is intended to assure value received for any funds paid or transferred by NASA pursuant to the Interim Agreement between NASA and RA (Contract NAS15–10110). This section is not intended to constitute or supplant the function of a contract compliance audit. However, the Committee also recognizes the economic and political pressures that bear on even official institutions of the Russian government, including quasi-private firms having access to hard currency. The Committee is also aware that financial regulations in Russia are evolving at this time. The Committee's intent, as expressed by this section, is to help preserve the value (buying and/or negotiating power) of U.S. funds paid by NASA to Russia. The purpose of this section is to help the Committee understand, and to assure, the timely procurement and completion of Russia's tasks under the firm fixed-price contracts.

Furthermore, the Committee believes the sovereignty of the Newly Independent States of the former Soviet Union and the Baltic nations of Estonia, Latvia, and Lithuania is fundamental to the positive new relationship between the United States and Russia. The Committee believes it would be inconsistent with U.S. policy for NASA to continue transacting business with Russia on space

projects in the event that Russia, or the Commonwealth of Independent States, violates the sovereignty of Estonia, Latvia, Lithuania or any other independent states of the former Soviet Union. Accordingly, the President is required to certify, annually upon submission of the budget request, that the sovereignty of these states has not been violated by the Russian Federation or the Commonwealth of Independent States before payments or transfers to Russia, as authorized by this Act, can take place.

SECTION 201. COMMERCIAL SPACE LAUNCH AMENDMENTS

Sectional analysis and recommendation

This section amends Chapter 701 of title 49, United States Code, entitled "Commercial Space Launch Activities," which is a recodification of the Commercial Space Launch Act of 1984. The purpose of the amendments is to establish a statutory framework for the licensing of commercial reentry activities by the Secretary of Transportation, clarify certain provision in Chapter 701, and provide for criteria for accepting a license application. $6,000,000 is authorized for the Secretary to carry out Chapter 701 for fiscal year 1996. None of these funds may be expended for policy analysis activities outside the scope of the Secretary's regulatory responsibilities under Chapter 701.

The Commercial Space Launch Act is further amended to expand the definition of "launch services" to those activities directly related to the preparation of a launch site or payload facility. Under Section 70105, the Secretary of Transportation is directed to notify the authorizing House and Senate Committees within 7 days after a license has not been issued within the deadline. The Secretary may establish procedures for certification of the safety of a launch or reentry vehicle. The Secretary is also given the authority to develop regulations establishing criteria for accepting an application for a license within the 60 days after receipt of such application. The Secretary is directed to establish criteria and procedures for determining the priority of competing requests from the private sector and State governments for property and services under section 70111. The term "license" is amended to "launch reentry or site operator license" under section 70112 on liability insurance.

Program description

The Department of Transportation, through its Office of Commercial Space Transportation, is responsible for implementing Chapter 701 which authorizes the Secretary of Transportation to license and regulate the nongovernmental space launch and reentry of a vehicle and operation of a launch or reentry site. In addition, by virtue of Executive Order 12465, the Department has lead agency responsibilities within the Executive Branch to encourage, facilitate and coordinate development of commercial expendable launch vehicle operations by private U.S. enterprises.

Committee views

When the Commercial Space Launch Act was passed in 1984 (P.L. 98–575) and when it was amended in 1988 (P.L. 100–657), Congress did not address the full range of space transportation ac-

tivities that the private sector could undertake on a commercial basis. Specifically, commercial space activities involving reentry vehicles that are returned to Earth from Earth orbit or from exo-atmospheric flight were not encompassed, and were not intended to be encompassed, by the statute. Market demand to support commercial reentry ventures has yet to emerge. However, the private sector is beginning to demonstrate technical capability to undertake such activities if a suitable profit making opportunity were presented. In recognition of these developments, the Committee wishes to establish the appropriate legal framework to ensure public safety is protected while minimizing regulatory burden, delay or uncertainty that could inhibit commercial exploitation of reentry capabilities. In addition to establishing a regulatory regime for commercial reentries, the Committee intends these amendments to address certain issues that have arisen regarding the definition of "launch," the extent to which activities before and after launch may be licensed or regulated, and applicability of the third party liability provisions of sections 70112 and 70113 of Chapter 701.

In establishing the legal framework for reentry, the Committee's approach is to treat reentry of a reentry vehicle the same as launch of a launch vehicle. Reentries described in section 70104(a) must be licensed, just as launches meeting these same criteria must be licensed. In addition, amendments to other sections of Chapter 701 grant to the Secretary the same authority and responsibility with respect to the licensing and regulation of the reentry of reentry vehicles as existing law provides to the Secretary with respect to the launch of vehicles.

An amendment to section 70102 also adds the phrase "from Earth" to the existing definition of "launch" in order to make clear the original intention of the Commercial Space Launch Act that the launch of a launch vehicle is an event that takes place from Earth, not from Earth orbit or otherwise from or in outer space. Although the definition of launch in the original Act lacks this explicit specification, the Act was otherwise quite clear that a launch for purposes of the license requirement takes place from a "launch site," which is defined in terms of a location "on Earth." Moreover, the legislative history of the commercial Space Launch Act demonstrates that only launches from Earth were envisioned.

The amendment to section 70102 was originally prompted by a concern that the Department of Transportation was advocating the position that a reentry is subject to a launch license requirement on the grounds that reentry entailed the placing of a launch vehicle in a suborbital trajectory "from Earth orbit." Although the Department has since abandoned that position, the committee wishes by this amendment to register its emphatic rejection of any interpretation of "launch" that would include space transportation activities that do not begin from Earth; such as reentry, the transfer of a satellite between one Earth orbit and another, or any other on-orbit operation after a launch is completed and before reentry is initiated.

The Committee intends that for purposes of the license requirement, reentry begins when the vehicle is prepared specifically for reentry. By way of definition, the Committee intends the term to apply to that phase of the overall space mission during which the

reentry is intentionally initiated. Although this may vary slightly from system to system, as a general matter the Committee expects reentry to begin when the vehicles's attitude is oriented for propulsion firing to place the vehicle on its reentry trajectory.

The Committee acknowledges that in order to issue a license the Department must be satisfied that an applicant has demonstrated capability to carry out a reentry safely and without jeopardy to critical national interests. The Committee also appreciates that, to evaluate capability, the Department may need to examine certain of the applicant's proposed procedures and activities that would precede initiation of reentry. However, the Committee wishes to make clear that these pre-reentry procedures or activities are not events requiring a license, nor otherwise subject to regulation. Rather, they would represent aspects of an application that the Department would have to measure against standards and criteria that the Department has established are necessary to evaluate capability to conduct the reentry. These standards and criteria may be generally applicable to all applicants or specific to a particular proposal. The Committee urges the Department to take the steps necessary to ensure that they are clearly articulated and understandable to license applicants.

These same principles should apply to the licensing of a launch. There has been much discussion about what activities, should be encompassed by the term "launch" for purposes of the license requirement. It is the Committee's view that there may be activities that precede flight that (1) are closely proximate in time to ignition or lift-off, (2) entail critical steps preparatory to initiating flight, (3) are unique to space launch, and (4) are inherently so hazardous as to warrant the Department's regulatory oversight under Chapter 701, For instance, once a launch vehicle is fueled and armed in preparation for a launch, whether from the ground or the air, the risk of an inadvertent ignition may be sufficiently high to justify an interpretation of launch that would encompass this pre-flight phase of the launch campaign.

The Committee recognizes that, given the very different preparatory process associated with individual launch vehicle systems, it may be difficult to pinpoint the same commencement of launch for all proposals. However, the Committee views with concern the Department's attempt to address this situation by using a license to indiscriminately cover all activities of a licensee at a launch facility before, during, and after a launch. The Committee believes that the Department can identify when a launch begins both for well-established launch systems as well as emerging systems. This would limit applicability of the Department's license requirement for purposes of obtaining a license and implementing the insurance and risk allocation provisions in Chapter 701.

The original Act intended that a launch ends, as far as the launch vehicle's payload is concerned, once the launch vehicle places the payload in Earth orbit or in the planned trajectory in outer space. The Committee wishes to make clear that the Secretary has no authority to license or regulate activities that take place between the end of the launch phase and the beginning of the reentry phase, such as maneuvers between two Earth orbits or other non-reentry operations in Earth orbit; or after the end of a

launch phase in the case of missions where the payload is not a reentry vehicle.

Sections 70112 and 70113, establishing an allocation of risk regime, are also amended to cover reentry in the same way that launches are covered. The Committee notes that these provisions apply to losses sustained as a result of licensed activities, (i.e., launches and reentries) not events or activities before launch, between launch and reentry, or after reentry. Once a launch or a reentry is completed no protection against third party liability is intended to be provided under Chapter 701 unless there is a clear causal nexus between the loss and the behavior of the launch or reentry vehicle. For instance, if, subsequent to a launch vehicle's successful deployment of a payload that is not a reentry vehicle, the payload returns to Earth and causes third party loss, the loss is not intended to be covered by sections 70112 and 70113. As another example, if during an airborne launch, the aircraft suffers an accident after the vehicle has separated from the aircraft and taken off, and the accident is not attributable to the launch vehicle, then this event is also not intended to be covered by sections 70112 and 70113.

To clarify applicability of sections 70112 and 70113 to licensed activities, the Committee recommends that the Secretary initiate a rule-making action to address both launch and reentry insurance and allocation of risk requirements as soon as reasonably practicable following enactment of this bill.

Additional amendments authorizing criteria for license application acceptance

Section 201 also amends Chapter 701 to authorize the Secretary to issue regulations establishing criteria for acceptance of a license application. The acceptance or rejection must be made within 60 days of receipt of the application. The purpose of this amendment is to (1) limit the undue expenditure of Office resources on determining whether an application is viable, and (2) to provide the applicant with timely notice of whether the application will be accepted.

Sectional analysis and recommendation

$6,000,000 is authorized for the Office of Commercial Space Transportation within the Department of Transportation.

Committee views

The Committee views with concern the allocation of resources currently being provided for regulatory activities within the Office of Commercial Space Transportation, Department of Transportation. The Committee has consistently held since the creation of that office, that the primary duty of the Office of Commercial Space Transportation is to regulate commercial launches and launch site operators. Promotion and advocacy, are of secondary importance. By limiting the Office's policy-making functions to only those within its regulatory responsibilities, OCST will be able to concentrate on developing critical safety and insurance regulations, and licensing and certification procedures.

The Committee notes that the current number of office personnel devoted to regulatory activities is less than half of total personnel. This reflects a downward trend during the past 12 months in numbers of regulatory personnel. The Committee also notes that the remaining number, a majority of all office personnel, are devoted to non-regulatory activities, including representation at bilateral trade negotiations and promotional activities.

The Committee directs the Office of Commercial Space Transportation to immediately correct the current imbalance in the number of personnel devoted to regulatory activities in order to reflect the priority of those duties. The Committee notes the requirement that regulatory personnel have the requisite technical and regulatory experience and skill level commensurate with the duties and responsibilities they are assigned. A written report on the revised allocation of office personnel is required to be submitted to the House Science Committee no later than December 31, 1995.

It is the recommendation of the Committee that should the proposed transfer of the Office of Commercial Space Transportation from the Office of the Secretary to the Federal Aviation Administration (FAA) be undertaken, that the Office of Commercial Space Transportation be recognized as an independent division of the FAA with the same level of authority as the six current divisions. In addition, OCST should be allowed to operate autonomously in both its budget and personnel matters and that the Director of OCST should report directly to the FAA Administrator or his deputy.

SECTION 202. OFFICE OF AIR AND SPACE COMMERCIALIZATION AUTHORIZATION

Sectional analysis and recommendation

$457,000 is authorized for the Department of Commerce Office of Air and Space Commercialization (OASC).

Program description

The Office of Air and Space Commercialization assists the Secretary of Commerce in efforts to promote the commercial development of space through policy development, export licensing, and commercial remote sensing satellite regulation.

Committee views

While the Committee commends the Office for its excellent work in the past, the Committee is concerned about the other forces within the Administration that are interfering with OASC's ability to effectively and efficiently coordinate and license commercial remote sensing satellites. The U.S. government is required to consider and issue or reject a license application to launch and operate a private remote sensing satellite within 120 days of a company's complete submission of an application. Over the past two years, this process has taken as long as eight months for some applications. Other reviews, such as those triggered by the addition of foreign partners, have taken longer than allowed. The Committee is aware that the Department of State is the source of many of these delays and is concerned that the Department of State may be ex-

ceeding its authority in the review process to make policy inconsistent with the President's policy direction.

The Committee recognizes that the licensing process involves interagency cooperation and consultation, over which OASC has no authority. Consequently, responsibility for failure to comply with legally-mandated licensing deadlines rests with the White House, which is clearly not performing its agency coordination and oversight functions. Continued failures on the part of the Administration to provide a reliable regulatory regime for this emerging industry will undermine the willingness and ability of entrepreneurs to invest in commercial space activity, thereby threatening existing and potential high-technology jobs in the U.S. commercial space sector and the overall space technology base in the United States. Moreover, the Administration's inability to manage the interagency process, make license determinations on time, and ensure an efficient review process will undermine the ability of U.S. firms to compete with foreign enterprises on the market, again threatening U.S. aerospace jobs. The Committee urges the President to take all necessary steps to ensure that his Administration lives up to its obligations and will continue to closely monitor the licensing process.

SECTION 203. REQUIREMENT FOR INDEPENDENT COST ANALYSIS

Section 203 requires the NASA Chief Financial Officer to conduct independent cost analyses of all new projects estimated to cost in excess of $5,000,000, and to report the results of the analyses to the Congress when the President's budget request is submitted. The Committee views this provision as critical to its ongoing oversight and authorization responsibilities, as well as Congressional support for current and future NASA programs.

SECTION 204. NATIONAL AERONAUTICS AND SPACE ACT OF 1958 AMENDMENTS

Automotive research

Section 102 of the National Aeronautics and Space Act of 1958 is amended to delete subsection (c), which relates to automotive research. With a declining budget profile for the next five years, the Committee recommends that NASA concentrate its resources on basic aeronautics and space research.

Reports to the Congress

Section 204 amends the National Aeronautics and Space Act of 1958 to conform to Executive Branch practice the statutory requirement for the President to submit a report on governmental aeronautics and space activities and accomplishments, and to allow adequate time to prepare the report. Accordingly, the President is required to submit to Congress the annual aeronautics and space report in May, rather than January; and to address in the report activities carried out by government agencies on a fiscal, rather than calendar, year basis.

Disclosure of technical data

Section 204 also amends the National Aeronautics and Space Act of 1958 by the addition of provisions that authorize the Adminis-

trator, under certain circumstances, to withhold from public disclosure technical data generated in the performance of experimental, development, or research activities funded jointly by NASA and the private sector that would enhance U.S. aerospace industry competitiveness.

Under existing authority (42 U.S.C. 22454(b)), NASA is authorized to withhold from public disclosure for up to five years information that (1) results from activities conducted under an agreement entered into under section 203(c) (5) and (6) of the National Aeronautics and Space Act of 1958, and (2) would be exempt from disclosure as a trade secret or commercial or financial information privileged or confidential under the Freedom of Information Act if it were obtained from a nongovernmental participant in the activities. However, this authority does not necessarily apply to the product of jointly-funded research and development initiatives.

The absence of appropriate protection for commercially-sensitive data can be an obstacle to industry involvement and investment in cooperative projects with NASA. Private sector participation and cost-sharing in NASA projects could be encouraged by allowing temporary protection for certain kinds of commercially sensitive data that may emerge from cooperative initiatives. At the same time, the Committee supports fundamental principles of open access to Government information that underlie the Freedom of Information Act.

The amendment set forth in Section 204 seeks to balance these competing interests. Subject to issuance of regulations implementing this provision, the Administrator is authorized to afford limited and temporary protection for up to five years of technical data generated in the course of joint NASA-private sector research activities and programs as long as such activities include cost-sharing by the industry partners. "Technical data" is defined as any recorded information, including computer software that is, or may be, directly applicable to the design, engineering, development, production, manufacture, or operation of products or processes that may have significant value in maintaining leadership or competitiveness in civil and governmental aeronautical and space activities by the United States industrial base. Regulations required to be issued are to include guidance for evaluating data from cooperative projects to determine whether it is encompassed by the definition of "technical data"; specification of the period(s) of nondisclosure for different types of technical data, including a requirement that the full five-year nondisclosure period is available only if the private sector share of funding is at least 50%; and identification of those experimental, developmental, or research activities that could generate technical data protected under this amendment. The Committee believes that NASA should study whether the regulations should provide for a sliding scale that would provide longer periods of protection for larger amounts of cost-sharing by industry. Cost-sharing means the expenditure by industry of private funds directly on the joint research activities.

SECTION 205. PROCUREMENT

This section establishes a program of expedited technology procurement to demonstrate how innovative technology concepts gen-

erated by the private sector can quickly be brought to bear upon NASA space missions.

Subsection (a) creates a procurement demonstration program within the Office of Space Access and Technology with a sunset provision of ten years. At least one percent of the amounts authorized for this office shall be used for innovative technology procurement of space hardware, technology or services from the private sector.

Evaluation of these technology concepts against the agency's mission requirements shall be conducted by NASA's Advisory Council. The Administrator is given special authority to hire, for limited term appointments, persons outside of NASA with expertise in relevant innovative technology concepts. In the past, NASA has been unreceptive to new solutions or ideas that came from outside the agency. This subsection is designed to generate creative solutions from the private sector which shall be applied to the missions of NASA.

Subsection (b) calls for a technology procurement initiative wherein the Administrator is required to certify that no functional equivalent of space hardware, technology, or service exists in the commercial sector or other, non-NASA federal agency before NASA can proceed with any procurement. The Administrator is required to comment in the Commerce Business Daily. This subsection is intended to ensure that NASA pursues "off-the-shelf" technology available from the private sector or another non-NASA federal agency before soliciting a more expensive one-of-a-kind procurement.

SECTION 206. ADDITIONAL NATIONAL AERONAUTICS AND SPACE ADMINISTRATION FACILITIES

This section requires the Administrator to determine, prior to construction or lease of new facilities, that no existing NASA or other federally-owned facilities are appropriate for the intended use.

SECTION 207. PURCHASE OF SPACE SCIENCE DATA

This section requires NASA, to the maximum extent possible, to purchase space science data from the private sector and to accomplish these procurements through a competitive bidding process.

The purpose of this section is to encourage the Administrator of NASA to acquire space science data commercially. For those data sets with both scientific merit and commercial appeal, NASA can spur commercial enterprises while acquiring the data faster and cheaper.

SECTION 208. REPORT ON MISSION TO PLANET EARTH

The Administrator shall, within six months after the date of enactment of this act, transmit to Congress a report on Mission to Planet Earth including the following: (1) an analysis of Earth observation systems of other countries to include current and historical data sets; (2) an analysis of how Department of Defense airborne and space sensor systems could be used in MTPE; (3) a plan for infusing advanced technology into the MTPE program; (4) a

plan to solicit proposals from the private sector on how to accomplish the goals of MTPE; (5) an integrated plan for research in the Scientific and MTPE enterprises in NASA; (6) a plan for developing metrics and milestones to quantify the performance of MTPE; and, (7) an analysis of how the U.S. government can use the space-based and airborne remote sensing data, services, distribution, and applications of the private sector to meet MTPE goals.

SECTION 209. SHUTTLE PRIVATIZATION

Sectional analysis and recommendation

The Administrator shall publish, within 30 days after enactment of this Act, in the Commerce Business Daily a request for proposals (RFP) to achieve a single prime contract for the space shuttle program. Certain criteria for the proposals are laid out, including a requirement that each proposal be accompanied by a plan to privatize the space shuttle program. The Administrator shall forward the privatization plans to Congress not later than 30 days after the deadline for submitting proposals to the RFP.

The Committee adopted an amendment directing the Administrator to prepare for an orderly transition from the federal operation, or federal management of contracted operation, of space transportation systems to federal purchase of commercial space transportation services. The Administrator shall also plan for the potential privatization of the Space Shuttle program.

The section includes a prohibition of funds authorized under this Act being used to plan or prepare for Federal Government, or federally contracted, operation of the Space Shuttle beyond the year 2012, or for studying, designing, or developing upgrades to the Shuttle whose sole purpose is to extend the operational life of the Space Shuttle system beyond 2012.

The Committee adopted an amendment to the aforementioned amendment which allows the federal, or federally contracted, operations of the Space Shuttle through 2012, or the privatized operation of the Space Shuttle after the year 2012.

Committee view

In order to realize cost savings in the shuttle program, the Committee directs the NASA Administrator to move forward with a single prime contract. Each proposal is required to contain a privatization plan. The Committee is interested in receiving expert input on privatization from the individuals who are intimately involved in the shuttle program. Privatization is the next logical step beyond consolidation of existing contracts and should be carried out in a manner that provides for a safe and efficient transition to private enterprise.

The Committee supports human spaceflight and endorses the concept of a derivative of a reusable launch vehicle to satisfy the requirement for a manned successor to the space shuttle program. This follow-on project should become operational prior to the planned milestone of the year 2012, at which time major decisions will have to have been reached regarding the service life extension of the shuttle. It is hoped that any such system will be operated by the private sector as will any operation of the shuttle by and

beyond 2012. It is with this in mind that the Committee wishes to restrict any modifications to the shuttle that serve solely to extend its operating life past this milestone. The Committee views the goal of a privately operated follow-on to the shuttle program as one that is achievable by this date but will reserve the right to monitor the progress of both programs and revise any milestones accordingly.

SECTION 210. AERONAUTICAL RESEARCH AND TECHNOLOGY FACILITIES

Sectional analysis

No funds may be obligated beyond the authorized amount in this bill, unless the Administrator receives full reimbursement of such excess amounts from non-federal sources.

Committee view

The Committee has responded to a report by the Congressional Budget Office that has been critical of certain programs within the NASA Aeronautics program. Programmatic descriptions of some of the elements of the Advanced Subsonic Technologies program in particular, lend themselves to being interpreted as more mature than basic research. While there is no question that domestic aerospace manufacturers are competing with heavily subsidized foreign aircraft companies, it is not the responsibility of NASA to respond in kind. To that end, any funds obligated in excess of the amounts authorized by this Act for Aeronautics Research and Technology programs will require the Administrator to receive full reimbursement from non-federal sources.

SECTION 211. LAUNCH VOUCHER DEMONSTRATION PROGRAM AMENDMENTS

Sectional analysis

Launch Voucher Demonstration Program Amendments, Section 504 of the fiscal year 1993 National Aeronautics and Space Administration Act (P.L. 102–588) is amended by striking out outdated references to dates and offices.

SECTION 212. PRIVATIZATION OF MICROGRAVITY PARABOLIC FLIGHT OPERATIONS

The Committee accepted an amendment to privatize all parabolic microgravity flight operations conducted by or for NASA. The Committee's intent in adopting this amendment is to accelerate the development of a new commercial space-related industry and save scarce federal resources. The Committee believes that such action is consistent with the desire Congress and the NASA Administrator have expressed to spin-off NASA activities that can be performed by the private sector at a lower cost.

The Committee's intention in privatizing microgravity flights is to change NASA from a provider of services to the commercial sector into a consumer of services provided by the private sector, which presumably will also earn revenue and cover overhead expenses from private-sector consumers of such services. Prior to discontinuing its own microgravity parabolic flights, as required by this section, NASA should report to the House Committee on Science and the Senate Committee on Commerce, Science, and

Transportation any shortfalls in the private sector's ability to meet NASA needs, any steps NASA can take to help the private sector rectify those shortcomings, and the expected budgetary impact of privatizing microgravity flights.

SECTION 213. ELIGIBILITY FOR AWARDS

Sectional analysis and recommendation

The Administrator is directed to exclude from consideration of awards of financial assistance by NASA after fiscal year 1995, any person who received funds appropriated for a fiscal year after fiscal year 1995, from federal funding that was not subjected to a competitive, merit-based award process. This exclusion is effective for five years after the person receives such federal funds. This section shall not apply to persons who are members of a class specified by law for which assistance is awarded to members of the class according to a formula provided by law.

Committee view

The Committee has long opposed the use of NASA funds for earmarked projects, as a corruption of the well-established peer review process. Section 213 is intended to ensure that funds authorized under this Act are not expended unless a competitive, merit-based, peer reviewed process is used to award the financial assistance. With the exception of persons who are a member of a class specified by law for which assistance is awarded to members of the class according to a formula provided by law, anyone who, after fiscal year 1995, receives funds for a project that was not subjected to a competitive, merit-based award process is to be excluded from awards of financial assistance under this Act.

SECTION 214. PROHIBITION OF LOBBYING ACTIVITIES

Sectional analysis and recommendation

None of the funds authorized by this Act shall be available for lobbying activities. This section shall not prevent departments or agencies from communicating with Congress on the request of any Member or to Congress on legislation or appropriations.

Committee views

The Committee strongly opposes the use of federal funds for the purpose of lobbying Members of Congress.

SECTION 215. LIMITATION ON APPROPRIATIONS

Sectional analysis and recommendation

Fiscal year 1996 sums can be used for only those activities and those specific amounts that are specifically authorized by this Act. Any subsequent fiscal years must be specifically authorized by this Act.

Committee views

Section 215 emphasizes the Committee position that the only funds authorized to be appropriated for the activities of NASA (other than the International Space Station), the Office of Commer-

cial Space Transportation of the Department of Transportation, and the Office of Air and Space Commercialization of the Department of Commerce are made available through this Act. It is the Committee's clear intent that annual authorizations are required for appropriations to be authorized. Organic act authority is enabling of agency missions and programmatic activity, but not sufficient to authorize actual funding.

SECTION 216. UNITARY WIND TUNNEL PLAN ACT OF 1949 AMENDMENTS

Sectional analysis

This section is amended to reflect the fact that the Unitary Wind Tunnel Act of 1949, as amended in 1958 does not include provisions for hypersonic facilities. It is further amended to include research and engineering centers along with laboratories for construction or expansion of wind tunnel facilities covered under the Act.

Committee view

The Committee wishes to encourage ongoing studies into the development of advanced aeronautic facilities. The Committee also recognizes that NASA and its industry partners are aggressively pursuing alternative plans which consider fewer new facilities, the utilization of existing infrastructure for development of new facilities, and increased cost-sharing for their construction. Industry must prioritize its long-term research needs with those of the Department of Defense and other federal agencies, within realistic budgetary constraints, before the Committee can favorably consider the authorization of funds for new facilities.

VII. COMMITTEE ACTIONS

Subcommittee markup

On July 19, 1995, the Subcommittee on Space and Aeronautics convened to mark up the Chairman's mark of H.R. 2043, the National Aeronautics and Space Administration Authorization Act, fiscal year 1996. The purpose of this markup was to authorize appropriations for the National Aeronautics and Space Administration for fiscal year 1996.

Of the ten amendments submitted, six were adopted, one was defeated, two were withdrawn, and one was not offered.

Amendment 1.—Mr. Sensenbrenner offered an amendment on technical and conforming language. The amendment was adopted by voice vote.

Amendment 2.—Ms. Harman's amendment to increase funding for Mission To Planet Earth by $274,360,000 without offsets was discussed but not offered. Mr. Sensenbrenner expressed concern over the amendment because it contained no specific offsets and therefore, it would be the NASA Administrator's decision about where to take the corresponding cuts.

Amendment 3.—Mr. Rohrabacher offered an En Bloc amendment which inserted a new finding in Section 2 on commercial launch services; a new paragraph to promote purchase of commercial space transportation services for all non-emergency manned and unmanned launches; an amendment to insert language regarding

shuttle privatization (RFP); and a new paragraph to prohibit space shuttle funding beyond 2012. The En Bloc amendment was adopted as amended by voice vote.

Amendment 4.—Mr. Weldon (FL) offered an amendment to Mr. Rohrabacher's amendment, which clarifies that the shuttle can be operated by the federal government or a federal contractor through 2012 and can be privately operated after 2012. Mr. Weldon's amendment was adopted by voice vote.

Amendment 5.—Mr. Weldon (FL) offered a substitute En Bloc amendment to amend the Commercial Space Launch Act regarding spaceports. This amendment was adopted by voice vote.

Amendment 6.—Mr. Roemer offered an En Bloc amendment to change Aeronautic Research and Technology program priorities: $15 million out of Research and Technology, $15 million out of High Speed Research, and $30 million added to Advanced Subsonic Technology. The amendment was defeated by a roll call vote of 8 to 13.

Amendment 7.—Mr. Rohrabacher's amendment to take $24,400,000 out of Terminal Area Productivity (Aeronautics Account) and put this amount into the X–33 project was not offered.

Amendment 8.—Mr. Davis offered an En Bloc amendment to add "exo-atmospheric flight" to Commercial Space Launch Act. This amendment places the X–34 under the commercial space launch licensing and insurance schemes. Since the X–34 does not actually reenter the earth's atmosphere from outer space, as defined by the bill, its return to Earth will not be covered by the licensing and insurance requirements of the Department of Transportation. This amendment was adopted by voice vote.

Amendment 9.—Mr. Rohrabacher offered an amendment that provided a new section, Sec. 212, Privatization of Microgravity Parabolic Flight Operations. This amendment allows private companies to perform microgravity flights used to train astronauts, perform test experiments, or other short-duration zero-gravity work presently being performed by NASA. Mr. Walker was concerned that a referral was likely because of the Federal Aviation Administration. This amendment passed by voice vote, but it was agreed that the referral issue would be examined prior to Full Committee markup.

Amendment 10.—Mr. Hilleary withdrew his amendment on revising the Unitary Wind Tunnel Plan Act of 1949, with the intent to offer it at Full Committee.

With a quorum present, Mr. Hall moved that the Subcommittee report the bill, as amended, and that staff prepare the Subcommittee report and make technical and conforming amendments and that the Chairman take all necessary steps to bring the bill before the Full Committee for consideration. The motion was agreed to by voice vote.

Full committee markup

On July 25, 1995, the Committee on Science convened to mark up the Chairman's mark of H.R. 2043, the National Aeronautics and Space Administration Authorization Act, fiscal year 1996. The purpose of the markup was to authorize appropriations for the National Aeronautics and Space Administration for fiscal year 1996.

Of the ten amendments submitted, six were adopted, three were defeated, and one was withdrawn.

Amendment 1.—Mr. Brown offered an amendment in the Nature of a Substitute. The amendment would increase the overall funding level to $13.8 billion, a 1.2% level above H.R. 2043. It provides full funding for Space Station and science programs, including Cassini, a new start for SOFIA and the New Millennium program. It provides funding for Advanced Subsonic Aeronautical Research, Space Infrared Telescope Facility and Gravity Probe-B. It significantly reduces the Reusable Launch Vehicle program and makes minor reductions to the Mission to Planet Earth. Defeated by voice vote.

Amendment 2.—Mr. Roemer offered an amendment to restore partial funding for Regional Technology Transfer Centers (RTTCs). This amendment would put $35 million in the Regional Technology Transfer Centers account, which is currently funded at $7 million a year. Withdrawn.

Amendment 3.—Mr. Roemer offered an amendment to reprioritize funds in Aeronautics R&D programs. This amendment would take away $15 million from the research and technology base and $15 million from high-speed research and put $30 million into the advanced subsonic account. Defeated—Roll Call—Y–13, N–24.

Amendment 4.—Ms. Harman offered an amendment to increase funding for the Mission to Planet Earth by $274,360,000. This amendment would increase funding for the Mission to Planet Earth. This amendment was the same, with the exception of clarifying language, that Ms. Harman offered at Subcommittee level.

Amendment 4a.—Mr. Bartlett offered an amendment to the amendment offered by Ms. Harman. This amendment adds to the Harman amendment subsection (c) "Limitation on Obligation and Expenditure." This amendment would require the National Academy of Sciences to conduct a comprehensive review of the Mission to Planet Earth program as part of its study of the U.S. Global Change Research Program. It would require the Administrator to report to Congress a plan for implementing the study's recommendation. The Administrator would have to make a formal request for all or part of the funds fenced off by this amendment ($274,360,000). Furthermore, the amendment would require that 90 legislative days pass after the report is transmitted before these funds would be available for obligation or expenditure. Amendment to the amendment—Adopted by voice vote. Amendment by Ms. Harman—Adopted, as amended, by voice vote.

Amendment 5.—Ms. Lofgren offered an amendment to restructure the NASA field centers. This amendment states that the Administrator shall not reconfigure any NASA field centers in a manner which would change the enterprises of such centers until after the asset-based review report is transmitted and after enactment of legislation implementing the Administrator's recommendation. The Chairman raised a concern that this amendment would undercut the Administrator's ability to conduct zero-based review which allows for cutting costs without cutting missions or closing centers. Defeated—Roll Call—Y–6, N–23.

Amendment 6.—Mr. Hilleary offered an amendment creating a new section, 215, of the Unitary Wind Tunnel Plan Act of 1949.

This amendment offers technical changes to update the language in the Unitary Wind Tunnel Plan Act of 1949. Adopted by voice vote.

Amendment 7.—Mr. Rohrabacher offered an amendment to strike subsection (c) on FAA regulation. This amendment was a technical correction of an amendment by Mr. Rohrabacher and adopted in Subcommittee. This amendment struck language referring to the FAA so as to not cross jurisdictional lines. Adopted by voice vote.

Amendment 8.—Mr. Weldon (PA) offered an amendment referring to GLOBE. This amendment would strike the language of the original bill that specifically eliminated (GLOBE) Global Observations to Benefit the Environment program. Adopted by voice vote.

Amendment 9.—Mr. Barcia offered an amendment creating a new section 106 (Limited Availability) on CIESIN. This amendment would allow a privatized CIESIN to compete for future contracts following a full and open-bidding competition. Adopted by voice vote.

With a quorum present, Mr. Brown moved that the Committee report the bill, as amended, to make technical and conforming amendments, prepare the legislative report, and that the Chairman take all necessary steps to bring the bill before the House for consideration. The motion was adopted by voice vote.

Mr. Brown moved that the Members have three legislative days to submit supplemental minority and additional views. The motion was adopted.

Mr. Sensenbrenner moved that the Committee adopt, as part of the legislative report on H.R. 2043, the summary chart. The motion was adopted by voice vote.

Mr. Ehlers moved that the Committee authorize the Chairman to offer such motions as may be necessary in the House to go to conference with the Senate on H.R. 2043 or a similar Senate bill. The motion was agreed to by voice vote.

VIII. Committee Cost Estimate

Clause 2(l)(3)(B) of rule XI of the House of Representatives requires each committee report that accompanies a measure providing new budget authority, new spending authority, or new credit authority or changing revenue or tax expenditure to contain a cost estimate, as required by section 308(a)(1) of the Congressional Budget Act of 1974, as amended, and, when practicable with respect to estimates of new budget authority, a comparison of the total estimated funding relevant program (or programs) to the appropriate levels under current law.

Clause 7(a) of rule XIII requires each committee report accompanying each bill or joint resolution of a public character to contain the committee's cost estimates, which include, where practicable, a comparison of the total estimated funding level for the relevant program (or programs) with the appropriate levels under current law.

The Committee adopts as its own the cost estimate prepared by the Director of the Congressional Budget Office, pursuant to section 403 of the Congressional Budget Act of 1974.

IX. Congressional Budget Office Cost Estimates

U.S. Congress,
Congressional Budget Office,
Washington, DC, August 4, 1995.

Hon. Robert S. Walker,
Chairman, Committee on Science, House of Representatives, Washington, DC.

Dear Mr. Chairman: The Congressional Budget Office has prepared the enclosed cost estimate for H.R. 2043, the National Aeronautics and Space Administration Authorization Act, Fiscal Year 1996.

Enacting H.R. 2043 could affect direct spending and receipts. Therefore, pay-as-you-go procedures would apply to the bill.

If you wish further details on this estimate, we will be pleased to provide them.

Sincerely,

June E. O'Neill.

Enclosure.

CONGRESSIONAL BUDGET OFFICE COST ESTIMATE

1. Bill number: H.R. 2043.

2. Bill title: National Aeronautics and Space Administration Authorization Act, Fiscal Year 1996.

3. Bill status: As ordered reported by the House Committee on Science on July 25, 1995.

4. Bill purpose: H.R. 2043 would authorize fiscal year 1996 appropriations for the Office of Commercial Space Transportation (OCST) in the Department of Transportation (DOT), the Office of Air and Space Commercialization in the Department of Commerce, and all programs of the National Aeronautics and Space Administration (NASA) except the International Space Station. The bill also would direct NASA to privatize its microgravity parabolic flight operations in 1996 and take steps toward privatizing the space shuttle operations by the year 2012. Other provisions would reform NASA's procurement practices for innovative technologies, set guidelines for disclosing data developed jointly with the private sector, and require an asset-based review of NASA operations to guide the restructuring of the agency. Finally, the bill would expand the scope of existing law regarding the licensing of commercial space launch activities by OCST to include reentry vehicles, activities, and sites.

5. Estimated cost to the Federal Government: As shown in the following table, H.R. 2043 would authorize appropriations totaling $11.6 billion for 1996. Of this total, $6 million would be authorized for OCST, $457,000 for the Office of Air and Space Commercialization, and $11.5 billion for NASA. Enacting this bill could affect direct spending and revenues, but CBO estimates that any such amounts would not be significant over the 1996–2000 period.

[By fiscal year, in millions of dollars]

	1995	1996	1997	1998	1999	2000
Spending under current law:						
Budget authority[1]	11,766	0	0	0	0	0

[By fiscal year, in millions of dollars]

	1995	1996	1997	1998	1999	2000
Estimated outlays	12,497	4,466	979	53	21	9
Proposed changes:						
Authorization level	0	11,554	0	0	0	0
Estimated outlays	0	7,297	3,475	782	0	0
Spending under H.R. 2043:						
Authorization level [1]	11,766	11,554	0	0	0	0
Estimated outlays	12,497	11,763	4,454	835	21	9

[1] The 1995 level is the amount actually appropriated for that year.

The budgetary impacts of this bill fall within budget functions 250, 370, and 400.

Spending Subject to Appropriations Action.—This estimate assumes that the full amounts authorized will be appropriated and that outlays would occur at rates consistent with historical trends for each program. Although provisions regarding procurement reforms for the space shuttle and innovative technologies could accelerate the pace of obligations in those programs, these changes are not expected to significantly effect spending patterns in 1996.

We also assume for this estimate that federally supported experiments that use private microgravity parabolic flight operators would be funded within the amounts authorized by H.R. 2043 for NASA operations. The amount and timing of appropriations for such costs would depend on the terms of the contractual arrangements and may differ from the amounts that would be budgeted for those operations under current law. CBO estimates that other provisions of the bill would have no significant effect on discretionary spending.

Direct Spending and Revenues.—Enacting this bill could result in offsetting receipts to the government from the sale of surplus property or from the levy of civil penalties. Privatization of microgravity parabolic flight operations would reduce NASA's need for certain aircraft, which could lead to the sale of such facilities as surplus property by the General Services Administration. CBO does not estimate receipts from such sales over the next five years, because officials at NASA have indicated that the aircraft would continue to be used by the agency for other programs.

CBO estimates that any additional receipts from penalties resulting from this bill would be insignificant. DOT has never collected a penalty for a violation of the licensing and related requirements of the commercial space transportation program.

6. Pay-as-you-go considerations: Section 252 of the Balanced Budget and Emergency Deficit Control Act of 1985 sets up pay-as-you-go procedures for legislation affecting direct spending or receipts through 1998. CBO estimates that enactment of H.R. 2043 could affect direct spending and receipts because of provisions that could result in the sale of surplus property or the collection of civil penalties. As shown in the following table, we estimate that these changes would be zero or negligible.

[By fiscal year, in millions of dollars]

	1995	1996	1997	1998
Change in outlays	0	0	0	0
Change in receipts	0	0	0	0

7. Estimated cost to State and local governments: None.
8. Estimate comparison: None.
9. Previous CBO estimate: None.
10. Estimate prepared by: Kathleen Gramp.
11. Estimate approved by: Robert A. Sunshine, for Paul N. Van de Water, Assistant Director for Budget Analysis.

X. Effects of Legislation on Inflation

Clause 2(l)(4) of rule XI requires each committee report on a bill or joint resolution of a public character to include an analytical statement describing what impact enactment of the measure would have on prices and costs in the operation of the national economy. The Committee has determined that H.R. 2043 has no inflationary impact on the national economy.

XI. Oversight Findings and Recommendations

Clause 2(l)(3)(A) of rule XI requires each committee report to contain oversight findings and recommendations required pursuant to clause 2(b)(1) of rule X. The Committee has no oversight findings.

XII. Oversight Findings and Recommendations by the Committee on Government Reform and Oversight

Clause 2(l)(3)(D) of rule XI requires each committee report to contain a summary of the oversight findings and recommendations made by the Government Reform and Oversight Committee pursuant to clause 4(c)(2) of rule X, whenever such findings have been timely submitted. The Committee on Science has received no such findings or recommendations from the Committee on Government Reform and Oversight.

XIII. Changes in Existing Law Made by the Bill, as Reported

In compliance with clause 3 of rule XIII of the Rules of the House of Representatives, changes in existing law made by the bill, as reported, are shown as follows (existing law proposed to be omitted is enclosed in black brackets, new matter is printed in italics, existing law in which no change is proposed is shown in roman):

TITLE 49, UNITED STATES CODE

* * * * * * *

SUBTITLE IX—COMMERCIAL SPACE TRANSPORTATION

* * * * * * *

CHAPTER 701—COMMERCIAL SPACE LAUNCH ACTIVITIES

Sec.
70101. Findings and purposes.
70102. Definitions.
70103. General authority.

[70104. Restrictions on launches and operations.]
70104. Restrictions on launches, operations, and reentries.
70105. License applications and requirements.
70106. Monitoring activities.
70107. Effective periods, and modifications, suspensions, and revocations, of licenses.
[70108. Prohibition, suspension, and end of launches and operation of launch sites.
[70109. Preemption of scheduled launches.]
70108. Prohibition, suspension, and end of launches, operation of launch sites and reentry sites, and reentries.
70109. Preemption of scheduled launches or reentries.

* * * * * * *

§ 70101. Findings and purposes

(a) FINDINGS.—Congress finds that—

(1) * * *

* * * * * * *

(3) new and innovative equipment and services are being sought, produced, and offered by entrepreneurs in telecommunications, information services, *microgravity research*, and remote sensing technologies;

(4) the private sector in the United States has the capability of developing and providing private satellite launching, *reentry*, and associated services that would complement the launching, *reentry*, and associated services now available from the United States Government;

(5) the development of commercial launch vehicles, *reentry vehicles*, and associated services would enable the United States to retain its competitive position internationally, contributing to the national interest and economic well-being of the United States;

(6) providing launch services *and reentry services* by the private sector is consistent with the national security and foreign policy interests of the United States and would be facilitated by stable, minimal, and appropriate regulatory guidelines that are fairly and expeditiously applied;

(7) the United States should encourage private sector launches, *reentries*, and associated services and, only to the extent necessary, regulate those launches, *reentries*, and services to ensure compliance with international obligations of the United States and to protect the public health and safety, safety of property, and national security and foreign policy interests of the United States;

(8) space transportation, including the establishment and operation of launch sites, *reentry sites*, and complementary facilities, the providing of launch services *and reentry services*, the establishment of support facilities, and the providing of support services, is an important element of the transportation system of the United States, and in connection with the commerce of the United States there is a need to develop a strong space transportation infrastructure with significant private sector involvement; and

(9) the participation of State governments in encouraging and facilitating private sector involvement in space-related activity, particularly through the establishment of a space trans-

portation-related infrastructure, including launch sites, *reentry sites,* complementary facilities, and launch site *and reentry site* support facilities, is in the national interest and is of significant public benefit.

(b) PURPOSES.—The purposes of this chapter are—

(1) * * *

(2) to encourage the United States private sector to provide launch vehicles, *reentry vehicles,* and associated services by—

(A) simplifying and expediting the issuance and transfer of commercial [launch] licenses; and

(B) facilitating and encouraging the use of Government-developed space technology;

(3) to provide that the Secretary of Transportation is to oversee and coordinate the conduct of commercial launch *and reentry* operations, issue and transfer commercial [launch] licenses authorizing those operations, and protect the public health and safety, safety of property, and national security and foreign policy interests of the United States; and

(4) to facilitate the strengthening and expansion of the United States space transportation infrastructure, including the enhancement of United States launch sites and launch-site support facilities, *and development of reentry sites,* with Government, State, and private sector involvement, to support the full range of United States space-related activities.

* * * * * * *

§ 70102. Definitions

In this chapter—

(1) * * *

* * * * * * *

(3) "launch" means to place or try to place a launch vehicle and any payload *from Earth*—

(A) * * *

* * * * * * *

(5) "launch services" means—

(A) activities directly related to the preparation of a launch site or payload facility for one or more launches;

[(A)] *(B)* activities involved in the preparation of a launch vehicle and payload for launch; and

[(B)] *(C)* the conduct of a launch.

* * * * * * *

(10) "reenter" and "reentry" mean to return or attempt to return, purposefully, a reentry vehicle and its payload, if any, from Earth orbit, from exo-atmospheric flight, or from outer space to Earth.

(11) "reentry services" means—

(A) activities involved in the preparation of a reentry vehicle and its payload, if any, for reentry; and

(B) the conduct of a reentry.

(12) "reentry site" means the location on Earth to which a reentry vehicle is intended to return (as defined in a license the Secretary issues or transfers under this chapter).

(13) "reentry vehicle" means a vehicle designed to return from Earth orbit or outer space to Earth, or a reusable launch vehicle designed to return from outer space or exo-atmospheric flight to Earth, substantially intact.

[(10)**]** *(14)* "State" means a State of the United States, the District of Columbia, and a territory or possession of the United States.

[(11)**]** *(15)* "third party" means a person except—

(A) the United States Government or the Government's contractors or subcontractors involved in launch services *or reentry services*;

(B) a licensee or transferee under this chapter;

(C) a licensee's or transferee's contractors, subcontractors, or customers involved in launch services *or reentry services*; or

(D) the customer's contractors or subcontractors involved in launch services *or reentry services*.

[(12)**]** *(16)* "United States" means the States of the United States, the District of Columbia, and the territories and possessions of the United States.

§ 70103. General authority

(a) * * *

(b) FACILITATING COMMERCIAL LAUNCHES *AND REENTRIES AND STATE SPONSORED SPACEPORTS*.—In carrying out this chapter, the Secretary shall—

(1) encourage, facilitate, and promote commercial space launches *and reentries* by the private sector *and State sponsored spaceports*; and

(2) take actions to facilitate private sector involvement in commercial space transportation activity, and to promote public-private partnerships involving the United States Government, State governments, and the private sector to build, expand, modernize, or operate a space launch *and reentry* infrastructure.

* * * * * * *

[§ 70104. Restrictions on launches and operations]

§ 70104. Restrictions on launches, operations, and reentries

(a) LICENSE REQUIREMENT.—A license issued or transferred under this chapter is required for the following:

(1) for a person to launch a launch vehicle or to operate a launch site *or reentry site, or reenter a reentry vehicle,* in the United States.

(2) for a citizen of the United States (as defined in section 70102(1)(A) or (B) of this title) to launch a launch vehicle or to operate a launch site *or reentry site, or reenter a reentry vehicle,* outside the United States.

(3) for a citizen of the United States (as defined in section 70102(1)(C) of this title) to launch a launch vehicle or to operate a launch site *or reentry site, or reenter a reentry vehicle,* outside the United States and outside the territory of a foreign country unless there is an agreement between the United

States Government and the government of the foreign country providing that the government of the foreign country has jurisdiction over the launch or operation *or reentry*.

(4) for a citizen of the United States (as defined in section 70102(1)(C) of this title) to launch a launch vehicle or to operate a launch site *or reentry site, or reenter a reentry vehicle,* in the territory of a foreign country if there is an agreement between the United States Government and the government of the foreign country providing that the United States Government has jurisdiction over the launch or operation *or reentry*.

(b) COMPLIANCE WITH PAYLOAD REQUIREMENTS.—The holder of a [launch] license under this chapter may launch *or reenter* a payload only if the payload complies with all requirements of the laws of the United States related to launching *or reentering* a payload.

(c) [PREVENTING LAUNCHES.—] *PREVENTING LAUNCHES AND REENTRIES.*—The Secretary of Transportation shall establish whether all required licenses, authorizations, and permits required for a payload have been obtained. If no license, authorization, or permit is required, the Secretary may prevent the launch *or reentry* if the Secretary decides the launch *or reentry* would jeopardize the public health and safety, safety of property, or national security or foreign policy interest of the United States.

* * * * * * *

§ 70105. License applications and requirements

(a) APPLICATIONS.—*(1)* A person may apply to the Secretary of Transportation for a license or transfer of a license under this chapter in the form and way the Secretary prescribes. Consistent with the public health and safety, safety of property, and national security and foreign policy interests of the United States, the Secretary, not later than 180 days after [receiving an application] *accepting an application in accordance with criteria established pursuant to subsection (b)(2)(D),* shall issue or transfer a license if the Secretary decides in writing that the applicant complies, and will continue to comply, with this chapter and regulations prescribed under this chapter. The Secretary shall inform the applicant of any pending issue and action required to resolve the issue if the Secretary has not made a decision not later than 120 days after [receiving an application] *accepting an application in accordance with criteria established pursuant to subsection (b)(2)(D). The Secretary shall submit to the Committee on Science of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate a written notice not later than 7 days after any occurrence when a license is not issued within the deadline established by this subsection.*

(2) In carrying out paragraph (1), the Secretary may establish procedures for certification of the safety of a launch vehicle, reentry vehicle, or safety system, procedure, service, or personnel that may be used in conducting licensed commercial space launch or reentry activities.

(b) REQUIREMENTS.—(1) Except as provided in this subsection, all requirements of the laws of the United States applicable to the launch of a launch vehicle or the operation of a launch site *or re-*

entry site, or reentry of a reentry vehicle, are requirements for a license under this chapter.

(2) The Secretary may prescribe—

(A) any term necessary to ensure compliance with this chapter, including on-site verification that a launch [or operation], *operation, or reentry* complies with representations stated in the application;

(B) an additional requirement necessary to protect the public health and safety, safety of property, national security interests, and foreign policy interests of the United States; [and]

(C) by regulation that a requirement of a law of the United States not be a requirement for a license if the Secretary, after consulting with the head of the appropriate executive agency, decides that the requirement is not necessary to protect the public health and safety, safety of property, and national security and foreign policy interests of the United States[.]*; and*

(D) regulations establishing criteria for accepting or rejecting an application for a license under this chapter within 60 days after receipt of such application.

(3) The Secretary may waive a requirement, *or the requirement to obtain a license,* for an individual applicant if the Secretary decides that the waiver is in the public interest and will not jeopardize the public health and safety, safety of property, and national security and foreign policy interests of the United States.

* * * * * * *

§ 70106. Monitoring activities

(a) GENERAL REQUIREMENTS.—A licensee under this chapter must allow the Secretary of Transportation to place an officer or employee of the United States Government or another individual as an observer at a launch site *or reentry site* the licensee uses, at a production facility or assembly site a contractor of the licensee uses to produce or assemble a launch vehicle *or reentry vehicle,* or at a site at which a payload is integrated with a launch vehicle. The observer will monitor the activity of the licensee or contractor at the time and to the extent the Secretary considers reasonable to ensure compliance with the license or to carry out the duties of the Secretary under section 70104(c) of this title. A licensee must cooperate with an observer carrying out this subsection.

* * * * * * *

[§ 70108. Prohibition, suspension, and end of launches and operation of launch sites]

§ 70108. Prohibition, suspension, and end of launches, operation of launch sites and reentry sites, and reentries

(a) GENERAL AUTHORITY.—The Secretary of Transportation may prohibit, suspend, or end immediately the launch of a launch vehicle or the operation of a launch site *or reentry site, or reentry of a reentry vehicle,* licensed under this chapter if the Secretary decides the launch or operation *or reentry* is detrimental to the public

health and safety, the safety of property, or a national security or foreign policy interest of the United States.

* * * * * * *

[§ 70109. Preemption of scheduled launches]

§ 70109. Preemption of scheduled launches or reentries

(a) GENERAL.—With the cooperation of the Secretary of Defense and the Administrator of the National Aeronautics and Space Administration, the Secretary of Transportation shall act to ensure that a launch *or reentry* of a payload is not preempted from access to a United States Government launch site, *reentry site*, or launch property, except for imperative national need, when a launch date commitment *or reentry date commitment* from the Government has been obtained for a launch *or reentry* licensed under this chapter. A licensee or transferee preempted from access to a launch site, *reentry site*, or launch property does not have to pay the Government any amount for launch services, *or services related to a reentry*, attributable only to the scheduled launch *or reentry* prevented by the preemption.

* * * * * * *

(c) REPORTS.—In cooperation with the Secretary of Transportation, the Secretary of Defense or the Administrator, as appropriate, shall submit to Congress not later than 7 days after a decision to preempt under subsection (a) of this section, a report that includes an explanation of the circumstances justifying the decision and a schedule for ensuring the prompt launching *or reentry* of a preempted payload.

§ 70110. Administrative hearings and judicial review

(a) ADMINISTRATIVE HEARINGS.—The Secretary of Transportation shall provide an opportunity for a hearing on the record to—

(1) * * *

(2) an owner or operator of a payload under this chapter, for a decision of the Secretary under section 70104(c) of this title to prevent the launch *or reentry* of the payload; and

(3) a licensee under this chapter, for a decision of the Secretary under—

(A) section 70107 (b) or (c) of this title to modify, suspend, or revoke a license; or

(B) section 70108(a) of this title to prohibit, suspend, or end a launch or operation of a launch site *or reentry site, or reentry of a reentry vehicle*, licensed by the Secretary.

* * * * * * *

§ 70111. Acquiring United States Government property and services

(a) GENERAL REQUIREMENTS AND CONSIDERATIONS.—(1) The Secretary of Transportation shall facilitate and encourage the acquisition by the private sector and State governments of—

(A) * * *

(B) launch services *and reentry services*, including utilities, of the Government otherwise not needed for public use.

The Secretary shall establish criteria and procedures for determining the priority of competing requests from the private sector and State governments for property and services under this section.

(2) In acting under paragraph (1) of this subsection, the Secretary shall consider the commercial availability on reasonable terms of substantially equivalent launch property or launch services *or reentry services* from a domestic source.

(b) PRICE.—(1) In this subsection, "direct costs" means the [actual costs] *additive costs only* that—

(A) can be associated unambiguously with a commercial launch *or reentry* effort; and

(B) the Government would not incur if there were no commercial launch *or reentry* effort.

(2) In consultation with the Secretary, the head of the executive agency providing the property or service under subsection (a) of this section shall establish the price for the property or service. The price for—

(A) * * *

* * * * * * *

(C) launch services *or reentry services* is an amount equal to the direct costs, including the basic pay of Government civilian and contractor personnel, the Government incurred because of acquisition of the services.

(3) The Secretary shall ensure the establishment of uniform guidelines for, and consistent implementation of, this section by all Federal agencies.

* * * * * * *

(d) COLLECTION BY OTHER GOVERNMENTAL HEADS.—The head of a department, agency, or instrumentality of the Government may collect a payment for an activity involved in producing a launch vehicle [or its payload for launch] *or reentry vehicle, or the payload of either, for launch or reentry* if the activity was agreed to by the owner or manufacturer of the launch vehicle, *reentry vehicle,* or payload.

§ 70112. Liability insurance and financial responsibility requirements

(a) GENERAL REQUIREMENTS.—(1) When a *launch, reentry, or site operator* license is issued or transferred under this chapter, the licensee or transferee shall obtain liability insurance or demonstrate financial responsibility in amounts to compensate for the maximum probable loss from claims by—

(A) * * *

* * * * * * *

(3) For the total claims related to one launch *or reentry,* a licensee or transferee is not required to obtain insurance or demonstrate financial responsibility of more than—

(A) * * *

* * * * * * *

(4) An insurance policy or demonstration of financial responsibility under this subsection shall protect the following, to the extent

of their potential liability for involvement in launch services *or reentry services*, at no cost to the Government:

(A) * * *

* * * * * * *

(b) RECIPROCAL WAIVER OF CLAIMS.—(1) A *launch, reentry, or site operator* license issued or transferred under this chapter shall contain a provision requiring the licensee or transferee to make a reciprocal waiver of claims with its contractors, subcontractors, and customers, and contractors and subcontractors of the customers, involved in launch services *or reentry services* under which each party to the waiver agrees to be responsible for property damage or loss it sustains, or for personal injury to, death of, or property damage or loss sustained by its own employees resulting from an activity carried out under the license.

(2) The Secretary of Transportation shall make, for the Government, executive agencies of the Government involved in launch services *or reentry services*, and contractors and subcontractors involved in launch services *or reentry services*, a reciprocal waiver of claims with the licensee or transferee, contractors, subcontractors, and customers of the licensee or transferee, and contractors and subcontractors of the customers, involved in launch services *or reentry services* under which each party to the waiver agrees to be responsible for property damage or loss it sustains, or for personal injury to, death of, or property damage or loss sustained by its own employees resulting from an activity carried out under the license. The waiver applies only to the extent that claims are more than the amount of insurance or demonstration of financial responsibility required under subsection (a)(1)(B) of this section. After consulting with the Administrator and the Secretary of the Air Force, the Secretary of Transportation may waive, for the Government and a department, agency, and instrumentality of the Government, the right to recover damages for damage or loss to Government property to the extent insurance is not available because of a policy exclusion the Secretary of Transportation decides is usual for the type of insurance involved.

* * * * * * *

(d) ANNUAL REPORT.—(1) Not later than November 15 of each year, the Secretary of Transportation shall submit to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science**[**, Space, and Technology**]** of the House of Representatives a report on current determinations made under subsection (c) of this section related to all issued licenses and the reasons for the determinations.

* * * * * * *

(e) LAUNCHES *OR REENTRIES* INVOLVING GOVERNMENT FACILITIES AND PERSONNEL.—The Secretary of Transportation shall establish requirements consistent with this chapter for proof of financial responsibility and other assurances necessary to protect the Government and its executive agencies and personnel from liability, death, bodily injury, or property damage or loss as a result of a launch or operation of a launch site *or reentry site or a reentry* involving a facility or personnel of the Government. The Secretary may not

relieve the Government of liability under this subsection for death, bodily injury, or property damage or loss resulting from the willful misconduct of the Government or its agents.

(f) COLLECTION AND CREDITING PAYMENTS.—The head of a department, agency, or instrumentality of the Government shall collect a payment owed for damage or loss to Government property under its jurisdiction or control resulting from an activity carried out under a *launch, reentry, or site operator* license issued or transferred under this chapter. The payment shall be credited to the current applicable appropriation, fund, or account of the department, agency, or instrumentality.

§ 70113. Paying claims exceeding liability insurance and financial responsibility requirements

(a) GENERAL REQUIREMENTS.—(1) To the extent provided in advance in an appropriation law or to the extent additional legislative authority is enacted providing for paying claims in a compensation plan submitted under subsection (d) of this section, the Secretary of Transportation shall provide for the payment by the United States Government of a successful claim (including reasonable litigation or settlement expenses) of a third party against a licensee or transferee under this chapter, a contractor, subcontractor, or customer of the licensee or transferee, or a contractor or subcontractor of a customer, resulting from an activity carried out under the license issued or transferred under this chapter for death, bodily injury, or property damage or loss resulting from an activity carried out under the license. However, claims may be paid under this section only to the extent the total amount of successful claims related to one launch *or reentry*—

(A) * * *

* * * * * * *

(d) SURVEYS, REPORTS, AND COMPENSATION PLANS.—(1) If as a result of an activity carried out under a license issued or transferred under this chapter the total of claims related to one launch *or reentry* is likely to be more than the amount of required insurance or demonstration of financial responsibility, the Secretary shall—

(A) survey the causes and extent of damage; and

(B) submit expeditiously to Congress a report on the results of the survey.

(2) Not later than 90 days after a court determination indicates that the liability for the total of claims related to one launch *or reentry* may be more than the required amount of insurance or demonstration of financial responsibility, the President, on the recommendation of the Secretary, shall submit to Congress a compensation plan that—

(A) * * *

* * * * * * *

§ 70115. Enforcement and penalty

(a) * * *

(b) GENERAL AUTHORITY.—(1) In carrying out this chapter, the Secretary of Transportation may—

(A) * * *

* * * * * * *

(D) under lawful process—

(i) enter at a reasonable time a launch site, *reentry site,* production facility, assembly site of a launch vehicle *or reentry vehicle,* or site at which a payload is integrated with a launch vehicle *or reentry vehicle* to inspect an object to which this chapter applies or a record or report the Secretary requires be made or kept under this chapter; and

* * * * * * *

§ 70117. Relationship to other executive agencies, laws, and international obligations

(a) EXECUTIVE AGENCIES.—Except as provided in this chapter, a person is not required to obtain from an executive agency a license, approval, waiver, or exemption to launch a launch vehicle or operate a launch site *or reentry site or reenter a reentry vehicle.*

* * * * * * *

(d) CONSULTATION.—The Secretary of Transportation is encouraged to consult with a State to simplify and expedite the approval of a space launch *or reentry* activity.

* * * * * * *

[(f) LAUNCH NOT AN EXPORT.—A launch vehicle or payload that is launched is not, because of the launch, an export for purposes of a law controlling exports.]

(f) LAUNCH NOT AN EXPORT; REENTRY NOT AN IMPORT.—A launch vehicle, reentry vehicle, or payload that is launched or reentered is not, because of the launch or reentry, an export or import, respectively, for purposes of a law controlling exports or imports.

(g) NONAPPLICATION.—This chapter does not apply to—

(1) a launch, [operation of a launch vehicle or launch site,] *reentry, operation of a launch vehicle or reentry vehicle, or operation of a launch site or reentry site,* or other space activity the Government carries out for the Government; [or]

(2) planning or policies related to the launch, *reentry,* operation, or activity[.]*; or*

(3) any amateur and similar small rocket activities, as defined by the Secretary by regulation.

* * * * * * *

§ 70119. Authorization of appropriations

The following amounts may be appropriated to the Secretary of Transportation for the fiscal year ending September 30, 1993:

(1) $4,900,000 to carry out this chapter.

(2) $20,000,000 for a program to ensure the resiliency of the space launch infrastructure of the United States if a law is enacted to establish that program in the Department of Transportation.

There are authorized to be appropriated to the Secretary of Transportation $6,000,000 to carry out this chapter for fiscal year 1996. None of the funds authorized by this section may be expended for

policy development or analysis activities not directly related to the Secretary's regulatory responsibilities under this chapter.

* * * * * * *

NATIONAL AERONAUTICS AND SPACE ACT OF 1958

* * * * * * *

TITLE I—SHORT TITLE, DECLARATION OF POLICY, AND DEFINITIONS

* * * * * * *

DECLARATION OF POLICY AND PURPOSE

SEC. 102. (a) * * *

* * * * * * *

[(e) The Congress declares that the general welfare of the United States requires that the unique competence in scientific and engineering systems of the National Aeronautics and Space Administration also be directed toward ground propulsion systems research and development. Such development shall be conducted so as to contribute to the objectives of developing energy- and petroleum-conserving ground propulsion systems, and of minimizing the environmental degradation caused by such systems.

[(f)] *(e)* The Congress declares that the general welfare of the United States requires that the unique competence in scientific and engineering systems of the National Aeronautics and Space Administration also be directed toward the development of advanced automobile propulsion systems. Such development shall be conducted so as to contribute to the achievement of the purposes set forth in section 302(b) of the Automotive Propulsion Research and Development Act of 1978.

[(g)] *(f)* The Congress declares that the general welfare of the United States requires that the unique competence of the National Aeronautics and Space Administration in science and engineering systems be directed to assisting in bioengineering research, development, and demonstration programs designed to alleviate and minimize the effects of disability.

[(h)] *(g)* It is the purpose of this Act to carry out and effectuate the policies declared in subsections (a), (b), (c), (d), (e), [(f), and (g)] *and (f)*.

* * * * * * *

TITLE II—COORDINATION OF AERONAUTICAL AND SPACE ACTIVITIES

* * * * * * *

REPORTS TO THE CONGRESS

SEC. 206. (a) The President shall transmit to the Congress in [January] *May* of each year a report, which shall include (1) a comprehensive description of the programed activities and the accomplishments of all agencies of the United States in the field of

aeronautics and space activities during the preceding [calendar] *fiscal* year, and (2) an evaluation of such activities and accomplishments in terms of the attainment of, or the failure to attain, the objectives described in section 102(c) of this Act.

* * * * * * *

TITLE III—MISCELLANEOUS

* * * * * * *

ACCESS TO INFORMATION

SEC. 303. (a) Information obtained or developed by the Administrator in the performance of his functions under this Act shall be made available for public inspection, except (A) information authorized or required by Federal statute to be withheld, (B) information classified to protect the national security, and (C) information described in subsection (b) *or (c)*: *Provided*, That nothing in this Act shall authorize the withholding of information by the Administrator from the duly authorized committees of the Congress.

* * * * * * *

(c)(1) The Administration may delay for a period not to exceed 5 years the unrestricted public disclosure of technical data in the possession of, or under the control of, the Administration that has been generated in the performance of experimental, developmental, or research activities or programs funded jointly by the Administration and the private sector.

(2) Within 1 year after the date of the enactment of the National Aeronautics and Space Administration Authorization Act, Fiscal Year 1996, the Administrator shall issue regulations to carry out this subsection. Paragraph (1) shall not take effect until such regulations are issued.

(3) Regulations issued pursuant to paragraph (2) shall include—

(A) guidelines for a determination of whether data is technical data within the meaning of this subsection;

(B) a requirement that a determination described in subparagraph (A) that particular data is technical data shall be reported to the Committee on Science of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate;

(C) provisions to ensure that technical data is available for dissemination within the United States to United States persons and entities in furtherance of the objective of maintaining leadership or competitiveness in civil and governmental aeronautical and space activities by the United States industrial base; and

(D) a specification of the period or periods for which the delay in unrestricted public disclosure of technical data is to apply to various categories of such data, and the restrictions on disclosure of such data during such period or periods, including a requirement that the maximum 5-year protection under this subsection shall not be provided unless at least 50 percent of the funding for the activities or programs is provided by the private sector.

(4) Along with the initial publication of proposed regulations under paragraph (2), the Administrator shall include a list of those experimental, developmental, or research activities or programs conducted by, or funded in whole or in part by, the Administration that may result in products or processes of significant value in maintaining leadership or competitiveness in civil and governmental aeronautical and space activities by the United States industrial base. Such list shall be updated biannually.

(5) For purposes of this subsection, the term "technical data" means any recorded information, including computer software, that is or may be directly applicable to the design, engineering, development, production, manufacture, or operation of products or processes that may have significant value in maintaining leadership or competitiveness in civil and governmental aeronautical and space activities by the United States industrial base.

* * * * * * *

SECTION 504 OF THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AUTHORIZATION ACT, FISCAL YEAR 1993

SEC. 504. LAUNCH VOUCHER DEMONSTRATION PROGRAM.

(a) COMMERCIAL SPACE VOUCHER DEMONSTRATION PROGRAM; EFFECTIVE PERIOD.—The Administrator shall establish a demonstration program to award vouchers for the payment of commercial launch services and payload integration services for the purpose of launching payloads funded by [the Office of Commercial Programs within] the National Aeronautics and Space Administration to become effective October 1, 1993. [Such program shall not be effective after September 30, 1995.]

* * * * * * *

[(c) ASSUMPTION OF CERTAIN RESPONSIBILITIES.—In carrying out the demonstration program established under subsection (a), the Administrator, in awarding vouchers, is limited to the launch of payloads funded by the Office of Commercial Programs within the National Aeronautics and Space Administration.

[(d)] *(c)* ASSISTANCE.—The Administrator may provide voucher award recipients with such assistance, including contract formulation and technical support during the proposal evaluation, as may be necessary, to ensure the purchase of cost effective and reasonably reliable commercial launch services and payload integration services.

[(e)] *(d)* REPORT.—The Administrator shall conduct an ongoing review of the program established under this section, and shall, not later than January 31, 1995, report to Congress the results of such a review, together with recommendations for further action relating to the program.

UNITARY WIND TUNNEL PLAN ACT OF 1949

TITLE I

SEC. 101. The Administrator of the National Aeronautics and Space Administration (hereinafter referred to as the "Administrator") and the Secretary of Defense are hereby authorized and directed jointly to develop a unitary plan for the construction of [transsonic and supersonic] *transonic, supersonic, and hypersonic* wind-tunnel facilities for the solution of research, development, and evaluation problems in aeronautics, including the construction of facilities at educational institutions within the continental limits of the United States for training and research in aeronautics, and to revise the uncompleted portions of the unitary plan from time to time to accord with changes in national defense requirements and scientific and technical advances. The Administrator and the Secretaries of the Army, the Navy, and the Air Force are authorized to proceed with the construction and equipment of facilities in implementation of the unitary plan to the extent permitted by appropriations pursuant to existing authority and the authority contained in titles I and II of this Act. Any further implementation of the unitary plan shall be subject to such additional authorizations as may be approved by Congress.

* * * * * * *

SEC. 103. (a) The Administrator is hereby authorized to expand the facilities at his existing [laboratories] *laboratories and centers* by the construction of additional [supersonic] *transonic, supersonic, and hypersonic* wind tunnels, including buildings, equipment, and accessory construction, and by the acquisition of land and installation of utilities.

* * * * * * *

(c) The facilities authorized by this section shall be operated and staffed by the Administrator but shall be available primarily to industry for testing experimental models in connection with the development of aircraft and missiles. Such tests shall be scheduled and conducted in accordance with industry's requirements and allocation of [laboratory] *facility* time shall be made in accordance with the public interest, with proper emphasis upon the requirements of each military service and due consideration of civilian needs.

* * * * * * *

XIV. Additional and Dissenting Views

ADDITIONAL VIEWS

The Unitary Wind Tunnel Plan Act of 1949 which originally declared that the NASA Administrator and the Secretary of Defense should jointly develop a plan for the construction of

> . . . wind tunnel facilities for the solution of research, development, and evaluation problems in aeronautics at educational institutions within the continental limits of the United States for training and research in aeronautics, and to revise the uncompleted portions of the unitary plan from time to time to accord with changes in national defense requirements and scientific and technical advances.

The field of aeronautics has received many advances since this Act was last amended in 1958. Our problem is that the wind tunnel facilities in this nation are several decades old. The European countries, in a consortium, recently opened a new transonic wind tunnel which is technologically superior to any in the United States. This will have a direct effect on improving the competitiveness of European aircraft in the global market.

The aerospace industry is the second largest exporting industry in this country, second only to agriculture. While just a few short years ago, the United States aerospace industry accounted for around 70 percent of the global market, recent reports show that this year we may drop below 50 percent. This loss of market share costs us billions of dollars in our trade deficit and each percentage point of global aerospace market lost by our domestic companies translates into about 44,000 Americans losing their jobs.

A study conducted by the National Research Council (NRC) in 1992 identified that our current wind tunnel facilities are inadequate for maintaining aeronautical superiority into the next century. In 1994, NASA was directed by Congress to conduct a study of the needs and requirements of a National Wind Tunnel Complex.

NASA currently is in the process of conducting this study of the technical, business, and related issues concerning the feasibility of developing the National Wind Tunnel complex. We fully support and encourage NASA to complete this study process, to assure that America's national security and international competitive interests in civil and military aeronautics will be sustained over the long term.

In our view, the NWTC study takes on added importance at this time, in light of continuing budgetary pressures on NASA and other agencies engaged in aeronautics research and test activities, including the Department of Defense and the Federal Aviation Administration. We should also consider economic conditions in the

aviation manufacturing sector of America's national industrial base constraining large-scale capital investment in research and test facilities; and the need to effectively integrate the NWTC with existing NASA, DOD, and FAA aeronautical research and test facilities and activities.

With this background, it is our view that the integrated planning and organizational framework envisioned in the Unitary Wind Tunnel Plan Act of 1949, as amended, is a suitable and appropriate vehicle for the planning, development and operation of aeronautics research and test facilities and activities in subsonic, transonic, supersonic, and hypersonic flight regimes, since all regimes influence performance, cost and competition for civil aviation directly undertaken in whole or in part by NASA.

Congress has already made it very clear that before the first spade of dirt can be turned, there must be an agreement in place which includes substantial financial participation from both the private aerospace industry and the Department of Defense as they will be the primary users and beneficiaries of the project. Any decision by the Congress to move beyond the Phase 1 study is contingent upon NASA executing a Memorandum of Agreement with both the Department of Defense and the U.S. aviation industry, both commercial and military, regarding cost shares for construction and utilization of the complex.

With regard to the NWTC study, in light of the budgetary pressures, general economic conditions impacting the U.S. aviation industry and other factors noted above, we anticipate that NASA will place special emphasis on the development and operation of additional wind tunnels at existing NASA and DOD research and test facilities. We also expect that NASA will coordinate the NWTC study activity with any similar activities being undertaken by the Department of Defense and/or the Federal Aviation Administration.

VAN HILLEARY.
ZOE LOFGREN.
MATT SALMON.
ZACH WAMP.
KEN CALVERT.
TODD TIAHRT.
LINDSEY O. GRAHAM.

ADDITIONAL VIEWS OF HON. MIKE DOYLE

I am greatly concerned about the adverse impact on computer and communications research that will result from the Committee's action to cut $35 million from the NASA High Performance Computing and Communications (HPCC) Program.

Federal funding under HPCC primarily supports university-based research, which underpins the development of new computer and communications technologies for use in engineering, financial services, manufacturing, medicine, security, space, and other areas. This fundamental research usually lies outside the research and development funded by the communications industry, as it involves long-term investment and uncertain financial payoffs. Cuts to the HPCC program reduce the scale of basic research in critical technology areas and ultimately will cripple the ability of the U.S. to compete internationally in computer and communications technologies.

Since its inception under the High Performance Computing Act of 1991, the HPCC Program has received bipartisan support and has performed well under Committee review. The legislative report {H.Rept. 102–66, Part 1} states that, at the full Committee markup of the High Performance Computing Act on May 8, 1991, "a bipartisan amendment in the nature of a substitute, sponsored by Representatives Boucher, Valentine, Brown, Packard, Lewis, and Walker, was adopted."

In an October 26, 1993, hearing the Committee received testimony from the manufacturing, financial services, energy and aerospace industries supporting the value of the program. An oversight hearing on May 10, 1994, revealed no serious problems with HPCC. The most recent assessment of the program was carried out by the National Academy of Sciences, which praised HPCC in a report earlier this year stating:

> Accomplishments under the High Performance Computing and Communications Initiatives to date reveal two key trends: better computing and computational infrastructure and increasing researcher-developer-user synergy. In the committee's expert judgment, the program has been generally successful.

The HPCC program is closely coordinated among 12 federal R&D agencies with many jointly funded activities. NASA provides approximately 12% of the total HPCC budget and is the agency responsible for the coordination of the government, academic, and industrial partners in the advanced software technologies component of the initiative.

The Committee has held no hearings on this program during the 104th Congress. New Members of Congress, who comprise a majority of the Committee on Science, have not had the opportunity to

learn about the objectives and accomplishments of this multi-agency, closely coordinated program. In the absence of any hearing record in this Congress, major cuts in the HPCC program are, at best, ill-advised. A large cut, such as the one contained in this bill, will have a negative impact on the ability of the overall HPCC program to meet its goals.

As a program that has proven its success, HPCC merits continued federal funding at a level that will allow it to continue its activities. The decision to drastically reduce the NASA component of the HPCC budget should be reconsidered.

MIKE DOYLE.

ADDITIONAL VIEWS OF HON. DAVE WELDON OF FLORIDA

Increased international competition has resulted in the nation's loss of a majority share of the commercial space launch market for medium and intermediate size launch vehicles. U.S. market share has decreased from 100 percent in 1965 to less than 35 percent in 1994. An integral factor in that loss is inefficient, labor intensive infrastructure that exists at the nation's current launch ranges.

In addition, there does not now exist at any launch range permanent infrastructure for use by small launch vehicles. The small launch vehicles will support the growing international market for small satellites, which has been projected by the Department of Transportation to reach a total of 120 launches in the next decade. The development of such infrastructure in the U.S. could enable the nation to recapture a significant share of the international space launch market.

At the same time as this threat and this opportunity present themselves, federal government facilities—including launch property—have been identified as excess and therefore available through state governments to the private sector. With a modest investment by the federal government, to be matched by state government and industry, infrastructure can be developed for use by small launch vehicles. The committee has provided $10 million for that purpose. The funds are to be spent on the improvement of existing launch infrastructure on federal government ranges and development of new launch infrastructure at nonfederal sites.

DAVE WELDON.

DISSENTING VIEWS OF HON. GEORGE E. BROWN, JR.

While there are a number of provisions in H.R. 2043 with which I can agree, the bill's fatal flaw is that it attempts to perpetuate the illusion that it is possible to significantly cut the NASA budget year after year without adversely affecting our future space program. As a result, I do not believe that there is a simple way to fix this piece of legislation.

My specific concerns fall into three areas.

MISSION TO PLANET EARTH

I would like to stress that my concerns with the bill are not partisan in nature. The adoption of Ms. Harman's amendment removed one of the most egregiously objectionable features of the bill that was presented for Full Committee markup, namely that the bill would have fundamentally unbalanced the civil space program by eliminating one of NASA's basic research missions: Mission to Planet Earth.

Unfortunately, the Committee report seems to presume that the Harman amendment was never offered, let alone adopted. The spreadsheet and language contained in the report are highly misleading in their statements that the authorization for Mission to Planet Earth was reduced by $323.9 million. With adoption of the Harman amendment, the FY 96 authorization for MPE was reduced by $50 million, leaving an authorization for the program of $1.287 billion. It is true that *expenditure* of about $280 million was "fenced" pending certain actions, but the *authorization* levels for the program are unequivocably set at $1.287 billion. On this there can be no argument.

Furthermore, the report is rife with language specifying how $323.9 million in reduction for MPE are to be allocated. Even had the authorization been lowered by this amount (which it wasn't), any attempt to specify such reductions in the Committee report clearly violates Rule 21(b) of the Science Committee's rules. I find it troubling that a new Committee Rule was violated so clearly and so quickly, in an apparent attempt to paper over the fact that the Harman amendment was adopted by the Committee on a unanimous voice vote.

INADEQUATE FUNDING LEVELS

H.R. 2043 still provides inadequate funding for NASA in FY 1996 and moves NASA further along the path of declining NASA budgets envisioned in the Republican's budget proposal.

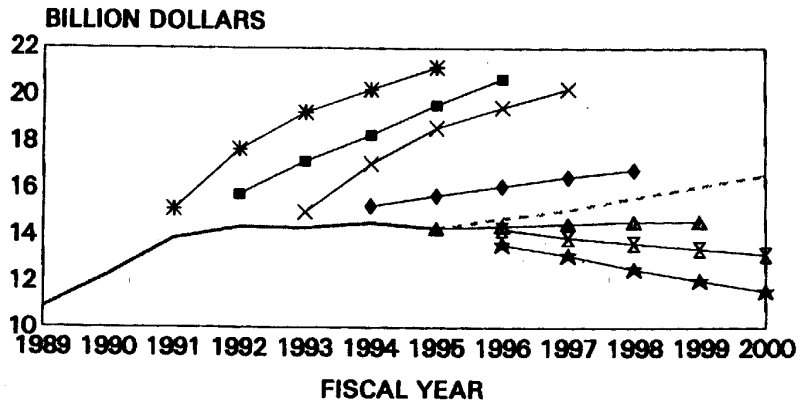
Figure 1 illustrates the situation confronting NASA. As can be seen from Figure 1, NASA has had its five-year funding plan cut significantly each year. Since 1992, this situation took a dramatic change for the worse when, despite the recommendations of the Augustine panel, the NASA budget began to decline significantly

below inflationary levels and more recently to register actual declines in nominal levels. It goes without saying that it is extremely difficult, if not impossible, for NASA to plan and execute complex, multiyear, research and development programs when the agency's funding plan is in a state of constant flux.

The situation will only worsen over the next five years if the Republican budgetary proposals are implemented. As shown in figure 2, the Republican five-year budgetary plan for NASA would reduce NASA's buying power to a level lower than that seen since the earliest days of the U.S. civil space program. NASA already has undertaken a major restructuring to meet the five-year budgetary targets imposed on it by the Administration. The more than $3 billion in additional cuts proposed by the Republicans over the next five years will force yet another major restructuring.

FIGURE 1

FIVE YEAR BUDGET HORIZONS COMPARED TO REPUBLICAN PROPOSAL



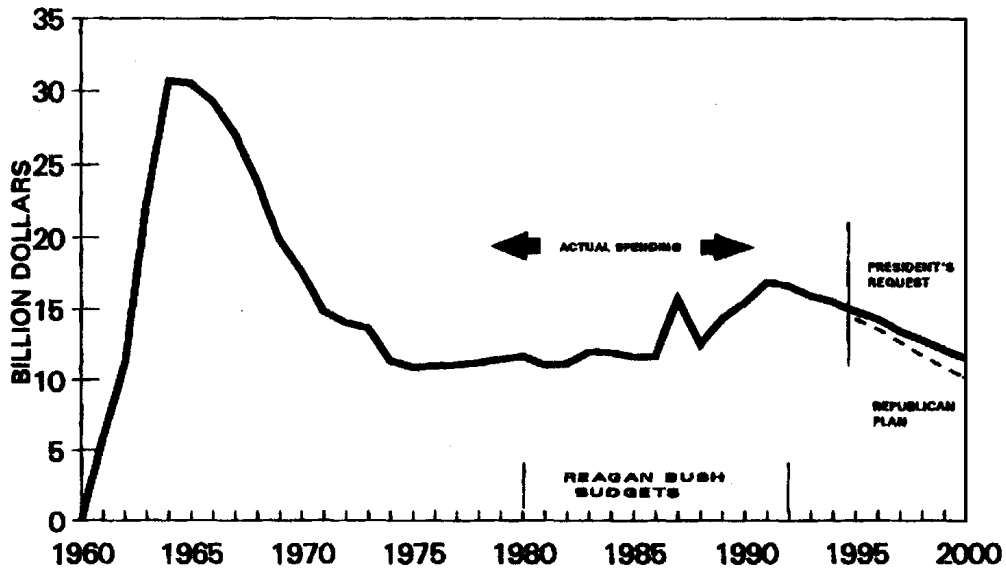
1991 BUDGET	1992 BUDGET	1993 BUDGET
1994 BUDGET	1995 BUDGET	1996 BUDGET PROPOSAL
INFLATION	ACTUAL APPROPRIATION	Republican Plan

Inflation based on CPI projection

92-457 95-4

FIGURE 2

SPENDING CUTS TO NASA
IN CONSTANT F.Y. 96 BUYING POWER



Despite the vague discussion of potential cost savings from "privatization" and capital asset sales, among other proposals, there are no measures identified in the bill that have any meaningful hearing record or documented savings associated with them. However, it is difficult to envision NASA being able to absorb the cuts contained in the Republican proposals without closing at least one Field Center and gutting one or more major NASA programs.

Historically, Democrats and Republicans on the Science Committee have strongly supported in a bipartisan manner space commercialization and the concept of harnessing the economic power of the private sector. Democrats, however, have viewed this as a way to expand the space program and capitalize on Federal investments, not as a substitute for a Federally supported space program. Although growth in commercial space may provide the Government with meaningful alternatives for carrying out its mission in the future, there is no evidence to demonstrate that this will occur any faster by decreasing Federal funding for NASA.

Over the near term, there is a widespread consensus supporting the management reforms which NASA has studied such as streamlining the contract structure for the Shuttle program. Beyond this, I urge caution inforcing privatization and commercialization where there is no clear evidence that this will be practically achievable, cost effective, or a benefit to the taxpayer.

We believe that NASA is a critically important element of the Nation's overall investment in research and development. We believe that that view is shared by the House at large, and we note that the Senate Committee on Commerce, Science, and Transportation has already approved a NASA Authorization bill at a significantly higher funding level than was approved by the House Science Committee.

It is fundamentally short-sighted and unwise to commit NASA to carrying out major national objectives without providing the space agency with sufficient funding to meet its commitments. That shortcoming, coupled with the inclusion of a wide range of policy provisions for which no documentation has been provided or hearings held, makes this bill one which I cannot support in its present form.

INAPPROPRIATE POLICY DIRECTIVES

Finally, it must be noted that the Chairman's report, which was unavailable to the Members at the time of the Committee's consideration of H.R. 2043 and thus was not adopted by the Committee at its markup, contains a plethora of policy directives and conclusions for which no basis can be found in the Committee's hearing or markup record. These include findings critical of Mission to Planet Earth that have been made in the absence of any Committee review of NASA's plans for this initiative in the 104th Congress. Such report language should not be interpreted as representing the consensus views of the Committee, and of course is not legislatively binding in any event.

XV. PROCEEDINGS FROM THE SUBCOMMITTEE MARKUP OF THE SUBCOMMITTEE PRINT

SUBCOMMITTEE MARKUP—H.R. 2043, NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AUTHORIZATION ACT, FY 1996

WEDNESDAY, JULY 19, 1995

U.S. HOUSE OF REPRESENTATIVES,
COMMITTEE ON SCIENCE,
SUBCOMMITTEE ON SPACE AND AERONAUTICS,
Washington, DC.

The subcommittee met at 10:10 a.m. in Room 2318 of the Rayburn House Office Building, the Honorable F. James Sensenbrenner, Jr. (chairman of the Subcommittee), presiding.

Mr. SENSENBRENNER. The Subcommittee will be in order.

Pursuant to notice, the Chair calls up the bill H.R. 2043 for markup. The National Aeronautics and Space Administration Authorization Act for Fiscal Year 1996.

Without objection, the bill will be considered as read and open for amendment at any point. And without objection, the Chair will be granted authority to declare a recess at any time during today's markup.

The Chair will state that he intends to complete the markup in one sitting, and only intends to call recesses when there are votes on the House floor. We do not have a large number of amendments to be offered, and I hope that we can get this markup done before lunch. Is there any objection to either of the unanimous consent requests?

Mr. BROWN. Reserving the right to object, Mr. Chairman, I so only for the purpose of commending you on your statement.

Mr. SENSENBRENNER. Thank you.

Mr. BROWN. And I will not object.

Mr. SENSENBRENNER. Let's hope the rest of this markup goes as smoothly as it's gone so far. The Chair moves to strike the last word, and recognizes himself for five minutes.

Today we need to mark up H.R. 2043, the NASA Authorization Act for 1996, which provides Congressional direction and authorization for NASA's activities in the coming year, when combined with H.R. 1601, the multi-year authorization of the International Space Station.

This bill offers Congressional input into NASA's priorities within the context of the confining budget. It recognizes the fundamental reality which many organizations across the United States face: the need to downsize.

President Clinton recognized the public's mood when he began the process of reducing NASA's budget this past January.

Rather than debating an arbitrary total budget authority at this markup, we can work together to prioritize NASA's missions within a realistic budget.

Unlike the President, who ordered budget reductions without specifying how NASA was to achieve them, this Committee must responsibly prioritize NASA's mission within a realistic budget.

Restoring NASA to financial health means that we cannot allow it to continue the practice of sponsoring more missions than it can afford. Should we fail to act responsibly or simply authorize everything under the sun, the Committee will have dodged its responsibility and broken faith with the American voters.

This bill will create a NASA whose priority is basic scientific research and technology development. It authorizes $11,547,000 for NASA which equals the amount approved for NASA under the House Budget Resolution.

When combined with H.R. 1601, this represents a savings of some $700 million from the fiscal year 1995 appropriation. H.R. 2043 moves NASA back to its strength in space science and takes the agency away from large systems such as the Space Shuttle and Mission to Planet Earth.

When the government created NASA, we built an agency designed to do fast, cutting edge research. Somewhere along the line, NASA took its R&D infrastructure and used that to run large, continuous operational systems.

H.R. 2043 reverses this trend and gives us a stronger agency that plays to its strength rather than to its weaknesses.

First, we are taking steps to privatize the shuttle, beginning with the first cost-saving step of moving to a single prime contractor, which NASA Space Shuttle Management Independent Review Team concluded held the greatest potential for significant cost savings.

According to industry, this action alone could save up to a billion dollars a year by fiscal year 1999.

Second, H.R. 2043 instructs NASA to study new methods of gathering earth environmental data from Mission to Planet Earth.

The General Accounting Office concluded that Mission to Planet Earth will cost the taxpayers some $33 billion by the time it is complete. When Mission to Planet Earth began, NASA expected its budget to increase some ten percent a year to accommodate this new mission, applying its science capabilities to the study of the earth. That expectation is no longer realistic, if it ever was.

Given these changed circumstances, we need to develop new approaches to Mission to Planet Earth. As currently structured, MTPE does not adequately take into account the possibility for using new cost-saving technology. The program is just in the beginning stages of exploring the applications of the miniaturized system with EOS satellites from the New Millennium program which is itself just getting underway.

The NASA Federal Laboratory Review found little evidence of advanced technology development or an infusion into MTPE which should be an ideal candidate for technology development.

By the same token, Mission to Planet Earth does not take adequate account of the emerging commercial remote sensing industry in its plans to acquire earth environmental data from space.

This industry is investing hundreds of millions of dollars in collecting environmental data from space for commercial customers. That is an investment the government cannot afford to ignore.

Similarly, Mission to Planet Earth has some scientific shortcomings. The Earth Systems Science and Applications Committee reported to the Committee, this Committee, that it does not see strong evidence of a program to provide balance in the earth observing system plans.

Similarly, the Federal Laboratory review noted a lack of definitive definite milestones and need dates that will provide the national policy process with necessary information to make decisions in a timely manner.

H.R. 2043 directs NASA to delay construction of the PM and Chemistry Series of EOS satellites and provide Congress with its plan to rectify these shortcomings. This will save the American people some $323 million in fiscal year 1996.

We still fund Mission to Planet Earth at over a billion dollars, but make cuts that will move that agency toward greater efficiency and creativity.

These steps provide the fiscal stability that the distinguished scientists of the George C. Marshall Institute deemed necessary for success.

Even as we move NASA away from these large operational systems, H.R. 2043 sharpens NASA's focus on space science, an area in which its accomplishments and capabilities are unmatched.

H.R. 2043 includes funding to complete the Cassini probe of Saturn, which is more than halfway done and enjoys significant financial contributions from several European partners.

The bill also provides funding for Gravity Probe B, which is more than 60 percent complete, and funds the Stratospheric Observatory for Infrared Astronomy or SOFIA. Our international partners in Germany have a strong stake in SOFIA and are contributing some 20 percent to the platform's cost.

Moving NASA out of large operational systems, such as Mission to Planet Earth, enables us to continue pursuing these excellent space science missions.

We also authorized programs intended to provide NASA with new lost-cost approaches in technology for the exploration of space. In particular, the bill recommends continued funding of the Discovery Program and the New Millennium Program.

Discovery, as many of us know, is NASA's attempt to demonstrate that it can conduct a faster, cheaper, better space exploration mission with a high science content.

H.R. 2043 also authorizes NASA's New Millennium program which the agency began in fiscal '95 to develop new technologies for miniaturized spacecraft systems and micro-satellites.

This is a technology program that focuses on providing the United States with new capabilities in space exploration that should dramatically decrease the cost of our space science missions.

Almost as important, NASA can use New Millennium to capitalize on the nation's multibillion dollar defense investment in miniaturized spacecraft, and by working cooperatively with the Department of Defense and the private sector, apply technology developed for the national security to the peaceful exploration of space and study of the earth. If managed properly, New Millennium can be an important contribution to our efforts at defense conversion.

Finally, H.R. 2043 is an important step in the continuing streamlining of NASA on a rational basis. The bill directs the NASA Administrator to conduct an asset-based review that relates NASA's infrastructure to its missions, and to avoid premature elimination of NASA facilities which sent a shockwave through a lot of folks last week.

The bill specifically directs the NASA Administrator to seek an independent evaluation of NASA assets, including the centers, and to make a recommendation upon which Congress must act, before closing any NASA field center.

As drafted, H.R. 2043 builds on the work the Subcommittee started with the Space Station Authorization bill. By providing the station with a multi-year authorization, HR 1601 gives NASA the funding stability it needs to reduce costs and to create technology within realistic budget expectations.

This bill moves NASA away from operating large, expensive programs and funds those programs that will enable the agency to further reduce its costs in the future.

The bill reduces NASA's budget by $597.8 million from the President's request, and is in line with plans to achieve a balanced Federal budget by the year 2002.

The agency will emerge smaller, leaner, and more responsive, and better able to accomplish those missions that the country asks from it within the parameters of fiscal responsibility.

I now recognize the gentleman from Texas, the ranking minority member, Mr. Hall.

[The prepared statement of Mr. Sensenbrenner follows:]

Subcommittee Mark-up
July 19, 1995

Opening Statement by Chairman Sensenbrenner

Today, we meet to mark-up H.R. 2043, the National Aeronautics and Space Administration Authorization Act of 1996, which provides Congressional direction and authorization for NASA's activities in the coming year when combined with H.R. 1601, the multi-year authorization of the International Space Station. This bill offers Congressional input into NASA's priorities within the context of a declining budget. It recognizes a fundamental reality that many organizations across the United States face, the need to downsize.

President Clinton recognized the public's mood when he began the process of reducing NASA's budget this past Jaunary. Rather than debating an arbitrary total budget authority at this mark-up, we can work together to prioritize NASA's missions within a realistic budget. Unlike the President, who ordered budget reductions without specifying how NASA was to achieve them, this Committee must responsibly prioritize NASA's mission within a realistic budget. Restoring NASA to financial health means that we cannot allow it to continue the practice of sponsoring more missions than it can afford. Should we fail to act responsibly and simply authorize everything under the sun, the Committee will have dodged its responsibilities and broken faith with American voters.

This bill will create a NASA whose priority is basic scientific research and technology development. It authorizes $11.547 billion for NASA, which equals the amount approved for NASA under the House Budget Resolution when combined with H.R. 1601. This represents a savings of some $700 million dollars from the FY1995 appropriation.

H.R. 2043 moves NASA back to its strengths in space science and takes the agency away from operating large systems such as the space shuttle and Mission to Planet Earth. When the government created NASA, we built an agency designed to do fast, cutting-edge research. Somewhere along the line, NASA took its R&D infrastructure and used that to run large, continuous, operational systems. H.R. 2043 reverses this trend and will give us a stronger agency that plays to its strengths rather than its weaknesses.

First, we are taking steps to privatize the shuttle, beginning with the first cost-saving step of moving to a single prime contractor, which NASA's Space Shuttle Management Independent Review Team concluded held the greatest potential for significant cost savings. According to industry, this action alone could save up to $1 billion dollars a year by FY1999.

Second, H.R. 2043 instructs NASA to study new methods of gathering earth environmental data for Mission to Planet Earth. The General Accounting Office concluded that Mission to Planet Earth will cost the taxpayer some $33 billion by the time it is complete. When Mission to Planet Earth began, NASA expected its budget to increase some 10% a year to accommodate this new mission applying its space science capabilities to the study of the earth. That expectation is no longer realistic, if it ever was. Given these changed circumstances, we need to develop new approaches to Mission to Planet Earth.

As currently structured, Mission to Planet Earth does not adequately take into account the possibility for using new, cost-saving technology. The program is just at the beginning stages of exploring the application of miniaturized systems to EOS satellites from the New Millennium program, which is itself just getting underway. The NASA Federal Laboratory Review found "little evidence of advanced technology development for and

infusion into MTPE, which should be an ideal candidate for technology development." By the same token, Mission to Planet Earth does not take adequate account of the emerging commercial remote sensing industry in its plans to acquire earth environmental data from space. This industry is investing hundreds of millions of dollars in collecting environmental data from space for commercial customers. That is an investment the government cannot afford to ignore.

Similarly, Mission to Planet Earth has some scientific shortcomings. The Earth System Science and Applications Committee (ESSAAC) reported to the Committee that it does not see strong evidence of a program to provide balance in Earth Observing System plans. Similarly, the Federal Laboratory Review noted "a lack of definite milestones and need dates that will provide the national policy process with the necessary information to make decisions in a timely manner." H.R. 2043 directs NASA to delay construction of the PM and Chemistry series of EOS satellites and provide Congress with its plans to rectify these shortcomings. This will save the American people some $323 million dollars in FY96. We still fund Mission to Planet Earth at over $1 billion dollars, but make cuts that will move the agency towards greater efficiency and creativity. These steps will provide the fiscal stability that the distinguished scientists of the George C. Marshall Institute deemed necessary for success.

Even as we move NASA away from these large operational systems, H.R. 2043 sharpens NASA's focus on space science, an area in which its accomplishments and capabilities are unmatched. H.R. 2043 includes funding to complete the Cassini probe to Saturn, which is more than halfway done and enjoys significant financial contributions from several European partners. The bill also provides funding for Gravity Probe-B, which is more than 60% complete and funds the Stratospheric Observatory for Infrared

Astronomy, or SOFIA. Our international partners in Germany have a strong stake in SOFIA and are contributing some 20% of the platform's cost. Moving NASA out of large operational systems such as Mission to Planet Earth, enables us to continue pursuing these excellent space science missions.

We also authorize programs intended to provide NASA with new, low-cost approaches and technologies for the exploration of space. In particular, the bill recommends continued funding of the Discovery program and the New Millennium program. Discovery, as many of us know, is NASA's attempt to demonstrate that it can conduct "faster, cheaper, better" space exploration missions with a high science content.

H.R. 2043 also authorizes NASA's New Millennium program, which the agency began in FY1995 to develop new technologies for miniaturized spacecraft systems and microsatellites. This is a technology program that focuses on providing the U.S. with new capabilities in space exploration that should dramatically decrease the costs of our space science missions. Almost as important, NASA can use New Millennium to capitalize on the nation's multi-billion dollar defense investment in miniaturized spacecraft and, by working cooperatively with DoD and the private sector, apply technologies developed for national security to the peaceful exploration of space and study of the earth. If managed properly, New Millennium can be an important contribution to our efforts at defense conversion.

Finally, H.R. 2043 is an important step in continuing the streamlining of NASA on a rational basis. The bill directs the NASA administrator to conduct an asset-based review that relates NASA's infrastructure to its missions, to avoid premature elimination of NASA facilities. The bill specifically directs the NASA administrator to seek an independent evaluation of NASA assets, including Centers, and make a recommendation upon which

Congress must act before closing any NASA field center.

As drafted, H.R. 2043 builds on the work this Subcommittee started with the Space Station authorization bill. By providing the station with a multi-year authorization, H.R. 1601 gives NASA the funding stability it needs to reduce costs and create technology within realistic budget expectations. H.R. 2043 moves NASA away from operating large, expensive programs and funds those programs that will enable the agency to further reduce its costs in the future. The bill reduces NASA's budget by $597.8 million dollars from the President's request and is in-line with plans to achieve a balanced budget by the year 2002. The agency will emerge smaller, leaner, more responsive, and better able to accomplish those missions that the country asks from it within the parameters of fiscal responsibility.

Mr. HALL. Mr. Chairman, I do thank you, and I thank you also for the open door policy that you've carried out, and for the extension of not just your friendship, but the time of your Committee people to mine, and it's been a pleasure working with you.

I also thank you for your remarks and for your SOFIA comments. I think today all of us know that we see hard times ahead for NASA.

We are struggling to maintain some public support for the Space and Aeronautics Program in the face of the increasingly severe budgetary climate that we live in today.

The space program today appeals to a broad segment of the public simply because it does so many things and fulfills so many dreams for so many people.

From biomedical research, which is very dear to me, to aeronautical research, each of NASA's activities has met a genuine need. And frankly, though, we are in danger today of losing this broad coalition, as we argue amongst ourselves over a declining budget.

Declining funding spawns arguments even among friends, and we can do that and yet try to come out with a bill that preserves and one that cuts back but does not cut out.

And I also appreciate your comments regarding the closing of Huntsville, Goddard, and Langley. There, once again, I always say cut back but don't cut out.

I would have applied that of course to even the Clinch River project some eight years ago in this Congress. We'd be getting electricity there now, had we kept a semblance of that program. Certainly the Synfuels Corporation, which was badly run, but we should have cut back and reorganized, rather than cutting out. And of course I feel that the same applies to the Super Collider.

I personally favor biomedical research over many other things in the NASA budget including environmental research, including reusable launch vehicles, spaceports and so on. And yet, I realize, Mr. Chairman, that most of these programs are very dear to others and have their advocates, and I'm willing to be considerate of them, and consider them to the extent that we share the cuts, but yet don't lose the program.

There's no right research or wrong research; there's only the challenge to plan and produce a balanced program that meets the needs and expectations of the public. That's, after all, what we're here for.

My guiding principle for NASA here in these tough budgetary times has been cut back but don't cut out.

So, accordingly, I'm willing to support such amendments as the one that Mrs. Harman has, intends to offer. Because, although Mission to Planet Earth is not my personal highest priority, her amendment has some restoration of the balance to the overall NASA budget while still making Mission to Planet Earth share in the overall cuts and yet survive in the face of these severe budgetary times.

So, Mr. Chairman, when Congress has completed its work on the NASA Authorization in this bill and this year, I hope we'll have maintained a space program the American people can support, and

I intend to support you as you work toward that goal. I yield back my time.

Mr. SENSENBRENNER. The time of the gentleman has expired.

[The prepared statement of Mr. Hall follows:]

OPENING STATEMENT
by

HON. RALPH M. HALL

Subcommittee Markup of H.R. 2043
July 19, 1995

Good morning. Today we are marking up the NASA Authorization bill for fiscal year 1996, and it is a difficult time for supporters of the space program. All of us see hard times ahead for NASA as they struggle to maintain public support for the space and aeronautics program in the face of an increasingly severe budgetary climate.

The space program today appeals to a broad segment of the public simply because it does so many things and fulfills so many dreams. From biomedical research to aeronautical research, each of NASA's activities has met a genuine need. We are in danger today of losing this broad coalition as we argue amongst ourselves over declining funding.

I personally favor biomedical research over many other things in the NASA budget, including environmental research, reusable launch vehicle, spaceports, and so on. Yet I realize that each of these other programs will have their advocates.

There is no right research or wrong research--only the challenge to produce a balanced program that best meets the needs and expectations of the public. My guiding principle for NASA during these tough budgetary times has been "cut back, but don't cut out". Thus, I'm willing to support the amendment that Ms. Harman intends to offer, because although Mission to Planet Earth is not my personal highest priority, her amendment restores balance to the overall NASA budget while still making Mission to Planet Earth share in the overall cuts faced by NASA.

When Congress has completed its work on the NASA authorization this year, I hope that we will have maintained a space program that the American people can support. I intend to work towards that goal.

Mr. SENSENBRENNER. The Chair recognizes the gentleman from Pennsylvania, Mr. Walker.

Mr. WALKER. Thank you, Mr. Chairman.

I first of all want to begin by congratulating you and the gentleman from Texas, Mr. Hall, for the bill which you have brought to us today.

The NASA Authorization bill before the Subcommittee, H.R. 2043, addresses the fundamental challenges facing NASA today. This document contains the authorization necessary for NASA to carry out its basic science and research mission.

$11,547,000 are authorized for the programs in this bill which, together with the International Space Station activities previously authorized in 1601, the total for NASA is $13.662 billion.

But I believe this document contains much more than money. It contains a new way of doing business, a clear priority for basic science and a forward-looking commitment to right-sizing NASA's assets, missions and budgets for the future. Today, we begin a new way of doing business.

The NASA budget woes go back many years. NASA budgets were unrealistic, even when they were increasing. Many large new programs were started by underestimating the potential costs. In a climate of 15 percent real budget increases, that was seen as okay. There would always be money to pay the bills as they came due.

But when there wasn't, the programs got stretched out, dropped scientific value, and ultimately were cancelled. A good example of this was CRAF, that NASA dropped in 1992.

Likewise, as NASA budgets have been reduced since 1991, unrealistic estimates of cost savings promised to be achieved through a powerful new lexicon of management challenges, unreserved costs and unallocated cost reductions.

Those have left NASA managing one fiscal crisis after another. This is exactly what led to the cancellation of the Space Station Freedom program in 1993.

In short, NASA has not been realistic about its costs when times were good, and unrealistic about savings when the times were tough.

I don't make this point to say that NASA is poorly or has been poorly led, only that it's been misleading itself.

I believe the Administrator, Dan Goldin, is working to turn things around. He is tireless in initiating cost cutting reviews, the roles and mission studies, red teams, blue teams, the Functional Work Force Review, the CRAF Committee, the NASA Federal Laboratory review, and the Zero-Based Review.

They are constantly looking to achieve the cost-cutting goals set by the President and by OMB.

H.R. 2043 recognizes the time has come to refocus NASA's priorities and right-size its Federal asset base to the missions approved by Congress. We are providing a clear sense of direction when NASA must again become the world's premier high risk basic R&D agency.

As we refocus NASA's capabilities on the basic science mission, I want to point out the last serious look at where NASA was going, conducted by the Augustine Committee in 1990, set forward the

idea of balance between basic science and other missions within NASA.

Augustine's Committee believed that 20 percent of the NASA budget should be devoted to basic science, the kinds of high risk basic science missions that are funded in H.R. 2043, Gravity Probe B, Cassini, the Advanced X-Ray Astrophysics Facility, the Stratospheric Observatory For Infrared Astronomy, Discovery Missions, and others like small explorers and New Millennium.

Today, I suspect we might spend some time discussing the balance of the NASA program as it concerns the cut proposed by the bill for Mission to Planet Earth.

I would like to remind my colleagues, new and old, that the Mission to Planet Earth was initiated as an adjunct to, not a replacement for, the basic science that I just talked about.

The first year it was proposed in fiscal 1991, EOS was termed a leadership initiative. It was not part of the science core mission.

As we return NASA to its basic science mission in Fiscal Year 1996, H.R. 2043 does not propose terminating EOS, even though I would argue that the critical measure of the balance in NASA is between human space flight and the core science program.

The balance we strike in H.R. 2043 favors the core science, continues the restructured EOS, and in human space flight initiates fundamental reforms that also refocus NASA on the basic research mission.

H.R. 2043 will begin the privatization of the Space Shuttle. We do so by requiring those companies who wish to be the single prime operating contractor for the shuttle, something that I agree with Dan Goldin is the critical first step, that in order to be considered for the single prime, the company must present a privatization plan for taking the program private.

We don't know, nor do we tell the companies how to do this. We require them to tell us how they want to do it. It's up to the privatizee to give us the deal they want. The Committee working with NASA will take the implementing steps together.

Why is privatization important? It's important because shuttle safety is so important. The current government only system requires one million signatures to launch a single shuttle mission. That's statistically unsafe, having to depend on a million separate approvals to be one hundred percent correct. That's what we do now.

By privatizing, I believe the cost of each such signature can be known, evaluated in terms of its contribution to safety, and reduced.

Without privatizing, there is no incentive to reduce the amount of paper work and improve safety in more meaningful ways than signatures.

Shuttle safety is not a government monopoly and we should stop treating it that way.

Along these same lines, H.R. 2043 proposes a business-like approach to the issue of NASA's infrastructure by examining the Federally owned assets that form the basis of NASA's budget.

If we had thought that missions ran NASA or that EOSAT centers ran missions, we were wrong.

The truth is that assets billed to NASA's budget, buildings that are maintained, wind tunnels that are operated, test stands that are used, computers that are programmed, offices that are occupied, all assets in general are what we pay for whether they are needed to do the mission or not.

Instead of closing field centers because we don't believe NASA has a plan to achieve its budget cuts, H.R. 2043 shows NASA how to find the cost savings it needs in the assets that NASA does not need.

We require the Administrator to conduct a full review of assets and their contributions to missions. If an asset is not being used, it should be retired, sold, or even given away in order to remove it from the cost base.

We believe this is an opportunity for NASA to get rid of the things it doesn't need to do its mission.

H.R. 2043 represents the only sensible approach for restructuring efforts which, according to the President's outyear budget, must come up with $4 billion in savings just to do the programs contained in the fiscal 1996 request.

Which brings me to a concluding observation. If this Committee doesn't help NASA put its house in order, I'm not sure who's going to do the job.

We see what other Subcommittees might do out of their frustration with NASA. Our job is to be innovative, to be inventive and constructive, and to help lead the way.

We have a bold vision for the future in this bill. We can see NASA growing stronger, not just on appropriated funds, but on ideas appropriated from the private sector.

I look forward to the Subcommittee's passage of this bill, H.R. 2043, today.

[The prepared statement of Mr. Walker follows:]

OPENING REMARKS
The Honorable Robert S. Walker
Chairman
Committee on Science
Subcommittee Mark Up of H.R. 2043
July 19, 1995

The NASA Authorization Bill before the Subcommittee, H.R. 2043, addresses the fundamental challenges facing NASA today. This document contains the authorizations necessary for NASA to carry out its basic science and research mission. $11.547 billion is authorized for the programs in this bill, which together with the International Space Station activities previously authorized by H.R. 1601, the total for NASA is $13.662 billion.

But I believe this document contains much more than money. It contains a new way of doing business, a clear priority for basic science, and a forward-looking commitment to right-sizing NASA's assets, missions, and budgets for the future.

Today we begin a new way of doing business.

NASA's budget woes go back many years. NASA budgets were unrealistic even when they were increasing. Many large, new programs were started by underestimating their potential costs. In a climate of 15% real budget increases, that was seen as okay; there would always be money to pay the bills as they came due. When there wasn't, programs got stretched out, dropped scientific value, and ultimately were cancelled. A good example of this is the CRAF, comet rendezvous mission, that NASA dropped in 1992.

Likewise, as NASA's budgets have been reduced since 1991, unrealistic estimates of cost savings promised to be achieved through a colorful new lexicon of "management challenges," "unresolved costs" and "unallocated cost reductions," has left NASA managing one fiscal crisis after another. This is exactly what led to the cancellation of the space station Freedom program in 1993. In short, NASA has not been realistic about its costs when times were good and unrealistic about savings when times are tough.

I don't make this point to say that NASA is poorly led, only that it has been misleading itself. I believe the Administrator, Dan Goldin, is working to turn things around. He's tirelessly initiated cost-cutting reviews: the Roles and Missions Study, Red Teams, Blue Teams, the Functional Workforce Review, the Kraft Committee, the NASA Federal Laboratory Review, and the Zero Base Review. They are constantly looking to achieve the cost-cutting goals set by the President and OMB.

But all these reviews and studies were not enough to convince the Appropriation's Subcommittee on VA-HUD and Independent Agencies that NASA could go forward with the budget proposed for Fiscal Year 1996 and beyond without cancelling major science missions and closing three field centers employing about 10,000 people.

If that does not signal a crisis in the way NASA does business, I'm afraid to know what would.

H.R. 2043 recognizes the time has come to refocus NASA's priorities and right-size its federal asset base to the missions approved by Congress. We are providing the clear sense of direction that NASA must, again, become: the world's premier high-risk, basic

R&D agency. As we refocus NASA's capabilities on the basic science mission, I want to point out the last serious look at where NASA was going, conducted by the Augustine Committee in 1990, set forward the idea of balance between basic science and other missions of NASA.

Augustine's committee believed that 20% of the NASA budget should be devoted to basic science, the kinds of high-risk basic science missions that are funded in H.R. 2043-- Gravity Probe-B, Cassini, the Advanced X-ray Astrophysics Facility, the Stratospheric Observatory For Infared Astronomy, the Discovery Missions, and others like the Small Explorers and New Millenium.

Today, I suspect we might spend some time discussing the balance of the NASA program as it concerns the cut proposed by the bill to Mission to Planet Earth. I would like to remind all my colleagues, new and old, that the Mission to Planet Earth was initiated as an adjunct to, not a replacement for, the basic science I just talked about. The first year it was proposed, in fiscal year 1991, EOS was termed a "leadership initiative;" it was not part of the Science Core mission.

As we return NASA to its basic science mission in fiscal year 1996, H.R. 2043 does not propose terminating EOS, even though I would argue the critical measure of balance in NASA is between human space flight and the core science program. The balance we strike in H.R. 2043 favors the core science, continues a restructured EOS, and in human space flight initiates fundamental reforms that also refocus NASA on a basic research mission.

H.R. 2043 will begin the privatization of the Space Shuttle. We do so by requiring those companies who wish to be the single-prime operating contractor for the shuttle-- something I agree with Dan Goldin is the critical first step-- that in order to be considered for the single-prime, the company must present a privatization plan for taking the program private. We don't know, nor do we tell the companies how to do this-- we require them to tell us how they want to do it. It's up to the privatizee to give us the deal they want, and the Committee working with NASA will take the implementing steps together.

Why is privatization important? It's important because shuttle safety is so important. The current government-only system requires 1 million signatures to launch a single shuttle mission. This is statistically unsafe, having to depend on a million separate approvals being 100% correct. That's what we do now. By privatizing, I believe the cost of each such signature can be known, evaluated in terms of its contribution to safety, and reduced. Without privatizing, there is no incentive to reduce that mountain of paperwork, and improve safety in more meaningful ways than signatures. Shuttle safety is not a government monopoly and we should stop treating it that way.

Along these same lines, H.R. 2043 proposes a business-like approach to the issue of NASA's infrastructure by examining the federally-owned assets that form the basis of NASA budgets. If we had thought that missions ran NASA or that field centers ran missions, we were wrong. The truth is that assets build NASA's budget. Buildings that are maintained, wind tunnels that are operated, test stands that are used, computers that are programmed, offices that are occupied, all assets in general, are what we pay for whether needed to do a mission or not.

Instead of closing field centers because we don't believe NASA has a plan to achieve its budget cuts, H.R. 2043 shows NASA how to find the cost savings it needs-- in the assets

NASA doesn't need. We require the Administrator to conduct a full review of the assets and their contribution to missions. If an asset isn't being used, it should be retired, sold, even given away, in order to remove it from the cost base.

We believe this is an opportunity for NASA to get rid of the things it doesn't need to do its mission. H.R. 2043 represents the only sensible approach to restructuring efforts, which according to the President's outyear budget, must come up with $4 billion in savings just to do the programs contained in the fiscal year 1996 request.

Which brings me to a concluding observation. If this Committee doesn't help NASA put its house in order, who will? We've seen what other Subcommittees might do out of their frustration with NASA. Our job is to be inventive and constructive, to help lead the way. We have a bold vision for the future in this bill. We can see NASA growing stronger, not just on appropriated funds, but on ideas appropriated from the private sector.

I look forward to the Subcommittee's passage of H.R. 2043 today.

Mr. SENSENBRENNER. The time of the gentleman has expired.

The Chair intends to recognize the gentleman from California, Mr. Brown, but before doing so, would like to ask unanimous consent that other opening statements be placed in the record following Mr. Brown's statement, so that we can get to the amendment process after Mr. Brown has concluded. Is there any objection to my unanimous consent request?

[No response.]

Mr. SENSENBRENNER. Hearing none, it is so ordered.

The gentleman from California, Mr. Brown, is recognized.

Mr. BROWN. Thank you very much, Mr. Chairman.

I first would like to say that I have listened with interest to the other opening statements, and find that I'm in fundamental agreement with the thrust of most of these statements.

However, I am unfortunately, at my age, humbled by the past, and I will have to tell you that I have been listening to this talk of redirecting NASA, cutting its waste and fraud or whatever, and doing a more efficient job for quite a few years.

And for example, with regard to the Augustine Report, some of you may recall that the first hearing that I held as Chairman in January of '91 was on the Augustine Report, which made the same point, Mr. Chairman, that you made: that NASA has more programs in its portfolio than have come forth. Mr. Augustine projected if we wanted to continue these programs, what the budget requirements would be. And as I recall, he said it would take a ten percent per year increase in the budget.

He also of course indicated the priorities that you and Mr. Walker have indicated, and which I share, and I've said so repeatedly over the years.

The projections on funding adequately the programs that NASA had underway of course were unrealistic. We could never hope for a 10 percent increase in 1991 and certainly we can't hope for that today.

I recall that my first authorization bill, the one that the Committee reported, I suggested perhaps a five percent increase per year, which is marginally over inflation and would have allowed for us to continue to make the efficiencies which Mr. Goldin was making and allow us to keep most of the programs that were then on our portfolio.

Well, we never even achieved that. And what has happened, and I think that it's unfair to criticize NASA and Mr. Goldin for not suggesting larger budgets than they have, it's that they never got the larger budgets. And even after they got a smaller budget, that budget was then cut repeatedly year after year. So it is very difficult for NASA to know just what is a reasonable portfolio of programs to sponsor under these conditions.

Mr. Chairman, this fact is reflected in the language of the bill itself. It says the National Aeronautics and Space Administration has failed to request sufficient funds to perform all missions it has proposed in annual budgets. And yet in this bill, we cut their request by another $600 million. That is typical of the situation that faces us.

I find that this is somewhat contradictory. NASA has just completed a major restructuring that will reduce planned spending by

almost $5 billion over the next five years. Now they have to start over again. And this has been the story of their life for the last ten years.

And I suggest that it's going to be very difficult for this country to maintain a leadership role in any field where it continues to restructure programs year after year. And there's no way of determining what the proper time horizon is.

I have a second problem with this bill. That is that it seeks to kill the Earth Observing System, despite the fine words that have been made as to how this is going to make it a better program.

You will hear words about involving the commercial sector, delaying some of the spacecraft, seeking to incorporate new technology, but these are basically obfuscations.

The bill does irreparable damage to EOS and is simply the first step in implementing the House Republican Budget Committee guidance to cut Mission to Planet Earth by $2.7 million over the last five years. This is after it's already been cut 50 percent, I might say.

Let me quote from the NASA Administrator's statement last month on the Budget Committee's plan. He said:

"Such a cut would dismantle the national approach to U.S. global change research priorities established over the last three Administrations and undercut U.S. leadership in this important area of research. It would destroy this program's basic feature—comprehensiveness—and turn an integrated, global program into a series of disconnected and fundamentally less effective measurements.

"The cuts would cripple the core of the program—the Earth Observing System—the first integrated satellite and research system designed to observe the linkages among all the components of the Earth system—the land, oceans, atmosphere, ice sheets, and ecosystems . . .

"By walking away from the systematic and comprehensive approach for Mission to Planet Earth, the U.S. would also give up its undisputed world leadership in Earth observations, jeopardize technologies that will be critical to the growing commercial remote sensing market, and reduce our ability to influence the global environmental agenda."

I thoroughly agree with the Administrator on this, as I have been in most areas in which he's seeking to make sense out of the complicated situation that he has to exist in.

And I will make every effort to correct that problem with Mission to Planet Earth if we can do so.

Mr. Chairman, I have focused on my areas of disagreement, perhaps disproportionately. I am in agreement with probably 90 percent of what this bill contains, but it's a borderline situation.

I'm trying to maintain the posture that I've consistently had for a number of years, that we need to stabilize this budget.

I think the Chairman, Mr. Walker, has made it clear that he agrees with this overall goal, although I'm afraid we see stability at slightly different levels, at least at the present time.

I therefore will continue to work toward increasing this budget up to what I consider to be a more acceptable minimum, not an increase.

The question is how much of a cut we should make, and frankly I think what making will amount to a 35 percent cut in NASA over a relatively short period of time is extreme and does great damage to our world leadership role in many space programs. I thank the Chair for his indulgence.

[The prepared statement of Mr. Brown follows:]

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OPENING STATEMENT
by
HON. GEORGE E. BROWN, JR.

Subcommittee Markup of H.R. 2043
July 19, 1995

Today the Subcommittee is meeting to mark up the NASA authorization bill. I must confess my deep disappointment with the bill on a number of grounds. However, my main objections are two-fold. First, the overall funding level for NASA contained in the bill is too low. The bill itself makes the point most tellingly in its first Finding, where it asserts that:

> "The National Aeronautics and Space Administration has failed to request sufficient funds to perform all missions it has proposed in annual budget requests"

And yet this bill proceeds to compound the "underfunding" by another $600 million. Forgive me if I find this a bit self-contradictory.

As you will recall, NASA has just completed a major restructuring that will reduce planned spending by almost $5 billion over the next five years. Now NASA will have to start the process all over again if the funding profile implicit in this bill is ever enacted. This is a prescription for waste and increased risk, not for a robust civil space program.

Second, this bill seeks to kill the Earth Observing System, the cornerstone of Mission to Planet Earth. You will hear vague words about involving the commercial sector, of delaying some spacecraft, and of seeking to incorporate new technology, but you should not be fooled. This bill does irreparable demage to EOS, and is simply the first step in implementing the House Republican Budget Committee guidance to cut Mission to Planet Earth by $2.7 billion over the next five years.

Let me quote the NASA Administrator's June 20th statement on the Budget Committee's plan:

"Such a cut would dismantle the national approach to U.S. global change research priorities established over the last three Administrations and undercut U.S. leadership in this important area of research. It would destroy this program's basic feature--comprehensiveness--and turn an integrated, global program into a series of disconnected and fundamentally less efffective measurements...

The cuts would cripple the core of the program--the Earth Observing System--the first integrated satellite and research system designed to observe the linkages among all the components of the Earth system--the land, oceans, atmosphere, ice sheets, and ecosystems...

By walking away from the systematic and comprehensive approach for Mission to Planet Earth, the U.S. would also give up its undisputed world leadership in Earth observations, jeopardize technologies that will be critical to the growing commercial remote sensing market, and reduce our ability to influence the global environmental agenda."

I must confess that I am disturbed by both the symbolism and the substance of what we may do today. Yesterday, the day before dozens of the world's best scientists and engineers were to assemble in California under the auspices of the National Academy of Sciences to review the Mission to Planet Earth program--at Chairman Walker's request--a NASA Authorization bill was introduced that in effect says: "never mind, we already have decided what the answer is." That is the bill that we are marking up today.

I find this ill-advised attempt to gut NASA's environmental research program repugnant, and I will oppose it. I believe that Ms. Harman intends to offer an amendment to restore some balance to the Authorization bill, and I intend to support it.

Mr. SENSENBRENNER. The time of the gentleman has expired. The bill is now open for amendment at any point.

The Chair has an en bloc amendment on technical and conforming amendments, number one, which the Clerk will report.

Mr. ADAMS. Amendment offered by Mr. Sensenbrenner.

[The amendment follows:]

AMENDMENTS TO H.R. 2043

OFFERED BY MR. SENSENBRENNER

Page 8, line 3, strike "section 208(7)" and insert in lieu thereof "208(7)(A)".

Page 13, line 21, insert "to the National Aeronautics and Space Administration" after "authorized to be appropriated".

Page 24, line 6, strike "the purpose of".

Page 47, line 20, strike "sentence" and insert in lieu thereof "incentives".

Mr. SENSENBRENNER. The Chair asks unanimous consent that the amendment be considered as read, and open for amendment at any point.

Mr. BROWN. Mr. Chairman, reserving the right to object, and I will not object, but I hope I'll have the opportunity to ask a few questions before we actually move to a vote.

Mr. SENSENBRENNER. Absolutely.

The Chair yields himself five minutes to explain the amendment. This amendment corrects technicalities in the bill in four ways.

First, it changes a reference to Section 208, paragraph 7, subparagraph [a], so that NASA cannot misinterpret the intention of funds authorized for Mission to Planet Earth. So the only difference is that there's a subsection that was put in there.

Second, it specifies that the upper limits set on funds authorized in the Act are funds intended for NASA, so that funds authorized in this bill for the Department of Transportation's Office of Commercial Space Transportation and the Commerce Department's Office of Air and Space Commercialization, are not counted against the total budget authority for NASA.

Third, it sharpens restrictions on transfers of resources to Russia so that this bill is consistent with H.R. 1601, the Space Station Authorization bill.

Finally, it changes the title that currently reads, centives, and corrects it to read incentives so that NASA creates an incentives structure for potential shuttle single prime contractors in order to reduce costs. I yield back the balance of my time. The gentleman from California.

Mr. BROWN. Thank you, Mr. Chairman.

I'll confess that in reading over your amendment, and in referencing it to the bill very quickly, I still don't thoroughly understand it.

I do understand the typo on page 47, and I thoroughly agree with the correction on page 24. I consider that an editorial change, and I thoroughly support that.

But it appears to me that what you have done, in the language change that you have made, is to specify that something like $21.5 million must be spent in the preparation of a report. Is this the intent of what you're doing?

Mr. SENSENBRENNER. The answer is no. This suggested change was suggested to us by the legislative counsel so that it specifically deals with the language on the bottom of page 46 and reads "most effectively utilize space-based and airborne earth remote sensing data services distribution and application provided by the United States private sector to meet government goals for Mission to Planet Earth."

Mr. BROWN. This is an analysis for which we will pay $21.5 million?

Mr. SENSENBRENNER. No, it's not. This is for purchase of commercial data.

Mr. BROWN. All right, I'm not going to probe further into this. I hope you understand that it is not really clear yet in my mind that that's what you achieve. I'm not sure that I would disagree with the purpose.

Mr. SENSENBRENNER. Perhaps between now and Full Committee, legislative counsel can come up with a clearer way of stating this. We certainly would be open to that.

Mr. BROWN. We'll work to see if we can agree to that. I'll not raise any objection to the amendment at this point.

Mr. HALL. Will the gentleman kindly yield?

Mr. Chairman, the book on you is that you don't usually put out $21 million or even $2100 for data that's not needed, and you say this is not for data provided by the private sector before NASA. You're saying between now and the time we have the Full Committee markup, that we'll more clearly delineate what the $21 mil is for.

Mr. SENSENBRENNER. If the gentleman from California, who has the time, will yield to me, the answer is yes.

Mr. HALL. Thank you.

Mr. SENSENBRENNER. Further discussion on the amendment?

[No response.]

Mr. SENSENBRENNER. The question is on adoption of the en bloc amendment.

Those in favor will say aye.

[Chorus of ayes.]

Mr. SENSENBRENNER. Those opposed, no.

[No response.]

Mr. SENSENBRENNER. The ayes appear to have it, the ayes have it. The en bloc amendments are agreed to.

The next amendment on the roster is an amendment by the gentlewoman from California, Ms. Harman.

[The amendment follows:]

AMENDMENT TO H.R. 2043

OFFERED BY MS. HARMAN

Page 8, line 2, strike "$1,013,100,000" and insert in lieu thereof "$1,287,460,000".

Mr. SENSENBRENNER. The Chair recognizes the gentlewoman from California.

Ms. HARMAN. Thank you, Mr. Chairman.

First off, I would just like to quibble a bit with the description of this amendment.

It says to increase funding for Mission to Planet Earth without offset. My amendment, and we can distribute it now, although I want to tell the Subcommittee that I am planning not to offer it today, so maybe we don't need to, but to offer it in the Full Committee, though I would like to discuss it for a brief moment.

Mr. SENSENBRENNER. The gentlewoman is recognized for five minutes.

Ms. HARMAN. Thank you, Mr. Chairman.

At any rate, the amendment does restore funding for Mission to Planet Earth but you will notice in I think it's one line, that it does not increase the overall caps. Therefore, it would automatically include an offset against the general NASA budget.

That is my intention, to have the Administrator of NASA make a cut in NASA's general operating expenses to compensate for the increase in funding for the Mission to Planet Earth fund.

Moving along, I would ask unanimous consent to put in the record of this markup at this point, some material from NASA which was supplied yesterday and today to the House Appropriations Committee, a response to queries on various subjects.

Mr. SENSENBRENNER. Without objection.

[Response to Query dated July 19, 1995, follows:]

Response to Query

House Appropriations Committee Markup: Effects on NASA's Mission to Planet Earth

July 19, 1995

What effect would the House Appropriations Committee markup have on NASA's Mission to Planet Earth?

NASA is very concerned about the $332 million cut from Mission to Planet Earth, a reduction of 25 percent. The House Appropriations Committee mark would cripple the core of NASA's Mission to Planet Earth -- the Earth Observing System, or EOS. This program is the first integrated satellite and research system designed to observe linkages among all the components of the Earth system -- the land, oceans, atmosphere, ice sheets and ecosystems. Such a cut would destroy the basic feature of EOS -- its comprehensiveness -- and turn an integrated, global program into a disconnected and fundamentally less effective effort.

NASA is committed to prudent and meaningful deficit reduction. The Agency has stepped up to the cost cutting challenge again and again in recent years. In EOS alone, NASA has already reduced the budget through the year 2000 by 60%. We are now looking at the next decade and ways we can use cutting edge technology and innovation to find even more savings. Beginning today, July 19, the National Academy of Sciences, at Chairman Walker's request, will be evaluating our long range plans for EOS.

By walking away from the systematic and comprehensive approach for EOS, the U.S. would be giving up its undisputed world leadership in Earth observations. NASA has always been at the forefront of such advances in knowledge and stands committed to this effort. Further near term cuts to this critical program seriously jeopardize our ability to realize both near and long-term benefits from this research. Further cuts would also make it extremely difficult for NASA to incorporate innovative new approaches now being planned for the future. *The full FY 1996 President's request for Mission to Planet Earth is critical.*

What tangible benefits will this program provide ?

EOS will produce both practical benefits and long term understanding of the environment. Both flow from the same high quality science. EOS will help us understand the causes of natural disasters and how to respond to them. It

will allow us to dramatically improve weather forecasts and thereby improve agricultural and natural resource productivity. It will help to reduce inefficiencies in the use of agricultural chemicals, reducing non-point source pollution and increasing crop productivity at the same time. It will generate the facts needed to make objective decisions about the environment. Finally, EOS science and technology have the potential to jump-start a new high-tech, commercial remote sensing industry in the U.S. that could contribute significantly our economy and trade balance.

In this field, research and applications go together. Just last week, a NASA research aircraft (a C-130 out of Ames Research Center) made observations over Scottsdale, Arizona that helped firefighters identify and track a dangerous fire outside the city. Other NASA research is helping to safeguard Chesapeake Bay coastal marshes, to protect the California wine industry from insect infestation, and to cost-effectively study crop yields and irrigation patterns in Kansas. As NASA flies increasingly capable instruments and satellites over the coming years, these kinds of return on investment will multiply rapidly.

In the long run, information from EOS basic research will help us answer the most profound questions about the global climate and how it may be changing. We hope to be able to forecast the climate, a year in advance at first, then progressively longer. Such predictions are key to major improvements in agricultural and urban planning, water and forest management, investment and capital decisions, and fishing, all of which affect U.S. competitiveness.

Response to Query

House Appropriations Committee markup on HUD/VA/Independent Agencies

Tuesday, July 18, 1995

(The full House Appropriations Committee finished its markup today of the NASA portion of the HUD/VA/Independent Agencies spending bill. The overall figure for NASA is $13.671 billion, which is $132 million above the subcommittee markup, but still $589 million, or 5%, below the President's budget request for NASA. The following language is guidance for responding to media inquiries on the Committee action.)

What is NASA's reaction to the Committee's markup today?

NASA is pleased that the full Committee restored some of the cuts made at the Subcommittee level. However, the overall funding level remains too low, and we are very concerned about the cuts to Mission to Planet Earth and to other NASA science programs.

We also are pleased that the full Committee chose to remove report language calling for the closure of three NASA centers, but we are concerned that the general bill language has been retained calling for a study of closing or restructuring NASA centers by October 1, 1998. Each of the NASA centers brings unique and fundamentally important skills to NASA's overall mission, which is critically important to the future of the country. The President's budget for NASA makes deficit reduction a high priority while still preserving NASA's major programs and the abilities of NASA's field centers to carry out those programs. We believe the President's approach is the right approach, and NASA will work diligently to make that point as the Congress continues its work on the budget.

What impact would this markup have on NASA's science programs?

NASA is pleased that the full Committee chose to restore funding for the Cassini mission to Saturn at $294 million and to partially fund SOFIA at $28.7 million. However, NASA is very concerned that the Committee did not include funding for the initiation of the Space Infrared Telescope Facility, designed to open a new era of infrared physics.

NASA also strongly objects to the $332 million cut from Mission to Planet Earth, a reduction of 25 percent to a program that is critical not just to Americans, but to all humanity. Mission to Planet Earth seeks to provide the

nation with a comprehensive approach to understanding how human activity affects global environmental change. This massive cut would undermine NASA's ability to provide policy makers with the critical information they will need in the years ahead to make informed decisions.

Now is not the time to weaken or dismantle this program. In the near future, the resources of the Earth will be challenged as never before in history. We have a window of opportunity to learn more about the Earth and its ability to sustain human activity. But if we slow down or weaken this program, we will be left with environmental research methods that are hopelessly out of date, and we will rob future leaders of the data they need to grapple with tough environmental questions. This approach simply does not make sense.

That is why the President's budget is the right approach. It makes hard choices and significant cuts at NASA, contributes to deficit reduction, but also enables the continuation of this and other important programs.

Does NASA believe it should not be cut further?

NASA understands the need to cut Federal expenditures. NASA has been at the forefront of that effort. And NASA has done its share.

In the last three years, NASA has reduced its long-range spending plans by $35 billion. NASA has stepped up to the deficit reduction challenge and has been among the first to produce significant, sweeping organizational changes to reduce overhead, improve efficiency and prepare for declining budgets in the years ahead. NASA has conducted two buyouts, and civil service staffing is down to the lowest level since 1961. NASA has reduced the spending on the Space Shuttle program by over 25% while still maintaining a highly successful and, most importantly, a safe space flight program. NASA redesigned the international Space Station, cutting billions from the budget while also making it possible to build the station sooner and perform more science and do it better. These organizational changes have been made in line with the President's budget, which encompasses very significant budget reductions for NASA between now and FY2000 while also preserving the important work that NASA does on behalf of the country.

What happens next?

The Subcommittee and full Committee actions represent the early stages of a long Congressional budget process. We will continue to make the case that

the President's budget request for NASA is the right approach for the country.

Ms. HARMAN. Let me just read about a paragraph and a half. This was supplied again by NASA, I guess yesterday. It says:

"Beginning today, July 19th, the National Academy of Sciences, at Chairman Walker's request, will be evaluating our long-range plans for EOS.

"By walking away from the systematic and comprehensive approach for EOS, the U.S. would be giving up its undisputed world leadership in earth observations. NASA has always been at the forefront of such advances in knowledge and stands committed to this effort. Further near term cuts to this critical program seriously jeopardize our ability to realize both near and long term benefits from this research. Further cuts would also make it extremely difficult for NASA to incorporate innovative new approaches now being planned for the future. The full FY 1996 President's request for Mission to Planet Earth is critical."

The point here obviously is that NASA is opposed to the cuts that would be made in this bill. I would just make these points briefly right now, and yield time to others, if people would like to discuss this.

First of all, the cuts to Mission to Planet Earth are disproportionate. It's 25 percent compared to a four percent overall cut for other science programs.

Second of all, they are premature, as you've heard in the NASA statement I just read. Chairman Walker has requested a National Academy of Sciences study on the Mission to Planet Earth. It is underway now, and it will be completed in about a month from now. So I would think we would like its results before we make cuts.

And third, I would make the point that the Mission to Planet Earth work is extremely valuable for predicting weather disasters, for example, like El Nino, which could in the end, if we had advanced warning, have saved us billions of dollars.

And also, for risk assessment which is a subject that this Subcommittee and the Full Committee and this member care about a great deal.

So when we get to the Full Committee level, I certainly will be offering this amendment and will hope for the Committee's support.

Mr. BROWN. Will the gentlelady yield?

Ms. HARMAN. Yes, I will.

Mr. BROWN. I am disturbed by one aspect of what the gentlelady says about the review by the National Academy of Sciences, and I wonder if the distinguished Chairman would indicate his thinking about making this severe cut prior to receiving the report, which I understand that he himself requested.

I know it's not conceivable that he has made up his mind before he made the request, but perhaps he could explain in more detail the rationale.

Mr. SENSENBRENNER. Time is controlled by the gentlewoman from California, Ms. Harman.

Ms. HARMAN. Mr. Chairman, I would yield to the Full Committee Chairman for a response to Mr. Brown's question.

Mr. WALKER. Obviously, we have on-going missions. It's one of the problems in having any kind of science research done. It

doesn't necessarily fit with the legislative rhythm, and we have asked for the National Academy of Science's review.

I believe the National Academy of Sciences' review will end up providing a roadmap for achieving some of the savings that we are now budgeting.

It is true that we are making cuts prior to having that particular review before us but based upon conversations that I have had ongoing, I have no doubt that the National Academy of Sciences will suggest that there are some ways to restructure this program.

Whether or not they will meet exactly the numbers that we have in the budget, that I don't know. I'm not about to prejudge where they're coming.

But I do believe that some of the concerns that we've expressed about the ground-based system for the program, as well as the need to adopt lower cost, more advanced technologies in the out years, will in fact be reflected in that study.

Mr. SENSENBRENNER. The time of the gentlewoman has expired.

Mr. WALKER. I would ask to be recognized.

Mr. SENSENBRENNER. The gentleman from Pennsylvania is recognized for five minutes.

Mr. WALKER. I simply want to complete my statement.

In my view, some of the those issues are going to be reflected in the report. They are exactly the kinds of things which lead us to believe that not only can you achieve savings in the near term by beginning the process of rescoping the mission, but in particular this mission needs to be looked at for potential outyear savings, and I believe in particular the National Academy of Sciences' report will help us look at the long term prospect of this program, and help us to achieve the downstream outyear savings that are going to be so necessary if we are to keep this within the framework of our balanced budget goal.

Mr. SENSENBRENNER. Will the gentleman from Pennsylvania yield to me?

Mr. WALKER. I'll be happy to yield to the Chair.

Mr. SENSENBRENNER. Thank you.

I have reviewed the Harman amendment, and for the record, let me state my extreme concern about the way this amendment is drafted.

The amendment proposes to increase the authorization for Mission to Planet Earth by approximately $274 million. It does not raise the cap on the total authorization that tracks the amount of money in the budget resolution.

The consequence of increasing the Mission to Planet Earth funding without raising the cap, and raising the cap would put us out of sync with the budget resolution, places every other program of NASA in jeopardy because it means that the NASA Administrator would have to take $274 million out of other NASA programs in order to fund the higher level of authorization that the gentlewoman from California proposes for Mission to Planet Earth.

Now looking at the practicalities of what this Subcommittee and eventually the Full Committee and the Congress will have to face.

Last week, as we know, the Appropriations Subcommittee came up with a NASA budget that closed three centers. They were operating within the same budget cap.

Fortunately, the Full Appropriations Committee thought better of that and reported out an appropriations bill that keeps the centers open.

I think that given the cap that the budget resolution and the 602[b] allocations have placed on the Appropriations Subcommittee means that we either can fund Mission to Planet Earth at the higher level proposed by the gentlewoman from California, or we have to start denuding the centers and perhaps closing down a center or two to maintain that funding.

Unfortunately, that is the situation we're in. I don't think anybody is comfortable. But it seems to me that Mission to Planet Earth, which is still funded at over a billion dollars a year, is going to be alive and well, even with the cuts that are being proposed by the Appropriations Committee and in this legislation.

I just do not want to see the NASA Administrator being forced to take over a quarter billion out of other NASA programs, including those that are run in the centers, in order to fund Mission to Planet Earth. That's why I think the Harman amendment is not a good one. I thank the gentleman from Pennsylvania for yielding.

Mr. WALKER. I thank the gentleman for yielding.

And the other thing is, as I say, we have to look not only at the present budget situation, which I think has all the dangers the gentleman describes, but also the situation in the outyears. This is a program that is going to grow at a rate much faster than anything anticipated in the general NASA budget or any other program within the budget.

So as a result, if we don't begin to make some savings early on, the pressures of just exactly the kind of problems that the gentleman points out become even more acute in the future.

And if we can rescope this program in a way that allows us to do it, but do it in a way which is more in line with where we think the budgets are going to be in the future, we think that you end up with a much stronger program, one that's actually possible to do, not one that has everybody's wish list included in the numbers. I'll be happy to yield to the gentlelady.

Ms. HARMAN. I would like to ask a question, but I believe that Mr. Roemer was interested in asking a question first. I know he has his own five minutes.

Mr. ROEMER. I'll take my own time. I'll ask you the question.

Ms. HARMAN. I just have a question. I certainly am not for programs growing out of proportion and I do support the NAS study which you have asked for.

I was going to ask you a while back why it doesn't make more sense to have the results of that study and then restructure that program, if indicated, according to the results of the study.

Mr. WALKER. Because either we are going to go forward with this authorization bill and help influence the policymaking, or the appropriators are going to go forward with their program, and they are not going to reference the NAS study.

The fact is that I think we are better off making a real determination here that is in line with the appropriators.

Mr. SENSENBRENNER. The time of the gentleman has expired.

The gentleman from Indiana is recognized for five minutes.

Mr. ROEMER. Thank you, Mr. Chairman.

I think the discussion and the debate has been helpful here. I would just yield for a brief minute to the gentlelady, the sponsor of the amendment, for a question. How does she propose, in the drafting of the amendment, to pay for the $274 million?

Ms. HARMAN. I thank the gentleman. There's clearly some confusion on this point.

I had a choice which was to try to add some money and not offset it, and there would be problems with that that were indicated by our Chairman when he was talking about it a few minutes ago, or to find an offset.

And what I have chosen to do is not to raise the caps but to have the offset be generally to the NASA science budget. By not raising the caps, that's what automatically happens.

I just heard conversation about how that could endanger other programs. I understand that, but I believe that given NASA's strong opposition to any cuts here, that NASA at least could work out these cuts in a way that would least affect the basic science programs, as NASA has been able to work out the cuts in its other funding to overhead and not to program.

I have been very impressed, and I know we all have, at Administrator Goldin's ability to do this.

Let me just endorse some comments that were made earlier by both the Chairman and the Full Committee Chairman about the need for more efficiency and creativity and for a better, faster, cheaper program, and high science content and for appropriate privatization.

I agree with all this, but I don't agree with taking a valuable program and giving it a disproportionate cut, so I think I've been responsible in the way I've crafted the amendment and I think restoring funding up to the level of the funding for other science programs makes sense in this environment.

Mr. ROEMER. I would thank the gentlelady, and reclaiming my time, just say that this has certainly been a debate we would have on a NASA authorization bill where we were debating the Space Station and the rest of NASA at the same time, rather than separating the two when they were in the same budget.

And when the gentlelady is talking about cutting a good, responsible program that has a very important mission for NASA and an appropriate mission for NASA and for the people of this country, this is exactly the impact that a Space Station is going to have on this budget.

I would like to support the gentlewoman's amendment. I think that this program has very positive economic and environmental ramifications for the people of the United States and for the economy of the United States.

It could stimulate telecommunication and technology advances. It certainly is going to impact the climate.

Our GDP, 25 percent of the United States' GDP is impacted by our climate. We have disasters that we appropriate money for every year. It's getting to be floods and El Nino and hurricanes and a host of different things that threaten our economy. This would certainly help us be proactive in that area, and understand the impact. I come from a farming state. It would certainly help our farm-

ers. The insurance industry would benefit from this kind of program.

Twenty-five percent of the economy is impacted. I think that's the kind of program that is appropriately within NASA's mission that has huge benefits to the taxpayers of the United States, and I would hope that we could work out some responsible budgetary way to work in Ms. Harman's amendment.

And would encourage the Committee in the future, as well, to handle both this Space Station and the rest of the NASA programs within one authorization bill.

Mr. BROWN. Mr. Chairman.

Mr. SENSENBRENNER. The time is controlled by the gentleman from Indiana for one minute.

Mr. ROEMER. I would be happy to yield to Mr. Brown.

Mr. SENSENBRENNER. Does the gentleman yield back the balance of his time?

Mr. ROEMER. I do yield back the balance of my time.

Mr. SENSENBRENNER. The gentleman from California is recognized for five minutes.

Mr. BROWN. Just to clarify this parliamentary situation, did I understand correctly, Ms. Harman, that you intend to withdraw the amendment?

Mr. SENSENBRENNER. The amendment has not been offered. We're all striking the last word to give our thoughts for the good of the order, and the gentleman's thoughts are very valuable.

The gentleman is recognized for five minutes.

Mr. BROWN. There are a couple of points, Mr. Chairman.

First, I appreciate the statements Mr. Walker made indicating the value of this program. I understand he does have mixed feelings about it, however.

I will try to have available at the Full Committee some of the mixed feelings that he's reflected in the past about the political nature of this program, which I think he does not thoroughly approve of.

Secondly, with regard to the constraints that are purported to be placed upon us by the report language in the budget resolution, I note, and I think all of us are aware of this, that the language of the budget resolution, and particularly the report language, is not binding on the Appropriations Committee, only their 602[b] resolution is, and neither of these is binding on the Authorizing Committee.

I would like to have the Chairman and Mr. Walker both admit that I have correctly stated the situation, and if there's an argument about it, I'll get the legal references that are necessary to support it.

In justification or support of this, I would point out that the Appropriations Subcommittee came up with a proposal, which I didn't like, but then I didn't like the President's budget either, which had a certain bottomline, and which provided essentially no funding for EOS.

They obviously were not bound by the report language in the budget resolution which stipulated lower figures for EOS. So in effect that's confirmation of my earlier statement.

Secondly, as a result of Mr. Walker's intervention, and I applaud him for it, the Full Committee acted quite properly to reinstate the figures that were contained in the budget resolution report language, or close to it, but then went on to increase the bottomline a fairly substantial amount over what the Subcommittee had reported.

And I commended this action too, but again it supports my statement that the precise language of the budget report is not binding on the Subcommittee or the Full Appropriations Committee, and not binding at all on this Committee.

I think what Mr. Walker is trying to do, in an effort to instill some discipline in this Committee, is to give weight to these things which he had a hand in creating as Vice Chairman of the Budget Committee, which goes beyond what I feel is legally necessary.

And I would suggest that historically the role of the Authorizing Committee in support of the effort which I again agree with Mr. Walker on in influencing the Appropriations Committee, which has been very hard to do in the past and apparently is difficult even yet to do, is to give its own best judgment of what the priorities ought to be, and not to be constrained by report language in the budget which has no legal significance to it, or even by the 602[b] allocation which again has no significance to it as an authorizing committee.

I make these statements, and they're editorial comments, to try and set the stage for expanding the role of this Committee. They are not bound by the things that have been suggested they are bound by.

Mr. SENSENBRENNER. Will the gentleman yield?

Mr. BROWN. I certainly will.

Mr. SENSENBRENNER. All I would do is just bring the gentleman up to date on what's happened in the last week.

The Appropriations Subcommittee, last week, closed three centers, made major disruption in the NASA budget.

On Monday, Mr. Walker and I introduced our bill showing that it could be done and a little bit less disruptively, and yesterday the Appropriations Committee caved.

Mr. BROWN. May I, if the gentleman will allow me to reclaim my time, may I point out that I too had conversations and have a bill introduced which I have outlined to members of the Appropriations Committee in which I did exactly the same thing. I prefer to think that they caved in response to a prominent former Chairman's views.

[Laughter.]

Mr. BROWN. Than the very able current Chairman's views. We're both entitled to that opinion if we wish. But it's pure dicta, as I think the gentleman will recognize.

Mr. SENSENBRENNER. The gentleman's time has expired.

Mr. HALL. Mr. Chairman.

Mr. SENSENBRENNER. The gentleman from Texas is recognized for five minutes.

Mr. HALL. Mr. Chairman, I'll need three or four minutes.

I guess I just want to listen to myself to try and determine whether or not I want to support an amendment that hasn't been offered. And if it is offered, it's going to be withdrawn.

[Laughter.]

Mr. HALL. While Mission to Planet Earth is not my personal highest priority, I think it's an illustration of what I was talking about in my opening statement that we all have our priorities and all of us who have priorities ought to have some give on our own priorities to accommodate others.

Once again, to cut back but not cut out. There is an offsetting general reduction in the gentlewoman's amendment and it still preserves the essential structure of the program and maintains some balance, I think, and it's not a budget buster.

I think it's worth looking at, and I think the gentlelady's entirely correct in withdrawing it and trying to work with some others and work out with others who might have some give and to get an amendment a little more acceptable to the Chairman and to the leadership. And I yield back my time.

Mr. SENSENBRENNER. The gentleman's time has expired.

Next on the roster of amendments is an en bloc amendment by the gentleman from California, Mr. Rohrabacher. The Chair recognizes the gentleman from California for the purposes of offering an en bloc amendment.

Mr. ROHRABACHER. Thank you, Mr. Chairman.

I've prepared three amendments to move us towards privatization and commercialization. However, I'm only offering two today.

Mr. SENSENBRENNER. The Clerk will report the amendments.

Mr. ADAMS. Amendment offered by Mr. Rohrabacher.

Page 3, after line 20, insert the following new paragraph.

Mr. SENSENBRENNER. Without objection, the amendment is considered as read and open for amendment at any point.

The gentleman from California is recognized for five minutes.

Mr. ROHRABACHER. As I say, these amendments, of which I'm offering two today, will move us toward privatization and commercialization of the space transportation, as well as move us towards cheaper access to space.

And I'm very pleased to be able to offer these en bloc. They are, I believe, non-controversial.

In the first part, in the first amendment I'm offering, it deals with shuttle privatization, and second, privatization of a small part of NASA's space transportation efforts, parabolic flight services.

Number one, the space shuttle privatization is an amendment that urges privatization of the shuttle, stating that the government should not operate the shuttle after 2012 and should not spend money upgrading its shuttle for use after 2012.

As of now, NASA has already said that it would like to replace the shuttle system by that year 2012, with a commercially developed reusable launch vehicle.

Continuing to fly the shuttle would require major upgrades which NASA probably can't afford. So we're talking about something that the space program is already, pardon the expression, in a glide path towards this direction anyway.

But my amendment today would reconfirm that. I believe that the Subcommittee should urge NASA to streamline the shuttle to the point where it can be privatized so that the shuttle can compete in the marketplace with other systems as soon as possible.

This amendment does not bash the space shuttle or the people that developed or operated it. I have consistently labeled them as heroes. That is, the men and women in NASA and industry who built the shuttle on a shoestring and are now operating it safely in a budget constrained environment.

But I've also said that because we under-funded it and because the government operates it, the space shuttle is simply too expensive for the long-term. So we want to move towards a cheaper access to space and free up resources for space exploration, science technology and other research projects.

So I would ask your support for this part of my amendment. This is not at all anti-shuttle. It is basically focused on moving us on as the shuttle is evolving out, moving us on towards the next generation of space transportation.

Mr. SENSENBRENNER. The gentleman's time has expired.

The Chair understands that the gentleman from Florida, Mr. Weldon, wishes to offer an amendment to the Rohrabacher amendment en bloc. Is that correct?

Mr. ROHRABACHER. That is correct, but I would ask permission for an additional one minute to explain the second half of my amendment.

Mr. SENSENBRENNER. Without objection.

Mr. WALKER. Would the gentleman yield for just a moment? I'm trying to figure out what the gentleman—is the gentleman offering just the amendment number three on our chart?

Mr. ROHRABACHER. No. In fact, amendment three is combined with amendment number eight.

Mr. WALKER. So you are offering both three and eight simultaneously as reflected on our chart?

Mr. ROHRABACHER. Right.

Mr. WALKER. I think you need to get unanimous consent.

Mr. ROHRABACHER. I'd ask unanimous consent to offer these two amendments en bloc.

Mr. SENSENBRENNER. The unanimous consent request is that Mr. Rohrabacher be allowed to offer amendment three and amendment eight en bloc. Any objection?

Mr. BROWN. Reserving the right to object, Mr. Chairman, it was my intention to vote for amendment number eight, but I have serious questions about some elements of amendment number three.

Mr. ROHRABACHER. I withdraw my request.

Mr. SENSENBRENNER. The gentleman from California withdraws his request.

Does the gentleman from Florida wish to offer his amendment to amendment number three?

Mr. ROHRABACHER. I will proceed with amendment number three.

[The amendment follows:]

AMENDMENT TO H.R. 2043

OFFERED BY MR. ROHRABACHER

Page 3, after line 20, insert the following new paragraph:

1 (7) The overwhelming preponderance of the
2 Federal Government's requirements for routine, non-
3 emergency manned and unmanned space transpor-
4 tation can be most effectively, efficiently, and eco-
5 nomically met by a free and competitive market in
6 privately developed and operated launch services.

Page 3, line 21, page 4, line 4, and page 5, line 13, redesignate paragraphs (7), (8), and (9) as paragraphs (8), (9), and (10), respectively.

Page 47, line 6, and page 48, line 1, redesignate subsections (a) and (b) as subsections (b) and (c), respectively.

Page 47, after line 5, insert the following new subsection:

7 (a) POLICY AND PREPARATION.—The Administrator
8 shall prepare for an orderly transition from the Federal
9 operation, or Federal management of contracted oper-
10 ation, of space transportation systems to the Federal pur-
11 chase of commercial space transportation services for all

1 nonemergency launch requirements, including human,
2 cargo, and mixed payloads. In those preparations, the Ad-
3 ministrator shall take into account the need for short-term
4 economies, as well as the goal of restoring the National
5 Aeronautics and Space Administration's research focus
6 and its mandate to promote the fullest possible commercial
7 use of space. As part of those preparations, the Adminis-
8 trator shall plan for the potential privatization of the
9 Space Shuttle program.

Page 47, line 21, insert ", and for savings below the target cost" after "achieving the target cost".

Page 48, lines 3 and 5, strike "(a)" both places it appears and insert in lieu thereof "(b)".

Page 48, after line 5, insert the following new subsection:

10 (d) LIMITATION ON USE OF FUNDS.—None of the
11 funds authorized by this Act shall be used to plan or pre-
12 pare for Federal Government, or federally contracted, op-
13 eration of the Space Shuttle beyond the year 2012, nor
14 for studying, designing, or developing upgrades to the
15 Shuttle whose sole purpose is to extend the operational
16 life of the Space Shuttle system beyond 2012.

Mr. SENSENBRENNER. That's the question before the Committee is the adoption of amendment number three. Does the gentleman from Florida wish to offer an amendment?

Mr. DAVE WELDON. Yes, Mr. Chairman.

[The amendment follows:]

AMENDMENT OFFERED BY MR. WELDON OF FLORIDA TO THE AMENDMENT OFFERED BY MR. ROHRABACHER

Page 2, line 16, insert "Nothing in this Act shall preclude the Federal, or federally contracted, operation of the Space Shuttle through the year 2012, or the privatized operation of the Space Shuttle after the year 2012." after "system beyond 2012.".

Mr. SENSENBRENNER. The Clerk will report the amendment to the amendment. The deputy clerks will distribute the amendment to the amendment because I don't believe this is in the package.

Mr. ADAMS. Amendment offered by Mr. Weldon of Florida to the amendment of Mr. Rohrabacher.

Page two, line 16, insert "Nothing in this Act shall preclude the Federal, or federally contracted, operation of the Space Shuttle through the year 2012, or the privatized operation of the Space Shuttle after the year 2012." after "system beyond 2012.".

Mr. SENSENBRENNER. The gentleman from Florida is recognized for five minutes.

Mr. DAVE WELDON. Mr. Chairman, current national policy regarding the future operation of the space shuttle is still being debated.

The nation has not resolved the question of exactly how manned space flight will be carried out in the future.

My amendment, I believe, clarifies the current national policies regarding future operation of the space shuttle.

I understand that it is not the gentleman's intent to rule out the shuttle as an option, and my amendment simply clarifies that the shuttle is not ruled out as an option for continued human exploration of space beyond the year 2012.

Mr. ROHRABACHER. Mr. Chairman, I would accept this as a friendly amendment.

Mr. SENSENBRENNER. The question is on the adoption of the amendment by the gentleman from Florida, Mr. Weldon, to the Rohrabacher amendment. Those in favor will say aye.

[Chorus of ayes.]

Mr. SENSENBRENNER. Those opposed, no.

[No response.]

Mr. SENSENBRENNER. The ayes have it. The amendment to the amendment is adopted. The question is now on the adoption—

Mr. HALL. Mr. Chairman?

Mr. SENSENBRENNER. The gentleman from Texas, Mr. Hall.

Mr. HALL. Mr. Chairman, I guess that I have some questions for the gentleman from California. These are questions, and this amendment that the gentleman from Florida just sent up, set forth subjects that probably could have been worked out in hearings. We didn't, I don't recollect, have any hearing right here, particularly of getting NASA's views on this proposal.

I have high regard for the gentleman from California, as he well remembers. We had hearings on his high direct thrust—I believe he was with the DCX, where we moved it up a little bit and then moved it back down, but it showed that it could be done. It was almost a re-elect Rohrabacher hearing that we had that day.

[Laughter.]

Mr. HALL. So I don't question the motives of the gentleman. I just have some problems about not having any hearing record on this.

Mr. SENSENBRENNER. If the gentleman will yield?

The gentleman may recall that when the initial budget submission was sent to Congress by the President, we had a hearing where Mr. Goldin testified, and brought practically everybody on the ninth floor of NASA up here.

I don't even know if the phone was answered that day because the ninth floor was denuded of all of its personnel.

Mr. Goldin didn't talk very much about the budget, didn't talk very much about the policy issues, but he had an opportunity to do so, and to answer questions of members of the Committee.

You also may recall that in March, we had a marathon hearing where non-government witnesses of all sizes, shapes and forums, were invited to testify on the various types of policy issues that were contained in the budget issue.

That hearing went on most of the day, so I think we do have an adequate hearing record.

If there was not a hearing on this specific issue, or testimony on this specific issue, it was simply because none of the witnesses either from NASA or from the private sector wished to testify on it.

Mr. HALL. I think the gentleman is correct, and I think that this specific issue, we did not have a hearing on it, and that's exactly why I said it. Mr. Goldin was fending you off most of the time during those hearings, and you didn't get a chance to ask him.

Mr. ROHRABACHER. Will the gentleman yield?

Mr. HALL. I do yield.

Mr. ROHRABACHER. If the gentleman will remember, Mr. Goldin did say at the January 6th Full Committee hearing, and at the February hearings, that he would prefer—he's on the record in front of Committee saying that the reusable launch vehicle should replace the shuttle. That's in fact, if they can, and that is our goal by the year 2012. This amendment basically has incorporated what Mr. Goldin stated before this Committee.

Mr. HALL. I thank the gentleman. This seems to be more like a privatizing issue rather than replacing the shuttle. My objection is not to the privatization of it. It just seems like this goes against the launch policy to keep the shuttle open until we are sure everything is going to work. I think you're for that. The gentleman from Florida's amendment may have addressed that.

Mr. DAVE WELDON. If I could comment?

Mr. HALL. I do yield to the gentleman from Florida.

Mr. DAVE WELDON. Thank you, Mr. Hall.

I think the people in NASA and on this Committee will agree that we would like to move to a new launch vehicle for human space flight in the future. I think what Mr. Rohrabacher is trying to do in this language is further set the stage for that and encourage it in that direction.

And I think what I have done in my clarifying language is made it possible that if NASA is not ready to go ahead, or if it appears as though it's in the best financial interests of the people of the United States to continue the shuttle beyond 2012 that we will be able to do so with this language.

I know I personally would like to see a new launch vehicle developed between now and then and deployed between now and then, even though the shuttle has served us extremely well. And indeed, even though it's 20-year-old technology, it is still way ahead of the rest of the world in technology.

We need to start setting the stage for moving onto the future so that we can always be ahead of the rest of the world. I think Mr. Rohrabacher is giving us some language that puts us in that direc-

tion and I think my clarifying language gives us the opportunity to continue the shuttle.

Mr. SENSENBRENNER. The time of the gentleman has expired.

Mr. ROEMER. Mr. Chairman.

Mr. SENSENBRENNER. The gentleman from Indiana.

Mr. ROEMER. I thank the gentleman.

I have a great deal of respect for the gentleman from California. I think he's bringing up a very, very timely and serious question. I'm not sure that I understand the question, however.

Whether it is a question of replacing or privatizing, and I think the terminology here is extremely important.

If we're talking about privatizing the space shuttle, I agree with Mr. Hall. I'm not sure that that question has been sufficiently asked or answered through the hearing process before this Subcommittee.

I would also further say that I think it goes beyond that. I think that if the gentleman means privatization of the space shuttle in the bottom of his amendment, on page three of our amendment handouts, it says that the Administrator shall prepare for an orderly transition from the Federal operation or Federal management of the contracted operation of space transportation systems to the Federal purchase of commercial space transportation services for all non-emergency launch requirements, including human cargo and mixed payloads.

It further goes on to say, as part of those preparations, the Administrator shall plan for the potential privatization of the space shuttle program. So I think he's talking about more than just the space shuttle.

I would also just ask him, with respect to this, what is the industry perspective on this? There is huge risk in the liability if the private sector were to take this on. Have we talked to the contractors? Are they willing to take this risk and liability on? What happens, given the scenario of a private shuttle operation that does not succeed?

Mr. HALL. Would the gentleman yield?

Mr. ROEMER. I'd be happy to yield.

Mr. HALL. I certainly agree with you, and it seems similar to what we did in the Clean Air Act in the early nineties, late eighties, where we provided for a cleansing of the air, using technology that has not even yet been discovered.

The sole purpose of this is to prevent expending or planning for any use of the shuttle beyond the year 2012. I just think it's kind of a dangerous thing to do until we know whether or not the REL vehicle's going to work.

I'm not questioning the gentleman from California's interest in privatization. I totally support that if we can do it timely, but I don't want to burn the bridge and not have an area to retreat back into if NASA, in their wisdom and their accumulated wisdom, feels that we need to go to the year 2013 or 2014. This would absolutely cut it off.

That's my problem, and I don't question the gentleman from Florida's total support of the space program. I think his amendment probably takes care of my problems.

I think you are exactly right in pointing out the pitfalls in saying we get to the year 2012, by golly, and midnight December 31st, of the year 2012, and you know, we will both probably still be in Congress then.

[Laughter.]

Mr. HALL. We'll have a chance until that time. I may be in the nursing home.

Mr. ROHRABACHER. Would the gentleman yield?

Mr. ROEMER. I'll be happy to yield.

Mr. ROHRABACHER. As Mr. Weldon's amendment takes care of any of the problems that have been raised here, especially what the shuttle would do after 2012, and hopefully we will all be—I can't speak for everybody, but hopefully I won't be sitting here in Congress at that time.

But the fact is, this amendment is urging NASA to go towards privatization. We have this huge army that now is required to launch a space shuttle.

There are various things that can be done by the private sector and this effort can be privatized to some degree. We're not mandating that. We're just urging that they go in that direction.

Let's save the taxpayers some money, for pete's sake. We can do things in the private sector that can be done and again, it's not mandating that we put the shuttle up on a block; we're just saying, look, there are some services required for the shuttle. Let's privatize those services.

Mr. ROEMER. I don't disagree with the gentleman from California's thrust at all. As a matter of fact, anything to save the taxpayers money that ensures a safe NASA and continues to be a technologically advanced NASA is in the best interests of the country.

But I do think that this amendment raises many important questions on liability, on risk, on NASA's position, and the Administration's position, and so forth.

Mr. SENSENBRENNER. The time of the gentleman has expired.

The gentleman from Pennsylvania, Mr. Walker.

Mr. WALKER. Thank you. Strike the last word. I think there are some important issues that have been raised, but that's exactly why the gentleman is saying, shall prepare for an orderly transition.

There are in fact a number of those questions that need to be addressed. The gentleman is simply saying that somewhere, somewhere around the 110th Congress, we're going to have to make some decisions of these types. It would be best if the policymakers at that time have a period of time when we've actually looked at these issues seriously so that they know what it is we're going to do, and when we arrive at that time, it may even be something where we have decided there is a new generation of launch vehicles that are available to us and we want to utilize those launch vehicles.

We have a shuttle that might still be usable. We might want to spin that off into the private sector. Who knows what the range of options might be?

The gentleman from California's amendment simply says, let's have an orderly transition process so that we don't stumble into

these things, but in fact answer the questions that need to be answered along the way.

It would seem to me that in light of the new directions we're trying to take in this bill, this is exactly the kind of amendment that helps achieve the end result that I think everybody wants, a NASA that can aggressively do its missions but do so in a way that recognizes other assets that may be available in the totality of the economy.

And if we can achieve those kinds of things, we ought to take those steps. And the gentleman's amendment helps us move in that direction.

Mr. SENSENBRENNER. Does the gentleman yield back the balance of his time?

Mr. WALKER. Yes, I yield back, Mr. Chairman.

Mr. SENSENBRENNER. The gentleman from California, Mr. Brown, is recognized for five minutes.

Mr. BROWN. Mr. Chairman, I would like to add to the chorus of statements. I have no real problems with the thrust of the gentleman's amendment towards privatization and in fact hopefully we can support that.

But I am concerned about, and I just perhaps don't fully understand exactly how this would impact NASA's current operations.

Having had no opportunity to receive a comment from the agency as to how they interpret the language here, I would have to reserve my approval.

I would make note of the fact that Section 209 of the bill, which seeks to be amended by this amendment, is entitled "Shuttle Privatization," and that it requires that the Administrator shall solicit proposals for a single prime contract for the space shuttle program, and that the proposals must be accompanied by a plan by the proposer to privatize the space program. And that these privatization plans for the shuttle will then be transmitted to the Congress so we may consider them in due course, or make a decision. Now I approve of that. I would raise no objections to that. I think this is reasonable language.

Now what additional impact does the language Mr. Rohrabacher is proposing have? Because it says that none of the funds authorized by this Act shall be used to plan or prepare by the Federal Government or the Federal contractors for the operations of the shuttle after the year 2012. And I think that the Weldon amendment may have ameliorated some of that language. If so, what is the remaining impact of the language?

Mr. WALKER. Will the gentleman yield?

Mr. BROWN. If the gentleman would explain that to me?

Mr. WALKER. I think what you have is both tracks being addressed in this amendment. In the case of the language which is in the bill, we are going to get the private sector's view of how all of this can take place.

What you have in the Rohrabacher amendment is the public sector also being asked to look at an orderly transition that way, so you will get both aspects happening here.

Our proposed language in the bill will make certain that the private sector is responding to this with detailed plans. This particular language will assure that the NASA Administrator and his

agencies are also preparing for an orderly transition this way, and getting us detail, so that you get both public and private.

Mr. BROWN. I would certainly hope that that would be the situation and if that is the situation, I can support the amendment.

But I would like a second opinion, frankly, from the agency as to how they would interpret the situation.

Mr. SENSENBRENNER. If the gentleman will yield?

You seem to be able to get opinions from the agency communicated to you much quicker than we on the majority side.

Mr. BROWN. The gentleman, this is flattering to me.

[Laughter.]

Mr. BROWN. But generally what I see is the speeches that have been made by the Administrator before another Committee, and from that, I can interpret.

Mr. WALKER. If the gentleman would just yield further to me, I think the language here that needs to be focused on is the language on the second page of the gentleman's amendment, if you look at, it's a full paragraph, it's the orderly transition on the top of the paragraph, and then the final language in the paragraph says:

As a part of those preparations, the Administrator shall plan for potential privatization of the space shuttle program.

In other words, what we are asking of industry would now also be that which the Administrator is doing under the gentleman from California's amendment.

Mr. ROHRABACHER. If the gentleman would yield?

Mr. BROWN. I'll be happy to yield, if I have the time.

Mr. SENSENBRENNER. Forty-five seconds.

Mr. BROWN. I yield 45 seconds to the gentleman from California.

Mr. ROHRABACHER. Again, I think Mr. Weldon's amendment has really taken care of many of the concerns that have been expressed today.

And what we're really talking about is urging NASA to move towards privatization and work at it seriously, look at the options and questions about liability and all the other issues that have been raised. That's exactly the kind of thing we need to address.

We are urging that we do so. That doesn't mean that we're mandated to sell the shuttle or anything such as that. But we want to move in the direction where the taxpayers are doing those things that only the taxpayers can do, and the private sector can do the rest. And we'll take a look and see what that is.

Mr. BROWN. Mr. Rohrabacher, if I may reclaim my time very briefly, I'm told by the staff that the problem that is most salient is the last paragraph which purports to put a limitation on the use of funds to NASA. If the gentleman would withdraw that portion of the amendment—

Mr. SENSENBRENNER. If the gentleman would yield, that's what the Weldon amendment addressed.

Mr. BROWN. Added to the amendment?

Mr. SENSENBRENNER. Correct.

Mr. WALKER. It took care of the problems with that last part.

Mr. SENSENBRENNER. The gentleman's time has expired.

Mr. BROWN. Let me study that and be prepared to offer a rebuttal at Full Committee, Mr. Chairman.

Mr. SENSENBRENNER. The gentleman from Kansas, Mr. Tiahrt?

Mr. TIAHRT. I just want to briefly say how much—and I promise to be brief—

Mr. SENSENBRENNER. The gentleman is recognized for five minutes.

Mr. TIAHRT. With an increasing demand for space, we're looking for new opportunities for access to space. I've worked in new technology before in a prior life, and the way we can achieve new technology is you set goals and you work towards those goals.

If nobody had that vision and set the goals to try and move into a new technology, then it would never occur. We'd just keep plodding along with the same old thing.

And I think this is a good example of how we're setting goals for NASA to move into new technology for access to space, and allowing the private sector to take over the old technology. 2012 is plenty of time. In the year 2011, if we come to the sudden realization that we're unable to transition, then we'll have a year to make that adjustment. If we see that in 2010, we'll have two years.

So I think there's plenty of time between now and 2012 that we can make this adjustment if it is necessary. But we have other programs going on now that are basic research that are seeking new ways to access space, and I think that's the way we ought to encourage NASA to move. And this is a good vehicle to do it, and I support the amendment. I yield back the balance of my time.

Mr. SENSENBRENNER. The Chair rises in support of the amendments by Mr. Rohrabacher. Collectively, the amendments bring the commercial sector into the American launch market and get the government out of launching routine payloads. This will bring market incentives into the provision of launch services to the U.S. Government, helping reduce the overall cost to the government of launching payloads into space, and promoting commercial development and private financing of space infrastructure.

These amendments also send a signal to capital markets that government is not going to compete with the private sector in space launch. This will help private financing of commercially developed space launch vehicles, again lowering the government's costs and perhaps those of the private sector as well by bringing more capital into the commercial space industry.

The first item is the new finding that most government space launch requirements can be met by a free and competitive market in launch services. It also indicates that Congress recognizes that the Department of Defense may have emergency launch on demand requirements that cannot be accommodated by the private sector.

The second item directs the Administrator to prepare for an orderly transition to reliance on the launch market for the provision of launch services to the government. This is important if we are to move the government out of operating a bus line in space in a rational manner. The question is on the adoption of the Rohrabacher amendments en bloc, as amended. Those in favor will signify by saying aye.

[Chorus of ayes.]

Mr. SENSENBRENNER. Those opposed, no.

Mr. BROWN. No.

Mr. SENSENBRENNER. The ayes appear to have it. The ayes have it and the amendment is adopted.

Next on the list of amendments is an amendment by the gentleman from Florida, Mr. Weldon.

The Chair recognizes the gentleman from Florida to call up his amendment.

Mr. DAVE WELDON. Mr. Chairman, I have an amendment at the desk. I ask that it be considered in lieu of the amendment printed.

[The amendment follows:]

AMENDMENT TO H.R. 2043

OFFERED BY MR. WELDON OF FLORIDA

Page 37, after line 10, insert the following new paragraphs:

1 (3) Section 70102(5) of title 49, United States Code,
2 is amended—
3 (A) by redesignating subparagraphs (A) and
4 (B) as subparagraphs (B) and (C), respectively; and
5 (B) by inserting before subparagraph (B), as so
6 redesignated by subparagraph (A) of this paragraph,
7 the following new subparagraph:
8 "(A) activities directly related to the prep-
9 aration of a launch site or payload facility for
10 one or more launches;".
11 (4) Section 70103(b) of title 49, United States Code,
12 is amended—
13 (A) in the subsection heading, by inserting
14 "AND STATE SPONSORED SPACEPORTS" after "AND
15 REENTRIES"; and
16 (B) in paragraph (1), by inserting "and State
17 sponsored spaceports" after "private sector".
18 (5) Section 70105 of title 49, United States Code,
19 is amended by inserting "The Secretary shall submit to
20 the Committee on Science of the House of Representatives

1 and the Committee on Commerce, Science, and Transpor-
2 tation of the Senate a written notice not later than 7 days
3 after any occurrence when a license is not issued within
4 the deadline established by this subsection.".
5 (6) Section 70111 of title 49, United States Code,
6 is amended—
7 (A) in subsection (a)(1), by inserting after sub-
8 paragraph (B) the following:
9 "The Secretary shall establish criteria and procedures for
10 determining the priority of competing requests from the
11 private sector and State governments for property and
12 services under this section.";
13 (B) by striking "actual costs" in subsection
14 (b)(1) and inserting in lieu thereof "additive costs
15 only"; and
16 (C) by inserting after subsection (b)(2) the fol-
17 lowing new paragraph:
18 "(3) The Secretary shall ensure the establishment of
19 uniform guidelines for, and consistent implementation of,
20 this section by all Federal agencies.".
21 (7) Section 70112 of title 49, United States Code,
22 is amended—
23 (A) in subsection (a)(1), by inserting "launch,
24 reentry, or site operator" after "(1) When a";

1 (B) in subsection (b)(1), by inserting "launch,
2 reentry, or site operator" after "(1) A"; and
3 (C) in subsection (f), by inserting "launch, re-
4 entry, or site operator" after "carried out under a".

Mr. SENSENBRENNER. The Clerk will report the amendment, and the deputy clerks will pass out copies.

Mr. ADAMS. Amendment offered by Mr. Weldon of Florida.

Page 37, after line 10, insert the following new paragraphs:

[3] Section 70101[5] of—

Mr. DAVE WELDON. Mr. Chairman.

Mr. SENSENBRENNER. The gentleman from Florida?

Mr. DAVE WELDON. I ask that the amendment be considered as read.

Mr. SENSENBRENNER. Without objection. The gentleman is recognized for five minutes in support of his amendment.

Mr. DAVE WELDON. Mr. Chairman, the only change from my amendment as printed comes on line 12 of page two, where I deleted the language "requests from the State governments shall be given first priority."

I commend the Chairman for including the changes in this bill that address the advances in commercial space since enactment of the Commercial Space Transportation Act of 1984.

As you may know, Florida's commercial space port endeavor, Space Port Florida, is pressing the envelope on commercial space launch activities.

In my discussions with them and other space port leaders across the nation, I see several additional areas of the 1984 Act that need to be addressed.

My amendment addresses these issues by, first off, clarifying and expanding the term, launch services. As defined in current law, launch services only applies to launch vehicle preparation and actual launch. Preparation of launch sites and payload facilities is also part of launch services.

My amendment extends the definition of launch services to preparing the site for launch. This will clarify when DOT insurance requirements are to be set and when indemnification by the Federal Government may be available.

My amendment also adds a requirement that the Secretary of Transportation notify the House Science Committee and Senate Commerce, Science, and Transportation Committee within seven days after a space port license is not issued. Currently there is no response required if a license is not granted.

I believe that such reporting will help the Committee remain well-informed on this issue, as we seek to encourage U.S. leadership in commercial space launch activities.

My amendment also requires the Secretary of Transportation to provide guidelines for agencies to use in disposing of excess launch property when there are competing interests wanting the property.

There are currently no guidelines for resolving such dilemmas. Existing law requires that direct costs be charged to the commercial user.

My amendment clarifies that. a] price for launch services is to include direct costs only; b] price to be charged for launch services is to include the salaries of government and contractor personnel only when they are direct costs; c] the Secretary of Transportation shall assure that Federal Government agencies consistently define and implement direct costs for launch property and services.

Finally, my amendment clarifies that DOT is to establish insurance requirements for launch site operators and that indemnification above that amount may be available to launch site operators.

Over the past decade, the market share of commercial launches from the U.S. has declined significantly.

My amendment is forward-looking and will help U.S. commercial space endeavors move forward and avoid some unnecessary and cumbersome hurdles that may lie in their way.

The amendment is about U.S. leadership in commercial space and restoring the U.S. market share in the commercial space launch market. I hope that all members of the Committee will support this amendment. I yield back the balance of my time, Mr. Chairman.

Mr. SENSENBRENNER. The gentleman yields back the balance of his time. Is there any further discussion on the amendment of the gentleman from Florida?

[No response.]

Mr. SENSENBRENNER. The Chair supports the amendment for the reasons the gentleman from Florida has stated. All those in favor of the amendment will signify by saying aye.

[Chorus of ayes.]

Mr. SENSENBRENNER. Opposed, no?

[No response.]

Mr. SENSENBRENNER. The ayes have it. The amendment is agreed to.

Next on the amendment roster is an amendment by the gentleman from Indiana, Mr. Roemer.

[The amendment follows:]

AMENDMENT TO H.R. 2043
OFFERED BY MR. ROEMER

Page 9, line 21, strike "$354,700,000" and insert in lieu thereof "$339,700,000".

Page 9, line 23, strike "$245,500,000" and insert in lieu thereof "$230,500,000".

Page 10, line 1, strike "$133,000,000" and insert in lieu thereof "$163,000,000".

Mr. SENSENBRENNER. The Chair recognizes the gentleman from Indiana.

Mr. ROEMER. Thank you, Mr. Chairman. I have an amendment at the desk, and ask for its consideration.

Mr. SENSENBRENNER. The Clerk will report the amendment.

Mr. ADAMS. Amendment offered by Mr. Roemer.

Page 9, line 21,—

Mr. SENSENBRENNER. Without objection, the amendment is considered as read and open for amendment at any point.

The gentleman from Indiana is recognized for five minutes.

Mr. ROEMER. Mr. Chairman, do you want me to begin to explain the amendment as it's being handed out?

Mr. SENSENBRENNER. It's in the packet.

Mr. ROEMER. The Administration request for aeronautical research and technology, Mr. Chairman, is $917 million.

The bill we are considering today funds the account at $826 million, a $90 million cut and a $55 million cut in the current year's level of $882 million.

The bill authorizes $354 million for hypersonic research and technology, $245 million for high speed technology, and $133 million for subsonic technology.

The request for subsonic was $188 million. My amendment would bring this up $30 million to $163 million, splitting the difference between the request and the Committee bill.

Yesterday, Mr. Chairman, the trade figures came out for the United States. They projected we would hit an all time record trade deficit in 1995.

Subsonic research and application is one account where we're most responsible for our positive balance of trade in the aeronautics field, a field that the U.S. dominated in 1970 with 100 percent of the market. And where our market share today, in 1995, is 50 percent.

NASA aeronautics programs have traditionally been the catalyst in promoting intercompany cooperation so important for our economy. Aeronautics has made a good effort to get the most bang for the buck by selecting programs that have both the broadest level of impact and the highest probability of success.

Such programs also mitigate high levels of risk for U.S. industry. Competition from Europe and fledgling industries in Asia is intense and growing. Aggressive pricing and substantial European Government investment in the Airbus Corporation have seriously eroded the U.S. balance of trade in aerospace, our most significant contributor for a favorable balance of trade.

Advanced subsonics is important to produce high payoff technologies, such as, and let me list some examples:

Sophisticated derivatives of current aircraft, future generations of subsonic aircraft, advanced materials and composites for better efficiency and lower cost, as well as improved safety, improved superior wing designs for safety and fuel efficiency, improved acoustics and noise control.

All of this aeronautics research, Mr. Chairman, and development is critical, but the subsonics account drives the economy and makes the real advancements in the future fields possible.

I would encourage adoption of this amendment so as to have a better balance in the allocation of resources in this account to help us with our trade deficit and help in a real world compete with foreign countries who have taken 50 percent of the market share from the United States.

As a student of international relations, Mr. Chairman, Hans Morgenthau used to talk about Realpolitik in the real world. I think this amendment affects and influences and recognizes the real world in trade deficits by saying here is an industry where the United States has performed extraordinarily well in the past, where we're having severe competition in this real world from subsidies and government support to Airbus with the Asians, particularly the Japanese and the South Koreans, who are getting government support to grow new industries and to erode the U.S. market share. And whether you call it applied research or whether you call it basic research, this is a real world reflection of real world competition. I would hope that we could restore this money into a very, very important account for our industry in this country.

Mr. SENSENBRENNER. Does anyone else seek recognition?

Ms. HARMAN. Mr. Chairman.

Mr. SENSENBRENNER. The gentlewoman from California is recognized for five minutes.

Ms. HARMAN. Thank you, Mr. Chairman.

I would like to strongly support Mr. Roemer's amendment. I think it's excellent, as was his presentation of what it will do.

The first A in NASA is Aeronautics. We tend to forget that in our conversations about some of the other issues. Certainly an economy like California's which is hurting so much from defense cutbacks, could receive an enormous infusion in terms of its economy by this assist in aeronautics research.

We, as Mr. Roemer pointed out, have lost an enormous amount of market share in the commercial subsonic aircraft industry. And without Federal involvement, the Federal Government here is a catalyst of private industry, we will not regain it.

And I think that, on one hand, this is among the top priorities of NASA, and I think that Mr. Roemer is extremely farsighted in suggesting that we restore funding. Finally, I would just speak to a couple other issues he raised.

As he said, we're not only talking about helping the subsonic aircraft industry, we're talking about byproducts like composite materials and improved wing designs and improved noise control, and so on and so forth, which can help a variety of other industries as well. So I say that let's not be shortsighted.

Mr. ROEMER. Would the gentlewoman yield?

Ms. HARMAN. Yes, I'd be happy to yield.

Mr. ROEMER. I would just thank the gentlelady from California for her support, and explain again to the Committee that my amendment, keeping in line with what we've tried to do on other markups in this Committee, this does not increase the deficit.

I have provided two offsets for $30 million increase in the subsonic area by cutting $15 million out of basic research and cutting $15 million out of high speed research for a total of $30 million to be added in subsonic. I am not increasing the deficit. I would thank again the gentlelady for yielding.

Ms. HARMAN. Reclaiming my time, I think that what Mr. Roemer is doing is prudent. We all understand, Mr. Chairman, the budget imperatives here, and certainly none of us, not me, not Mr. Roemer, who have talked about restoring certain funding, are proposing to add to the deficit, or to do anything that is not budget neutral in this bill. Thank you. I yield back.

Mr. SENSENBRENNER. The gentlewoman yields back the balance of her time. Does anyone else seek recognition?

Mr. HALL. Mr. Chairman.

Mr. SENSENBRENNER. The gentleman from Texas is recognized for five minutes.

Mr. HALL. Once again, Mr. Chairman, I think we see here a good illustration of cutting back but not cutting out.

Adding back 25, 30—this is another example, Mr. Chairman, of some of the real tough choices that this budget is forcing on the various members.

I'm sympathetic to Mr. Roemer's amendment because the bill we're marking up today really makes some pretty tough, I'd almost say ill-advised cuts to NASA's advanced subsonic aeronautics program.

These cuts are all the more troubling given the major contribution made by subsonic aircraft sales and subsonic aviation to the nation's trade balance. We know we need some help there.

I'm a little unhappy that he's taken some funding from the aeronautics research and technology based program which we know is NASA's aeronautical research, it's seed corn, this is as good a word for it as any, to compensate for the advanced subsonic funding shortfall. All in all, I like the intent of the amendment and I intend to support it.

Mr. SENSENBRENNER. The Chair rises in opposition to the amendment.

First, this bill does not reduce the account for the advanced subsonic technologies program. It's increased by six percent to $133 million, when the entire aeronautics account is being reduced by $90 million.

This program has been criticized by the Congressional Budget Office as corporate welfare. CBO contends that the benefits from the R&D in this program fall almost exclusively to aircraft manufacturers, their suppliers, and the airlines.

Many of the elements in this program are much more mature than basic research, and thus should be the subject of increased scrutiny.

Funding this program at $133 million is an increase of slightly more than six percent.

The gentleman from Indiana's amendment would increase AST funding nearly 30 percent at the expense of other programs, such as high speed research, arguably much more cutting edge than AST or the R&D base, which has already been reduced by $65 million from fiscal year 1994 where most of the aeronautic space industry outlines the best basic research.

So what we're doing is we're further cutting back the best basic research to pay for research that has already matured.

Although it is commendable that this amendment for a program increase is offered with the corresponding offset, the offsets come

at the expense of the R&D base which has already been reduced by 15 percent from fiscal '94.

It also seeks offset from the high speed research program whose major component, the high speed civil transport, is entering a critical phase of validation for meeting international environmental and noise standards.

This amendment seeks to plus up the AST program almost 30 percent. The bill, without the amendment, increase AST approximately six percent over last year's funding level, but allows for increases provided the cost of the utilization of Federal facilities is reimbursed by those who benefit from the research.

That's the way we should be doing business, by making those who stand to make a profit from the government pay their fair share of the cost. I oppose the amendment. The question is on the amendment offered by the gentleman from Indiana, Mr. Roemer. Those in favor will signify by saying aye.

[Chorus of ayes.]

Mr. SENSENBRENNER. Those opposed, no?

[Chorus of nays.]

Mr. SENSENBRENNER. The noes appear to have it.

Mr. ROEMER. I'd ask for a roll call vote.

Mr. SENSENBRENNER. The gentleman from Indiana asks for a roll call vote. Those in favor of the amendment will vote aye. Those opposed will vote no. The Clerk will call the roll.

Mr. ADAMS. Mr. Sensenbrenner.

Mr. SENSENBRENNER. No.

Mr. ADAMS. Mr. Sensenbrenner votes no.

Mr. Calvert.

Mr. CALVERT. No.

Mr. ADAMS. Mr. Calvert votes no.

Mr. Weldon.

Mr. DAVE WELDON. No.

Mr. ADAMS. Mr. Weldon votes no.

Mr. Stockman.

[No response.]

Mr. ADAMS. Mrs. Seastrand.

Mrs. SEASTRAND. No.

Mr. ADAMS. Mrs. Seastrand votes no.

Mr. Tiahrt.

Mr. TIAHRT. No.

Mr. ADAMS. Mr. Tiahrt votes no.

Mr. Hilleary.

Mr. HILLEARY. No.

Mr. ADAMS. Mr. Hilleary votes no.

Mr. Rohrabacher.

Mr. ROHRABACHER. No.

Mr. ADAMS. Mr. Rohrabacher votes no.

Mr. Salmon.

Mr. SALMON. No.

Mr. ADAMS. Mr. Salmon votes no.

Mr. Davis.

Mr. DAVIS. No.

Mr. ADAMS. Mr. Davis votes no.

Mr. Largent.

[No response.]
Mr. ADAMS. Mr. Foley.
Mr. FOLEY. No.
Mr. ADAMS. Mr. Foley votes no.
Mr. Walker.
Mr. WALKER. No.
Mr. ADAMS. Mr. Walker votes no.
Mr. Hall.
Mr. HALL. Yes.
Mr. ADAMS. Mr. Hall votes yes.
Mr. Traficant.
[No response.]
Mr. ADAMS. Mr. Roemer.
Mr. ROEMER. Aye.
Mr. ADAMS. Mr. Roemer votes yes.
Mr. Cramer.
[No response.]
Mr. ADAMS. Mr. Barcia.
[No response.]
Mr. ADAMS. Ms. Harman.
Ms. HARMAN. Yes.
Mr. ADAMS. Ms. Harman votes yes.
Ms. Jackson Lee.
Ms. JACKSON LEE. Aye.
Mr. ADAMS. Ms. Jackson Lee votes yes.
Mr. Hastings.
Mr. HASTINGS. Aye.
Mr. ADAMS. Mr. Hastings votes yes.
Mr. Ward.
Mr. WARD. Aye.
Mr. ADAMS. Mr. Ward votes yes.
Mr. Luther.
Mr. LUTHER. No.
Mr. ADAMS. Mr. Luther votes no.
Mr. Brown.
Mr. BROWN. Aye.
Mr. ADAMS. Mr. Brown votes yes.
Mr. STOCKMAN. Mr. Chairman, how am I recorded?
Mr. ADAMS. The gentleman from Texas is not recorded, Mr. Chairman.
Mr. STOCKMAN. No.
Mr. SENSENBRENNER. The gentleman from Alabama?
Mr. CRAMER. Mr. Chairman, how am I recorded?
Mr. ADAMS. Mr. Cramer is not recorded.
Mr. CRAMER. My vote should be recorded as aye.
Mr. ADAMS. Mr. Cramer votes yes.
Mr. SENSENBRENNER. The Clerk will report.
Mr. ADAMS. Mr. Chairman, on this roll call vote, the yeas are 8, the nays are 13.
Mr. SENSENBRENNER. The amendment is not agreed to.
[The Subcommittee Roll Call on Roemer amendment follows:]

104th Congress
Committee on Science

SUBCOMMITTEE ON SPACE AND AERONAUTICS - 104TH CONGRESS ** ROLL CAL

SUBJECT: H.R. 2043, National Aeronautics and Space Administration Authorization Act, Fiscal Year 1996

Amendment offered by Mr. Roemer

Rm.	Phone	Name	Present	Absent	Yea	Nay	Not Voting
2332	55101	Mr. Sensenbrenner, R-WI				✓	
1034	51986	Mr. Calvert, R-CA				✓	
216	53601	Mr. Weldon, R-FL				✓	
417	55656	Mr. Stockman, R-TX				✓	
1216	53601	Mrs. Seastrand, R-CA				✓	
1319	56216	Mr. Tiahrt, R-KS				✓	
114	56831	Mr. Hilleary, R-TN				✓	
2338	52415	Mr. Rohrabacher, R-CA				✓	
115	52635	Mr. Salmon, R-AZ				✓	
415	51492	Mr. Davis, R-VA				✓	
410	52211	Mr. Largent, R-OK					
506	55792	Mr. Foley, R-FL				✓	
2369	52656	Mr. Walker, R-PA*				✓	
2236	56673	Mr. Hall, D-TX			✓		
2446	55261	Mr. Traficant, D-OH					
407	53915	Mr. Roemer, D-IN			✓		
236	54801	Mr. Cramer, D-AL			✓		
1410	58171	Mr. Barcia, D-MI					
325	58220	Ms. Harman, D-CA			✓		
1520	53816	Ms. Jackson Lee, D-TX			✓		
1039	51313	Mr. Hastings, D-FL			✓		
1032	55401	Mr. Ward, D-KY			✓		
1419	52271	Mr. Luther, D-MN				✓	
2300	56161	Mr. Brown, D-CA*			✓		
		TOTAL			8	13	

Attest: Brandon D. Adams 7/19/95 (Clerk)

*Ex Officio Members

Mr. SENSENBRENNER. Next on the amendment roster is amendment number six by the gentleman from California, Mr. Rohrabacher.

[The amendment follows:]

AMENDMENT TO H.R. 2043

OFFERED BY MR. ROHRABACHER

Page 8, line 18, strike "$639,800,000" and insert in lieu thereof "$664,200,000".

Page 8, line 19, strike "$193,000,000" and insert in lieu thereof "$217,400,000".

Page 8, line 20, insert ", of which $67,400,000 are authorized for the Flight Demonstration Program phase of the Single-Stage-to-Orbit X-33 Large-Scale Advanced Technology Demonstration project, except that not more than $30,000,000 are authorized for the X-34 Small Booster project" after "Advanced Space Transportation".

Page 9, line 20, strike "$826,900,000" and insert in lieu thereof "$802,500,000".

Page 10, line 1, strike "$133,000,000" and insert in lieu thereof "$108,600,000".

Page 10, line 5, insert ", or for the Terminal Area Productivity program" after "Design and Manufacturing".

Mr. SENSENBRENNER. For what purpose does the gentleman from California seek recognition?

Mr. ROHRABACHER. I have an amendment at the desk.

Mr. SENSENBRENNER. The Clerk will report the amendment.

Mr. ADAMS. Amendment by Mr. Rohrabacher.

Page 8, line 18—

Mr. SENSENBRENNER. Without objection, the amendment is considered as read and open for amendment at any point. The gentleman from California is recognized for five minutes.

Mr. ROHRABACHER. Mr. Chairman, I will be withdrawing this amendment.

Mr. SENSENBRENNER. Without objection.

Next on the amendment roster is amendment number seven by the gentleman from Virginia, Mr. Davis. For what purpose does the gentleman from Virginia seek recognition?

[The amendment follows:]

AMENDMENT TO H.R. 2043

OFFERED BY MR. DAVIS

Page 28, line 14, insert ", from exo-atmospheric flight," after "from Earth orbit".

Page 29, line 2, insert ", or a reusable launch vehicle designed to return from outer space or exo-atmospheric flight to Earth," after "outer space to Earth".

Mr. DAVIS. I have an amendment at the desk.

Mr. SENSENBRENNER. The Clerk will report the amendment.

Mr. ADAMS. Amendment offered by Mr. Davis.

Page 28,—

Mr. SENSENBRENNER. Without objection, the amendment will be considered as read, and open for amendment at any point. The gentleman from Virginia, Mr. Davis, is recognized for five minutes.

Mr. DAVIS. Mr. Chairman, this is a relatively short amendment. Let me just explain it to members of the Committee.

This amendment addresses a shortcoming in the Commercial Space Launch Act as currently written. The Commercial Space Launch Act defines launch very narrowly for the purpose of regulation by the Department of Transportation's Office of Commercial Space Transportation, known as the OCST.

This is the case in part because earlier launch systems were stacked and launched from a single site. There was little question about which activities were under the regulatory purview of OCST.

But now we're seeing the next generation of commercial launch systems authorized in our bill today. The X33 and the X34 were clearly not contemplated with the existing CSLA provisions were enacted.

The absence of language updating CSLA in order to accommodate these next generation system commercial companies who bear the lion's share of the financial and technical risks of these programs right now, they literally have to vet their companies. No actions would occur unless this change is updated now.

We have talked to OCST. I have not run this language by them, but the concept I think is one which they would agree on.

Right now, the Department of Transportation licenses commercial launches and one of OCST's responsibilities is to evaluate the maximum comparable lofts for a launch and then present this assessment to a launch company. The company then buys insurance for that amount, the amount above the maximum possible loss; i.e. catastrophic coverage. OCST would have the authority to provide indemnification in the case of a reusable launch vehicle.

Current law allows them to provide this coverage only to traditional launch vehicles. This really updates it.

Now just to explain this a step further, to date, the OCST has not had the statutory authority to license reentry activities, but these new vehicles we have today operate differently. They are reusable launch systems like the X33 and X34.

The definitional problem is compounded by virtue of the flight hardware returning to earth at the vehicle launch site, and defines the structure of the regulatory environment and addresses new developments, and adopts a manner appropriate for both government and industry.

Reentry industry activities are not only integral to launch of these two systems, but are as inherently dangerous as any activity associated with the traditional definition of launch.

NASA's reusable launch vehicle program is all about new ways of doing business. It's about sharing risks among government and industry.

We can't expect our commercial companies to put their significant capital on the line while exempting the government from keeping up its end of the partnership.

Mr. HALL. Would the gentleman yield?

Mr. DAVIS. Yes.

Mr. HALL. As I understand it, your amendment is a constructive amendment, as most of your amendments have been. It seems like you're just clarifying the intent of the reentry vehicle licensing provisions that are already in this bill.

Mr. DAVIS. Yes. The amendment is technical.

Mr. HALL. It's a reasonable amendment. I certainly support it.

Mr. SENSENBRENNER. Will the gentleman yield?

Mr. DAVIS. I'll be happy to.

Mr. SENSENBRENNER. I support the amendment as well. The gentleman yields back the balance of his time. Does anyone seek recognition?

[No response.]

Mr. SENSENBRENNER. If not, the question is on agreeing to the amendment offered by the gentleman from Virginia, Mr. Davis. All those in favor will signify by saying aye.

[Chorus of ayes.]

Mr. SENSENBRENNER. Opposed, no?

[No response.]

Mr. SENSENBRENNER. The ayes have it. The amendment is agreed to.

Next on the amendment roster is amendment number eight by Mr. Rohrabacher. For what purpose does the gentleman from California seek recognition?

Mr. ROHRABACHER. I have an amendment at the desk, Mr. Chairman.

[The amendment follows:]

AMENDMENT TO H.R. 2043

OFFERED BY MR. ROHRABACHER

Page 49, after line 5, insert the following new section:

1 SEC. 212. PRIVATIZATION OF MICROGRAVITY PARABOLIC
2 FLIGHT OPERATIONS.

3 (a) FINDING.—The Congress finds that no national
4 security or mission critical justification exists for the Na-
5 tional Aeronautics and Space Administration to maintain
6 its own fleet of aircraft to provide a short duration micro-
7 gravity environment via parabolic flight.

8 (b) PRIVATIZATION OF FLIGHT OPERATIONS.—(1)
9 The Administrator shall privatize all parabolic flight air-
10 craft operations conducted by or for the National Aero-
11 nautics and Space Administration in support of micro-
12 gravity research, astronaut training, and other functions,
13 through issuance of one or more long-term, renewable,
14 block purchase contracts for the performance of such oper-
15 ations by United States private sector providers.

16 (2) Within 30 days after the date of the enactment
17 of this Act, the Administrator shall issue a request for
18 proposals to provide services as described in paragraph
19 (1). The Administrator shall coordinate the process of re-

1 view of such proposals, and shall oversee the transfer of
2 such operations to the private sector.
3 (3) Within 6 months after the issuance of a request
4 for proposals under paragraph (2), the Administrator shall
5 award one or more contracts for microgravity parabolic
6 flight services, and shall cease all National Aeronautics
7 and Space Administration-operated parabolic aircraft
8 flights, and shall thereafter procure all microgravity
9 parabolic flight services from private sector providers. Na-
10 tional Aeronautics and Space Administration experi-
11 menters, and National Aeronautics and Space Administra-
12 tion-funded experimenters, who would otherwise use Na-
13 tional Aeronautics and Space Administration-owned or op-
14 erated microgravity parabolic flight aircraft, shall be is-
15 sued vouchers for the procurement of microgravity
16 parabolic flight services from the private sector.
17 (c) REGULATORY ASSISTANCE.—The Congress en-
18 courages the Federal Aviation Administration to facilitate
19 and expedite regulatory activity associated with parabolic
20 aircraft flight for persons awarded contracts under sub-
21 section (b) relating to large seat pallet certification, air
22 space clearances, and aircraft certification for parabolic
23 flight. The Administrator of the Federal Aviation Admin-
24 istration shall deliver to the Congress a report on such
25 Administration's activities described in the preceding sen-

1 tence, and the results thereof, not later than one year after
2 the date of the enactment of this Act.

Redesignate the subsequent sections accordingly.

Mr. SENSENBRENNER. The Clerk will report the amendment.

Mr. ADAMS. Amendment by Mr. Rohrabacher.

Page 49, after line 5—

Mr. SENSENBRENNER. Without objection, the amendment is considered as read and open for amendment at any point. The gentleman from California is recognized for five minutes.

Mr. ROHRABACHER. Thank you very much, Mr. Chairman.

This amendment privatizes a mature and potentially profitable part of NASA's microgravity flight program that is the parabolic aircraft flight operations which are used to train astronauts and carry out short duration experiments.

Many of you on this Committee may remember or be aware of the portions of the movie, Apollo 13, that were filmed aboard NASA's KC135 which is called the Vomit Comet, pardon the expression.

Mr. SENSENBRENNER. That phrase will be stricken from the record.

[Laughter.]

Mr. ROHRABACHER. What you may not know, and what people may not be aware of is that a private company tried to sell parabolic flight services to Ron Howard's production. So we had a private company that was trying to sell these flight services to Ron Howard's production company, and NASA in effect competed with them.

Parabolic flight services is a clearly mature and potentially profitable operational part of NASA's program, and it should be privatized. This will save NASA money and create more jobs for the private sector by lowering costs and attracting new customers.

Just this morning, my office received a call from an employee of Johnson Space Center who said there is considerable interest in privatizing this. They see it as a potential moneymaker. And I see it as a potential moneymaker as well.

There's no reason the government should be doing things that can be done in the private sector.

NASA should be doing this not only with this service but other services. So I ask for your support of this portion of my amendment that will basically help privatize something that can be done by the private sector. I yield back the balance of my time.

Mr. SENSENBRENNER. The gentleman yields back his time. Does anyone else seek recognition?

Mr. BROWN. Mr. Chairman.

Mr. SENSENBRENNER. The gentleman from California, Mr. Brown, is recognized for five minutes.

Mr. BROWN. I move to strike the last word.

Mr. SENSENBRENNER. The gentleman is recognized.

Mr. BROWN. I support the thrust of this amendment but I am constrained by my important leadership role to the minority to raise a question or two.

First of all, while the gentleman has indicated that he had informal comments from NASA employees at Johnson, I would really like to have some sort of a formal NASA process for commenting on this be received by the Committee, and hopefully as the bill progresses, even though we don't provide necessarily for a hearing, we can get those formal comments.

Secondly, I'm concerned that this might well trigger a referral to another Committee. I don't think even the Chairman wants to have that happen. I would like that to be investigated.

Thirdly, and this is of a general nature, we have all agreed, and I agree with the gentleman thoroughly that we should be privatizing as many things as possible, I'm not sure that I would have supported NASA, although it received great benefit from it, providing a plane to the movie Apollo 13.

As I say, even though it I think was a marvelous success and helped NASA's public image and so forth, I don't know what the charges were. I suspect they were merely marginal charges. They could easily have gotten full cost recovery for the plane if they had bargained properly on this, and it may well be that NASA would be better off to strike a long term contract with a private supplier to replace their existing government-owned airplanes for this purpose. And I would support that.

I do think it should be based on due consideration with an opportunity for the pros and cons to be explored. And I do feel that we should not get involved in a parliamentary situation where this bill will be referred to another Committee if it contains this language. And I will respectfully suggest that the Chairman ought to be concerned about that situation. I yield back the balance of my time.

Mr. SENSENBRENNER. The gentleman from California yields back his time. Does anyone else seek recognition?

The gentleman from Pennsylvania, Mr. Walker, is recognized for five minutes.

Mr. WALKER. I'll be brief. I just want to agree with the ranking minority member that we ought not have language in the bill that might give us a joint referral. This is a bill that we would hope to bring to the floor so that we can move it to the Senate for an authorization. I don't particularly want to have a joint referral. It does not seem to me that the language related to the Federal Aviation Administration is necessary to accomplish the intent of the gentleman from California. And I think the bill would be better off not burdened with that particular language.

Mr. ROHRABACHER. Will the gentleman yield?

Mr. WALKER. I'll be happy to yield.

Mr. ROHRABACHER. I'll be working in a very cooperative spirit with both the ranking member and yourself to make sure that we have language that will make sure there isn't a referral and we'll fix it before the Full Committee.

Mr. WALKER. That's fine. I thank the gentleman.

Mr. SENSENBRENNER. Does the gentleman yield back his time? The Chair supports the amendment.

The Chair knows that Mr. Rohrabacher is a man in a hurry and very impatient and thus very effective gentleman and he's not willing to wait for the Asset-Based Review on our bill to determine that the NASA owned KC135 is one of those assets that should be transferred to the private sector. I'm not going to keep him waiting, and support the amendment.

The question is on the adoption of the amendment offered by the gentleman from California, Mr. Rohrabacher. All those in favor will signify by saying aye.

[Chorus of ayes.]

Mr. SENSENBRENNER. Opposed, no?

[No response.]

Mr. SENSENBRENNER. The ayes have it, the amendment is agreed to.

Next on the amendment roster is amendment number nine by the gentleman from Tennessee, Mr. Hilleary. For what purpose does the gentleman from Tennessee seek recognition?

Mr. HILLEARY. Mr. Chairman, I have an amendment at the desk.

[The amendment follows:]

AMENDMENT TO H.R. 2043

OFFERED BY MR. HILLEARY

Page 50, after line 19, insert the following new section:

1 SEC. 215. UNITARY WIND TUNNEL PLAN ACT OF 1949
2 AMENDMENTS.

3 The Unitary Wind Tunnel Plan Act of 1949 is
4 amended—

5 (1) in section 101 (50 U.S.C. 511) by striking
6 "transonic and supersonic" and inserting in lieu
7 thereof "subsonic, transonic, supersonic, and
8 hypersonic"; and

9 (2) in section 103 (50 U.S.C. 513)—

10 (A) by striking "laboratories" in sub-
11 section (a) and inserting in lieu thereof "cen-
12 ters";

13 (B) by striking "supersonic" in subsection
14 (a) and inserting in lieu thereof "subsonic,
15 transonic, supersonic, and hypersonic";

16 (C) by striking ", but not to exceed
17 $136,000,000" in subsection (b); and

18 (D) by striking "laboratory" in subsection
19 (c) and inserting in lieu thereof "center".

Mr. SENSENBRENNER. The Clerk will report the amendment.

Mr. ADAMS. Amendment offered by Mr. Hilleary.

Page 50,—

Mr. SENSENBRENNER. Without objection, the amendment is considered as read and open for amendment at any point. The gentleman from Tennessee is recognized for five minutes in support of his amendment.

Mr. HILLEARY. Thank you, Mr. Chairman. It's going to be my intent to withdraw this, after I read a brief statement.

We thought it was a very uncontroversial amendment and when we found out this morning there was some controversy with it, we'd like to work with the Chair between now and the Full Committee markup and possibly reoffer this at the Full Committee.

Mr. Chairman, my amendment updates the Unitary Wind Tunnel Plan Act of 1949. This amendment does not ask for the start of any new programs, nor does it ask for authorization of any new funds. It's my intent to simply update the directive of the NASA Administrator.

Mr. Chairman, this amendment is in accordance with the findings of this Committee in Section 2, paragraph 4 of the bill before us.

The Committee finds that, "the National Aeronautics and Space Administration must reverse its current trend toward becoming an operational agency and return to its proud history as the nation's leader in basic scientific air and space research."

It is my hope we can implement the partnership that industry and NASA are interested in developing to find the solution to the lack of adequate wind tunnel facilities.

Specifically, I want to amend the Unitary Wind Tunnel Plan Act of 1949, which originally declared that the NASA Administrator and the Secretary of Defense should jointly develop a plan for the construction of "wind tunnel facilities for the solution of research, development, and evaluation problems in aeronautics and educational institutions within the continental limits of the United States for training and research in aeronautics, and to revise the uncompleted portions of the Unitary Plan from time to time, to accord with changes in national defense requirements and scientific and technical advances."

The field of aeronautics has received many advances since this Act was last amended in 1958, more than four decades ago.

Our problem is the Committee has heard from the expert testimony received during our hearings that the wind tunnel facilities in this nation are several decades old.

The European countries, in a consortium, recently opened a new transonic wind tunnel which is technologically superior to any in the United States.

This will have a direct effect on improving the competitiveness of European aircraft in the global market.

As you know, the aerospace industry is the second largest exporting industry in this country, second only to agriculture.

While just a few years ago, the United States aerospace industry accounted for around 70 percent of the global market, recent reports show that this year, we may drop below 50 percent.

This loss of market share costs us billions of dollars in trade deficit, and each percentage point of global aerospace market lost by our domestic companies translates into about 44,000 Americans losing their jobs.

A study conducted by the National Research Council in 1992, identified that our current wind tunnel facilities are inadequate for maintaining aeronautical superiority into the next century.

In 1994, NASA was directed by Congress to conduct a study of the needs and requirements of a national wind tunnel complex and appropriated $60 million for its study.

Last year, Congress appropriated $400 million in advance for the construction of new national wind tunnel facilities.

Earlier this year, this Congress approved continuing availability of that appropriation to the end of Fiscal Year 1997, while allowing $35 million from that account to be spent on the study to the end of Fiscal Year 1996. This action by Congress was signed into law in April of this year.

Under my amendment, no action on the wind tunnel is to take place until after the phase one study on the current status of our nation's wind tunnels is complete.

Congress has already made it very clear that before the first spade of dirt can be turned, there must be an agreement in place which includes substantial financial participation from both the private aerospace industry and the Department of Defense as they will be the primary users and beneficiaries of the project.

Any decision by the Congress to move beyond the phase one studies is contingent upon NASA executing a memorandum of agreement with both the Department of Defense and the U.S. aviation industry, both commercial and military, regarding cost shares for construction and utilization of the complex.

I'm very excited about this study taking place on the current status of wind tunnels. I feel the information being gathered will be instrumental in maintaining aeronautical superiority over the rest of the world.

Until that study is complete, however, this amendment merely attempts to revise language that is no longer consistent with today's technology. It is not my intent to have any budget implications whatsoever.

Mr. Chairman, I just want to go through this statement to expose the very big problem of inadequate wind tunnels in this country because we spend so much of our time talking about the space part of NASA, not the aeronautics part of NASA.

And I would certainly like to reserve my right to reoffer this at Full Committee and want to work with the Chairman to try to get this language worked out.

Mr. SENSENBRENNER. That will happen. Does the gentleman now ask unanimous consent to withdraw his amendment?

Mr. HILLEARY. Yes, sir, I will.

Mr. SENSENBRENNER. Without objection. That concludes the number of amendments on the roster. Are there any further amendments to the bill?

[No response.]

Mr. SENSENBRENNER. If not, the Chair recognizes the gentleman from Texas for a motion.

Mr. HALL. Mr. Chairman, I move that the Subcommittee report the bill, H.R. 2043, National Aeronautics and Space Administration Authorization Act, Fiscal Year 1996, as amended.

Furthermore, I move to instruct the staff to prepare the Subcommittee report, to make technical and conforming amendments, and that the Chairman take all necessary steps to bring the bill before the Full Committee for consideration.

Mr. SENSENBRENNER. The question is on agreeing to the motion. Those in favor will signify by saying aye.

[Chorus of ayes.]

Mr. SENSENBRENNER. Opposed, no?

[Chorus of nays.]

Mr. SENSENBRENNER. The ayes appear to have it. The ayes have it, and the motion is agreed to.

The Chair would like to thank all Members for their patience and their participation today. The Full Committee Markup will be held next Tuesday on this legislation. Without objection, the Subcommittee is adjourned.

[Whereupon, at 12:10 p.m., Wednesday, July 19, 1995, the Subcommittee was adjourned, subject to call of the Chair.]

[Additional material follows:]

COMMITTEE ON SCIENCE
SUBCOMMITTEE ON SPACE AND AERONAUTICS

SUBCOMMITTEE MARKUP - July 19, 1995

AMENDMENT ROSTER

H.R. 2043, National Aeronautics and Space Administration Authorization Act, Fiscal Year 1996

H.R. 2043 AGREED TO AS AMENDED BY VOICE VOTE

MOTION TO REPORT THE MEASURE AS AMENDED TO FULL COMMITTEE BY VOICE VOTE

No.	Sponsor	Description	Results
1.	Mr. Sensenbrenner	En bloc amendment on technical and conforming language	Adopted by voice vote
2.	Ms. Harman	Amendment to increase funding for Mission To Planet Earth without offset	Not offered
3.	Mr. Rohrabacher	En Bloc amendment which inserts new finding in Section 2 on commercial launch services; new paragraph to promote purchase of commercial space transportation services for all non-emergency manned and unmanned launches; amendment to insert language regarding shuttle privitzation (RFP); and new paragraph to prohibit space shuttle funding beyond 2012.	Unanimous consent to offer 3 and 8 withdrawn - - - - - - - - - - - Adopted as amended by voice vote
3a.	Mr. Weldon (FL)	Amendment to Mr. Rohrabacher's amendment	Adopted by voice vote
4.	Mr. Weldon (FL) Substitute	En Bloc amendment to amend the Commercial Space Launch Act regarding spaceports	Adopted by voice vote

5.	Mr. Roemer	En bloc amendment to change Aeronautic Research and Technology program priorities	Yea - 8 Nay - 13 Amendment not agreed to.
6.	Mr. Rohrabacher	En bloc amendment to strike and insert language including Flight Demonstration Program	Withdrawn
7.	Mr. Davis	En bloc amendment to add "exo-atmospheric flight" to Commercial Space Launch Act	Adopted by voice vote
8.	Mr. Rohrabacher	New section Sec 212, Privatization of Microgravity Parabolic Flight Operations.	Adopted by voice vote
9.	Mr. Hilleary	New Section 215, Unitary Wind Tunnel Plan Act of 1949 Amendments	Withdrawn

104TH CONGRESS
1ST SESSION

H. R. 2043

IN THE HOUSE OF REPRESENTATIVES

Mr. WALKER (for himself and Mr. SENSENBRENNER) introduced the following bill; which was referred to the Committee on

A BILL

To authorize appropriations to the National Aeronautics and Space Administration for human space flight, science, aeronautics, and technology, mission support, and Inspector General, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the "National Aeronautics and Space Administration Authorization Act, Fiscal Year 1996".

1 SEC. 2. FINDINGS.

2 The Congress makes the following findings:

3 (1) The National Aeronautics and Space Ad-
4 ministration has failed to request sufficient funds to
5 perform all missions it has proposed in annual budg-
6 et requests. For fiscal year 1996, the budget re-
7 quested is $140,000,000 below the amount required
8 to fulfill program commitments made by the fiscal
9 year 1995 budget approved by Congress. The re-
10 quest for fiscal year 1996 proposes continued
11 underfunding of the requirements of the National
12 Aeronautics and Space Administration by
13 $439,000,000 for fiscal year 1997, $847,000,000 for
14 fiscal year 1998, $1,189,000,000 for fiscal year
15 1999, and $1,532,000,000 for fiscal year 2000.

16 (2) In order to close the gap between projected
17 program requirements and the underfunding re-
18 quested, the National Aeronautics and Space Admin-
19 istration should aggressively pursue actions and re-
20 forms directed at reducing institutional costs, includ-
21 ing management restructuring, facility consolidation,
22 procurement reform, personnel base downsizing, and
23 convergence with other defense and private sector
24 systems.

25 (3) While institutional reforms, restructurings,
26 and downsizing hold the promise of comporting the

1 projected needs of the National Aeronautics and
2 Space Administration with funding levels requested
3 by the Administration, such reforms provide no
4 guarantee against cancellation of missions in the
5 event reform efforts fail to achieve cost reduction
6 targets.

7 (4) The National Aeronautics and Space Ad-
8 ministration must reverse its current trend toward
9 becoming an operational agency, and return to its
10 proud history as the Nation's leader in basic sci-
11 entific air and space research.

12 (5) Commercial space activity is in a delicate
13 stage of growth but has the potential to eclipse Fed-
14 eral space activity in its economic return to the Na-
15 tion if not stifled.

16 (6) The United States is on the verge of creat-
17 ing and using new technologies in microsatellites, in-
18 formation processing, and space launch that could
19 radically alter the manner in which the Government
20 approaches its space mission.

21 (7) In formulating a national space transpor-
22 tation service policy, the National Aeronautics and
23 Space Administration should agressively pursue re-
24 verse contracting opportunities to support the pri-
25 vate sector development of advanced space transpor-

1 tation technologies including reusable space vehicles,
2 single-stage-to-orbit vehicles, and manned space sys-
3 tems.
4 (8) International cooperation in space explo-
5 ration and science activities serves the United States
6 national interest—
7 (A) when it—
8 (i) reduces the cost of undertaking
9 missions the United States Government
10 would pursue unilaterally;
11 (ii) enables the United States to pur-
12 sue missions that it could not otherwise af-
13 ford to pursue unilaterally; or
14 (iii) enhances United States capabili-
15 ties to use and develop space for the bene-
16 fit of United States citizens; and
17 (B) when it does not—
18 (i) otherwise harm or interfere with
19 the ability of United States private sector
20 firms to develop or explore space commer-
21 cially;
22 (ii) interfere with the ability of Fed-
23 eral agencies to use space to complete their
24 missions;

(iii) undermine the ability of United States private enterprise to compete favorably with foreign entities in the commercial space arena; or

(iv) transfer sensitive or commercially advantageous technologies or knowledge from the United States to other countries or foreign entities except as required by those countries or entities to make their contribution to a multilateral space project in partnership with the United States, or on a quid pro quo basis.

(9) The National Aeronautics and Space Administration and the Department of Defense can cooperate more effectively in leveraging their mutual capabilities to conduct joint space missions that improve United States space capabilities and reduce the cost of conducting space missions.

SEC. 3. DEFINITIONS.

For purposes of this Act—

(1) the term "Administrator" means the Administrator of the National Aeronautics and Space Administration; and

(2) the term "institution of higher education" has the meaning given such term in section 1201(a)

of the Higher Education Act of 1965 (20 U.S.C. 1141(a)).

TITLE I—AUTHORIZATION OF APPROPRIATIONS

Subtitle A—Authorizations

SEC. 101. HUMAN SPACE FLIGHT.

(a) AUTHORIZATIONS.—There are authorized to be appropriated to the National Aeronautics and Space Administration for fiscal year 1996 for Human Space Flight the following amounts:

(1) For Space Shuttle Operations, $2,341,800,000.

(2) For Space Shuttle Safety and Performance Upgrades, $837,000,000.

(3) For Payload and Utilization Operations, $315,000,000.

(4) For Russian Cooperation, $100,000,000.

(b) CONSTRUCTION OF FACILITIES.—(1) Of the funds authorized to be appropriated under subsection (a)(2), $5,000,000 are authorized for modernization of the Firex System, Pads A and B, Kennedy Space Center.

(2) Of the funds authorized to be appropriated under subsection (a)(2), $7,500,000 are authorized for replacement of the Chemical Analysis Facility, Kennedy Space Center.

1 (3) Of the funds authorized to be appropriated under
2 subsection (a)(2), $4,900,000 are authorized for replace-
3 ment of the Space Shuttle Main Engine Processing Facil-
4 ity, Kennedy Space Center.

5 SEC. 102. SCIENCE, AERONAUTICS, AND TECHNOLOGY.

6 (a) AUTHORIZATIONS.—There are authorized to be
7 appropriated to the National Aeronautics and Space Ad-
8 ministration for fiscal year 1996 for Science, Aeronautics,
9 and Technology the following amounts:

10 (1) For Space Science, $1,995,400,000, of
11 which—

12 (A) $1,167,600,000 are authorized for
13 Physics and Astronomy, of which $51,500,000
14 shall be for the Gravity Probe B, except that no
15 funds are authorized for the Space Infrared
16 Telescope Facility; and

17 (B) $827,800,000 are authorized for Plan-
18 etary Exploration, of which $30,000,000 shall
19 be for the New Millennium Spacecraft, includ-
20 ing $5,000,000 for the National Aeronautics
21 and Space Administration's participation in
22 Clementine 2 (Air Force Program Element
23 0603401F Advanced Spacecraft Technology).

24 (2) For Life and Microgravity Sciences and Ap-
25 plications, $293,200,000.

1 (3) For Mission to Planet Earth.
2 $1,013,100,000, of which $21,500,000 shall only be
3 for activities described in section 208(7), except that
4 no funds are authorized for the Consortium for
5 International Earth Science Information Network.
6 the Global Observations to Benefit the Environment.
7 or the Topex Poseidon Follow-On mission. Funds
8 authorized by this paragraph may not be expended
9 to duplicate private sector or other Federal activities
10 or to procure systems to provide data unless the Ad-
11 ministrator certifies to Congress that no private sec-
12 tor or Federal entity can provide suitable data in a
13 timely manner. Notwithstanding any other provision
14 of law, funds in excess of those authorized by this
15 paragraph may not be obligated for Mission To
16 Planet Earth.
17 (4) For Space Access and Technology;
18 $639,800,000 of which—
19 (A) $193,000,000 are authorized for Ad-
20 vanced Space Transportation;
21 (B) $10,000,000 are authorized to be
22 made available for defraying the costs of con-
23 verting or redesigning commercially inconsistent
24 elements of former Federal facilities or to take
25 actions required for conformance with Federal

1 laws or regulations relating to commercial space
2 transportation infrastructure, to remain avail-
3 able until expended;
4 (C) $20,000,000 shall be for continuing
5 the Launch Voucher Demonstration Program
6 authorized under section 504 of the National
7 Aeronautics and Space Administration Author-
8 ization Act, Fiscal Year 1993 (15 U.S.C.
9 5803); and
10 (D) $33,900,000 are authorized for the
11 Small Spacecraft Technology Initiative, except
12 that funds for such Initiative may not be ex-
13 pended to duplicate private sector activities or
14 to fund any activities that a private sector en-
15 tity is proposing to carry out for commercial
16 purposes. No funds are authorized under this
17 paragraph for the Partnership for Next Genera-
18 tion Vehicle.
19 (5) For Aeronautical Research and Technology,
20 $826,900,000, of which—
21 (A) $354,700,000 are authorized for Re-
22 search and Technology Base activities;
23 (B) $245,500,000 are authorized for High
24 Speed Research;

1 (C) $133,000,000 are authorized for Ad-
2 vanced Subsonic Technology, except that no
3 funds are authorized for concept studies for Ad-
4 vanced Traffic Management and Affordable De-
5 sign and Manufacturing;
6 (D) $40,200,000 are authorized for High-
7 Performance Computing and Communications;
8 and
9 (E) $48,100,000 are authorized for Nu-
10 merical Aerodynamic Simulation.
11 (6) For Mission Communication Services,
12 $461,300,000.
13 (7) For Academic Programs, $102,200,000.
14 (b) CONSTRUCTION OF FACILITIES.—(1) Of the
15 funds authorized to be appropriated under subsection
16 (a)(3), $17,000,000 are authorized for construction of the
17 Earth Systems Science Building, Goddard Space Flight
18 Center.
19 (2) Of the funds authorized to be appropriated under
20 subsection (a)(5), $5,400,000 are authorized for mod-
21 ernization of the Unitary Plan Wind Tunnel Complex,
22 Ames Research Center.
23 (3) Of the funds authorized to be appropriated under
24 subsection (a)(2), $3,000,000 are authorized for the con-

1 struction of an addition to the Microgravity and Develop-
2 ment Laboratory, Marshall Space Flight Center.

3 **SEC. 103. MISSION SUPPORT.**

4 There are authorized to be appropriated to the Na-
5 tional Aeronautics and Space Administration for fiscal
6 year 1996 for Mission Support the following amounts:

7 (1) For Safety, Reliability, and Quality Assur-
8 ance, $37,600,000.

9 (2) For Space Communication Services,
10 $319,400,000.

11 (3) For Construction of Facilities, including
12 land acquisition, $152,600,000, of which—

13 (A) $6,300,000 shall be for restoration of
14 Flight Systems Research Laboratory, Ames Re-
15 search Center;

16 (B) $3,000,000 shall be for restoration of
17 chilled water distribution system, Goddard
18 Space Flight Center;

19 (C) $4,800,000 shall be for replacing
20 chillers, various buildings, Jet Propulsion Lab-
21 oratory;

22 (D) $1,100,000 shall be for rehabilitation
23 of electrical distribution system, White Sands
24 Test Facility, Johnson Space Center;

1 (E) $4,200,000 shall be for replacement of
2 main substation switchgear and circuit break-
3 ers, Johnson Space Center;
4 (F) $1,800,000 shall be for replacement of
5 15kV load break switches, Kennedy Space Cen-
6 ter;
7 (G) $9,000,000 shall be for rehabilitation
8 of Central Air Equipment Building, Lewis Re-
9 search Center;
10 (H) $4,700,000 shall be for restoration of
11 high pressure air compressor system, Marshall
12 Space Flight Center;
13 (I) $6,800,000 shall be for restoration of
14 Information and Electronic Systems Labora-
15 tory, Marshall Space Flight Center;
16 (J) $1,400,000 shall be for restoration of
17 canal lock, Stennis Space Center;
18 (K) $2,500,000 shall be for restoration of
19 primary electrical distribution system, Wallops
20 Flight Facility;
21 (L) $30,000,000 shall be for repair of fa-
22 cilities at various locations, not in excess of
23 $1,500,000 per project;

1 (M) $30,000,000 shall be for rehabilitation
2 and modification of facilities at various loca-
3 tions, not in excess of $1,500,000 per project;
4 (N) $2,000,000 shall be for minor con-
5 struction of new facilities and additions to exist-
6 ing facilities at various locations, not in excess
7 of $750,000 per project;
8 (O) $10,000,000 shall be for facility plan-
9 ning and design not otherwise provided for; and
10 (P) $35,000,000 shall be for environmental
11 compliance and restoration.
12 (4) For Research and Program Management,
13 including personnel and related costs, travel, and re-
14 search operations support, $2,094,800,000.
15 SEC. 104. INSPECTOR GENERAL.
16 There are authorized to be appropriated to the Na-
17 tional Aeronautics and Space Administration for Inspector
18 General, $17,300,000 for fiscal year 1996.
19 SEC. 105. TOTAL AUTHORIZATION.
20 Notwithstanding any other provision of this title, the
21 total amount authorized to be appropriated under this Act
22 shall not exceed $11,547,400,000 for fiscal year 1996.

Subtitle B—Restructuring the National Aeronautics and Space Administration

SEC. 111. FINDINGS.

The Congress finds that—

(1) the restructuring of the National Aeronautics and Space Administration is essential to accomplishing the space missions of the United States while simultaneously balancing the Federal budget;

(2) to restructure the National Aeronautics and Space Administration rapidly without reducing mission content and safety requires objective financial judgment;

(3) no effort has been undertaken by the National Aeronautics and Space Administration to perform a formal economic review of its missions and the Federal assets that support them;

(4) therefore it is premature and unwarranted to attempt closing any National Aeronautics and Space Administration field center until an asset-based review of United States space missions and capabilities to support them is performed; and

(5) cost savings from the closing of National Aeronautics and Space Administration field centers

1 are speculative and potentially injurious to mission
2 goals, unless derived from an asset-based analysis.

3 **SEC. 112. ASSET-BASED REVIEW.**

4 (a) REQUEST FOR PROPOSALS.—Not later than 30
5 days after the date of the enactment of this Act, the Ad-
6 ministrator shall publish in the Commerce Business Daily
7 a request for proposals to perform a National Aeronautics
8 and Space Administration asset-based review.

9 (b) QUALIFIED PROPOSALS.—Qualified proposals to
10 perform the asset-based review under this section shall be
11 from United States persons whose primary business is cor-
12 porate financial strategy, investment banking, accounting,
13 or asset management. All proposals shall, at a minimum,
14 propose to review, for each capital asset owned by the Na-
15 tional Aeronautics and Space Administration—

16 (1) its primary function or purpose in relation-
17 ship to a program, mission, or activity of the Na-
18 tional Aeronautics and Space Administration;

19 (2) the existence of other capital assets which
20 duplicate or overlap with such function or purpose:

21 (3) the Federal and non-Federal users thereof;
22 and

23 (4) its necessity to carry out a program, mis-
24 sion, or activity of the National Aeronautics and
25 Space Administration.

1 (c) REPORT.—The contractor selected to perform the
2 asset-based review under this section shall complete such
3 review and transmit to the Administrator and the Con-
4 gress, no later than July 31, 1996, a report containing,
5 at a minimum—
6 (1) for each National Aeronautics and Space
7 Administration field center facility—
8 (A) a list of capital assets that should be
9 permanently retired or disposed of;
10 (B) a list of capital assets that may be
11 transferred to non-Federal institutions and cor-
12 porations, if the transfer of such asset is cost
13 effective; and
14 (C) a list of capital assets essential to the
15 conduct of National Aeronautics and Space Ad-
16 ministration programs, missions, or activities,
17 and a justification for retaining the asset;
18 (2) for each National Aeronautics and Space
19 Administration program element—
20 (A) a list of capital assets essential to the
21 conduct of the program element; and
22 (B) a plan for achieving the most cost-ef-
23 fective consolidation and efficient use of nec-
24 essary capital assets to support such program

1 element, including the use of non-Federal assets
2 where appropriate; and
3 (3) for each National Aeronautics and Space
4 Administration capital asset—
5 (A) the total annual cost of maintaining
6 and operating such capital asset, including Fed-
7 eral employee and contractor costs;
8 (B) the depreciated cost, replacement cost,
9 and salvage value; and
10 (C) the most cost-effective strategy for
11 maintaining, replacing, upgrading, or disposing
12 of the capital asset, as appropriate.
13 (d) IMPLEMENTATION.—The Administrator shall
14 consider the results of the asset-based review conducted
15 under this section, and based on the Administrator's rec-
16 ommendations, the President shall propose to Congress
17 legislation required to implement those recommendations
18 no later than September 30, 1996.
19 (e) CLOSING OF FIELD CENTERS.—The Adminis-
20 trator shall not close any National Aeronautics and Space
21 Administration field center until after the asset-based re-
22 view report is transmitted under subsection (c), and may
23 only close field centers that would become obsolete as a
24 result of the implementation of the Administrator's rec-

1 ommendations, and may do so only after enactment of leg-
2 islation implementing those recommendations.

3 Subtitle C—Limitations and
4 Special Authority

5 SEC. 121. USE OF FUNDS FOR CONSTRUCTION.

6 (a) AUTHORIZED USES.—Funds appropriated under
7 sections 101(a), 102(a), and 103 (1) and (2), and funds
8 appropriated for research operations support under sec-
9 tion 103(4), may be used for the construction of new fa-
10 cilities and additions to, repair of, rehabilitation of, or
11 modification of existing facilities at any location in support
12 of the purposes for which such funds are authorized.

13 (b) LIMITATION.—None of the funds used pursuant
14 to subsection (a) may be expended for a project, the esti-
15 mated cost of which to the National Aeronautics and
16 Space Administration, including collateral equipment, ex-
17 ceeds $500,000, until 30 days have passed after the Ad-
18 ministrator has notified the Committee on Science of the
19 House of Representatives and the Committee on Com-
20 merce, Science, and Transportation of the Senate of the
21 nature, location, and estimated cost to the National Aero-
22 nautics and Space Administration of such project.

23 (c) TITLE TO FACILITIES.—If funds are used pursu-
24 ant to subsection (a) for grants to institutions of higher
25 education, or to nonprofit organizations whose primary

1 purpose is the conduct of scientific research, for purchase
2 or construction of additional research facilities, title to
3 such facilities shall be vested in the United States unless
4 the Administrator determines that the national program
5 of aeronautical and space activities will best be served by
6 vesting title in the grantee institution or organization.
7 Each such grant shall be made under such conditions as
8 the Administrator shall determine to be required to ensure
9 that the United States will receive therefrom benefits ade-
10 quate to justify the making of that grant.

11 SEC. 122. AVAILABILITY OF APPROPRIATED AMOUNTS.

12 To the extent provided in appropriations Acts, appro-
13 priations authorized under subtitle A may remain avail-
14 able without fiscal year limitation.

15 SEC. 123. REPROGRAMMING FOR CONSTRUCTION OF FA-
16 CILITIES.

17 (a) IN GENERAL.—Appropriations authorized under
18 any paragraph of section 101(b), 102(b), or 103(3)—
19 (1) may be varied upward by 10 percent in the
20 discretion of the Administrator; or
21 (2) may be varied upward by 25 percent, to
22 meet unusual cost variations, after the expiration of
23 15 days following a report on the circumstances of
24 such action by the Administrator to the Committee
25 on Science of the House of Representatives and the

1 Committee on Commerce, Science, and Transpor-
2 tation of the Senate.
3 The aggregate amount authorized to be appropriated
4 under sections 101(b), 102(b) and 103(3) shall not be in-
5 creased as a result of actions authorized under paragraphs
6 (1) and (2) of this subsection.
7 (b) SPECIAL RULE.—Where the Administrator deter-
8 mines that new developments in the national program of
9 aeronautical and space activities have occurred; and that
10 such developments require the use of additional funds for
11 the purposes of construction, expansion, or modification
12 of facilities at any location; and that deferral of such ac-
13 tion until the enactment of the next National Aeronautics
14 and Space Administration Authorization Act would be in-
15 consistent with the interest of the Nation in aeronautical
16 and space activities, the Administrator may use up to
17 $10,000,000 of the amounts authorized under section
18 101(b), 102(b), or 103(3) for each fiscal year for such
19 purposes. No such funds may be obligated until a period
20 of 30 days has passed after the Administrator has trans-
21 mitted to the Committee on Commerce, Science, and
22 Transportation of the Senate and the Committee on
23 Science of the House of Representatives a written report
24 describing the nature of the construction, its costs, and
25 the reasons therefor.

1 SEC. 124. CONSIDERATION BY COMMITTEES.

2 Notwithstanding any other provision of law—

3 (1) no amount appropriated to the National
4 Aeronautics and Space Administration may be used
5 for any program for which the President's annual
6 budget request included a request for funding, but
7 for which the Congress denied or did not provide
8 funding;

9 (2) no amount appropriated to the National
10 Aeronautics and Space Administration may be used
11 for any program in excess of the amount actually
12 authorized for the particular program by subtitle A;
13 and

14 (3) no amount appropriated to the National
15 Aeronautics and Space Administration may be used
16 for any program which has not been presented to
17 the Congress in the President's annual budget re-
18 quest or the supporting and ancillary documents
19 thereto,

20 unless a period of 30 days has passed after the receipt
21 by the Committee on Science of the House of Representa-
22 tives and the Committee on Commerce, Science, and
23 Transportation of the Senate of notice given by the Ad-
24 ministrator containing a full and complete statement of
25 the action proposed to be taken and the facts and cir-
26 cumstances relied upon in support of such proposed ac-

1 tion. The National Aeronautics and Space Administration
2 shall keep the Committee on Science of the House of Rep-
3 resentatives and the Committee on Commerce, Science,
4 and Transportation of the Senate fully and currently in-
5 formed with respect to all activities and responsibilities
6 within the jurisdiction of those committees. Except as oth-
7 erwise provided by law, any Federal department, agency,
8 or independent establishment shall furnish any informa-
9 tion requested by either committee relating to any such
10 activity or responsibility.

11 SEC. 125. LIMITATION ON OBLIGATION OF UNAUTHORIZED
12 APPROPRIATIONS.

13 (a) REPORTS TO CONGRESS.—Not later than 30 days
14 after the later of the date of enactment of an Act making
15 appropriations to the National Aeronautics and Space Ad-
16 ministration for fiscal year 1996 and the date of enact-
17 ment of this Act, the Administrator shall submit a report
18 to Congress and to the Comptroller General which speci-
19 fies—

20 (1) the portion of such appropriations which are
21 for programs, projects, or activities not authorized
22 under subtitle A of this title, or which are in excess
23 of amounts authorized for the relevant program,
24 project, or activity under this Act; and

1 (2) the portion of such appropriations which are
2 authorized under this Act.
3 (b) FEDERAL REGISTER NOTICE.—The Adminis-
4 trator shall, coincident with the submission of the report
5 required by subsection (a), publish in the Federal Register
6 a notice of all programs, projects, or activities for which
7 funds are appropriated but which were not authorized
8 under this Act, and solicit public comment thereon regard-
9 ing the impact of such programs, projects, or activities on
10 the conduct and effectiveness of the national aeronautics
11 and space program.
12 (c) LIMITATION.—Notwithstanding any other provi-
13 sion of law, no funds may be obligated for any programs,
14 projects, or activities of the National Aeronautics and
15 Space Administration for fiscal year 1996 not authorized
16 under this Act until 30 days have passed after the close
17 of the public comment period contained in the notice re-
18 quired in subsection (b).
19 **SEC. 126. USE OF FUNDS FOR SCIENTIFIC CONSULTATIONS**
20 **OR EXTRAORDINARY EXPENSES.**
21 Not more than $30,000 of the funds appropriated
22 under section 102 may be used for scientific consultations
23 or extraordinary expenses, upon the authority of the Ad-
24 ministrator.

1 SEC. 127. LIMITATION ON TRANSFERS TO RUSSIA.

2 (a) LIMITATION.—No funds authorized to be appro-
3 priated to the National Aeronautics and Space Adminis-
4 tration for fiscal year 1996 may be paid or otherwise
5 transferred to Russia unless—

6 (1) the purpose of the payment or transfer is
7 authorized by this Act;

8 (2) the payment or transfer is made in ex-
9 change for goods or services that have been provided
10 to the National Aeronautics and Space Administra-
11 tion in accordance with a written agreement between
12 the National Aeronautics and Space Administration
13 and Russia;

14 (3) the Government of the Russian Federation
15 agrees to provide a monthly report to the National
16 Aeronautics and Space Administration during the
17 term of such written agreement, that fully accounts
18 for the disposition of the funds paid or transferred,
19 including information with respect to the preceding
20 month on—

21 (A) the amount of the funds received, and
22 the date of receipt;

23 (B) the amount of the funds converted
24 from United States currency, the currency into
25 which the funds have been converted, and the
26 date and rate of conversion;

1 (C) the amount of non-United States cur-
2 rency, and of United States currency, that is
3 disbursed to any contractor or subcontractor,
4 the identity of such contractor or subcontractor,
5 and the date of disbursement; and
6 (D) the balance of the funds not disbursed
7 as of the date of the report;
8 (4) Russia has provided all monthly reports
9 with respect to which an agreement was made pur-
10 suant to paragraph (3); and
11 (5) the President, before such payment or
12 transfer and annually upon submission of the Presi-
13 dent's budget request for fiscal years after fiscal
14 year 1996, has certified to the Congress that—
15 (A) the presence of any troops of the Rus-
16 sian Federation or the Commonwealth of Inde-
17 pendent States; and
18 (B) any action by the Russian Federation
19 or the Commonwealth of Independent States,
20 in Estonia, Latvia, Lithuania, or any other inde-
21 pendent state of the former Soviet Union do not vio-
22 late the sovereignty of those independent states.
23 (b) DEFINITION.—For purposes of this section, the
24 term "Russia" means the Government of the Russian
25 Federation, the Russian Space Agency, or any agency or

1 instrumentality of the Government of the Russian Federa-
2 tion or the Russian Space Agency.

3 TITLE II—MISCELLANEOUS
4 PROVISIONS

5 SEC. 201. COMMERCIAL SPACE LAUNCH AMENDMENTS.

6 (a) AMENDMENTS.—Chapter 701 of title 49, United
7 States Code, is amended—

8 (1) in the table of sections—

9 (A) by amending the item relating to sec-
10 tion 70104 to read as follows:

"70104. Restrictions on launches, operations, and reentries.";

11 (B) by amending the item relating to sec-
12 tion 70108 to read as follows:

"70108. Prohibition, suspension, and end of launches, operation of launch sites and reentry sites, and reentries.";

13 and

14 (C) by amending the item relating to sec-
15 tion 70109 to read as follows:

"70109. Preemption of scheduled launches or reentries.";

16 (2) in section 70101—

17 (A) by inserting "microgravity research,"
18 after "information services," in subsection
19 (a)(3);

20 (B) by inserting ", reentry," after "launch-
21 ing" both places it appears in subsection (a)(4);

1 (C) by inserting ", reentry vehicles," after
2 "launch vehicles" in subsection (a)(5);
3 (D) by inserting "and reentry services"
4 after "launch services" in subsection (a)(6);
5 (E) by inserting ", reentries," after
6 "launches" both places it appears in subsection
7 (a)(7);
8 (F) by inserting ", reentry sites," after
9 "launch sites" in subsection (a)(8);
10 (G) by inserting "and reentry services"
11 after "launch services" in subsection (a)(8);
12 (H) by inserting "reentry sites," after
13 "launch sites," in subsection (a)(9);
14 (I) by inserting "and reentry site" after
15 "launch site" in subsection (a)(9);
16 (J) by inserting ", reentry vehicles," after
17 "launch vehicles" in subsection (b)(2);
18 (K) by striking "launch" in subsection
19 (b)(2)(A);
20 (L) by inserting "and reentry" after "com-
21 mercial launch" in subsection (b)(3);
22 (M) by striking "launch" after "and trans-
23 fer commercial" in subsection (b)(3); and

1 (N) by inserting "and development of re-
2 entry sites," after "launch-site support facili-
3 ties," in subsection (b)(4);
4 (3) in section 70102—
5 (A) by inserting "from Earth" after "and
6 any payload" in paragraph (3);
7 (B) by redesignating paragraphs (10)
8 through (12) as paragraphs (14) through (16),
9 respectively;
10 (C) by inserting after paragraph (9) the
11 following new paragraphs:
12 "(10) 'reenter' and 'reentry' mean to return or
13 attempt to return, purposefully, a reentry vehicle
14 and its payload, if any, from Earth orbit or from
15 outer space to Earth.
16 "(11) 'reentry services' means—
17 "(A) activities involved in the preparation
18 of a reentry vehicle and its payload, if any, for
19 reentry; and
20 "(B) the conduct of a reentry.
21 "(12) 'reentry site' means the location on Earth
22 to which a reentry vehicle is intended to return (as
23 defined in a license the Secretary issues or transfers
24 under this chapter).

"(13) 'reentry vehicle' means a vehicle designed to return from Earth orbit or outer space to Earth substantially intact."; and

(D) by inserting "or reentry services" after "launch services" each place it appears in paragraph (15), as so redesignated by subparagraph (B) of this paragraph;

(4) in section 70103(b)—

(A) by inserting "AND REENTRIES" after "LAUNCHES" in the subsection heading;

(B) by inserting "and reentries" after "space launches" in paragraph (1); and

(C) by inserting "and reentry" after "space launch" in paragraph (2);

(5) in section 70104—

(A) by amending the section designation and heading to read as follows:

"§ 70104. Restrictions on launches, operations, and reentries";

(B) by inserting "or reentry site, or reenter a reentry vehicle," after "operate a launch site" each place it appears in subsection (a);

(C) by inserting "or reentry" after "launch or operation" in subsection (a)(3) and (4);

(D) in subsection (b)—

(i) by striking "launch license" and inserting in lieu thereof "license";

(ii) by inserting "or reenter" after "may launch"; and

(iii) by inserting "or reentering" after "related to launching"; and

(E) in subsection (c)—

(i) by amending the subsection heading to read as follows: "PREVENTING LAUNCHES AND REENTRIES.—";

(ii) by inserting "or reentry" after "prevent the launch"; and

(iii) by inserting "or reentry" after "decides the launch";

(6) in section 70105—

(A) by inserting "or reentry site, or reentry of a reentry vehicle," after "operation of a launch site" in subsection (b)(1); and

(B) by striking "or operation" and inserting in lieu thereof ", operation, or reentry" in subsection (b)(2)(A);

(7) in section 70106(a)—

(A) by inserting "or reentry site" after "observer at a launch site"; and

(B) by inserting "or reentry vehicle" after "assemble a launch vehicle";

(8) in section 70108—

(A) by amending the section designation and heading to read as follows:

"§ 70108. Prohibition, suspension, and end of launches, operation of launch sites and reentry sites, and reentries";

and

(B) in subsection (a)—

(i) by inserting "or reentry site, or reentry of a reentry vehicle," after "operation of a launch site"; and

(ii) by inserting "or reentry" after "launch or operation";

(9) in section 70109—

(A) by amending the section designation and heading to read as follows:

"§ 70109. Preemption of scheduled launches or reentries";

(B) in subsection (a)—

(i) by inserting "or reentry" after "ensure that a launch";

(ii) by inserting ", reentry site," after "United States Government launch site";

(iii) by inserting "or reentry date commitment" after "launch date commitment";

(iv) by inserting "or reentry" after "obtained for a launch";

(v) by inserting ", reentry site," after "access to a launch site";

(vi) by inserting ", or services related to a reentry," after "amount for launch services"; and

(vii) by inserting "or reentry" after "the scheduled launch"; and

(C) in subsection (c), by inserting "or reentry" after "prompt launching";

(10) in section 70110—

(A) by inserting "or reentry" after "prevent the launch" in subsection (a)(2); and

(B) by inserting "or reentry site, or reentry of a reentry vehicle," after "operation of a launch site" in subsection (a)(3)(B);

(11) in section 70111—

(A) by inserting "and reentry services" after "launch services" in subsection (a)(1)(B);

(B) by inserting "or reentry services" after "or launch services" in subsection (a)(2);

(C) by inserting "or reentry" after "commercial launch" both places it appears in subsection (b)(1);

(D) by inserting "or reentry services" after "launch services" in subsection (b)(2)(C);

(E) by striking "or its payload for launch" in subsection (d) and inserting in lieu thereof "or reentry vehicle, or the payload of either, for launch or reentry"; and

(F) by inserting ", reentry vehicle," after "manufacturer of the launch vehicle" in subsection (d);

(12) in section 70112—

(A) by inserting "or reentry" after "one launch" in subsection (a)(3);

(B) by inserting "or reentry services" after "launch services" in subsection (a)(4);

(C) by inserting "or reentry services" after "launch services" each place it appears in subsection (b);

(D) by striking ", Space, and Technology" in subsection (d);

(E) by inserting "OR REENTRIES" after "LAUNCHES" in the heading for subsection (e); and

1 (F) by inserting "or reentry site or a re-
2 entry" after "launch site" in subsection (e);
3 (13) in section 70113(a)(1) and (d)(1) and (2),
4 by inserting "or reentry" after "one launch" each
5 place it appears;
6 (14) in section 70115(b)(1)(D)(i)—
7 (A) by inserting "reentry site," after
8 "launch site,"; and
9 (B) by inserting "or reentry vehicle" after
10 "launch vehicle" both places it appears;
11 (15) in section 70117—
12 (A) by inserting "or reentry site or reenter
13 a reentry vehicle" after "operate a launch site"
14 in subsection (a);
15 (B) by inserting "or reentry" after "ap-
16 proval of a space launch" in subsection (d);
17 (C) by amending subsection (f) to read as
18 follows:
19 "(f) LAUNCH NOT AN EXPORT; REENTRY NOT AN
20 IMPORT.—A launch vehicle, reentry vehicle, or payload
21 that is launched or reentered is not, because of the launch
22 or reentry, an export or import, respectively, for purposes
23 of a law controlling exports or imports."; and
24 (D) in subsection (g)—

(i) by striking "operation of a launch vehicle or launch site," in paragraph (1) and inserting in lieu thereof "reentry, operation of a launch vehicle or reentry vehicle, or operation of a launch site or reentry site,";

(ii) by striking "or" at the end of paragraph (1);

(iii) by inserting "reentry," after "launch," in paragraph (2);

(iv) by striking the period at the end of paragraph (2) and inserting in lieu thereof "; or"; and

(v) by adding at the end the following new paragraph:

"(3) any amateur and similar small rocket activities, as defined by the Secretary by regulation.";

(16) in section 70119, by inserting the following after paragraph (2):

"There are authorized to be appropriated to the Secretary of Transportation $6,000,000 to carry out this chapter for fiscal year 1996. None of the funds authorized by this section may be expended for policy development or analysis activities not directly related to the Secretary's regulatory responsibilities under this chapter.".

1 (b) ADDITIONAL AMENDMENTS.—(1) Section 70105
2 of title 49, United States Code, is amended—
3 (A) by inserting "(1)" before "A person may
4 apply" in subsection (a);
5 (B) by striking "receiving an application" both
6 places it appears in subsection (a) and inserting in
7 lieu thereof "accepting an application in accordance
8 with criteria established pursuant to subsection
9 (b)(2)(D)";
10 (C) by adding at the end of subsection (a) the
11 following new paragraph:
12 "(2) In carrying out paragraph (1), the Secretary
13 may establish procedures for certification of the safety of
14 a launch vehicle, reentry vehicle, or safety system, proce-
15 dure, service, or personnel that may be used in conducting
16 licensed commercial space launch or reentry activities.";
17 (D) by striking "and" at the end of subsection
18 (b)(2)(B);
19 (E) by striking the period at the end of sub-
20 section (b)(2)(C) and inserting in lieu thereof ";
21 and";
22 (F) by adding at the end of subsection (b)(2)
23 the following new subparagraph:
24 "(D) regulations establishing criteria for ac-
25 cepting or rejecting an application for a license

1 under this chapter within 60 days after receipt of
2 such application.": and
3 (G) by inserting ", or the requirement to obtain
4 a license," after "waive a requirement" in subsection
5 (b)(3).
6 (2) The amendment made by paragraph (1)(B) shall
7 take effect upon the effective date of final regulations is-
8 sued pursuant to section 70105(b)(2)(D) of title 49, Unit-
9 ed States Code, as added by paragraph (1)(F) of this sub-
10 section.

11 SEC. 202. OFFICE OF AIR AND SPACE COMMERCIALIZATION
12 AUTHORIZATION.

13 There are authorized to be appropriated to the Sec-
14 retary of Commerce for the activities of the Office of Air
15 and Space Commercialization, $457,000 for fiscal year
16 1996.

17 SEC. 203. REQUIREMENT FOR INDEPENDENT COST
18 ANALYSIS.

19 The Chief Financial Officer for the National Aero-
20 nautics and Space Administration shall be responsible for
21 conducting independent cost analyses of all new projects
22 estimated to cost more than $5,000,000 and shall report
23 the results annually to Congress at the time of the submis-
24 sion of the President's budget request. In developing cost
25 accounting and reporting standards for carrying out this

1 section, the Chief Financial Officer shall, to the extent
2 practicable and consistent with other laws, solicit the ad-
3 vice of expertise outside of the National Aeronautics and
4 Space Administration.

5 **SEC. 204. NATIONAL AERONAUTICS AND SPACE ACT OF 1958**
6 **AMENDMENTS.**

7 (a) DECLARATION OF POLICY AND PURPOSE.—Sec-
8 tion 102 of the National Aeronautics and Space Act of
9 1958 (42 U.S.C. 2451) is amended—

10 (1) by striking subsection (e) and redesignating
11 subsections (f) through (h) as subsections (e)
12 through (g), respectively; and

13 (2) in subsection (g), as so redesignated by
14 paragraph (1) of this subsection, by striking "(f),
15 and (g)" and inserting in lieu thereof "and (f)".

16 (b) REPORTS TO THE CONGRESS.—Section 206(a) of
17 the National Aeronautics and Space Act of 1958 (42
18 U.S.C. 2476(a)) is amended—

19 (1) by striking "January" and inserting in lieu
20 thereof "May"; and

21 (2) by striking "calendar" and inserting in lieu
22 thereof "fiscal".

23 (c) DISCLOSURE OF TECHNICAL DATA.—Section 303
24 of the National Aeronautics and Space Act of 1958 (42
25 U.S.C. 2454) is amended—

1 (1) in subsection (a)(C), by inserting "or (c)"
2 after "subsection (b)": and
3 (2) by adding at the end the following new sub-
4 section:
5 "(c)(1) The Administration may delay for a period
6 not to exceed 5 years the unrestricted public disclosure
7 of technical data in the possession of, or under the control
8 of, the Administration that has been generated in the per-
9 formance of experimental, developmental, or research ac-
10 tivities or programs funded jointly by the Administration
11 and the private sector.
12 "(2) Within 1 year after the date of the enactment
13 of the National Aeronautics and Space Administration Au-
14 thorization Act, Fiscal Year 1996, the Administrator shall
15 issue regulations to carry out this subsection. Paragraph
16 (1) shall not take effect until such regulations are issued.
17 "(3) Regulations issued pursuant to paragraph (2)
18 shall include—
19 "(A) guidelines for a determination of whether
20 data is technical data within the meaning of this
21 subsection;
22 "(B) a requirement that a determination de-
23 scribed in subparagraph (A) that particular data is
24 technical data shall be reported to the Committee on
25 Science of the House of Representatives and the

1 Committee on Commerce, Science, and Transpor-
2 tation of the Senate;
3 "(C) provisions to ensure that technical data is
4 available for dissemination within the United States
5 to United States persons and entities in furtherance
6 of the objective of maintaining leadership or com-
7 petitiveness in civil and governmental aeronautical
8 and space activities by the United States industrial
9 base; and
10 "(D) a specification of the period or periods for
11 which the delay in unrestricted public disclosure of
12 technical data is to apply to various categories of
13 such data, and the restrictions on disclosure of such
14 data during such period or periods, including a re-
15 quirement that the maximum 5-year protection
16 under this subsection shall not be provided unless at
17 least 50 percent of the funding for the activities or
18 programs is provided by the private sector.
19 "(4) Along with the initial publication of proposed
20 regulations under paragraph (2), the Administrator shall
21 include a list of those experimental, developmental, or re-
22 search activities or programs conducted by, or funded in
23 whole or in part by, the Administration that may result
24 in products or processes of significant value in maintain-
25 ing leadership or competitiveness in civil and governmental

1 aeronautical and space activities by the United States in-
2 dustrial base. Such list shall be updated biannually.
3 "(5) For purposes of this subsection, the term 'tech-
4 nical data' means any recorded information, including
5 computer software, that is or may be directly applicable
6 to the design, engineering, development, production, man-
7 ufacture, or operation of products or processes that may
8 have significant value in maintaining leadership or com-
9 petitiveness in civil and governmental aeronautical and
10 space activities by the United States industrial base.".
11 SEC. 205. PROCUREMENT.
12 (a) PROCUREMENT DEMONSTRATION PROGRAM.—
13 (1) IN GENERAL.—The Administrator shall es-
14 tablish within the Office of Space Access and Tech-
15 nology a program of expedited technology procure-
16 ment for the purpose of demonstrating how innova-
17 tive technology concepts can rapidly be brought to
18 bear upon space missions of the National Aero-
19 nautics and Space Administration.
20 (2) PROCEDURES AND EVALUATION.—The Ad-
21 ministrator shall establish procedures for actively
22 seeking from persons outside the National Aero-
23 nautics and Space Administration innovative tech-
24 nology concepts relating to the provision of space
25 hardware, technology, or services to the National

1 Aeronautics and Space Administration, and for the
2 evaluation of such concepts by the National Aero-
3 nautics and Space Administration's Advisory Council
4 against mission requirements.
5 (3) REQUIREMENT.—At least 1 percent of
6 amounts authorized to be appropriated under section
7 102(a)(4) shall be used for innovative technology
8 procurements that are determined under paragraph
9 (2) of this subsection to meet mission requirements.
10 (4) SPECIAL AUTHORITY.—In order to carry
11 out this subsection the Administrator shall recruit
12 and hire for limited term appointments persons from
13 outside the National Aeronautics and Space Admin-
14 istration with special expertise and experience relat-
15 ed to the innovative technology concepts with respect
16 to which procurements are made under this sub-
17 section.
18 (5) SUNSET.—This subsection shall cease to be
19 effective 10 years after the date of its enactment.
20 (b) TECHNOLOGY PROCUREMENT INITIATIVE.—
21 (1) IN GENERAL.—The Administrator shall co-
22 ordinate National Aeronautics and Space Adminis-
23 tration resources in the areas of procurement, com-
24 mercial programs, and advanced technology in order
25 to—

1 (A) fairly assess and procure commercially
2 available technology from the marketplace in
3 the most efficient manner practicable;
4 (B) achieve a continuous pattern of inte-
5 grating advanced technology from the commer-
6 cial sector, and from Federal sources outside
7 the National Aeronautics and Space Adminis-
8 tration, into the missions and programs of the
9 National Aeronautics and Space Administra-
10 tion;
11 (C) incorporate private sector buying and
12 bidding procedures, including fixed price con-
13 tracts, into procurements; and
14 (D) provide incentives for cost-plus con-
15 tractors of the National Aeronautics and Space
16 Administration to integrate commercially avail-
17 able technology in subsystem contracts on a
18 fixed-price basis.
19 (2) CERTIFICATION.—Upon solicitation of any
20 procurement for space hardware, technology, or serv-
21 ices that are not commercially available, the Admin-
22 istrator shall certify, by publication of a notice and
23 opportunity to comment in the Commerce Business
24 Daily, for each such procurement action, that no
25 functional equivalent, commercially available space

1 hardware, technology, or service exists and that no
2 commercial method of procurement is available.

3 SEC. 206. ADDITIONAL NATIONAL AERONAUTICS AND
4 SPACE ADMINISTRATION FACILITIES.

5 The Administrator shall not construct or enter into
6 a new lease for facilities to support National Aeronautics
7 and Space Administration programs unless the Adminis-
8 trator has certified to the Congress that the Administrator
9 has reviewed existing National Aeronautics and Space Ad-
10 ministration and other federally owned facilities, including
11 military facilities scheduled for closing or reduction, and
12 found no such facilities appropriate for the intended use.

13 SEC. 207. PURCHASE OF SPACE SCIENCE DATA.

14 (a) IN GENERAL.—To the maximum extent possible,
15 the National Aeronautics and Space Administration shall
16 purchase from the private sector space science data. Ex-
17 amples of such data include scientific data concerning the
18 elemental and mineralogical resources of the moon and the
19 planets, Earth environmental data obtained through re-
20 mote sensing observations, and solar storm monitoring.

21 (b) COMPETITIVE BIDDING.—(1) Contracts for the
22 purchase of space data under this section shall be awarded
23 in a process of full, fair, and open competitive bidding.

1 (2) Submission of cost data, either for the purposes
2 of supporting the bid or fulfillment of the contract, shall
3 not be required of bidders.
4 (3) Conformance with military specifications
5 (Milspec) or National Aeronautics and Space Administra-
6 tion specifications systems with respect to the design, con-
7 struction, or operation of equipment used in obtaining
8 space science data under contracts entered into under this
9 section shall not be a requirement for a commercial pro-
10 vider bidding to provide such services.
11 (4) Contracts under this section shall not provide for
12 the Federal Government to obtain ownership of data not
13 specifically sought by the Federal Government.
14 SEC. 208. REPORT ON MISSION TO PLANET EARTH.
15 (a) REQUIREMENT.—The Administrator shall, within
16 6 months after the date of the enactment of this Act,
17 transmit to the Congress a report on Mission to Planet
18 Earth.
19 (b) CONTENTS.—The plan required by subsection (a)
20 shall include—
21 (1) an analysis of Earth observation systems of
22 other countries and the ways in which the United
23 States could benefit from such systems, including by
24 eliminating duplication of effort;

1 (2) an analysis of how the Department of De-
2 fense's airborne and space sensor programs could be
3 used in Mission to Planet Earth;
4 (3) a plan for infusing advanced technology into
5 the Mission to Planet Earth program, including
6 milestones and an identification of available re-
7 sources;
8 (4) a plan to solicit proposals from the private
9 sector on how to innovatively accomplish the most
10 critical research on global climate change;
11 (5) an integrated plan for research in the Sci-
12 entific Research and Mission to Planet Earth enter-
13 prises of the National Aeronautics and Space Ad-
14 ministration;
15 (6) a plan for developing metrics and milestones
16 to quantify the performance of work on Mission to
17 Planet Earth; and
18 (7) an analysis of how the United States Gov-
19 ernment can—
20 (A) most effectively utilize space-based and
21 airborne Earth remote sensing data, services,
22 distribution, and applications provided by the
23 United States private sector to meet Govern-
24 ment goals for Mission to Planet Earth; and

1 (B) evaluate and foster commercial data
2 sources, commercial archiving services, commer-
3 cial applications, and commercial distribution of
4 Mission to Planet Earth data.

5 SEC. 209. SHUTTLE PRIVATIZATION.

6 (a) REQUEST FOR PROPOSALS.—Within 30 days
7 after the date of the enactment of this Act, the Adminis-
8 trator shall publish in the Commerce Business Daily a re-
9 quest for proposals to achieve a single prime contract for
10 the space shuttle program. The request for proposals shall
11 include—

12 (1) a timetable and milestones for selecting a
13 single prime contractor not later than September 30,
14 1996;

15 (2) criteria for selection of the single prime con-
16 tractor;

17 (3) the annual target cost to be achieved by the
18 single prime contractor;

19 (4) proposed terms and conditions of the single
20 prime contract, including fee and sentence for
21 achieving the target cost; and

22 (5) a requirement that each proposal be accom-
23 panied by a plan by the proposer to privatize the
24 space shuttle program.

1 (b) PRIVATIZATION PLANS.—The Administrator shall
2 forward all privatization plans received pursuant to sub-
3 section (a)(5) to the Congress not later than 30 days after
4 the deadline for submitting proposals under subsection
5 (a).

6 SEC. 210. AERONAUTICAL RESEARCH AND TECHNOLOGY
7 FACILITIES.

8 Notwithstanding any other provision of law, no funds
9 may be obligated for fiscal year 1996 for Aeronautical Re-
10 search and Technology programs of the National Aero-
11 nautics and Space Administration in excess of amounts
12 authorized by this Act, except to the extent that the Ad-
13 ministrator receives from non-Federal sources full reim-
14 bursement of such excess amounts through payment of
15 costs associated with research at the aeronautical research
16 and technology facilities of the National Aeronautics and
17 Space Administration.

18 SEC. 211. LAUNCH VOUCHER DEMONSTRATION PROGRAM
19 AMENDMENTS.

20 Section 504 of the National Aeronautics and Space
21 Administration Authorization Act, Fiscal Year 1993 (15
22 U.S.C. 5803) is amended—
23 (1) in subsection (a)—
24 (A) by striking "the Office of Commercial
25 Programs within"; and

1 (B) by striking "Such program shall not
2 be effective after September 30, 1995.";
3 (2) by striking subsection (c); and
4 (3) by redesignating subsections (d) and (e) as
5 subsections (c) and (d), respectively.

6 SEC. 212. ELIGIBILITY FOR AWARDS.

7 (a) IN GENERAL.—The Administrator shall exclude
8 from consideration for awards of financial assistance made
9 by the National Aeronautics and Space Administration
10 after fiscal year 1995 any person who received funds,
11 other than those described in subsection (b), appropriated
12 for a fiscal year after fiscal year 1995, from any Federal
13 funding source for a project that was not subjected to a
14 competitive, merit-based award process. Any exclusion
15 from consideration pursuant to this section shall be effec-
16 tive for a period of 5 years after the person receives such
17 Federal funds.

18 (b) EXCEPTION.—Subsection (a) shall not apply to
19 awards to persons who are members of a class specified
20 by law for which assistance is awarded to members of the
21 class according to a formula provided by law.

22 SEC. 213. PROHIBITION OF LOBBYING ACTIVITIES.

23 None of the funds authorized by this Act shall be
24 available for any activity whose purpose is to influence leg-
25 islation pending before the Congress, except that this shall

1 not prevent officers or employees of the United States or
2 of its departments or agencies from communicating to
3 Members of Congress on the request of any Member or
4 to Congress, through the proper channels, requests for leg-
5 islation or appropriations which they deem necessary for
6 the efficient conduct of the public business.

7 **SEC. 214. LIMITATION ON APPROPRIATIONS.**

8 (a) EXCLUSIVE AUTHORIZATION FOR FISCAL YEAR
9 1996.—Notwithstanding any other provision of law, no
10 sums are authorized to be appropriated for fiscal year
11 1996 for the activities for which sums are authorized by
12 this Act unless such sums are specifically authorized to
13 be appropriated by this Act.

14 (b) SUBSEQUENT FISCAL YEARS.—No sums are au-
15 thorized to be appropriated for any fiscal year after fiscal
16 year 1996 for the activities for which sums are authorized
17 by this Act unless such sums are specifically authorized
18 to be appropriated by Act of Congress with respect to such
19 fiscal year.

Section-by-Section Analysis
NASA Authorization Act, Fiscal Year 1996

Section 1 -- Short Title

Section 2 -- Findings

The Congress finds that: NASA has failed to request sufficient funds to perform all missions proposed in annual budget requests; NASA should pursue reforms to reduce institutional costs; NASA must return to its role as the Nation's leader in basic scientific air and space research; NASA should pursue reverse contracting opportunities to support private sector development of advanced space transportation technologies; international cooperation in space exploration and science should be pursued when it satisfies particular conditions; and NASA and the Department of Defense reduce the cost of space missions by more effectively leveraging their mutual capabilities.

Section 3 -- Definitions

TITLE I -- Authorization of Appropriations
Subtitle A -- Authorizations

HUMAN SPACE FLIGHT

Sec. 101(a) Authorizations. $2,341,800,000 for Space Shuttle Operations; $837,000,000 for Space Shuttle Safety and Performance Upgrades; $315,000,000 for Payload and Utilization Operations; and $100,000,000 for Russian Cooperation.

Sec. 101(b) Construction of Facilities.

SCIENCE, AERONAUTICS, AND TECHNOLOGY

Sec. 102(a) Authorizations. $1,995,400,000 for Space Science of which $1,167,600,000 is for Physics and Astronomy and $827,800,000 is for Planetary Exploration; $293,200,000 for Life and Microgravity Sciences and Applications; $1,013,100,000 for Mission to Planet Earth; $639,800,000 for Space Access and Technology; $826,900,000 for Aeronautical Research and Technology; $461,300,000 for Mission Communication Services; and $102,200,000 for Academic Programs.

Sec. 102(b) Construction of Facilities.

MISSION SUPPORT

Sec. 103 Mission Support. $37,600,000 for Safety, Reliability, and Quality Assurance; $319,400,000 for Space Communication Services; $152,600,000 for Construction of Facilities; and $2,094,800,000 for Research and Program Management.

INSPECTOR GENERAL

Sec. 104 Inspector General. $17,300,000 for Inspector General.

Sec. 105 Total Authorization. The total amount authorized under this Act shall not exceed $11,547,400,000 for fiscal year 1996.

Subtitle B -- Restructuring NASA

Sec. 111 Findings. Restructuring NASA requires objective, financial judgment; NASA has not undertaken to perform a formal economic review of its missions and the underlying Federal assets; and it is premature to close any NASA field center until an asset based review is performed.

Sec. 112 Asset Based Review. (a) The NASA Administrator shall publish a request for proposals to perform an asset-based review of NASA. (b) Qualified proposals shall review the capital assets of NASA to determine: the asset's primary purpose in relation to a program, mission or activity of NASA; the existence of any duplication among capital assets; the Federal and non-Federal users thereof; and the asset's necessity.

(c) The contractor shall submit a report to NASA and Congress by July 31, 1996, containing an analysis of NASA's capital assets by field center and program element. The report shall also contain, for each capital asset, the total annual cost of maintaining and operating such capital asset; the depreciated cost, replacement cost, and salvage value; and the most cost-effective strategy for maintaining, replacing, upgrading, or disposing of the capital asset.

(d) The Administrator shall review the results of the asset-based review. Based on the Administrator's recommendations, the President shall propose legislation to Congress to implement the recommendations by September 30, 1996.

(e) The Administrator shall not close any NASA field center until after the asset-based review is transmitted to the Administrator and Congress. The Administrator may only close field centers that would become obsolete as a result of the implementation of the Administrator's recommendations, after enactment of such implementing legislation.

Subtitle C -- Limitations and Special Authority

Sec. 121 Use of Funds for Construction. Funds appropriated under Human Space Flight; Science, Aeronautics, and Technology; and Mission Support may be used to repair, modify, or rehabilitate existing facilities and to construct new facilities. If the estimated cost of the project exceeds $500,000, no funds may be expended until 30 days have passed after the Administrator has notified the House and Senate authorizing committees.

Sec. 122 Availability of Appropriated Amounts. Appropriations authorized under Subtitle A may remain available without fiscal year limitation.

Sec. 123 Reprogramming for Construction of Facilities. The Administrator may vary the amount authorized for specific construction of facilities projects, provided that the total authorization for construction of facilities is not increased as a result of such reprogramming actions. The Administrator may also use up to $10,000,000 authorized in this bill for construction of facilities for projects that result from new and time-sensitive developments in the national program of aeronautical and space activities, subject to notification to the House and Senate authorizing committees.

Sec. 124 Consideration by Committees. The Administrator must report in advance to the House and Senate authorizing committees, the use of appropriated funds for a program where the Congress did not provide funding as requested; the amount of funds proposed to be used exceeds the amount authorized for the program under Subtitle A of this bill; or the program was not presented to the Congress in the President's budget request. This section also obliges NASA to keep the authorizing committees fully apprised of agency activities and responsibilities within the jurisdiction of those committees, including the provision of information requested by either committee.

Sec. 125 Limitation on Obligation of Unauthorized Appropriations. The Administrator must publish in the Federal Register a notice of all programs that have been appropriated funds but are not authorized under this bill. The Administrator must also solicit public comment with this notification. No funds may be obligated for any programs not authorized under this bill, until 30 days have passed after the close of the public comment period.

Sec. 126 Use of Funds for Scientific Consultations or Extraordinary Expenses. The Administrator may use up to $30,000 of the funds authorized Science, Aeronautics and Technology for scientific consultations or extraordinary expenses.

Sec. 127 Limitation on Transfers to Russia. No funds authorized under this bill may be transferred to Russia unless the following conditions are met: (1) the purpose of the payment or transfer is authorized by this bill; (2) the payment or transfer is made in accordance with a written agreement between NASA and Russia; (3) during the term of such written agreement, the Government of the Russian Federation agrees to provide a monthly report to NASA that fully accounts for the disposition of U.S. funds, including information as to whom, when, and in what currency the funds are paid to Russian contractors or subcontractors, and the balance of funds not disbursed at the time of the report; (4) Russia provides all reports as required by this section; and (5) the President of the United States has certified to Congress that the presence of any troops of either the Russian Federation or the Commonwealth of Independent States, or any action by the Russian Federation or the Commonwealth of Independent States, does not violate the sovereignty of the Baltic states, or any other independent state of the former Soviet Union. The section defines the term "Russia" to mean the Government of the Russian Federation, the Russian Space Agency, or any agency or instrumentality of the Government of the Russian Federation or the Russian Space Agency.

TITLE II -- Miscellaneous Provisions

Sec. 201 Commercial Space Launch Amendments. This section amends Chapter 701 of title 49, United States Code, entitled "Commercial Space Launch Activities", which is a recodification of the Commercial Space Launch Act of 1984. The purpose of the amendments is to establish a statutory framework for the licensing of commercial reentry activities by the Secretary of Transportation, clarify certain provisions in Chapter 701, and provide criteria for accepting a license application. $6,000,000 is authorized for the Secretary of Transportation to carry out Chapter 701 for fiscal year 1996. None of these funds may be expended for policy development or analysis activities outside the scope of the Secretary's regulatory responsibilities

under Chapter 701.

Sec. 202 Office of Air and Space Commercialization Authorization. There are authorized $457,000 for the Secretary of Commerce to carry out the activities of the Office of Air and Space Commercialization.

Sec. 203 Requirement for Independent Cost Analysis. The Chief Financial Officer for NASA is required to conduct an independent cost analyses of all new projects estimated to cost in excess of $5,000,000 and to report the results of the analyses to the Congress when the President's budget request is submitted.

Sec. 204 National Aeronautics and Space Act of 1958 Amendments. Section 102 of the National Aeronautics and Space Act of 1958 is amended to delete subsection (e) which relates to automotive research. The 1958 Act is also amended so that the President is required to submit to Congress the annual aeronautics and space report in May, rather than January; and to address in the report, activities carried out by government agencies on a fiscal, rather than calendar year basis. The 1958 Act is further amended by the addition of provisions that authorize the Administrator, under certain circumstances, to withhold from public disclosure technical data generated in the performance of experimental, developmental, or research activities funded jointly by NASA and the private sector that would enhance U.S. aerospace industry competitiveness.

Sec. 205 Procurement. Subsection (a) creates a procurement demonstration program within the Office of Space Access and Technology with a sunset provision of 10 years. At least 1% of the amounts authorized for this office shall be used for innovative technology procurement of space hardware, technology or services from the private sector. The Administrator is given special authority to hire, for limited term appointments, persons outside of NASA with expertise in relevant innovative technology concepts. Subsection (b) establishes a technology procurement initiative wherein the Administrator is required to certify, in Commerce Business Daily, that no functional equivalent or commercially available space hardware, technology, or service exists before NASA can proceed with any procurement.

Sec. 206 Additional National Aeronautics and Space Administration Facilities. The Administrator is required to certify to Congress, before entering into a new lease for a facility or constructing a new facility, that no existing NASA or other Federally-owned facility is appropriate for the intended use.

Sec. 207 Purchase of Space Science Data. To the maximum extent possible, NASA is required to purchase space science data from the private sector and to accomplish these procurements by a competitive bidding process.

Sec. 208 Report on Mission to Planet Earth. The Administrator shall, within 6 months after the date of enactment of this Act, transmit to Congress a report on Mission to Planet Earth to include the following: (1) an analysis of Earth observation systems of other countries; (2) an analysis of how DoD airborne and space sensor systems could be used in MTPE; (3) a plan for infusing advanced technology into the MTPE program; (4) a plan to solicit proposals from the

private sector on how to accomplish the goals of MTPE; (5) an integrated plan for research in the Scientific and MTPE enterprises in NASA; (6) a plan for developing metrics and milestones to quantify the performance of MTPE; and (7) an analysis of how the U.S. government can utilize the space-based and airborne remote sensing data, services, distribution and applications of the private sector to meet MTPE goals.

Sec. 209 Shuttle Privatization. The Administrator shall publish, within 30 days after enactment of this Act, in the Commerce Business Daily a request for proposals to achieve a single prime contract for the space shuttle program. Certain criteria for the proposals are laid out, including a requirement that each proposal be accompanied by a plan to privatize the space shuttle program. The Administrator shall forward the privatization plans to Congress not later than 30 days after the deadline for submitting proposals to the RFP.

Sec. 210 Aeronautical Research and Technology Facilities. No funds may be obligated beyond the authorized amount in this bill, unless the Administrator receives full reimbursement of such excess amounts from non-Federal sources.

Sec. 211 Launch Voucher Demonstration Program Amendments. Section 504 of United States Code 5803 (NASA Authorization Act, Fiscal Year 1993) is amended by striking out outdated references in the law.

Sec. 212 Eligibility for Awards.

Sec. 213 Prohibition of Lobbying Activities.

Sec. 214 Limitation on Appropriations.

XVI. PROCEEDINGS FROM THE COMMITTEE MARKUP OF H.R. 2043

FULL COMMITTEE MARKUP—H.R. 2043 NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AUTHORIZATION ACT, FY 1996

TUESDAY, JULY 25, 1995

HOUSE OF REPRESENTATIVES,
COMMITTEE ON SCIENCE,
Washington, DC.

The committee met, pursuant to notice, at 10:47 a.m., in Room 2318, Rayburn House Office Building, Hon. Robert S. Walker (chairman of the Committee) presiding.

Present: Representatives Walker, Sensenbrenner, Boehlert, Fawell, Morella, Weldon of Pennsylvania, Rohrabacher, Calvert, Baker, Bartlett, Ehlers, Wamp, Weldon of Florida, Graham, Salmon, Davis, Stockman, Gutknecht, Seastrand, Tiahrt, Largent, Hilleary, Cubin, Foley, Myrick, Brown, Hall, Traficant, Hayes, Tanner, Geren, Roemer, Cramer, Barcia, McHale, Harman, Johnson, Minge, Hastings, Rivers, McCarthy, Lofgren, Doggett, Doyle, Jackson Lee, and Luther.

The CHAIRMAN [presiding]. Good morning. Pursuant to the notice, the Committee on Science is meeting today to consider H.R. 2043, the National Aeronautics and Space Administration Act, Fiscal Year 1996, as reported by the Subcommittee on Space and Aeronautics.

Prior to moving ahead here, I do want to acknowledge the letter that I received on June 28 from the Minority Members regarding a proposed rules change. I'm in the process of reviewing that letter, having chance gone—having staff look at it, and we're going to respond to your concerns after the August recess in the context of the proposed Rule 47, as well as other rules that might come up. I would tell you that there are also some Members of the majority who have indicated an interest in looking at some rules changes, and so what we'll probably do is schedule a meeting where we'll look at a variety of those kinds of rules changes. In the meantime, though, it's my intention to protect the rights of Members to exercise their rights both in committee and on the floor, and so throughout this session today we will not have votes while votes are going on on the floor. We hope to move with enough rapidity here today that we won't run into that situation on too many occasions.

With that, the Chair would ask unanimous consent for authority to recess during the meeting today. Without objection.

The Chair would then proceed with an opening statement. The NASA authorization bill before the Science Committee, H.R. 2043, takes the first bold steps necessary to refocus NASA's vision on the knowledge demands facing the American people in the next century. This bill is also the most market-oriented NASA authorization produced by Congress since NASA was founded in 1958. It rec-

ognizes the accomplishment of NASA's rich history, NASA's acquisition of enormous capabilities to perform ever more challenging basic science and space research missions, and at the same time H.R. 2043 faces the Nation's fiscal crisis head on.

H.R. 2043 contains 11.547 billion in program authorizations, which combined with the International Space Station activities previously authorized by H.R. 1601, provide a total of 13.662 billion for Fiscal Year 1996. The Committee is following the guidance provided by the House Concurrent Resolution 67, the Balanced Budget Resolution, in making these reductions. Congress is acting on the will of the American people, balancing the Federal budget by the year 2002, and if I may say, we are doing so willingly and thoughtfully. Hard choices had to be made, and H.R. 2043 represents a reprioritizing of all the programs with NASA.

It is not solely for the reason of fiscal austerity, nor only to achieve a balanced budget, H.R. 2043 makes these reductions. There is a more NASA-specific financial problem this bill works to address: chronic underfunding of program requirements. The committee has been working since 1992 to solve the science bow wave where NASA's program demands have exceeded even the most optimistic funding projections.

Over the last few years, the committee initiated efforts to make NASA reduce its program demands on future budgets. Those efforts have begun to work. Fiscal Year 1996 request was just $140 million shy of matching up projected cost with the budget requested to pay the bills, but, as everyone knows, after this budget was put to bed, NASA was summoned to reduce outyear funding by $5 billion, starting in Fiscal Year 1997. Since it boggles the mind to imagine fully funding NASA programs in one year that cannot be afforded and won't be supported in the President's budget request the next year, the committee has had to again resolve a NASA bow wave problem.

I want to recognize and commend the efforts of the Space Aeronautics Subcommittee Chairman, Jim Sensenbrenner, Vice Chairman Dave Weldon, and Ranking Democrat Ralph Hall for their efforts to pass this bill through the subcommittee last week. This bill is designed to prevent another NASA bow wave problem by setting a clear priority for basic science and a forward-looking commitment to right-sizing NASA's assets, missions, and budgets for the future.

I believe that the NASA Administrator, Dan Goldin, is working toward the same goal. He tirelessly initiated cost-cutting reviews, the Roles and Missions Studies, Red Teams, Blue Teams, and the Functional Workforce Review, the NASA Federal Laboratory Review, and the Zero Base Review. The agency is constantly looking to achieve the cost-cutting goals set by the President and by OMB.

H.R. 2043 not only strives to solve the problems facing NASA in this fiscal climate, it also provides the framework for NASA to conduct far-reaching basic science over the large term. This bill funds Gravity Probe-B, Cassini, the Advanced X-Ray Astrophysics Facility, the Stratospheric Observatory for Infrared Astronomy, the Discovery Missions, and others like the Small Explorers and the New Millennium.

H.R. 2043 does not take aim at any of NASA's outstanding field centers, whose research excellence is widely distributed across the

NASA system. We do, however, call on NASA to augment its own Zero Base Review, which is focused on the realignment of missions among the centers, with an Asset Base Review to right-size capital asset base—the capital asset base of NASA to meet today's mission set. We believe the Asset Base Review will not only identify more specific cost savings than the Zero Base Review, but will also provide a more sensible cost-cutting approach than the bureaucratically managed reductions in force that result in the loss of critical skills while forcing out younger engineers and minorities. Instead of closing field centers because we don't believe NASA has a plan to achieve its budget cuts, H.R. 2043 shows NASA how to find the cost savings it needs—in the assets NASA doesn't need.

We are providing a clear sense of direction that NASA must, again, become the world's premier high-risk, basic R&D agency. Compare that vision with what we have grown accustomed to expect from NASA in recent years: huge inelastic support system for each billion dollar program that compete for a shrinking base of funds.

This bill takes a new road: we begin the orderly transition towards privatizing the Space Shuttle, having money from a single-prime contractor arrangement, and then plowing those near-term efficiencies into long-term gains in space transportation. The bill fully funds the Reusable Launch Vehicle initiative, the Nation's linchpin technology effort to overcome foreign launch service competition and permanently reduce the overhead price we pay for every mission of NASA, the launch itself.

Similarly, the Earth Observation System—similarly, in the Earth Observation System, we take aim at the real potential for EOS to become a rigid, top-down, bureaucratic remote-sensing data monopoly. The EOS and Mission to Planet Earth reductions contained in H.R. 2043 total $324 million, leaving more than $1 billion to carry out this program. While this is the largest single cut contained in the bill, I believe that Mission to Planet Earth can be rescoped to achieve its goals in a $1 billion envelope, much in the same way Space Station was redesigned in 1993 to fit a $2.1 billion-a-year cost cap. The Space Station program's designed-to-cost effort was also greeted with some skepticism on this committee, but the result has been to increase its research capability, increase international participation, and reduce total program costs, including operational costs. I believe NASA can restructure the EOS program in the same way, and H.R. 2043 initiates this process to achieve a rescoped program with the same profitable results as Space Station.

H.R. 2043's basic research themes are carried throughout the bill's support for NASA's leading-edge aeronautics research programs. The bill fully funds the most basic of these research efforts—the Research and Technology Base, and the High Speed Research Programs. These are programs that solve tomorrow's aeronautics problems and can open entirely new avenues through Earth's skies. The Advanced Subsonic Transportation program line increases 6 percent, even though it contains more applied research activities to the R&T base or the High Speed Research efforts.

H.R. 2043 also provides authorizations of $6 million for the Office of Commercial Space Transportation and the Department of Trans-

portation and $457,000 for the Office of Air and Space Commercialization at the Commerce Department. In so doing, we attempt to clearly define the appropriate role for each office, effectively transferring all public policy analysis and advocacy functions of OCST to the Commerce Department's Space Office. This will clear the way for the Department of Transportation to concentrate solely on developing the critical safety and insurance regulations and licensing and certification procedures which are updated and expanded by section 201 of the bill.

My colleagues, I am very excited about this bill and what it will do for our children and our grandchildren. We are not only authorizing necessary appropriations, we are appropriating ideas from the private sector necessary to further NASA's mission. I look forward to today's session and to passage of H.R. 2043.

With that, I'd be happy to recognize the ranking minority member, the gentleman from California.

[The prepared statement of Mr. Walker follows:]

OPENING REMARKS
The Honorable Robert S. Walker
Chairman
Committee on Science
Mark Up of H.R. 2043
July 25, 1995

The NASA Authorization Bill before the Science Committee, H.R. 2043, takes the first bold steps necessary to refocus NASA's vision on the knowledge demands facing the American people in the next century. This bill is also the most market-oriented NASA authorization produced by the Congress since NASA was founded in 1958. It recognizes the accomplishments of NASA's rich history, NASA's acquisition of enormous capabilities to perform ever more challenging basic science and space research missions, and at the same time, H.R. 2043 faces the nation's fiscal crisis head-on.

H.R. 2043 contains $11.547 billion in program authorizations, which combined with the International Space Station activities previously authorized by H.R. 1601, provide a total of $13.662 billion for fiscal year 1996. The Committee is following the guidance provided by House Concurrent Resolution 67, the Balanced Budget Resolution, in making these reductions. Congress is acting on the will of the American people--balancing the federal budget by the year 2002. And if I may say, we are doing so willingly and thoughtfully. Hard choices had to be made, and H.R. 2043 represents a reprioritizing of all the programs in NASA.

It is not solely for the reason of fiscal austerity nor only to achieve a balanced budget that H.R. 2043 makes these reductions. There is a more NASA-specific financial problem this bill works to address: chronic underfunding of program requirements. The Committee has been working since 1992 to resolve the "Science Bow Wave," where NASA's program demands have exceeded even the most optimistic funding projections. Over the last few years, the Committee initiated efforts to make NASA reduce its program demands on future budgets.

Those efforts had begun to work. The fiscal year 1996 request was just $140,000,000 shy of matching up projected costs with the budget requested to pay the bills. But, as everyone knows, after this budget was put to bed, NASA was summoned to reduce out-year funding by $5 billion, starting in fiscal year 1997. Since it boggles the mind to imagine fully funding NASA programs in one year that cannot be afforded and won't be supported in the President's request next year, the Committee has had to, again, resolve a NASA bow wave problem.

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I believe the NASA Administrator, Dan Goldin, is working toward the same goal. He's tirelessly initiated cost-cutting reviews: the Roles and Missions Study, Red Teams, Blue Teams, the Functional Workforce Review, the Kraft Committee, the NASA Federal Laboratory Review, and the Zero Base Review. The agency is constantly looking to achieve the cost-cutting goals set by the President and OMB.

H.R. 2043 not only strives to solve the problems facing NASA in this fiscal climate, it also provides the framework for NASA to conduct far-reaching basic science over the long term. This bill funds Gravity Probe-B, Cassini, the Advanced X-ray Astrophysics Facility, the Stratospheric Observatory for Infrared Astronomy, the Discovery Missions, and others like the Small Explorers and New Millennium.

H.R. 2043 also does not take aim at any of NASA's outstanding field centers, whose research excellence is widely distributed across the NASA system. We do, however, call upon NASA to augment its own Zero Base Review, which is focussed on the realignment of missions among centers, with an Asset Base Review to right-size the capital asset base of NASA to meet today's mission set. We believe the Asset Base Review will not only identify more specific cost savings than the Zero Base Review, but it will also provide a more sensible cost-cutting approach than bureaucratically managed Reductions In Force that result in the loss of

critical skills while forcing out younger engineers and minorities. Instead of closing field centers because we don't believe NASA has a plan to achieve its budget cuts, H.R. 2043 shows NASA how to find the cost savings it needs-- in the assets NASA doesn't need.

We are providing the clear sense of direction that NASA must, again, become the world's premier high-risk, basic R&D agency. Compare that vision with what we have grown accustomed to expect from NASA in recent years: huge inelastic support systems for each billion dollar program that compete for a shrinking base of funds.

This bill takes a new road: We begin the orderly transition towards privatizing the Space Shuttle, saving money from a single-prime contractor arrangement, and then plowing those near-term efficiencies into long-term gains in space transportation. The bill fully funds the Reusable Launch Vehicle initiative, the Nation's linch-pin technology effort to overcome foreign launch service competition and permanently reduce the "overhead" price we pay for every mission of NASA, the launch itself.

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H.R. 2043 also provides authorizations of $6 million for the Office of Commercial Space Transportation in the Department of Transportation, and $457,000 for the Office of Air and Space Commercialization at the Commerce Department. In doing so, we attempt to clearly define the appropriate role for each office, effectively transferring all public policy analysis and advocacy functions of OCST to the Commerce Department's space office. This will clear the way for the Department of Transportation to concentrate solely on developing the critical safety and insurance regulations, and licensing and certification procedures which are updated and expanded by Section 201 of the bill.

My colleagues, I am excited about this bill and what it will do for our children and grandchildren. We are not only authorizing necessary appropriations, we are appropriating ideas from the private sector necessary to further NASA's mission. I look forward to today's session and to passage of H.R. 2043.

Mr. BROWN. Thank you very much, Mr. Chairman.

And before I start my opening statement about this bill, let me just thank you for, first of all, adjusting the schedule for meeting this morning to accommodate some problems that I had, and, secondly, for your announcement that you were planning to consider some rules changes which would alleviate some of the problems that came up earlier this year, and I want to compliment you for acting without a rule change to actually ameliorate the situation very substantially.

Now today we're meeting to discharge one of our most important duties as an authorizing committee, the markup of a NASA authorization. While this is always an important task, it is doubly so this year when the civil space program is being put under extraordinary budgetary constraints. It is critically important that we do nothing that would destroy the balance and vitality of our Nation's space program.

The bill before us contains a number of significant funding and policy provisions, as the chairman has described. There are a number of these provisions with which I can wholeheartedly agree. However, I must state my unhappiness by the—with the process by which this legislation has been developed and considered.

First, this bill contains a number of policy decisions that have been apparently made without the committee having established any meaningful public record on the pros and cons of the policy options or the potential impacts of the decisions made in H.R. 2043. For example, the bill directs NASA to begin the transition to Shuttle privatization without any documentation from NASA on the potential safety or economic impacts of such a move. In addition, the bill directs NASA to contract for a review of all of its capital assets without any hearings on the results of the previous facility reviews that have been conducted by both internal and external groups, the magnitude of the likely savings from such a review versus the cost and further disruption to NASA involved in undertaking it, and so forth. That is not to say that over the years we haven't had hearings on these subjects, but they are not up to date and have little relevance to the current situation, and, of course, are largely unknown to most of the members of this committee.

Second, H.R. 2043 contains funding for a number of new initiatives that were never requested by the President and for which no hearings have been held or documentation provided to the Members of the committee. I find such an action all the more surprising given the stated intention not to fund new starts in the Fiscal Year 1996 budget due to the overall budgetary constraints.

Third, this bill makes a premature and, to my mind, unwise cut to Mission to Planet Earth that will have the effect of destroying the Earth Observing System. I have no quarrel with Chairman Walker's decision to seek a review of Mission to Planet Earth by the National Academy of Sciences. There is no research program that cannot benefit from periodic review. However, H.R. 2043 prejudges what the results of the Academy review will be in the manner that could trivialize the efforts of the dedicated scientists who have given their time to undertake the review. Moreover, H.R. 2043 fundamentally unbalances the civil space program by singling out one activity for deep cuts. It is my understanding that Ms. Har-

man will offer an amendment to restore balance to NASA's activities by adding back functions—funding for Mission to Planet Earth, and I intend to strongly support that amendment.

I might insert, parenthetically, the fact that my major goal for the entire period in which I was chairman of this committee, and continuing to the present time, is to maintain a balanced program. This was the thrust of the study that this commission—this committee participated in that was chaired by Dr. Augustine several years ago, and, basically, the outline which was contained in that report gave further weight to the need to maintain balance in the program.

As has been the practice with the other authorization bills that have come before the committee, I intend to offer an alternative to the committee's version of the NASA authorization when the bill is open for amendment. I do so because I believe that both the magnitude of the cut made to NASA and the unbalanced manner in which that cut is allocated are unwise. My bill will attempt to address the major difficulties that exist in H.R. 2043. While I, frankly, am unhappy with the level of funding for NASA contained in my alternate authorization bill, a level of funding equal to that provided in the NASA authorization marked up last week by the Senate, I believe that it is barely sufficient to maintain a viable space program if the cuts are made judiciously, and I will have more to say on these topics later in the markup.

I must say to you that to sponsor an amendment which is half a billion or more below a request from the President, which I considered inadequate at the time that it was offered, is somewhat embarrassing to me, but in recognition of the realities that exist today I am going to do that with my proposed substitute. And I thank the chairman.

The CHAIRMAN. The gentleman from Wisconsin, the chairman of the subcommittee.

Mr. SENSENBRENNER. Mr. Chairman, at the outset I would like to express my appreciation to you and your leadership of this committee in the last 200 days and to the distinguished gentlemen from California and Texas for their comments and work on behalf of a strong space program. It has been a pleasure working with you to bring NASA's programs into line with its budget, and I look forward to continuing our bipartisan efforts to sharpen NASA's focuses on its strength.

I am pleased to inform the Full Committee gathered here today that the Subcommittee on Space and Aeronautics favorably reported H.R. 2043 with strong bipartisan support. This bill continues the process of streamlining NASA's programs within a realistic and constrained budget that we began with H.R. 1601, the multiyear authorization of the Space Station.

H.R. 2043 returns NASA's focus to the things which it goes best: basic scientific research, cutting-edge technology development, and the exploration of space. It achieves significant cost savings in NASA's activities by moving the agency out of operating large continuous systems such as the Space Shuttle and Mission to Planet Earth. Yet, we do not eliminate these programs. In fact, we will seek a new foundation on which to continue them with the financial support of the private sector. Heeding the advice of my es-

teemed colleague from Texas, Mr. Hall, we do cut back; we do not cut out.

For example, the NASA authorization bill begins the process of privatizing the Space Shuttle by moving to a single prime contractor, which the Kraft Report indicated offered the best means of lowering Shuttle cost. At the same time we begin restructuring of Mission to Planet Earth so that it takes into account the private sector's emerging capabilities, the Image Earth from Space, and the potential to introduce new satellite technology that radically lowers cost. Those who claim that reducing Mission to Planet Earth's budget by slightly more than $300 million amounts to a cancellation of the program. I would suggest that we do not heed these chicken little claims that the sky is falling. The bill authorizes more than a billion dollars for Mission to Planet Earth for the single Fiscal Year of 1996, hardly a program on the verge of extinction.

However, I would caution the chicken littles among us, if we don't manage to restructure Mission to Planet Earth to achieve significant savings now and in the out-years, this program will swallow space science, life in microgravity sciences, and all the technology programs, such as the Reusable Launch Vehicle, that promise to take NASA and the United States into the next millennium with now low-cost, high-capability systems.

For those who doubt that what I say will happen, I would refer them to Mr. Brown's bill, H.R. 2059, which cuts over $140 million from the Reusable Launch Vehicle program in order to increase Mission to Planet Earth's budget or to the recent actions of the Appropriations Subcommittee which closed NASA field centers in Maryland, Virginia, and Alabama to meet the President's request for Mission to Planet Earth.

Mr. Chairman, this bill focuses on the future. It authorizes a budget of some $11.5 billion for Fiscal Year 1996, which brings us to a total authorization of $13.6 billion, when combined with the Space Station authorization bill. This represents a savings of some $700 million from the Fiscal Year 1995 appropriation and will enable us to provide our children and grandchildren with a balanced Federal budget by the year 2002.

Within this authorization, we will provide the technologies that lower NASA's long-term cost, the space science missions that expand our knowledge about the universe and bring us the benefits of new space technology and the life in microgravity research that improve life on Earth by helping create new medicines and better understanding about natural processes. The bill fully funds the major exploration programs such as the Cassini Probe to Saturn, the Mars Surveyor program, and the Discovery program to perform rapid, low-cost, high-return exploration missions, and the New Millennium program to create new technologies that radically lower long-term costs. We also provide full funding for SOFIA, an airborne astronomy platform which our major international partners are contributing international funding, and Gravity Probe-B, a major physics experiment which is more than 60 percent complete.

The bill meets the President's request for full funding of the Reusable Launch Vehicle program, which could radically lower the cost of getting to orbit early in the next century. It also comes up

to the President's request for research into life in microgravity sciences, so that NASA can continue to contribute to our understanding of human physiology and materials research.

In short, Mr. Chairman, this bill focuses on those programs that will help us build a better future that is technologically advanced and fiscally responsible. Thank you.

[The prepared statement of Mr. Sensenbrenner follows:]

Full Science Committee Mark-Up of H.R. 2043 (July 25, 1995)
Opening Statement by Mr. Sensenbrenner

Mr. Chairman, at the outset I would like to express my appreciation to you for your leadership of this committee in the last 200 days and to the distinguished gentlemen from California and Texas for their comments and work on behalf of a strong space program. It has been a pleasure working with you to bring NASA's programs into line with its budget and I look forward to continuing our bipartisan efforts to sharpen NASA focus on its strengths.

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For example, this NASA authorization bill begins the process of privatizing the

space shuttle by moving to a single prime contractor, which the Kraft report indicated offered the best means of lowering shuttle costs. At the same time, we begin the restructuring of Mission to Planet Earth so that it takes into account the private sector's emerging capabilities to image earth from space and the potential to introduce new satellite technology that radically lowers costs. There are some who claim that reducing Mission to Planet Earth's budget by slightly more than $300 million dollars amounts to a cancellation of the program. I would suggest that we not heed these chicken-little claims that the sky is falling. This bill authorizes more than $1 billion for Mission to Planet Earth in fiscal year 1996, hardly a program on the verge of extinction.

However, I would also caution the chicken-littles among us. If we do not manage to restructure Mission to Planet Earth to achieve significant savings now and in the out-years, the program will swallow space science, life and microgravity sciences, and all the technology programs, such as the Reusable Launch Vehicle, that promise to take NASA and the United States into the next millennium with new, low-cost, high-capability systems. For those who doubt that this will happen, I would refer them to H.R. 2059, which cuts over $140 million from the Reusable Launch Vehicle program in order to increase Mission to Planet Earth's budget, or to the recent actions of the Appropriations Subcommittee, which closed NASA field centers in Maryland, Virginia, and Alabama to meet the President's request for Mission to Planet Earth.

Mr. Chairman, this bill focuses on the future. It authorizes a budget of some $11.5 billion for fiscal year 1996, which brings us to a total authorization of $13.6 billion when combined with the space station authorization bill. This

represents a savings of some $700 million dollars from the fiscal year 1995 appropriation and will enable us to provide our children and grandchildren with a balanced federal budget by 2002. Within this authorization, we will provide the technologies that lower NASA's long-term costs, the space science missions that expand our knowledge about the universe and bring us the benefits of new space technology, and the life and microgravity research that improve life on earth by helping create new medicines and better understanding about natural processes.

The bill fully funds major exploration programs such as the Cassini probe to Saturn, the Mars Surveyor program, the Discovery program to perform rapid, low-cost, high-return exploration missions, and the New Millennium program to create new technologies that radically lower long-term costs. We also provide full funding for SOFIA, an airborne astronomy platform to which our major international partners are contributing significant funding, and Gravity Probe-B, a major physics experiment which is more than 60% complete. The bill also meets the President's request for full funding of the Reusable Launch Vehicle program, which could radically lower the cost of going to orbit early in the next century. It also comes up to the President's request for research into Life and Microgravity sciences so that NASA can continue to contribute to our understanding of human physiology and materials research. In short, Mr. Chairman, this bill focuses on those programs that will help us build a better future that is technologically advanced and fiscally responsible.

The CHAIRMAN. Thank you, Mr. Sensenbrenner.

Mr. Hall?

Mr. HALL. Mr. Chairman, I thank you and I thank you for the work that you've put into this bill and for the openness with which you—under which you've operated.

There's no question that the NASA budget's facing cuts in Congress, and even though I'm not happy about cutting one of the Nation's most important investments in research and development, we're here in the rather unusual situation or unique situation. We have Dan Goldin at the head of NASA that's giving us good leadership, you know, not only a good guy and a great Administrator, but he's a pretty good politician. He was appointed by a Republican President and then survived a Democratic President appointment. So he's probably the best politician among us. He's already shown that.

[Laughter.]

So I think we need to take our hats off to him to start with because, since 1993, for those of us who are trying to cut the budget, he and those with whom he works have cut that budget 35 percent, and then, at the request of the administration, I believe, took another 5 billion off. So we're in a cutting mood and we're being cut; let there be no mistake about that. And though we may disagree among ourselves about some of the areas where the cuts should be, I think we are following the leadership of the chairman and the ranking minority, that we are cutting and we're addressing the trend that addressed us back in November.

I know our space program has delivered benefits to the American taxpayer since NASA's formation more than 35 years ago, and I'm convinced that the space program, and in particular the Space Station, are going to continue to make very important contributions to the health and well-being of our citizens in the years ahead, and that's why I think it's important, Mr. Chairman, that we be sensible in the way we make these cuts. I know we want to be, and what is sensible to one person may be a little bit different to the other, but I think there's good faith on this committee that we're trying to get to the right destination, and that's what's the greatest good for the greatest number.

As I said at the subcommittee markup—and Mr. Sensenbrenner commented on it—cut back, but don't cut out, and I think I pitched out several times about the Super Collider, that we should have whacked it back, but not cut it out; we'd still have it. That goes for the Synfuels Corporation, Clinch River, and on and on, to where we've invested billions of dollars and then summarily whack them out and they're gone forever. We've lost what we put into them. It seems like there ought to be a way to keep those things, a thread alive. If they were good to start with, probably they're good enough to keep going.

For some people, the Space Station is their very highest priority, and for others it's aeronautics, and for others it's Mission to Plant Earth. All of these worthy programs have their advocates; they have them on this committee, and then, certainly, the resulting coalition has enabled us to preserve a strong space program in spite of a lot of budget-cutting pressures.

In February of this year, Mr. Chairman, NASA and Administrator Goldin released NASA's strategic plan, which I recommend that all my colleagues read, if they haven't read it, to go through that, because it's a very good plan, very well thought out. In developing the plan, NASA spent months reaching out to segments of our Nation's population, trying to understand what the public really wanted from our Space Station. After all, that's the people to whom we have to report.

NASA has identified five major areas which they call Strategic Enterprises in this Strategic Plan that the public wants to see us address. These include the traditional areas of human space flight and space science, all the way to Mission to Planet Earth. So we have to realize that the public already recognizes that understanding the environment will be important for economic reasons, for quality-of-life reasons, for our basic survival in the next century. And NASA is in a unique position to contribute to this understanding.

Thus, although many of us may see other things in the NASA budget that attract us, we need to recognize that the space program today is the sum total of all of these things. I'll support Mrs. Harman when she offers her amendment to restore some of the funds to Mission to Planet Earth. It just seemed a little unfair to me, though I'm not a big Mission to Planet Earth guy, that it's unfair to target this program for special adverse treatment when the rest of the Nation sees this as an appropriate and useful goal for our space program.

In the end, Mr. Chairman, I hope we'll be able to craft a NASA authorization that can be supported by both the House and the Senate. I intend to work toward that goal. It's a pleasure to support you in this bill. I yield back my time.

[The prepared statement of Mr. Hall follows:]

OPENING STATEMENT
by

HON. RALPH M. HALL

COMMITTEE MARKUP OF H.R. 2043
July 25, 1995

My statement will be brief, as I believe that we have a lot of work to do today. There is no question that the NASA budget is facing some cuts this year in Congress, even though I am not happy that we are cutting one of the Nation's most important investments in research and development.

I know that our space program has delivered untold benefits to the American taxpayer since NASA's formation more than 35 years ago. And I am convinced that the space program--and in particular the Space Station--will continue to make important contributions to the health and well being of our citizens in the years ahead.

That is why I think that it is important that we be sensible in the way that we make cuts to the NASA budget. As I said at the Subcommittee markup, "let's cut back, but not cut out". One of the reasons that the space program has the support of the American people is that it offers a good return on our investment in many, many ways, and it inspires our young people with the worthy activities undertaken.

For some people, the Space Station is their highest priority, for others it's aeronautics, and for others it's Mission to Planet Earth. All of the worthy programs have their advocates, and the

resulting coalition has enabled us to preserve a strong space program in spite of budget-cutting pressures. In February of this year, NASA and Administrator Goldin released NASA's Strategic Plan which I recommend that all of my colleagues read. In developing this plan, NASA spent months reaching out to all segments of our Nation's population trying to understand what the public really wanted from our space program.

NASA has identified five major areas, which they call "Strategic Enterprises" that the public wants the space program to address. These include the traditional areas of human space flight and space science all the way to Mission to Planet Earth. We must recognize what the public already recognizes--that understanding the environment will be important for economic reasons, for quality of life reasons, and for our basic survival in the next century. NASA is in a unique position to contribute to this understanding.

Thus, although each of us may see other things in the NASA budget that attract us, we need to recognize that the space program today is the sum total of all of these things. I thus will support Ms. Harman when she offers her amendment to restore some of the funds to Mission to Planet Earth. It is simply unfair to target this program for special adverse treatment when the rest of the nation sees this as an appropriate and useful goal for our space program.

In the end, I hope that we will be able to craft a NASA Authorization that can be supported by both the House and the Senate. I intend to work towards that goal.

The CHAIRMAN. Thank you very much, Mr. Hall.

Are there other members who wish to include a statement in the record at this point? I have a statement here from Mrs. Seastrand. Are there additional members who would wish to include a statement in the record at this point?

[The prepared statement of Mrs. Seastrand follows:]

Statement by Congresswoman Andrea Seastrand (R-CA-22) on the NASA Authorization Bill -- July 25, 1995

Mr. Chairman, as we mark-up the authorization bill for NASA and prepare for what is likely to be a vigorous floor debate, I believe we need to focus on exactly what we're doing and why.

What we in the 104th Congress have set out to do is rid the federal government of waste, fraud and abuse; reduce government's size and scope; make government more responsive to the American people; and force government to do what most American companies and most American families have to do every day -- balance the budget.

There are few elements of the government that will be left untouched by this process and that includes NASA. We have all seen the charts which clearly illustrate how much of the cost-cutting burden NASA has absorbed over the last few years. This has been a very difficult period for the agency -- its leadership and its rank and file personnel.

But let's be clear about this budget. It is not draconian. It will not end space flight as we know it. It will not imperil the future of the American space program. It will, however, force NASA to do some serious restructuring of priorities.

As this Congress makes a responsible attempt to truly reinvent government, all government department's and agencies will undergo a serious review of their goals and objectives. It is perfectly responsible to make certain that elements of the federal government are focused on doing the things they do best.

For NASA that means manned space flight, studying how man can live and work in space, aeronautical research, and space science. It's back to basics and focusing on the fundamentals.

The Appropriations Committee approved a VA-HUD bill that includes a $588 million reduction from the Clinton Administrations funding request for NASA. This is not an easy process and many will argue passionately that the nation's space program will be severely imperiled by such cuts. While I agree that this budget will have an effect on some good programs -- including programs in my own district -- it does not imperil the U.S. space program.

In fact, I believe it is in NASA's best long-term interest that we go forward in restructuring the agency to ensure that they focus on the things they do best. In the final analysis, I believe that NASA will end up a more efficient federal agency and most importantly, that our space program will be strengthened.

This is a new era. We have to come up with more creative, efficient, and prudent ways of running government. This budget accomplishes those objectives and ensures that programs of vital importance for our nation's future -- programs like the International Space Station Alpha -- are protected and funded.

Balancing the federal budget is not an easy task. It requires us to stand on principle and make some very tough decisions that will inevitably irritate those who have come to depend on federal monies.

But, Mr. Chairman, there is no issue before this Congress that is more important than ensuring our children's future. And if we don't do what is necessary to bring this government's finances into order, what we really imperil is the next generation's right to inherit an America as strong as the one their parents did.

Thank you.

The CHAIRMAN. We will now consider H.R. 2043, the NASA Authorization Act for Fiscal Year 1996, as reported by the Subcommittee on Space and Aeronautics. I ask unanimous consent the bill be considered as read and open to amendment at any point. And I ask the members to proceed with amendments in the order of the roster.

Having said that, the roster would indicate that Mr. Brown is recognized for an amendment in the nature of a substitute.

[The amendment follows:]

AMENDMENT IN THE NATURE OF A SUBSTITUTE

OFFERED BY MR. BROWN

Strike all after the enacting clause and insert in lieu thereof the following:

104TH CONGRESS
1ST SESSION

H. R. 2059

To authorize appropriations to the National Aeronautics and Space Administration for human space flight, science, aeronautics, and technology, mission support, and Inspector General, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

JULY 12, 1995

Mr. BROWN of California introduced the following bill; which was referred to the Committee on Science, and in addition to the Committee on the Budget, for a period to be subsequently determined by the Speaker, in each case for consideration of such provisions as fall within the jurisdiction of the committee concerned

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A BILL

To authorize appropriations to the National Aeronautics and Space Administration for human space flight, science, aeronautics, and technology, mission support, and Inspector General, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the "National Aeronautics and Space Administration Authorization Act, Fiscal Year 1996".

1 **SEC. 2. FINDINGS.**

2 The Congress finds that—

3 (1) a balanced civil space program is a critical
4 element of the Nation's investment in research and
5 development that needs to be maintained even as the
6 United States reduces its deficit;

7 (2) the National Aeronautics and Space Admin-
8 istration will require predictable and adequate fund-
9 ing over the next 5 years in order to carry out a bal-
10 anced program of initiatives in human space flight
11 and science, aeronautics, and technology;

12 (3) international cooperation can play a major
13 role in leveraging American investments in space ex-
14 ploration and utilization and should be encouraged;
15 and

16 (4) the National Aeronautics and Space Admin-
17 istration should continue its efforts to reduce insti-
18 tutional costs, through management restructuring,
19 facility consolidation when appropriate, procurement
20 reform, personnel base downsizing, and convergence
21 with other defense and private sector systems.

22 **SEC. 3. DEFINITION.**

23 For purposes of this Act, the term "Administrator"
24 means the Administrator of the National Aeronautics and
25 Space Administration.

TITLE I—AUTHORIZATION OF APPROPRIATIONS

Subtitle A—Authorizations

SEC. 101. HUMAN SPACE FLIGHT.

(a) AUTHORIZATIONS.—There are authorized to be appropriated to the National Aeronautics and Space Administration for fiscal year 1996 for Human Space Flight the following amounts:

(1) For the Space Station, $1,833,600,000.

(2) For Russian Cooperation, $129,200,000.

(3) For the Space Shuttle, $3,171,800,000.

(4) For Payload and Utilization Operations, $315,000,000.

(b) CONSTRUCTION OF FACILITIES.—(1) Of the funds authorized to be appropriated under subsection (a)(1), $14,800,000 are authorized for construction of a Neutral Buoyancy Laboratory, Johnson Space Center. The Administrator is authorized to exercise an option to purchase, for not more than $35,000,000, the Clear Lake Development Facility, containing the Sonny Carter Training Facility and the approximately 13.7 acre parcel of land on which it is located, using funds authorized by this Act.

(2) Of the funds authorized to be appropriated under subsection (a)(3), $7,500,000 are authorized for replace-

1 ment of the Chemical Analysis Facility, Kennedy Space
2 Center.
3 (3) Of the funds authorized to be appropriated under
4 subsection (a)(3), $4,900,000 are authorized for replace-
5 ment of the Space Shuttle Main Engine Processing Facil-
6 ity, Kennedy Space Center.
7 (4) Of the funds authorized to be appropriated under
8 subsection (a)(3), $5,000,000 are authorized for mod-
9 ernization of the Firex System, Pads A and B, Kennedy
10 Space Center.
11 **SEC. 102. SCIENCE, AERONAUTICS, AND TECHNOLOGY.**
12 (a) AUTHORIZATIONS.—There are authorized to be
13 appropriated to the National Aeronautics and Space Ad-
14 ministration for fiscal year 1996 for Science, Aeronautics,
15 and Technology the following amounts:
16 (1) For Space Science, $1,972,400,000, of
17 which—
18 (A) $1,154,600,000 are authorized for
19 Physics and Astronomy, including $7,000,000
20 for the Space Infrared Telescope Facility,
21 $28,700,000 for the Stratospheric Observatory
22 for Infrared Astronomy, and $51,500,000 for
23 the Gravity Probe B Relativity Mission; and

1 (B) $817,800,000 are authorized for Plan-
2 etary Exploration, including $20,000,000 for
3 the New Millenium program.
4 (2) For Life and Microgravity Sciences and Ap-
5 plications, $504,000,000.
6 (3) For Mission to Planet Earth,
7 $1,287,460,000.
8 (4) For Space Access and Technology,
9 $557,300,000, of which—
10 (A) $59,000,000 are authorized for the
11 Reusable Launch Vehicle technology develop-
12 ment program, and, to the extent provided in
13 appropriations Acts, the Administrator may uti-
14 lize up to $100,000,000 from funds otherwise
15 provided to the Department of Defense for the
16 Reusable Launch Vehicle;
17 (B) $140,500,000 are authorized for
18 Spacecraft and Remote Sensing; and
19 (C) $22,600,000 are authorized for the
20 Small Spacecraft Technology Initiative.
21 (5) For Aeronautical Research and Technology,
22 $877,300,000, of which—
23 (A) $354,700,000 are authorized for Re-
24 search and Technology Base activities;

1 (B) $240,500,000 are authorized for High
2 Speed Research;
3 (C) $163,400,000 are authorized for Ad-
4 vanced Subsonic Technology; and
5 (D) $65,200,000 are authorized for High
6 Performance Computing and Communications.
7 (6) For Mission Communication Services,
8 $461,300,000.
9 (7) For Academic Programs, $102,200,000.
10 (b) CONSTRUCTION OF FACILITIES.—(1) Of the
11 funds authorized to be appropriated under subsection
12 (a)(2), $3,000,000 are authorized for the construction of
13 an addition to the Microgravity Development Laboratory,
14 Marshall Space Flight Center.
15 (2) Of the funds authorized to be appropriated under
16 subsection (a)(3), $17,000,000 are authorized for con-
17 struction of Earth Systems Science Building, Goddard
18 Space Flight Center.
19 (3) Of the funds authorized to be appropriated under
20 subsection (a)(5), $5,400,000 are authorized for mod-
21 ernization of the Unitary Plan Wind Tunnel Complex,
22 Ames Research Center.

1 **SEC. 103. MISSION SUPPORT.**

2 There are authorized to be appropriated to the Na-
3 tional Aeronautics and Space Administration for fiscal
4 year 1996 for Mission Support the following amounts:

5 (1) For Safety, Reliability, and Quality Assur-
6 ance, $37,600,000.

7 (2) For Space Communications Services,
8 $299,400,000, of which $175,800,000 are author-
9 ized for the Tracking and Data Relay Satellite Re-
10 plenishment program.

11 (3) For Research and Program Management,
12 including personnel and related costs, travel, and re-
13 search operations support, $2,094,800.

14 (4) For Construction of Facilities, including
15 land acquisition, $166,400,000, of which—

16 (A) $6,300,000 are authorized for restora-
17 tion of Flight Systems Research Laboratory,
18 Ames Research Center;

19 (B) $3,000,000 are authorized for restora-
20 tion of Chilled Water Distribution System, God-
21 dard Space Flight Center;

22 (C) $4,800,000 are authorized for replace-
23 ment of Chillers, various buildings, Jet Propul-
24 sion Laboratory;

1 (D) $1,100,000 are authorized for rehabili-
2 tation of Electrical Distribution System, White
3 Sands Test Facility, Johnson Space Center;
4 (E) $4,200,000 are authorized for replace-
5 ment of Main Substation Switchgear and Cir-
6 cuit Breakers, Johnson Space Center;
7 (F) $1,800,000 are authorized for replace-
8 ment of 15KV Load Break Switches, Kennedy
9 Space Center;
10 (G) $9,000,000 are authorized for rehabili-
11 tation of Central Air Equipment Building,
12 Lewis Research Center;
13 (H) $4,700,000 are authorized for restora-
14 tion of High Pressure Air Compressor System,
15 Marshall Space Flight Center;
16 (I) $6,800,000 are authorized for restora-
17 tion of Information and Electronic Systems
18 Laboratory, Marshall Space Flight Center;
19 (J) $1,400,000 are authorized for restora-
20 tion of Canal Lock, Stennis Space Center;
21 (K) $2,500,000 are authorized for restora-
22 tion of Primary Electrical Distribution System,
23 Wallops Flight Facility;

(L) $35,000,000 are authorized for repair of facilities at various locations, not in excess of $1,500,000 per project;

(M) $35,000,000 are authorized for rehabilitation and modification of facilities at various locations, not in excess of $1,500,000 per project;

(N) $3,800,000 are authorized for minor construction of new facilities and additions to existing facilities at various locations, not in excess of $1,500,000 per project;

(O) $10,000,000 are authorized for facility planning and design; and

(P) $37,000,000 are authorized for environmental compliance and restoration.

SEC. 104. INSPECTOR GENERAL.

There are authorized to be appropriated to the National Aeronautics and Space Administration for fiscal year 1996 for Inspector General, $17,300,000.

SEC. 105. TOTAL CONSTRUCTION OF FACILITIES AUTHORIZATION.

Notwithstanding any other provision of this title, the total amount authorized to be appropriated under this Act for Construction of Facilities shall not exceed $214,000,000.

1 **Subtitle B—Limitations and**
2 **Special Authority**

3 **SEC. 111. USE OF FUNDS FOR CONSTRUCTION.**

4 (a) AUTHORIZED USES.—Funds appropriated under
5 sections 101(a), 102(a), and 103 (1) and (2), and funds
6 appropriated for research operations support under sec-
7 tion 103(3), may be used for the construction of new fa-
8 cilities and additions to, repair of, rehabilitation of, or
9 modification of existing facilities at any location in support
10 of the purposes for which such funds are authorized.

11 (b) LIMITATION.—None of the funds used pursuant
12 to subsection (a) may be expended for a project, the esti-
13 mated cost of which to the National Aeronautics and
14 Space Administration, including collateral equipment, ex-
15 ceeds $500,000, until 30 days have passed after the Ad-
16 ministrator has notified the Committee on Science of the
17 House of Representatives and the Committee on Com-
18 merce, Science, and Transportation of the Senate of the
19 nature, location, and estimated cost to the National Aero-
20 nautics and Space Administration of such project.

21 (c) TITLE TO FACILITIES.—If funds are used pursu-
22 ant to subsection (a) for grants to institutions of higher
23 education, or to nonprofit organizations whose primary
24 purpose is the conduct of scientific research, for purchase
25 or construction of additional research facilities, title to

1 such facilities shall be vested in the United States unless
2 the Administrator determines that the national program
3 of aeronautical and space activities will best be served by
4 vesting title in the grantee institution or organization.
5 Each such grant shall be made under such conditions as
6 the Administrator shall determine to be required to ensure
7 that the United States will receive therefrom the benefits
8 adequate to justify the making of that grant.

9 **SEC. 112. AVAILABILITY OF APPROPRIATED AMOUNTS.**

10 To the extent provided in appropriations Acts, appro-
11 priations authorized under subtitle A may remain avail-
12 able without fiscal year limitation.

13 **SEC. 113. REPROGRAMMING FOR CONSTRUCTION OF FA-**
14 **CILITIES.**

15 Appropriations authorized under section 101(b),
16 102(b), or 103(4)—
17 (1) may be varied upward by 10 percent at the
18 discretion of the Administrator; or
19 (2) may be varied upward by 25 percent, to
20 meet unusual cost variations, after the expiration of
21 30 days following a report on the circumstances of
22 such action by the Administrator to the Committee
23 on Science of the House of Representatives and the
24 Committee on Commerce, Science, and Transpor-
25 tation of the Senate.

1 The aggregate amount authorized to be appropriated
2 under sections 101(b), 102(b), and 103(4) shall not be
3 increased as a result of actions authorized under para-
4 graphs (1) and (2) of this section.

5 **SEC. 114. CONSIDERATION BY COMMITTEES.**

6 Notwithstanding any other provision of this Act—
7 (1) no amount appropriated to the National
8 Aeronautics and Space Administration may be used
9 for any program for which the President's annual
10 budget request included a request for funding, but
11 for which the Congress denied or did not provide
12 funding;
13 (2) no amount appropriated to the National
14 Aeronautics and Space Administration may be used
15 for any program in excess of the amount actually
16 authorized for the particular program by subtitle A;
17 and
18 (3) no amount appropriated to the National
19 Aeronautics and Space Administration may be used
20 for any program which has not been presented to
21 the Congress in the President's annual budget re-
22 quest or the supporting and ancillary documents
23 thereto,
24 unless a period of 30 days has passed after the receipt
25 by the Committee on Science of the House of Representa-

1 tives and the Committee on Commerce, Science, and
2 Transportation of the Senate of notice given by the Ad-
3 ministrator containing a full and complete statement of
4 the action proposed to be taken and the facts and cir-
5 cumstances relied upon in support of such proposed ac-
6 tion. The National Aeronautics and Space Administration
7 shall keep the Committee on Science of the House of Rep-
8 resentatives and the Committee on Commerce, Science,
9 and Transportation of the Senate fully and currently in-
10 formed with respect to all activities and responsibilities
11 within the jurisdiction of those committees. Except as oth-
12 erwise provided by law, any Federal department, agency,
13 or independent establishment shall furnish any informa-
14 tion requested by either committee relating to any such
15 activity or responsibility.

16 **SEC. 115. USE OF FUNDS FOR SCIENTIFIC CONSULTATIONS**
17 **OR EXTRAORDINARY EXPENSES.**

18 Funds appropriated under section 102 may be used,
19 but not to exceed $35,000, for scientific consultations or
20 extraordinary expenses upon the authorization of the Ad-
21 ministrator.

TITLE II—MISCELLANEOUS PROVISIONS

SEC. 201. PURCHASE OF AIRBORNE INFRARED ASTRONOMY DATA SERVICES.

(a) CONTRACT FOR SERVICES.—The Administrator is authorized to enter into multiyear contracts for the purchase of services to provide infrared astronomical data by airborne platforms. Such contracts may provide for the acquisition of aircraft, instruments, support equipment, and any capital items necessary to meet Government needs, and further, the costs of such items may be amortized over the life of the contract.

(b) TERMINATION LIABILITY.—Any contract entered into pursuant to this section may provide for the payment of contingent liability that may accrue in the event that the Federal Government for its convenience terminates such contracts. Payments made for such liability shall be derived from appropriations for Science, Aeronautics, and Technology which remain unobligated from any fiscal year.

(c) CALCULATION OF TRANSACTIONS.—For the purposes of the Balanced Budget and Emergency Deficit Control Act of 1985, the Congressional Budget Act of 1974, the Budget Enforcement Act of 1990, and scorekeeping guidelines, the Office of Management and Budget and the

1 Congressional Budget Office shall score any contract en-
2 tered into under this section in the same manner as if
3 the contract had been entered into on September 30,
4 1990.

5 **SEC. 202. FACILITIES CLOSING COMMISSION.**

6 (a) ESTABLISHMENT.—In the event that the total
7 amount of funds appropriated to the National Aeronautics
8 and Space Administration for fiscal year 1996 is less than
9 the amount authorized to be appropriated to the National
10 Aeronautics and Space Administration in this Act, there
11 shall be established an independent commission to be
12 known as the National Aeronautics and Space Administra-
13 tion Facilities Commission (hereafter referred to in this
14 section as the "Commission"). The Commission shall be
15 constituted and conduct its activities in accordance with
16 a plan provided to Congress by the President within 90
17 days after the date of the enactment of the Act making
18 such appropriations.

19 (b) PURPOSE.—The purpose of the Commission shall
20 be to make recommendations for the closure or reconfig-
21 uration of National Aeronautics and Space Administration
22 facilities, including research and operations Centers, re-
23 sulting in cost savings for the overall budget for such fa-
24 cilities.

O

Mr. BROWN. Thank you, Mr. Chairman, and I will try to be brief. I am not going to belabor this with the extensive efforts to convince the members on your side that this is a better bill than yours, and I will not ask for a roll call, but this does represent my effort at providing a modest contribution to a more balanced bill. I might indicate the key features of it.

First of all, the overall funding level is 13.8 billion, which is slightly above that contained in your bill, but it's still 443 million below the President's request and it is above, 155 above the House—the Space Subcommittee mark. It does preserve a balance amongst the major programs. In other words, it does not unduly cut, although it cuts some, into the Mission to Planet Earth.

It provides full funding for Space Station, and it funds the Advanced Subsonic Aeronautical Research at only 25 million below the request, but 30 million above the subcommittee mark. It maintains full funding for the science programs, which is of high priority to me, including Cassini and a new start for SOFIA and the New Millennium program. Also, it provides funding for the Infrared Telescope and Gravity Probe-B. It does support the Reusable Launch Vehicle start and leverages funding authorized for that from—by using some Department of Defense funds. As I think you pointed out, however, it is still not as large an item as contained in the subcommittee bill. And it does provide, in terms of new policy, for an independent base closure-style commission in the event NASA appropriations continue to fall below the overall level recommended.

Now these are not partisan differences. I am convinced that you, Mr. Chairman, and I share the same goals. At the beginning of the year, I was tremendously encouraged by your statement at that time that you wanted to continue a budget which had a certain dependability and continuity and that roughly kept up with the ravages of inflation. I know that you have had to change that viewpoint because of your role in the overall budget-cutting efforts that are going on in the House, but I still believe very sincerely that you were right, and that I hope that we can come close to achieving that as we move forward.

I want to make a subtle point about language around here. Any bill that cuts something below what you want, that cut is considered a gutting amendment, and you have to use that term, and this is—I learned this 30 years ago on the floor when I observed relatively modest cuts being described as "gutting amendments." The cuts here can be described as relatively modest. The cuts below the existing program contained in the chairman's bill actually only amount to about 4 percent of the overall amount of the bill. This is, I can—in some people's view, would be considered not unreasonable.

The reason that I take it so seriously has been made over and over again. This agency, NASA, has taken cuts that are more than a third of its previous budget, including the last $5 billion that the President requested, and despite what Mr. Walker has said about feeling that that cut was not justified, the cuts contained here are on top of these cuts, and it's the cumulative impact, 4 percent, 4 percent, 4 percent, adding up to now, it will be, 35 to 40 percent

that bother me very, very much and which my bill seeks to redress ever so slightly.

Now with those stirring words, I will not go into all the other details that I should cover, but I will ask unanimous consent to put my statement in the record.

[The prepared statement of Mr. Brown follows:]

OPENING STATEMENT
by

HON. GEORGE E. BROWN, JR.
COMMITTEE MARKUP OF H.R. 2043

Good morning. Today we are meeting to discharge one of our most important duties as an authorizing committee--the markup of the NASA authorization. While it is always an important task, it is doubly so this year, when the civil space program is being put under extraordinary budgetary constraints. I is critically important that we do nothing that would destroy the balance and vitality of our Nation's space program.

The bill before us, H.R. 2043, contains a number of significant funding and policy provisions. There are a number of provisions with which I can agree. However, I must state my unhappiness with the process by which this legislation has been developed and considered.

First, this bill contains a number of policy decisions that have apparently been made without the Committee having established any meaningful public record on the pros and cons of the policy options or the potential impacts of the decisions made in H.R. 2043. For example, the bill directs NASA to begin the transition to Shuttle privatization without any documentation from NASA on the potential safety or economic impacts of such a move. In addition, the bill directs NASA to contract for a review of all of its capital assets without any hearings on the results of the previous facility reviews that have been conducted by both internal and external groups, the magnitude of the likely savings from such a review versus the costs and further disruption to NASA involved in undertaking it, and so forth.

Second, H.R. 2043 contains funding for a number of new initiatives that were never requested by the President and for which no hearings have been held or documentation provided to the Members of the Committee. I find such an action all the more surprising given the stated intention not to fund new starts in the FY 1996 budget due to the overall budgetary constraints.

Third, this bill makes a premature, and to my mind unwise, cut to Mission to Planet Earth that will have the effect of destroying the Earth Observing System program. I have had no quarrel with Chairman Walker's decision to seek a review of Mission to Planet Earth by the National Academy of Sciences. There is no research program that cannot benefit from periodic review. However, H.R. 2043 prejudges what the results of the Academy review will be in a manner that could trivialize the efforts of the dedicated scientists who have given their time to undertake the review. Moreover, H.R. 2043 fundamentally unbalances the civil space program by singling out one activity for deep cuts. It is my understanding that Ms. Harman will offer an amendment to restore balance to NASA's activities by adding back funding for Mission to Planet Earth. I intend to strongly support that amendment.

As has been the practice with the other authorization bills that have come before the Committee, I intend to offer an alternative to the Committee's version of the NASA Authorization when the bill is open for amendment. I do so because I believe that both the magnitude of the cut made to NASA and the unbalanced manner in which that cut is allocated among NASA's programs are unwise. My bill attempts to address the major difficulties that exist in H.R. 2043. While I frankly am unhappy with the level of funding for NASA contained in my alternative Authorization bill--a level of funding equal to that provided in the NASA Authorization marked up last week by the Senate--I believe that it is sufficient to sustain a viable space program if the cuts are made judiciously.

I will have more to say on these topics later in the markup.

The CHAIRMAN. Thank you, Mr. Brown.

Mr. SENSENBRENNER. Mr. Chairman, I rise in opposition to the amendment.

Mr. Chairman—Mr. Chairman, what we're talking about here is a difference of about 1.2 percent. It is not a major difference, but it is a significant difference, and it's a significant difference because this committee can no longer operate in the abstract in deciding how much money we want to fund the various NASA programs.

I think, if I had my druthers and we didn't have a budget resolution and a Budget Committee and an Appropriations Committee, the numbers that I have for the various programs operating in the abstract would be very similar to the ones that Mr. Brown has come up with in his substitute amendment, but we don't operate in the abstract and there have been limitations placed through the Budget Resolution, through the 602(b) allocations, on how much money can actually be appropriated for NASA, which is a discretionary spending program. And that's why it's important for this committee to set priorities, so that NASA will have the direction on where the money can be spent in the best and most proper manner.

I would submit that the major change between the Brown budget and the subcommittee budget involves the Reusable Launch Vehicle and Mission to Planet Earth. The gentleman from California hopes that we will be able to leverage some money for the Reusable Launch Vehicle from the Department of Defense. So he takes about $140 million out of that and hopes that the National Security Committee and the Defense Appropriations Subcommittee will be able to find the money for it. I'm not so confident about that because we all know the type of cuts the Defense Department has endured for a longer period of time than the cuts that NASA has endured.

The fact of the matter is that the Reusable Launch Vehicle is the key to reducing the cost of access to space in the next century, and I think that gutting the Reusable Launch Vehicle concept early on means that the people who are going to be sitting in this committee 10 years from now and those who are going to be sitting in the other relevant committees at that period of time are going to have to come up with a lot more money to get American objects into space. And because there's more and more commercialization in the launch vehicle market on a worldwide base—worldwide basis, if we don't go ahead with the Reusable Launch Vehicle, we may very well abdicate the commercialization of space to the French, to the Russians, to the Japanese, and to our other international competitors. So I think that cutting the money out of the Reusable Launch Vehicle, on the hope that the other committees will come up with this money, is having us chickens eat the seed corn.

Now, secondly, with regard to Mission to Planet Earth, Mission to Planet Earth is a big-ticket item. The projections of the total costs of completion of Mission to Planet Earth are only slightly less than those projections for the Space Station. The Space Station has come under intense scrutiny, correctly so, by the administration, by NASA, and by this committee, and I think that the cost overruns have been flushed out of the International Space Station by a lot of hard work by a lot of people, some of whom, like Mr. Roemer, would like to kill the project altogether. That hasn't been true for

Mission to Planet Earth, and what both Mr. Walker and I have said earlier on is that, unless we cut out or reduce some of the funding base of Mission to Planet Earth early on, we are in for Mission to Planet Earth eating up the whole rest of the science budget. And what this budget does that has come out of the subcommittee gets us on the road to doing that, by bringing in the private sector more, by making Mission to Planet Earth faster, better, and cheaper, which seems to have escaped both NASA and the administration.

Believe me, if we don't do that, again, the people who will be sitting in this room 10 years from now are going to have a much more difficult time of dealing with the NASA budget in terms of the total context of the budget, and for that reason I think that the priority on Mission to Planet Earth that has been selected by the gentleman from California is also in error, and I would urge the rejection of his amendment.

Thank you.

Mr. BROWN. Mr. Chairman, if the gentleman—if you'd be kind enough to allow me about a one-or two-minute rebuttal, I'll try and discourage other speakers on our side, so we can get to a vote on this.

The CHAIRMAN. I think we do have other members that are—that are—that are probably going to seek recognition, but I will—I would certainly be happy to do—I think the gentleman from Florida was seeking recognition.

Mr. BROWN. Certainly.

Mr. WELDON OF FLORIDA. I thank the chairman.

I speak out as well against the Brown amendment. I am concerned about the direction the Brown substitute takes us. The Brown amendment represents a—I believe a microcosm of what the current Mission to Planet Earth would bring to us, eating away at other areas of the NASA budget.

I am concerned that the Brown amendment fails to include provisions directing an agency-wide review of NASA. The current administration has asked for a comprehensive review of the Shuttle program. I believe that the Shuttle program is not the only program that should go under the microscope. I believe the same level of scrutiny should be applied to all of NASA's programs. The bill before us does this, while the Brown substitute fails in this respect. I believe such a review will help NASA become a more efficient agency, freeing up money for additional activities.

I share the subcommittee chairman's concerns about the Mission to Planet Earth and about adding another 275 million to this program. I understand the need to collect data about our environment, but I believe we must do so in a way that does not cripple other NASA initiatives.

This program will cost us tens of billions of dollars, as currently planned. That is why I believe we must place this program under the microscope to find ways to achieve the same end with fewer dollars.

The Brown substitute does not contain the changes to the Commercial Space Transportation Act which would update the law to reflect the current realities of the marketplace. The absence of

these changes will seriously inhibit the ability of the U.S. commercial space industry to regain the market for commercial launches.

I also share the Chair—the subcommittee chairman's concerns about the funding from DOD for the Reusable Launch Vehicle, and I would encourage my colleagues to vote against the Brown substitute.

Thank you, Mr. Chairman. I yield back the balance of my time.

The CHAIRMAN. Thank you, Mr. Weldon.

Are there other members that seek recognition on the Brown substitute?

Mr. HALL. Mr. Chairman.

The CHAIRMAN. Mr. Hall.

Mr. HALL. Yes. Mr. Chairman, I'll just take a moment or so of my time and yield to Mr. Brown the additional time that I do not use.

I think that it's good to discuss this amendment, and I think Mr. Brown is certainly to be commended for putting it into the record and putting his statements into the record, and letting all of us have our shots at it. I think—I think his amendment is a constructive budgetary proposal that would maintain a healthy and a vigorous NASA, and I'm very pleased that his amendment provides full funding for the Space Station, and I like the fact that it contains funding for the SOFIA program, as does the chairman's amendment. It's consistent with the philosophy of cutting back, but don't cut out. And even though I don't totally agree with the cutback of Reusable Launch Vehicle start, I well remember the gentleman from California, who's very sincere, very determined in pursuing that back even a couple of years ago in the hearings that we had on it, but I think it's good that we put this into the record and that we carry this along to make some decisions when we hit the floor. And I'm sure that the testimony that's being rendered here today and the statements we're making will even be looked at when this hits the Conference Committee.

Mr. Chairman, I yield the balance of my time back to Mr. Brown to make the statement that he'd instructed—

Mr. BROWN. I thank the gentleman for yielding—

Mr. HALL. [continuing]. The chairman that he wanted to make.

Mr. BROWN. [continuing]. And, as I say, I am trying to expedite the matter.

First, let me thank Mr. Sensenbrenner for his use of the compulsory word "gutting" in reference to my amendment with regard to the Reusable Launch Vehicle. The gentleman knows that I am a very strong supporter of that program and have done everything possible to encourage it, and I personally think that this is merely a way of adjusting or finetuning the program to achieve more effective results instead of being a gutting amendment, but that's a minor objection.

There is another point that the gentleman made, and I'm not really dealing with the numbers here. The numbers, as I've indicated, are precisely those—almost exactly the same as the Senate authorizing subcommittee has already passed.

What I do want to clarify for all the members is that there is no language mandating any particular level for this bill in the Budget Resolution, and I've looked at the Budget Resolution rather care-

fully, and the funding for Function 250 is described on page 65, as I recall. I invite any of you who have a copy to read that. It does not set a level for NASA. It sets an overall level for Function 250 which contains NASA, NSF, and several other programs, but I'm really very interested that all members understand the way the budgetary and appropriations process functions.

The Budget Resolution has no effect on authorizations. It is not intended to. It constrains appropriations by function, but not by detail of particular agencies. The Appropriations Committee, in turn, through its 602(b) allocation process, mandated in the Budget Act, then assigns those functional levels to the various subcommittees of the Appropriations Committee. At no point in this process is there a number which you can select and say this is a cap on NASA. And when I hear these repeated references to we are capped at a certain level in this committee, and then I see the Appropriations Committee in the House go for a different level, and the Senators go for a different level, I wonder what illusionary effects are at work here to assume that we have a cap, but nobody else does.

And this is the point that I think the distinguished subcommittee chairman made and the distinguished chairman frequently made. Now what they are saying I think is a shorthand expression for the fact that they have decided that in the interest of budgetary discipline we need to set limits ourselves on what we do. If they would put it that way, I'd say God bless you, but don't say it's because you've been assigned caps; you haven't been.

And I thank the gentleman for allowing me to make that statement.

The CHAIRMAN. Are there additional members that wish to be recognized on the Brown—Mr. Rohrabacher?

Mr. ROHRABACHER. Mr. Chairman, I respect the distinguished former chairman's role and I respect the leadership that he's given us over the years on major space issues, and I would just note that times have changed in the sense that this is a new Congress and the people elected a new Congress for a change and to set priorities. They did not ask us, basically, to give them just 5 percent less of the same old stuff, and, basically, while I respect the former chairman greatly, I think that his substitute reflects old priorities when we had a much—an expanding budget and could spend more money.

The chairman, basically, does not set us on—the former chairman does not set us on a course for a bright future, and I believe that the chairman's bill, our current mark that we have before us today, is a major step forward in the sense that we are setting priorities finally.

I have two major substantive problems with Mr. Brown's substitute. And, first, again, it makes the assumption that the government will continue to be the major force in space, that the government is going to always be the doer. It's going to do space for the American people now and tomorrow and forever, and I believe that that basically is a backwards approach. We should be looking for finding ways of getting the private sector into this—into the commercialization, utilization, exploration of space, and that's basically what the Reusable Launch program is all about.

And that leads to my second point, which is, obviously, as has been stated, the Brown substitute basically cuts the Reusable Launch Vehicle program by $134 million, and that would dramatically hold back the development of this technology that promises to take us into a new era and bring down the cost of getting into space, and, thus, opening up tremendous new potential for space.

So instead of the same old stuff, we do need to focus on new technologies, and the Brown substitute, I'm afraid, does not do that. It goes in the opposite direction.

I believe Mr. Brown is basically, I think, assuming that NASA will be given $100 million by the Department of Defense for Reusable Launch Vehicles, and Mr. Weldon I'm sure will agree with me that we didn't put the money into the Reusable Launch Vehicle research in the Air Force just to have Mr. Brown assume that NASA can take it away. And, indeed, Mr. Weldon—

Mr. WELDON of Pennsylvania. Will the gentleman yield?

Mr. ROHRABACHER. I would yield to Mr. Weldon.

Mr. WELDON of Pennsylvania. I thank my colleague and gentleman and friend for yielding, and I would just like to echo that, as chairman of the Research and Development Subcommittee for the National Security Committee, I believe that the administration did, in fact, underestimate its request for the triple-use benefit of Reusable Launch Vehicles—the military, the civilian, and commercial sector. We did plus up that account, but we didn't plus up the account so that NASA could decrease the amount it would make. That was not the intent of the National Security Committee. That was not the intent of the Research and Development Subcommittee. And if this committee wants to take a different posture, then perhaps in conference we ought to go back and look at perhaps taking some of that money back that we made in a good faith gesture of a commitment from both NASA as well as DOD.

I thank my colleague for yielding and yield back—

Mr. ROHRABACHER. And, Mr. Chairman, reclaiming the balance of my time, I'd just like to say that it has been very clear, Mr. Goldin has been very clear that he wants NASA to take the lead in developing and researching this new technology, and Mr. Goldin and NASA should be the lead agency, and I believe that if we make sure we set our priorities now, that we can set America's space effort in the years ahead on the proper course. I believe that the chairman's mark does this, and I think the substitute, Mr. Brown's substitute, is going back in the wrong direction.

And I thank you very much.

Mr. BROWN. Would the gentleman yield—

Mr. ROHRABACHER. I certainly will.

Mr. BROWN. —if he has any remaining time just briefly?

Mr. ROHRABACHER. Yes, sir.

Mr. BROWN. Just to clarify this business of the 100 million, the defense authorization bill had this language in it: "$100 million shall be available for a competitive, reusable rocket technology program," which is what we're talking about here. And it also states in the next paragraph: "may be obligated only to the extent that the current operating plan of the National—of NASA allocates at least an equal amount." So it's a matching program, each agency funding it, but NASA managing it. We're agreed on that, I think.

Now you used a figure that my amendment cuts 134 million. I think that that neglects the contribution of the military, but I won't quibble about 100 million; it's so trivial in an overall budget like that. My calculation is that I'm cutting about 26 million and something of that sort, but that will be finally determined by the operating plan that NASA proposes—provides the committee after we pass the appropriations bills.

The CHAIRMAN. The time of the gentleman has expired.

Mr. ROHRABACHER. Yes, thank you.

The CHAIRMAN. Are there additional members seeking to be recognized on the Brown substitute?

[No response.]

If not, the chairman is prepared to close the debate.

I'm—I am grateful that Mr. Brown has brought forward his substitute which gives us a general view of where the minority seeks to put its priorities. I think that helps engage us in a healthy debate. I do believe that the—it also helps demonstrate that the differences over the funding are not particularly great. The Brown substitute is, in fact, at a 1.2 percent level above where our particular bill was, but it does, I think, give us a sense of priorities that helps us understand how we all got to where we are.

For example, in general space science the Brown substitute is actually lower than the bill that we brought out of our subcommittee, and while he is higher than the Clinton request in space science, we are still higher in ours. There is a major area of difference with our bill over the question of Mission to Planet Earth, and as the chairman of the subcommittee has stated, we do believe that there are some rescoping issues in that program that need to be addressed and our budget moves us in that particular direction.

There are differences over the question of the money for the Reusable Launch Vehicle, and while it is my understanding that the Brown bill wishes to leverage the money that the Defense—in the Defense Department, the fact is that we are attempting to come up with a very aggressive program that would combine both what the Defense Department is doing with what NASA is doing, and rather than having NASA trying to leverage—just taking the money away from Defense to keep the money at an even keel, we are—we are hopeful that we can expand this program so that we move the program forward.

I'm also concerned that the—that by starting the CERTIF program that we do create in that particular issue a budget bow wave that in the out-years could crowd out and force the cancellation of Cassini and the AXAF Mission that would be a problem under the Brown budget, and so that causes me some concern. So I do think that there are some—some questions that are raised.

I would also point out that the kind of amendment that we had at the subcommittee level is also raised at—raises a question. When Ms. Jackson Lee offered her amendment to 1601 at—the Space Station bill, had we adopted the Brown substitute here, even at its higher levels, it would have, in fact, been a figure that under the Jackson Lee amendment would cancel Space Station this year. It tells you about the difficulties of balancing these things and why it's important to look at these things in the overall issue of how much we actually have to spend.

I understand that the chairman has wished—that the chairman has made his point about the whole business of the budget bill—I'm talking about me [laughter]—that the chairman has made his point about the overall budget and that that has not been accepted by the ranking minority member. You know, there is nothing under the Budget Committee Resolution; the ranking member is absolutely correct that there is nothing in the Budget Resolution that assigns those numbers to this committee. That was—that was—that was a leadership decision that was made in this committee. The fact is it has allowed us to interact with the appropriators in a rather unique way, and I think has made a difference in terms of getting those kinds of priorities in place. And it has allowed us to coordinate these things in a meaningful way.

If we simply go and fund programs at levels where we think they ought to be and it relates to nothing in the overall budget caps or the caps in which the appropriators operate, we, in fact, end up doing damage to the programs if those priorities are not reflected in the right way. And I think what we—what we've ended up with here is a pattern where our priorities are being reflected reasonably meaningfully across the board.

And so I would oppose the Brown amendment. I would hope that we could, in fact, continue this process of keeping ourselves as a meaningful part of the appropriations, as well as the budget process.

With that, the Chair would put the question. Those in favor of the Brown amendment will say aye. Those opposed will say no. In the opinion of the Chair, the noes have it. The noes have it. The substitute is not agreed to.

Mr. Roemer.

Mr. ROEMER. Thank you, Mr. Chairman. I have an Amendment No. 2 which I do not intend to offer, but I would like to talk about it for one minute, Mr. Chairman.

The CHAIRMAN. The gentleman is recognized.

Mr. ROEMER. Thank you, Mr. Chairman.

This—this amendment I understand dealing with commercial technology programs, which I think are a very, very important connection between NASA and many of our small businesses in this country—I understand that the Appropriations Committee has funded this program, and I would reserve the right to offer this amendment on the floor.

Simply put, what my amendment would do would be to restore some monies to the commercial technology programs to better connect the great ideas that NASA has with many of our small businesses throughout America. We all brag about and have read about, and have even benefitted from, many of NASA's great ideas, whether they be velcro, teflon, software products, the defense industry, national security, electronics, telecommunications products—we just need to continue to make sure that these great ideas that scientists at NASA develop are sold as products in America and benefit our consumers and benefit our economic results as well, too.

We have been so successful, Mr. Chairman, in this country at coming up with great ideas, whether they be great patents, great copyright rights, fantastic and stimulating ideas that might help us

in the future, but too often times the Japanese and the Europeans then take our ideas and market them as products. And I think this commercial technology program has been a conduit between NASA's great ideas, their successful scientists, and many of our small businesses. This commercial technology program has benefitted over 100 small businesses in my State, in Indiana, alone. With that, Mr. Chairman, I'll withdraw the amendment.

The CHAIRMAN. Okay, the gentleman is—does the gentleman wish to offer amendment—the gentleman is not going to offer Amendment No. 2?

Mr. ROEMER. I'm not going to offer Amendment No. 2. I would ask unanimous consent to withdraw the amendment, but reserve the right to offer that at a later point.

The CHAIRMAN. Without objection, the gentleman will certainly have that right. Does the gentleman wish to offer Amendment No. 3?

Mr. ROEMER. I do, Mr. Chairman.

The CHAIRMAN. Then the gentleman is recognized to offer—well, I think we will withhold at this point since we have a vote on the floor. We'll come back and take Amendment No. 3 when we return.

[Recess.]

The CHAIRMAN. The gentleman from Indiana is recognized for Amendment No. 3.

Mr. ROEMER. Thank you, Mr. Chairman.

[The amendment follows:]

AMENDMENT TO H.R. 2043

OFFERED BY MR. ROEMER

Page 9, line 20, strike "$354,700,000" and insert in lieu thereof "$339,700,000".

Page 9, line 22, strike "$245,500,000" and insert in lieu thereof "$230,500,000".

Page 9, line 24, strike "$133,000,000" and insert in lieu thereof "$163,000,000".

Mr. ROEMER. Mr. Chairman, my amendment is a simple amendment. What I accomplish is budget-neutral. I know that the chairman has encouraged us not to increase the deficit in our committee markups and hearings over the past seven months.

My amendment would achieve the balanced objective here by moving and taking away $15 million out of hypersonic research and technology and taking $15 million away from high-speed technology, and putting the $30 million from those two accounts into the subsonic account. The reasons I do this, Mr. Chairman, are threefold.

One is, just recently, the trade figures were released—I believe it was last Wednesday—showing that the United States had record projections for trade deficits with our trading allies. We have a trade deficit with the Germans, a trade deficit with the Chinese, a trade deficit with the Japanese, and one of the few areas where we have a trade surplus is in our aeronautical area with the Boeings and the McDonnell Douglases and the ancillary aeronautical firms that trade overseas, whether it be to Saudi Arabia, whether it be to China and Russia in the future, or whether, as announced in *The Wall Street Journal* this morning, that it be with the Taiwanese.

I certainly think that we need to continue to support this industry, especially, getting into my second reason for offering the amendment, because the other countries, such as the Europeans, are supporting airbus and competing industries. The airbus industry gets a host of subsidies, a host of help, a host of assistance and aid, and we cannot leave our industry high and dry simply to say to them: we don't have the wherewithal, we don't have the means, we don't have the financial support to help you in an increasingly competitive world economy.

It's not only the airbus that gets substantial amount of help; it's new fledgling industries coming from countries such as Japan and South Korea that will be developing all kinds of new aeronautical products that will be competing with our already successful products, and I—and I hasten to add, Mr. Chairman, that we used to have in 1970 100 percent of the field in aeronautics in our trade balance. Right now our market share has shrunk to 50 percent in 1995. I think $30 million going into this area would certainly help us with our trade balance and certainly help us with respect to our allies' support to their industries.

Let me list off a couple of the things that we accomplish by the $30 million. This helps future generations of subsonic aircraft. It helps develop advanced materials and composites for better efficiency, lower cost, as well as improved safety. It will help improve superior wing designs for safety and fuel efficiency, and it helps improve acoustics and noise control. All of the aeronautics research and development is critical, but the subsonics account drives the economy and makes real advancements in the future fields possible.

Finally, the third reason, Mr. Chairman, Hans Morganthal used to talk in international politics about real politics, about the real world, and I know that you will make some—or attempt to make some differences between applied research and basic research. I think the real world would say that we need to keep up with our

allies in terms of their support for their industries. I think we need to keep up with the fledgling industries that are coming into this field in the world. I think we need to keep up in an area where we've had 100 percent of the market and we've let that slip to 50 percent over the last 25 years. I think this amendment is a small way of accomplishing that. It's a budget-neutral way of accomplishing that because it takes the $30 million out of two different accounts to bring it over to the subsonic area.

So I would encourage my colleagues to support this amendment and yield back the balance of my time.

Mr. SENSENBRENNER. Mr. Chairman?

The CHAIRMAN. The gentleman from Wisconsin.

Mr. SENSENBRENNER. Mr. Chairman, I rise in opposition to the amendment.

The gentleman from Indiana, Mr. Roemer, has correctly described the fact that he is reducing two accounts to provide an additional increase in the advanced subsonic technologies program. I point out that the AST program in our bill is increased by 6 percent at a time when practically everything else in NASA is being reduced, and not just below a baseline, but reduced below the 1995 appropriation, and that the move to further reduce the other, more high-risk research accounts to fund the AST disturbs me as we are refocusing NASA to its basic research, its high-risk research area.

I believe the AST program constitutes corporate welfare; so does the CBO. The CBO contends that the benefits from the R&D of this program fall almost exclusively to aircraft manufacturers, their suppliers, and the airlines. And a review of NASA's budget request yields programmatic descriptions of AST elements which don't lend themselves to be interpreted otherwise.

But despite how you may judge the merits of this program, a near 30 percent increase from Fiscal 1995 appropriations at a time when we seek to refocus NASA toward basic research is unwarranted. H.R. 2043 funds the program at $133 million for Fiscal 1996, an increase slightly more than 6 percent. The Roemer amendment would increase it 30 percent, at the expense of the research and technology base which has already been reduced some $65 million from Fiscal 1994 and the high-speed research program as well. These two research programs that the gentleman from Indiana seeks to further reduce are those that are essential to the development of the next generation of aircraft. So what the gentleman from Indiana does is proposes to fund something today at the expense of something that might be very necessary tomorrow in order to continue exporting American-made aircraft overseas.

Now we've heard one theme in support of the Roemer amendment: that if it isn't passed and we don't put more money in this program, the American aerospace industry would surrender its leadership to foreign state-subsidized companies. Does that mean we have to underwrite our aerospace industry in order to be competitive? I would hope not. We all want to see American manufacturers outperform their competition, but I don't think we need to utilize the types of methods that the foreign governments have done with their aerospace industry.

What the Roemer amendment seeks to do is to plus-up the AST program almost 30 percent. Our bill increases AST 6 percent over

last year's funding level, but allows for increases in expenditures, provided the cost of utilization of Federal facilities is reimbursed—reimbursed by those who benefit from the research. I think that's the way we ought to be doing business. It's the way that shares the risk with industry, and I don't think we need to cut the other accounts to provide them $30 million more.

I yield back the balance of my time.

The CHAIRMAN. The gentleman yields back the balance of his time. Are there other members that wish to be recognized on the Roemer amendment?

Mr. BROWN. Mr. Chairman?

The CHAIRMAN. The gentleman from California.

Mr. BROWN. I would like to speak briefly in support of the Roemer amendment, and I do so for a number of reasons. It does illustrate the very difficult choices that we have to make under the constraints that we are told are necessary at this particular time, and it's highly debilitating on the programs to have to make the kind of cuts that we're making.

I had, of course, in my own substitute restored the funding that Mr. Roemer's amendment proposes to restore, along with a number of others, but to do that I had to go above the so-called caps that the chairman had set for what we could do here and go up to the level included—up to the level of the Senate authorization bill, which has already been passed by the subcommittee. But we are, apparently, not at liberty to make these kinds of changes in this committee.

Let me recount a brief anecdote. I came in last night on a plane from California, and for the first time in my experience the plane had to make three passes at the field before it landed. And I was a little unnerved at seeing us almost hit the ground and then zoom off again, and I was told in a comforting voice from the cockpit that there were problems on the ground, that he had been ordered to take off again before he could land. Now it is in an effort to avoid problems of that sort that we are doing research on improved air terminal traffic management, which is included in this particular item that Mr. Roemer seeks to increase to a slightly higher level.

I think every member of this committee ought to be supportive of that kind of research, which is only part, of course, of the research that is included in this bill. The other programs, of course, are aimed at keeping America's leadership role in the commercial market in terms of aircraft development, but we have to look at these, as we all know and have discussed in this committee, as part of a larger system, and that larger system includes the terminals and the system for managing aircraft on the ground, as well as improving the quality of the aircraft in the air.

I was struck last night by the need for doing this kind of thing and the possible impact that the failure to do so might have on Members of Congress, and I wasn't the only one on the plane. So while I don't normally make ad hominem arguments like this, I would like to do so in this case, in the hopes of influencing a few people whose concerns for their own lives might lead them to support this additional research.

The CHAIRMAN. Mr. Tiahrt?

Mr. TIAHRT. Thank you, Mr. Chairman.

I am concerned about increasing the funding here because I think there's a number of programs that NASA is funding that goes beyond basic research, like the Interior Noise Reduction Program, the Technology Integration and Environmental Assessment, Composite Wing, Fly by Light, Powered by Wire, Community Noise Impact—and I can't speak for all of those, but in the area of Composite Wing I know that we have approximately 180 A-6 aircraft that are flying on composite wing today. The B-2 is a composite wing aircraft. The Beech Starship, which over 50 were built, is a composite wing aircraft. The F-22 employs—employs composites. The 777, Boeing 777, has an impanosure, a horizontal stabilizer, that is a composite wing.

This, for example, is not a basic research item. We have aircraft that are in the air now that are flying. And so I think we kind of walk a fine line between basic research and applied research, but I think that increasing the funding here is overstepping what basic research is, and I think it would be better applied to supersonic aeronautics, other areas that are truly basic research. And so I would oppose the Roemer amendment.

I yield back the balance of my time.

The CHAIRMAN. Are there other members that wish to be recognized on this amendment?

[No response.]

If not, the Chair is prepared to close the debate. The gentleman from California raises the point that our lives may be at stake in this amendment. The Chair has also been waved off a couple of times when he's been flying in. It turned out it was just bad piloting, not—not problems on the ground, and I'm not so certain that Mr. Roemer's amendment solves that particular problem.

Mr. ROEMER. If it will get me your vote, Mr. Chairman—

[Laughter.]

The CHAIRMAN. You'll—you'll take up the issue of bad piloting, too?

The gentleman's amendment seeks to increase an applied research program at the expense of two other basic research programs in the field of aeronautics. His very laudable goal is for the U.S. aerospace industry to retain the leadership which it has held for so long. Unfortunately, while that may be his goal, this is a step backwards rather than forwards. To increase the funding and focus in applied research programs such as AST perpetuates the very practices which have caused our leadership to deteriorate. Basic research is NASA's forte; that's what NASA does well, and that's where we ought to be directing the effort, so that we can maintain our leadership in the future. NASA is the right place to open up new possibilities in the field of aeronautics. That's the step forward and that's the steps that we ought to be taking. In the subcommittee bill we direct the money in a way that allows us to take those steps forward.

With that, the Chair will put the question. Those in favor of the amendment will say aye. Those opposed will say no. In the opinion of the Chair, the noes have it.

Mr. ROEMER. I'd ask for a roll call vote, Mr. Chairman.

The CHAIRMAN. The gentleman from Indiana requests a roll call vote. The clerk will call the roll. A "no" is heard from the back room before the clerk can—

The CLERK. Mr. Walker.
The CHAIRMAN. No.
The CLERK. Mr. Sensenbrenner.
Mr. SENSENBRENNER. No.
The CLERK. Mr. Boehlert.
[No response.]
The CLERK. Mr. Fawell.
Mr. FAWELL. No.
The CLERK. Mr. Fawell votes no.
Mrs. Morella.
Mrs. MORELLA. No.
The CLERK. Mrs. Morella votes no.
Mr. Weldon of Pennsylvania.
[No response.]
The CLERK. Mr. Rohrabacher.
[No response.]
The CLERK. Mr. Schiff.
[No response.]
The CLERK. Mr. Barton.
[No response.]
The CLERK. Mr. Calvert.
[No response.]
The CLERK. Mr. Baker.
Mr. BAKER. No.
The CLERK. Mr. Baker votes no.
Mr. Bartlett.
Mr. BARTLETT. No.
The CLERK. Mr. Bartlett votes no.
Mr. Ehlers.
[No response.]
The CLERK. Mr. Wamp.
Mr. WAMP. No.
The CLERK. Mr. Wamp votes no.
Mr. Weldon of Florida.
Mr. WELDON OF FLORIDA. No.
The CLERK. Mr. Weldon votes no.
Mr. Graham.
Mr. GRAHAM No.
The CLERK. Mr. Graham votes no.
Mr. Salmon.
[No response.]
The CLERK. Mr. Davis.
Mr. DAVIS. No.
The CLERK. Mr. Davis votes no.
Mr. Stockman.
Ms. STOCKMAN. No.
The CLERK. Mr. Stockman votes no.
Mr. Gutknecht.
Mr. GUTKNECHT. No.
The CLERK. Mr. Gutknecht votes no.
Mrs. Seastrand.

Mrs. SEASTRAND. No.
The CLERK. Mrs. Seastrand votes no.
Mr. Tiahrt.
Mr. TIAHRT. No.
The CLERK. Mr. Tiahrt votes no.
Mr. Largent.
Mr. LARGENT. No.
The CLERK. Mr. Largent votes no.
Mr. Hilleary.
Mr. HILLEARY. No.
The CLERK. Mr. Hilleary votes no.
Mrs. Cubin.
Mrs. CUBIN. No.
The CLERK. Mrs. Cubin votes no.
Mr. Foley.
Mr. FOLEY. No.
The CLERK. Mr. Foley votes no.
Mrs. Myrick.
Mrs. MYRICK. No.
The CLERK. Mrs. Myrick votes no.
Mr. Brown.
Mr. BROWN. Yes.
The CLERK. Mr. Brown votes yes.
Mr. Hall.
Mr. HALL. Yes.
The CLERK. Mr. Hall votes yes.
Mr. Traficant.
[No response.]
The CLERK. Mr. Hayes.
[No response.]
The CLERK. Mr. Tanner.
Mr. TANNER. Aye.
The CLERK. Mr. Tanner votes yes.
Mr. Geren.
[No response.]
The CLERK. Mr. Roemer.
Mr. ROEMER. Aye.
The CLERK. Mr. Roemer votes yes.
Mr. Cramer.
Mr. CRAMER. No.
The CLERK. Mr. Cramer votes no.
Mr. Barcia.
[No response.]
The CLERK. Mr. McHale.
Mr. MCHALE. Aye.
The CLERK. Mr. McHale votes yes.
Ms. Harman.
Ms. HARMAN. Aye.
The CLERK. Ms. Harman votes yes.
Ms. Johnson.
Ms. JOHNSON. Aye.
The CLERK. Ms. Johnson votes aye.
Mr. Minge.
Mr. MINGE. Aye.

The CLERK. Mr. Minge votes aye.
Mr. Olver.
[No response.]
The CLERK. Mr. Hastings.
[No response.]
The CLERK. Ms. Rivers.
Ms. RIVERS. Aye.
The CLERK. Ms. Rivers votes aye.
Ms. McCarthy.
[No response.]
The CLERK. Mr. Ward.
Mr. WARD. Aye.
The CLERK. Mr. Ward votes aye.
Ms. Lofgren.
Ms. LOFGREN. Aye.
The CLERK. Ms. Lofgren votes aye.
Mr. Doggett.
[No response.]
The CLERK. Mr. Doyle.
Mr. DOYLE. Yes.
The CLERK. Mr. Doyle votes yes.
Ms. Jackson Lee.
[No response.]
The CLERK. Mr. Luther.
Mr. LUTHER. No.
The CLERK. Mr. Luther votes no.
Mr. WELDON of Pennsylvania. Mr. Chairman, how am I recorded?
The CLERK. Mr. Weldon is not recorded.
Mr. WELDON of Pennsylvania. No.
The CLERK. Mr. Weldon votes no.
Mr. ROHRABACHER. Mr. Chairman, how am I recorded?
[Laughter.]
The CLERK. Mr. Rohrabacher is not recorded.
Mr. ROHRABACHER. No.
Mr. SALMON. Mr. Chairman, how am I recorded?
The CLERK. Mr. Salmon is not recorded.
Mr. SALMON. I vote no.
The CLERK. Mr. Chairman, yes, 13; no, 24.
The CHAIRMAN. The amendment is not agreed to.
[The roll call on Roemer amendment follows:]

COMMITTEE ON SCIENCE - 104TH CONGRESS ********** ROLL CALL (3)

SUBJECT: HR 2043: Amendment Offered by Ms. Roem

Rm.	Phone	Name	Present	Absent	Yes	No	Not Voting
2369	52411	Mr. Walker, R-PA				1	
2332	55101	Mr. Sensenbrenner, R-WI				2	
2246	53665	Mr. Boehlert, R-NY					✓
2159	53515	Mr. Fawell, R-IL				3	
106	55341	Mrs. Morella, R-MD				4	
2452	52011	Mr. Curt Weldon, R-PA				(X)	✓
2338	52415	Mr. Rohrabacher, R-CA				(X)	✓
2404	56316	Mr. Schiff, R-NM					✓
2264	52002	Mr. Barton, R-TX					✓
1034	51986	Mr. Calvert, R-CA					✓
1724	51880	Mr. Baker, R-CA				5	
322	52721	Mr. Bartlett, R-MD				6	
1717	53831	Mr. Ehlers, R-MI					✓
423	53271	Mr. Wamp, R-TN				7	
216	53671	Mr. Dave Weldon, R-FL				8	
1429	55301	Mr. Graham, R-SC				9	
115	52635	Mr. Salmon, R-AZ				(X)	✓
415	51492	Mr. Davis, R-VA				10	
417	56565	Mr. Stockman, R-TX				11	
425	52472	Mr. Gutknecht, R-MN				12	
1216	53601	Mrs. Seastrand, R-CA				13	
1319	56216	Mr. Tiahrt, R-KS				14	
410	52211	Mr. Largent, R-OK				15	
114	56831	Mr. Hilleary, R-TN				16	
1114	52311	Mrs. Cubin, R-WY				17	
506	55792	Mr. Foley, R-FL				18	
509	51976	Mrs. Myrick, R-NC				19	
2300	56161	Mr. Brown, D-CA			1		
2236	56673	Mr. Hall, D-TX			2		
2446	55261	Mr. Traficant, D-OH					✓
2432	52031	Mr. Hayes, D-LA					✓
1127	54714	Mr. Tanner, D-TN			3		
2448	55071	Mr. Geren, D-TX					✓
407	53915	Mr. Roemer, D-IN			4		
236	54801	Mr. Cramer, D-AL				20	
1410	58171	Mr. Barcia, D-MI			(X)		✓
217	56411	Mr. McHale, D-PA			5		
325	58220	Ms. Harman, D-CA			6		
1123	58885	Ms. Johnson, D-TX			7		
1415	52331	Mr. Minge, D-MN			8		
1027	55335	Mr. Olver, D-MA					✓
1039	51313	Mr. Hastings, D-FL					✓
1116	56261	Ms. Rivers, D-MI			9		
1232	54535	Ms. McCarthy, D-MO					✓
1032	55401	Mr. Ward, D-KY			10		
118	53072	Ms. Lofgren, D-CA			11		
126	54865	Mr. Doggett, D-TX					✓
1218	52135	Mr. Doyle, D-PA			12		
1520	53816	Ms. Jackson Lee, D-TX					✓
1419	52271	Mr. Luther, D-MN				21	
		TOTAL			13	24	

Attest: Patricia Schwartz (Clerk)

The CHAIRMAN. Ms. Harman is recognized for the next amendment.

Ms. HARMAN. Thank you, Mr. Chairman. My amendment, I believe, is in the packet.

[The amendment follows:]

H.L.C.

AMENDMENT TO H.R. 2043
OFFERED BY MS. HARMAN

Page 13, after line 18, insert the following new section:

1 **SEC. 106. ADDITIONAL AUTHORIZATION AND CORRESPOND-**
2 **ING REDUCTION.**

3 (a) AUTHORIZATION.—In addition to amounts au-
4 thorized by section 102(a)(3), there are authorized to be
5 appropriated to the National Aeronautics and Space Ad-
6 ministration for fiscal year 1996 for Mission to Planet
7 Earth $274,360,000, to be derived from amounts other-
8 wise authorized by this Act.

9 (b) OPERATING PLAN.—The Administrator shall,
10 within 30 days after the later of—

11 (1) the date of the enactment of this Act; and
12 (2) the date of the enactment of the Act mak-
13 ing appropriations for the National Aeronautics and
14 Space Administration for fiscal year 1996,

15 transmit to the Committee on Science of the House of
16 Representatives and the Committee on Commerce,
17 Science, and Transportation of the Senate an operating
18 plan which identifies which amounts will be transfered
19 purusant to subsection (a).

Ms. HARMAN. Mr. Chairman, you will recall that we discussed this amendment at the subcommittee level, where I did not ask for a vote. I have added some clarifying language to it to make clear that it is deficit—or budget-neutral, and would not present it for discussion.

In another context, I am known as the "mother of lockbox," and with regard to Mr. Sensenbrenner's comments earlier, I would like to be known here as the "mother of chicken little." And you may not know this, but chicken little's mother told him not to overstate—

Mr. SENSENBRENNER. Will the gentlewoman yield?

Ms. HARMAN. Yes, I—

Mr. SENSENBRENNER. Looking at your dress, we will refer to you as "the little red hen" from now on.

Ms. HARMAN. Thank you.

[Laughter.]

Well, little red hen and her mother understood that they should not overstate the consequences of certain actions, but they should not understate them, either, and in that context I offer this amendment to restore funding for the Mission to Planet Earth.

In subcommittee I read a statement from NASA Administrator Goldin in support of full funding of the Mission for Planet Earth. I'd just like to read briefly two excerpts from other statements on this subject now.

The first of them, from Senator Burns, who chairs the Senate Space Subcommittee, the counterpart to our subcommittee, says, "Mission to Planet Earth is NASA's $7 billion satellite program aimed at studying how the oceans, land, and atmosphere work as a system in order to understand and predict global climate change. For those of us representing farm States, weather and water are our lifeblood. Mission to Planet Earth promises dramatic improvements in our ability to predict climate change and manage our scarce water resources. If those expectations are met, the program will easily pay for itself in lives and property saved and improved water management."

And the second statement, excerpts of the statement, is from Senator Pressler, chairman of the Senate Commerce Committee, on introducing the NASA Authorization Act for this Fiscal Year in the Senate in which full funding for Mission to Planet Earth is included, and he says and I quote:

"I believe Mission to Planet Earth may be NASA's most important and relevant program. The satellite data from Mission to Planet Earth will deliver direct benefits to the taxpayer in contrast to the speculative spinoffs promised by other space activities. For this reason, the bill fully funds this activity at the requested level of $1.36 billion."

Mr. Chairman, we've discussed this in the past, and I've certainly heard your views and those of Mr. Sensenbrenner. Let me just briefly add a few points.

First of all, as chicken little's mother or Red Riding Hood's mother would say, in a balanced form, we don't gut Mission to Planet Earth by these cuts, but this is what we do by these cuts or what would happen: Mission to Planet Earth's space segment would be effectively cancelled, both EOS PM, which is designed to enable

fundamental improvements in long-term climate and short-term weather prediction, would be cancelled and so would EOS Chemistry, designed to provide unique and critical measurements of ozone and pollution. EOS's common spacecraft would be cancelled, thereby eliminating the comprehensive and integrated nature of Mission to Planet Earth. And, finally, EOS DIS, which is EOS Data and Information System, would be effectively eliminated and replaced with nonintegrated ground systems for individual missions.

I think that these decisions on our part are premature in light of the fact that the National Academy of Science is presently studying Mission to Planet Earth at your request, and in light of the fact that already $10 billion in projected funding through the year 2000 have been—has been cut by the Clinton administration. Let's remember that this is a program that developed in the Reagan and Bush administrations. It has enormous support in many of our communities, and it will yield enormous results both in terms of weather prediction, so that we can avoid tragedies caused by hurricanes, and so forth, and in terms of the ability, as the Senators have stated, to plan orderly economic development in farming and other things. And so—and, finally, it would also yield benefits for true scientific risk assessment, which many of us on this committee strongly support.

In conclusion, I suggest that cuts are appropriate, but we should be even-handed. These cuts proposed in your bill to Mission to Planet Earth are premature and disproportionate.

The CHAIRMAN. The time of the gentlelady has expired.

The gentleman from Maryland is—

Mr. BARTLETT. Mr. Chairman, I have at the desk an amendment to Ms. Harman's amendment. Might I ask that it be distributed and I be given time to support it?

The CHAIRMAN. The gentleman is recognized.

Mr. BARTLETT. Thank you very much. Shall I wait until the amendment—

The CHAIRMAN. Yes, let's have the amendment distributed. The gentleman will withhold.

The gentleman from Michigan is recognized for a unanimous consent request.

Mr. EHLERS. Well, Mr. Chairman, I regret that I was detained in getting back here. I'd like to have unanimous request to have the record show that, had I been present, I would have voted no on the Roemer amendment.

The CHAIRMAN. The record will so state.

Mr. EHLERS. Thank you.

The CHAIRMAN. The gentleman from Maryland.

Mr. BARTLETT. Thank you very much.

[The amendment follows:]

AMENDMENT OFFERED BY MR. BARTLETT
TO THE AMENDMENT OFFERED BY MS. HARMAN

(c) LIMITATION ON OBLIGATION AND EXPENDITURE.—None of the funds authorized by subsection (a) shall be available for obligation or expenditure until—

(1) the National Academy of Sciences has conducted a comprehensive review of the Mission to Planet Earth program as part of its study of the United States Global Change Research Program;

(2) the Administrator has reported to the Committee on Science of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate a plan for implementing the study's recommendations; and

and a formal request for all or part of such funds

(3) 90 legislative days have passed after the report is transmitted under paragraph (2).

Mr. BARTLETT. Mr. Chairman, it's been suggested that the mark prejudges the results of the study from the National Academy of Sciences. I think that it's more appropriate to say that, considering the restraints of the legislative agenda, that it was necessary to, in a sense, anticipate the results of the study.

What—what my amendment does—and it follows immediately after the language of the—Ms. Harman's amendment—is simply to add a paragraph saying, ''Limitation on Obligation and Expenditure.'' And what it does is to recognize that it would be appropriate to wait for the results of the—of the study before making definitive decisions about how the money shall be spent, and that, No. 2 under that, the Administrator then has an obligation to look at the report, to study the report, and to—and to make a recommendation to the Congress as to how the monies ought to be spent.

It's my understanding that, if at that time the Congress agreed with the Administrator, that there could be informally a letter sent authorizing him to proceed with his recommendation. In the event that there was an element of disagreement between the Congress and the Administrator, paragraph (c) allows for 90 legislative days in which the Congress could then proceed to enact specific legislation that would serve as a guide to the Administrator on how these funds were to be appropriated, were to be spent. I believe that this is a relatively noncontroversial amendment, acceptable, I believe, to Ms. Harman and to the chairman. And with that, sir, I would yield back the balance of my time.

The CHAIRMAN. Would the gentleman from Maryland wish to yield to the gentlelady from California for purposes of allowing her—of course, I can recognize her on the Bartlett amendment—

Mr. BARTLETT. I would be happy to yield.

Ms. HARMAN. I'll just take a moment, Mr. Chairman.

I'd like to commend Mr. Bartlett for his very constructive role here and to say that, certainly, my view is that our action here is premature. It is not that it is—I forget what the other word was that you used, but that we're—that it is prejudicial, but it—I forget what word you used. But, at any rate, I think it's premature and I think the National Academy of Sciences is a very competent body to reassess this program, and I'm very comfortable fencing this money until that study is concluded.

I would have two technical questions which I'd like to put to you or to the chairman about this amendment and would hope we could get some answers, but I am certainly enthusiastic about it.

The CHAIRMAN. Okay, well—

Ms. HARMAN. If I could find it—they just relate, Mr. Chairman, to what the definition of ''legislative day'' is for purposes of understanding this amendment; and, secondly, what the definition of ''formal request'' is in another part of this amendment.

The CHAIRMAN. Well, legislative days are days in which the House is in session.

Ms. HARMAN. Does that include days in which the Senate's in session? I just want to be clear that we understand. The other body—

The CHAIRMAN. Yes, it does.

Ms. HARMAN. Okay. And what does ''formal request'' mean?

The CHAIRMAN. Well, my guess is that this would be in the form of a reprogramming request since the appropriations process will be finished by the end of that time.

Ms. HARMAN. But we would have, would we not—I know this is premature—we would have—this money would be authorized and perhaps appropriated, and it would be fenced, so it would have to be re—I'm confused by what that means.

The CHAIRMAN. Under the language of the amendment, as I understand it, none of the funds would be authorized until all of these steps had been taken, and the formal request, since by that time we would assume that the appropriations process would be completed, that that formal request would be in the—probably in the form of a reprogramming request for the monies, because, obviously, under your amendment you don't increase the ceilings. So that now—

Ms. HARMAN. Right.

The CHAIRMAN. The Administrator would have to come back and say where he was going to cut other monies in order to fund Mission to Planet Earth if, in fact, that were his choice. And so that—that would be, in effect, a reprogramming request, would be the formal request from the Administrator.

Ms. HARMAN. Is—I would just ask Mr. Bartlett if that could be—because we're talking, I thought, about authorizing funds, but fencing them—and I agree with you about the offsets, Mr. Chairman—fencing them until certain steps have been taken.

Mr. BARTLETT. It's the language—reclaiming my time, the language of the amendment says that none of the funds authorized by subsection (a) shall be available for obligation or expenditure until—

Ms. HARMAN. Right.

Mr. BARTLETT. So we have these—the nuances of these different words, yes, thank you.

Ms. HARMAN. Thank you.

Mr. SENSENBRENNER. Mr. Chairman.

The CHAIRMAN. The gentleman from Wisconsin.

Mr. SENSENBRENNER. Mr. Chairman, I am prepared to accept the Bartlett amendment, and the reason I'm prepared to do so is that this, in effect, postpones a decision on, No. 1, the expenditure of funds above the subcommittee reported bill on Mission to Planet Earth until some future time, and it also requires the NASA Administrator to specifically state in a reprogramming request where he intends to take the money out of.

The concern that I have with not being specific is that NASA could very easily fall into the trap of stretching out programs that it has. This is the slippery slope that has discredited NASA's financial management in the past and will continue to discredit NASA's financial management in the future unless it's stopped, either by Congress or by NASA or both. Stretch-outs mean that the time of completion of the projects will be delayed. The infrastructure, which includes the engineers on the payroll, will be there at the same cost, and the longer we stretch these programs out, the longer the meter will be ticking and the most cost overruns that NASA will experience, and the more the existing programs will be placed in jeopardy.

So it seems to me that what the Bartlett amendment does is force Mr. Goldin to make a determination on whether or not a stretch-out would be fatal to existing NASA programs in order to get more money into Mission to Planet Earth. So he's going to have to make that decision before we do. I'm willing to accept the Bartlett amendment and force him to make that decision, but I think that it's a decision that's going to have to be made because, again, as I said in my opening remarks, we don't legislate here in the abstract; we're legislating here with a finite number of dollars, and we're going to have to set priorities, and this means that the Administrator will recommend priorities and then it will be up to us to determine whether we agree or disagree with those priorities.

I yield back the balance—

Ms. HARMAN. Will the gentleman yield?

Mr. SENSENBRENNER. I yield to the gentlelady from California.

Ms. HARMAN. I—I agree with the thrust of your remarks. I have always agreed with them, and I am worried, as you are, about one program gobbling up another program, and I am in favor of a balanced NASA. I think that, as you do, that what Mr. Bartlett is offering helps make sure that this does not occur—

Mr. SENSENBRENNER. Are you—are you going to accept the Bartlett amendment?

Ms. HARMAN. —and I would accept the Bartlett amendment to my amendment.

Mrs. MORELLA. Mr. Chairman.

The CHAIRMAN. The gentlelady from Maryland.

Mrs. MORELLA. Thank you.

The CHAIRMAN. Oh, I'm sorry.

Mrs. MORELLA. Thank you, Mr. Chairman. I just briefly want to commend Mr. Bartlett for crafting what I consider to be a very sensible, responsible amendment that is going to allow science to prevail.

Thank you, Mr. Bartlett.

The CHAIRMAN. Thank you, Ms. Morella.

Mr. Brown.

Mr. BROWN. Mr. Chairman, let me say that I thoroughly support the Bartlett amendment and the underlying Harman amendment, and I am also quite aware of the problems which Mr. Sensenbrenner has enunciated with regard to the bow wave effect and the difficult managerial problem that we have at NASA.

May I just again, for portatory reasons more than anything else, say that that problem will never be solved as long as NASA does not have a stable budget expectation. You cannot create a management plan for what you're doing if at the end of each year the underlying assumptions under which you made that budget plan are changed, and that's been happening to NASA now for the last 10 years. You—we've all experienced it, those of us who have been here for 10 years, on the Space Station. They—not the authorizing committee in that case, it was the Appropriations Committee redesigned the Space Station year after year. The five-year projections by the administration for NASA have changed each year, and it is that indeterminate situation that causes NASA probably to erect a little cushion of, we'll say, somewhat more on their agenda than they know they can expect, in the hope that they can get a little

more money than what experience has shown that they're likely to get.

Now the—the positive effect, aspect of what we're doing is we're all thinking in long-term budgetary terms. We're adopting five-year, seven-year, and in the case of the President ten-year budget plans which we hope will create some stability, will create a glide slope on which we can depend. I would be delighted if we could do that. It has never happened yet.

And I would just urge that we, instead of castigating NASA for their flaws—and they are many and we want to keep them under close review—we should recognize that we play a part in this also, and seek to provide that stability which I know the chairman has announced support for, and I've said before, and Mr. Sensenbrenner has indicated before, that the program badly needs, if we are going to maintain our leadership in space amongst the nations of the world.

Mr. WELDON of Pennsylvania. Mr. Chairman? Mr. Chairman, I thank you for yielding. I'll be brief.

Let me say at the outset I would have had a problem supporting the original Harman amendment, but I think the perfecting amendment by Mr. Bartlett is well considered and places the appropriate controls on this funding to allow us to revisit the issue, and I say that in spite of the shortsighted decision of the Lockheed-Martin Company to move 2,000 jobs in this program out of southeastern Pennsylvania. So I will support the Bartlett amendment.

Thank you.

The CHAIRMAN. Is there anyone else who wishes to be recognized? Mr. Roemer?

Mr. ROEMER. Thank you, Mr. Chairman.

I supported the gentlelady from California's amendment in subcommittee, and I think it made a lot of sense then. I think Mr. Bartlett's amendment might be the best that we can do in full committee, and I would support Mr. Bartlett's amendment to the gentlelady's amendment because I think it's very important to continue this program. This program has a great deal of effect on the development of future telecommunications technology, of predicting weather. Predicting weather affects about 25 percent of the GDP in the United States of America. And for those reasons, I think it's important to work on and support the compromise that's been worked out here.

I would say, just as an aside, in reflecting upon Mr. Brown's remarks, that we will continue to be faced with these programs with a decline—these programs and their funding levels as we face the declining NASA budget. We have tried to delay and deflect those decisions by separating the authorization into two separate authorizations, one on Space Station, one on the rest of NASA. We have tried to do it now by fencing this EOS language. In the future it's going to be more and more difficult to have a balanced NASA and continue to have a Space Station and every other thing that we want to put into NASA. We're going to have to make some tough choices.

It's been said before, I think, that we've got to make those tough choices. We can't deflect them onto other people, and I think this is the best compromise that can be worked out at this point, but

I think this one has a tendency to potentially fall apart in the future.

With that, I yield back the balance of my time.

The CHAIRMAN. The gentleman yields back the balance of his time. Are there other members who wish to be heard on the Harman amendment or the underlying—the underlying Harman amendment or the Bartlett amendment thereto?

[No response.]

If not, the Chair is prepared to close the debate. The—the Chair is going to accept the Bartlett amendment and then the Harman amendment as modified, if the Bartlett amendment is accepted. But I do want to make it clear exactly what's happening here. We are—we are at that point authorizing no additional funds for Mission to Planet Earth. We will allow additional funds to be considered in the future, should—after the report of the—the NAS report, and it seems to me that is—that is something which is positive here, because we want to take that report seriously, but the Administrator will have to come back with a reprogramming request in order to have additional money allocated.

The other thing that strikes me as being helpful about the approach that the gentlelady and the gentleman have worked out is the fact that I do believe that probably when we have finished conference with the Senate, and so on, that we will probably have an appropriation that will be somewhat higher in this program than what we are presently—have in this bill. And so, therefore, this would accommodate a somewhat higher—higher funding profile.

But I want to get to the question somewhat raised by Mr. Roemer and also raised by Mr. Brown. We need a funding profile for this program which is sustainable. If we don't have a funding profile for this program which is sustainable, at some point the whole thing is going to collapse because we're not going to have money for—for all kinds of big programs. We have attempted in what we put forward in the subcommittee bill to come up with a funding profile that we believe takes us to a sustainable level out through the completion of this program, and I think this committee has an obligation to move in that direction.

Secondly, we are trying to do the same thing in programs like Space Station. Space Station—this committee approved a seven-year authorization. That is an attempt to have a sustainable program for that entire period of time. I've had very positive conversations with the authorizers on the Senate side about that bill. I think we might be able to achieve that, and it seems to me moves us in the direction. I would ultimately like to do big programs, including Mission to Planet Earth, in that way, but they have to be within a funding level which is sustainable.

We also need to recognize with this amendment, and with the potentials that this amendment holds, that this committee may be faced with some—some very crucial decisions on that reprogramming. If you assume the full amount of this reprogramming request, we already know what the appropriators did when they had to assume the full funding level for Mission to Planet Earth. It cost us field centers. It cost us the Cassini program. It cost us the SOFIA program, most of the science programs. So when they reprioritized in order to handle this program, it was

not something that I felt comfortable with as chairman of the authorizing committee.

If you assume that what the Administrator would do is not go target programs in the same manner, but go for an across-the-board kind of approach to this—just understand that would cut the human space flight account by $105.7 million, meaning that $40 million would come out of Space Station. So it's a sustainable program that we've designed for Space Station—would be undercut by this approach. We would take $115 million out of science, aeronautics, and technology. We would take $37.5 million out of space science, life in—the life programs, and so on, would take $9.7 million; aeronautics taking $17.5 million; mission support would take $52.4 million. And so the Administrator is going to have a very tough thing to do to implement this, and we just need to understand that accepting this approach we are not necessarily accepting any more money for Mission to Planet Earth unless the Administrator decides specifically to make some very tough decisions with regard to other programs.

Now having said that, the Chair is prepared to—to accept both the Bartlett and the Harman amendment. We would put the question first on the Bartlett amendment. Those in favor will say aye.

Those opposed will say no.

The ayes have it. The question is now on the Harman amendment as amended by the Bartlett amendment. Those in favor will say aye.

Those opposed will say no.

The ayes have it. The Harman amendment is—is agreed to.

The next amendment is the Lofgren amendment.

Ms. LOFGREN. Thank you, Mr. Chairman. I believe the amendment is in the packet.

[The amendment follows:]

AMENDMENT TO H.R. 2043
OFFERED BY MS. LOFGREN

Page 17, lines 12 through 19, amend subsection (e) to read as follows:

1 (e) RECONFIGURATION OR CLOSING OF FIELD CEN-
2 TERS.—The Administrator shall not—
3 (1) close any National Aeronautics and Space
4 Administration field center; or
5 (2) reconfigure any National Aeronautics and
6 Space Administration field center in a manner which
7 would change the enterprises of such center,
8 until after the asset-based review report is transmitted
9 under subsection (c), and may do so only after enactment
10 of legislation implementing the Administrator's rec-
11 ommendations. The Administrator may only close field
12 centers that would become obsolete as a result of the im-
13 plementation of the Administrator's recommendations
14 pursuant to subsection (d).

The CHAIRMAN. The lady is recognized for five minutes.

Ms. LOFGREN. Thank you very much.

I don't think this should be a highly controversial amendment, nor should it be divided from one side of the aisle to the other. The bill already provides that the Administrator may not close fields until after the asset-based review provided for in section (c), and I agree with that.

The reason why I've suggested this amendment is that it is possible to reconfigure your way into essentially the same thing without saying it's a closure, and I think both the majority and the minority want to make sure that we get a report that follows the review of assets that has the plan before this goes forward. And if we do not make it clear that reconfiguring to the extent that the major enterprise of the centers also needs to be subsequent to an asset review, then I think we will not accomplish, or potentially may not accomplish, our goals.

The amendment wouldn't affect any of the time tables in the bill. It doesn't affect any of the money in the bill. It's budget-neutral. The intention is basically to support what is already in the bill. It is not meant as a criticism of the Administrator, nor do I think is the section (c) meant to be a criticism, but just a reflection of our need to at least have that asset-based review, which I think is very sound, occur before major changes are made.

And, with that, I would hope that we could approve this even on a voice vote on a bipartisan basis.

Mr. SENSENBRENNER. Mr. Chairman.

The CHAIRMAN. The gentleman from Wisconsin.

Mr. SENSENBRENNER. Mr. Chairman, I rise in opposition to the amendment.

The CHAIRMAN. The gentleman is recognized.

Mr. SENSENBRENNER. I hate to spoil the gentlelady's day, but the problem with this amendment is that it does not allow the Administrator to implement the zero-based review that has been going on in NASA as a way of providing the $5 billion of savings that the President directed the NASA Administrator to come up with in the out-years of the budget.

I think that the procedure that is outlined in subsection (c) of the bill is adequate to provide congressional approval of the proposed closing of any center, but I really think that we tread into the position of congressional micromanagement of NASA, which ended up after all causing huge cost overruns in the Space Station program by not allowing the Administrator to more adequately and more sharply define the missions of the NASA centers.

So because of this effect of the gentlewoman's amendment on the NASA Administrator's ability, basically, to manage his own program, I would hope that this amendment be rejected, and would yield back the balance of my time.

Ms. LOFGREN. Would the gentleman yield?

Mr. SENSENBRENNER. I'm happy to yield.

Ms. LOFGREN. In checking with both the minority and majority staff, I—my staff was not apprised of any concern that this would prevent the restructuring required for the budget that Mr. Goldin has currently underway.

What—the reason why I brought this forward—and this could occur to anybody who has NASA facilities in their state. You could end up with a restructuring that affects a basic mission that is way beyond what is currently envisioned and never really have a report back. It could be—and I don't think that's what our committee wants or what the Congress wants.

Mr. SENSENBRENNER. Well, reclaiming my time, the gentlewoman thinks that this committee and the subcommittee which I chair will be somewhat lax in their oversight over NASA—

Ms. LOFGREN. That was not my intent, sir.

Mr. SENSENBRENNER. And this chairman has never had the reputation of giving Mr. Goldin a pass on anything.

Ms. LOFGREN. I—my comments were not meant as criticism, sir, but they are—the reason why we have an asset-based review and the closure in here is because we need our positions to be identified in law, and that is why I've offered the amendment. And I'm hopeful that in our interest of representing our constituents, we can—

Mr. SENSENBRENNER. Reclaiming my time, the real problem in the gentlewoman's—

The CHAIRMAN. The gentlelady—oh, I'm sorry.

Mr. SENSENBRENNER. It's my time.

The CHAIRMAN. No, I'm sorry.

Mr. SENSENBRENNER. Reclaiming my time, the real problem in the gentlewoman's amendment is sub-subsection (2) which prohibits the Administrator from reconfiguring any NASA field center in a manner which would change the enterprises of such center. Now if that isn't a straitjacket, I don't know what it is.

And I yield back the balance of my time.

The CHAIRMAN. The gentleman yields back the balance of his time. Are there other members that wish to be heard on the Lofgren amendment?

[No response.]

If not, the Chair is prepared to close the debate.

I share the concern that the gentleman from—the gentleman, Mr. Sensenbrenner, has raised. NASA has been asked by OMB to find $4 billion in savings not tomorrow, but yesterday, and the fact is the Administrator is going about doing this and some of what he is talking about is restructuring a number of these centers. Now that's what the zero-based review is all about, to cut costs without cutting missions or closing centers, and, you know, I don't think we ought to be in the way of allowing the Administrator to proceed on that ground. I think that that would undercut him in a very, very significant way.

On the other hand, the purpose behind the asset review that we have in here is to prevent the closing of NASA field centers based upon any kind of political criteria. Decisions like that should at least be based on the useful assets of the center and their contribution to the overall NASA mission. In other words, if a center should be closed, it should only be closed because there's nothing important left to do there.

And so I think that the asset review works in harmony with the zero-based review, but I don't believe that we ought to stand in the way of the Administrator doing what is necessary under the zero-based review to effect the cost savings beginning today and moving

us forward. And so my concern is that the gentlelady's amendment does get in the way of allowing the Administrator the latitude he needs in order to move us forward. The specific language is the reconfiguration language that she has in—if the purpose behind her language was to simply stop the closing of field centers, that would not be a problem here for us, but the reconfiguration question is, in fact, a very real problem for the agency, we would believe.

With that, the Chair will put the question. Those in favor of the Lofgren amendment will say aye. Those opposed will say no. In the opinion of the Chair, the noes have it.

Ms. LOFGREN. Not a roll call vote, but a division, could we just—

The CHAIRMAN. Yes, the gentlelady requests a division on her amendment. Those in favor of the Lofgren amendment will signify by raising their hand.

[Show of hands.]

The clerk will count.

Those opposed—does the clerk have a count? Those opposed will raise their hand.

[Show of hands.]

The clerk will report.

The CLERK. Yeses, 6; no, 23.

The CHAIRMAN. And the amendment is not agreed to.

The next amendment on the list is Mr. Hilleary.

Mr. HILLEARY. Mr. Chairman, I believe this amendment is in the packet.

[The amendment follows:]

AMENDMENT TO H.R. 2043
OFFERED BY MR. HILLEARY

Page 50, after line 19, insert the following new section:

1 **SEC. 215. UNITARY WIND TUNNEL PLAN ACT OF 1949**
2 **AMENDMENTS.**

3 The Unitary Wind Tunnel Plan Act of 1949 is
4 amended—

5 (1) in section 101 (50 U.S.C. 511) by striking
6 "transonic and supersonic" and inserting in lieu
7 thereof "transonic, supersonic, and hypersonic"; and

8 (2) in section 103 (50 U.S.C. 513)—

9 (A) by striking "laboratories" in sub-
10 section (a) and inserting in lieu thereof "labora-
11 tories and centers";

12 (B) by striking "supersonic" in subsection
13 (a) and inserting in lieu thereof "transonic, su-
14 personic, and hypersonic"; and

15 (C) by striking "laboratory" in subsection
16 (c) and inserting in lieu thereof "facility".

The CHAIRMAN. The gentleman is recognized for five minutes.

Mr. HILLEARY. Mr. Chairman, it's my hope that this truly will be noncontroversial. It's a—it's just a very few technical changes in the Unitary Wind Tunnel Plan Act of 1949. And for those on the committee who are not familiar with that act, this was basically an act that authorized wind tunnels in the post-World War II period that just made sure that we were going to keep our post-World War II edge in aerospace, and that—the result has been accomplished. We've had the vast majority of the lion's share of the world aerospace market up until recently, and up until recently we had about 70 percent of it. And now we've begun to fall below—we may this year fall below 50 percent, and what we're hoping is these are very, very—just very technical changes. This is just going to lay the groundwork for future authorization of new wind tunnels, and this is something that NASA believes that we need to have new wind tunnels. A consortium of European companies and the governments have built new wind tunnels, and that's one of the reasons we've begun to lose our—part of our world market share.

And what—to put that down into real terms for this country, every time we lose one percentage point of the global aerospace market, we lose about 44,000 jobs in this country. So what this does is just simply update some of the language, mostly putting in language that would apply to technology of today and the—they could look at the—each Member can look at the very small changes in wording in the amendment itself.

I'd just like to say that there is a study going on now which has been funded, which was voted on by this Congress, which will determine the plan for any new wind tunnel authorization that would take place, and it's our hope that that will give us a good memorandum of agreement between the NASA Administrator, between DOD and certain industry—industries, aerospace industry officials, that will come up with a plan that will be conducive to actually getting it reauthorized in this committee and the full Congress.

I yield back my time.

The CHAIRMAN. The gentleman—the gentleman yields back the balance of his time. Are there additional members who wish to be heard on the Hilleary amendment? Mr. Brown?

Mr. BROWN. Mr. Chairman, I appreciate the work that the gentleman is doing on wind tunnels, and, obviously, he's given the matter a lot of study and he is correct in that this is a very important factor in our continued superiority in the aerospace industry.

I have only procedural problems with this in the sense that I don't really understand the effect that this would have, and I regret—and I've said this before, and I'm using this amendment as an opportunity to make the point again—that we haven't had the opportunity to have hearings on items of this sort, which change underlying basic legislation and on which we ought to have the views from industry and from the administration and others who would be involved.

Now I'm prepared to believe that the gentleman has on his own made these kinds of efforts to establish the position and that what he's presented to us is a consensus. I'm going to accept that on faith and not object to the bill, but I would like to have his assurances that he will try to establish a little better framework or base

for establishing the need for this and the direction that he's going, and that if he has neglected by oversight to do so, that perhaps we could correct this in the further progress of his language in conference with the Senate.

Mr. HILLEARY. If I could just answer the gentleman, there were hearings on this in which industry leaders indicated a need for this wind tunnel and as well as the NASA Administrator indicated a need for this, and we are in the very embryonic stage of this and we will continue to develop that and answer the concerns of the gentleman.

Mr. BROWN. Well, I'm well aware of the need for wind tunnels. We're hoping to get a couple of them built in California. But I'm not aware of the hearings that the gentleman mentioned, and if the gentleman knows of such hearings, I'd like to have him cite the hearings so that I could review them.

Ms. LOFGREN. Mr. Brown, would you yield for—so I could ask a question?

Mr. BROWN. I yield to the lady.

Ms. LOFGREN. Thank you, Mr. Brown.

I was wondering, Mr. Hilleary, whether or not—I don't have the act that this would amend before me, but whether this would include upgrades in addition to existing wind tunnels, as well as new development. I agree very much that the—our economic competitiveness will be damaged because of the lack of wind tunnels, and already that's happening. We have to go to Europe for testing, and we should have the state of the art right here in the United States. But I also understand that with a much more modest investment we could do an upgrade that wouldn't get us to where we want to be, but would get us to about 80 percent of where we want to be, and I don't see that as where I want to end up. But the question is, would this allow for at least that kind of upgrade while we're pursuing state of the art?

Mr. BROWN. I yield to the gentleman if he wishes to respond to—

Mr. HILLEARY. I'll just say to the gentlelady that this is not authorizing in any way, and that very well may be the end result, upgrading existing wind tunnels, but that's what this study, part of what this study will show, hopefully, is our different options in the way we're going to proceed. And so we'll just have to wait and see on authorization any further steps, I think, until that study is—

Ms. LOFGREN. It wouldn't preclude looking at that, is what I'm saying.

Mr. HILLEARY. No, Ma'am, it would not preclude it.

Ms. LOFGREN. Thank you very much, sir.

The CHAIRMAN. The gentleman from California, Mr. Calvert.

Mr. CALVERT. Thank you, Mr. Chairman. I want to speak in favor of the amendment. Anything that speaks favorably toward wind tunnel construction in this country I think should be accepted. Whether it's built in California or in Tennessee, we certainly need to assist the aerospace industry, and, hopefully, the aerospace industry will also involve themselves in construction of new wind tunnel facilities and someday we can talk about some appropriations on wind tunnel design and construction.

Mr. BROWN. Will the gentleman yield?

Mr. CALVERT. Certainly.

Mr. BROWN. I also have no objections to be—the wind tunnels being in Tennessee or California. I might prefer California, but the process is the important thing. [Laughter.] It ought to be done on a reasonably competitive peer-reviewed basis.

The CHAIRMAN. Are there additional members who wish to be—Mr. Ehlers.

Mr. EHLERS. Thank you, Mr. Chairman. Just a technical question:

Unless I have a defective bill or misunderstand, I don't see where this fits. It says, "On page 50, after line 19, insert," and that doesn't seem like an appropriate place. It's also labeled section 215. There's already a section 215 in the bill. I'd appreciate it if that could be clarified or corrected.

Mr. HILLEARY. If the gentleman will yield—are you referring to this, the amendment itself, and where it would be inserted?

Mr. EHLERS. Where—

Mr. HILLEARY. This is for the Unitary Wind Tunnel Plan Act. It's not the bill under consideration.

The CHAIRMAN. The gentleman from Michigan raises a valid point. The gentleman from Tennessee drafted his amendment in good faith based upon the way the bill had been introduced. It has been modified somewhat since. The problem that the gentleman from Michigan is referring to can be corrected as a part of the technical corrections that would take place. The gentleman meant to insert his amendment at the end of the bill.

Are there other—are there any other questions or comments with regard to the gentleman from Tennessee's amendment?

[No response.]

If not, the Chair is prepared to close the debate. The gentleman's amendment does go far toward updating the Unitary Wind Tunnel Act of 1949. It was last amended in 1958, but today will enter the hypersonic age. When this act was first adopted, the sound barrier had just been broken about two years earlier. The Nation needed new transonic and supersonic research facilities. Today, as we expand our knowledge in the field of hypersonics, this amendment underscores our commitment to basic research and may justify initiatives in the future to provide new hypersonic facilities to the Department of Defense and to America's aerospace industry. And so, therefore, the Chair accepts the gentleman's amendment.

With that, the Chair will put the question. Those in favor of the gentleman's amendment will say aye.

Those opposed will say no.

The ayes have it. The amendment is adopted.

Mr. Rohrabacher.

Mr. ROHRABACHER. Yes, Mr. Chairman, I have a technical amendment at the desk.

[The amendment follows:]

H.L.C.

AMENDMENT TO H.R. 2043

OFFERED BY MR. ROHRABACHER

Page 53, lines 10 through 20, strike subsection (c).

Mr. ROHRABACHER. Mr. Chairman, during the Space and Aeronautics Subcommittee markup of this legislation Mr. Brown raised a question about the language of my amendment to the privatization of microgravity parabolic flight services. The specific concern was that the amendment's language directing the FAA to expedite its licensing of commercial microgravity parabolic flight service operators might trigger a subsequent referral to the Transportation and Infrastructure Committee. The technical amendment before you now strikes the entire subsection dealing with FAA regulation.

Mr. SENSENBRENNER. Will the gentleman yield?

Mr. ROHRABACHER. Yes, sir.

Mr. SENSENBRENNER. This is a very good strike one, and the subcommittee is prepared to accept it.

Mr. ROHRABACHER. Thank you very much.

The CHAIRMAN. Are there any other members that wish to be recognized on the gentleman from—Mr. Rohrabacher's amendment?

[No response.]

If not, the Chair is prepared to close the debate. The gentleman from California is offering this amendment in the nature of a technical correction, and this amendment was adopted in the subcommittee. At that point Mr. Brown did correctly point out that this amendment might cross jurisdictional lines. It, indeed, does, and so, therefore, the gentleman from California is withdrawing the amendment at this point and correcting—

Mr. ROHRABACHER. Mr. Chairman—

The CHAIRMAN. So that we get the bill back to fully jurisdictional in our purview.

Mr. ROHRABACHER. Mr. Chairman, would you be willing—

The CHAIRMAN. I yield to the gentleman.

Mr. ROHRABACHER. To send a letter to the FAA Administrator about this matter, so we can speed up the delay on—

The CHAIRMAN. The gentleman has my assurance on that.

Mr. ROHRABACHER. Thank you very much.

The CHAIRMAN. With that, the Chair will put the question. Those in favor of the Rohrabacher amendment will say aye. Those opposed will say no. The ayes have it. The amendment is adopted.

Mr. Weldon.

Mr. BROWN. Mr. Chairman, I have a parliamentary inquiry.

The CHAIRMAN. The gentleman from California is recognized for a parliamentary inquiry.

Mr. BROWN. I'll postpone it until we get to the appropriate—

The CHAIRMAN. Mr. Weldon.

Mr. WELDON of Pennsylvania. Mr. Chairman, I have an amendment that I—staff I assume will be circulating.

The CHAIRMAN. The Chair—staff will distribute the amendment.

[The amendment follows:]

H.L.C.

AMENDMENT TO H.R. 2043

OFFERED BY MR. WELDON OF PENNSYLVANIA

Page 8, lines 3 and 4, strike ", the Global Observations to Benefit the Environment,".

Mr. WELDON of Pennsylvania. Mr. Chairman, if I may proceed?

The CHAIRMAN. Well, the gentleman—let's—let's have the amendment distributed and then the gentleman will be recognized.

The gentleman from Pennsylvania is recognized.

Mr. WELDON of Pennsylvania. I thank the chairman.

Members of the committee, this amendment, hopefully, will not be—will be noncontroversial. It is an amendment that does not affect any direct dollar amounts in the bill, but rather deals with the GLOBE program, the Global Observations to Benefit the Environment, which this full committee voted on in the past on the NOR reauthorization, and which included that authorization in that bill.

This amendment also puts our bill into a consistent pattern with the appropriation bill that will be voted on later on this week. As we move to cut back the funding for the Mission to Planet Earth, our bill specifically prohibits any funds from being used for the GLOBE program.

The appropriators allow that decision to be made by NASA. What my amendment will do will be to follow suit and allow that decision to be made by NASA as opposed to having us, in effect, micromanage.

This amendment is a bipartisan amendment that I'm offering with Mr. McHale. As members of this committee know, when I spoke on this issue in the past, use of the Internet by our schools is one of the highest priorities of the new Speaker. And, in fact, Speaker Gingrich has come out publicly in favor of this program, which is why I offer the amendment on a no authorization bill.

In addition, Vice President Gore has made this technology effort one of his highest priorities, and, in fact, to date, we have 1,500 schools across the country who are now participating in the GLOBE program. And, in fact, I did a quick count and we have some 187 schools in the districts of 27 Members of this committee who are currently Internet members through the GLOBE network.

It is a program that will not be without end. It is designed to encourage private sector dollars and eventually be totally operated by the private sector as opposed to the public sector. We are not saying the program has to proceed. What we would say in this amendment is we will leave that up to NASA. As NASA reconfigures how they're going to spend their dollars as they shrink, especially in light of the decrease in the Mission to Planet Earth funding, they will be able to make a decision as to whether or not—

Mr. SENSENBRENNER. Would the gentleman yield?

Mr. WELDON of Pennsylvania. This program should continue.

I'll be happy to yield to the distinguished subcommittee chairman.

Mr. SENSENBRENNER. The subcommittee is reluctantly prepared to accept this amendment, if we can get it out of the way before going to vote.

Mr. WELDON of Pennsylvania. I thank the chairman for his reluctant consideration.

[Laughter.]

The CHAIRMAN. I thank—I thank the subcommittee Chair for that, but I did give the members an assurance—give members an assurance that we would not do any voting, voice voting or any

other thing, while there was a vote on on the floor. So the committee stands in recess.

[Recess.]

The CHAIRMAN. The committee will be in order.

When the committee went into recess, we were considering the Weldon amendment on GLOBE. Are there additional members that wish to be recognized on the Weldon amendment?

Mr. MCHALE. I do, Mr. Chairman.

The CHAIRMAN. The gentleman from Pennsylvania.

Mr. MCHALE. Thank you, Mr. Chairman.

I very strongly support the Weldon amendment. I've been privileged to cosponsor the amendment with my colleague, Mr. Weldon.

I am told that the number of votes that we get on this issue will be inversely proportional to how long I speak on the subject. So I'm going to keep this exceptionally brief.

[Laughter.]

The gentleman's time has expired.

[Laughter.]

The gentleman, Mr. Weldon, made the strongest point when he indicated that the language in his amendment simply brings the bill in line with the current language as proposed by the appropriators. I'm not going to advocate the GLOBE program, although I strongly believe in it; I think Mr. Weldon has done that job quite well. The question here is whether we will continue the existing language in the Science mark which would, without a sense of priority, abolish the GLOBE program or, in the spirit that's been described by the chairman of the full committee on several occasions, work with the appropriators in seeking common language and a common financial base in order to provide the support for the program that I think is correct.

The Weldon amendment will strike the language of the Science mark, bring the bill in line with the appropriations bill, and I think move the process forward while allowing NASA the opportunity and, in fact, the obligation to develop a sense of priorities. We can work hand-in-glove with the appropriators and the Weldon amendment does that. I encourage all of the members, particularly those on my side of the aisle, to support Mr. Weldon's amendment.

The CHAIRMAN. Well, the gentleman's time has expired. Any—anyone else seeking recognition on the Weldon amendment?

[No response.]

If not, the Chair will put the question. Those in favor of the Weldon amendment will say aye. Those opposed will say no. The ayes have it. The amendment carries.

Ms. JACKSON-LEE. Mr. Chairman.

The CHAIRMAN. The gentlewoman from Texas.

Ms. JACKSON-LEE. Mr. Chairman, I would like to note to the committee that I was unavoidably detained in hearings being held on the Waco matter in the Judiciary Committee, as a Member of the Judiciary Committee, and if I had been present in the room at the time that the Roemer amendment was offered, I would like to have my vote recorded at the place of that vote as an aye.

The CHAIRMAN. The gentlelady's comments will be noted.

Ms. JACKSON-LEE. Thank you.

The CHAIRMAN. The gentleman, Mr. Barcia.

Mr. BARCIA. Yes, thank you very much, Mr. Chairman. I have an amendment that I think is relatively noncontroversial, but before I—

The CHAIRMAN. This amendment needs to be distributed. The staff will distribute the amendment, and the gentleman will withhold for a moment.

[The amendment follows:]

AMENDMENT TO H.R.2043
OFFERED BY Mr. Barcia

On page 8 , line 3 ; insert "(except as provided in section 106)" after "Information Network".

Page 13, after line 18, insert the following new section:

SEC. 106. LIMITED AVAILABILITY.

Nothing in this Act shall interfere with the rights of any parties under contracts. Nothing in this Act shall preclude the Consortium for International Earth Science Information Network from receiving a contract awarded following a full and open competition.

The CHAIRMAN. The gentleman is recognized.

Mr. BARCIA. Thank you very much, Mr. Chairman.

The current language in the bill, as currently drafted, would basically preclude CIESIN from negotiating—negotiating or completing any contracts with NASA or Federal agencies, and I would just like to, before I begin explaining the amendment, compliment the chairman on his sensitivity and open-mindedness about the—my concerns on this issue, and to say that, of course, given the nature of the deficit reduction in the Congress overall, as well as the specific cuts in NASA, of course, CIESIN will recognize it must be very competitive and be so in a very, I think, open bidding process.

But we think that we have made, I think, great strides in terms of CIESIN's accomplishments, and I'd like to take a moment just to say that the amendment that I have would make clear that funding the CIESIN project is subject to NASA's discretion as to the appropriateness of the project relative to the overall data mission of the Mission to Planet Earth, and, of course, we know that that area is also going to be subjected to significant cuts.

But the amendment clarifies that CIESIN is allowed to be a NASA contractor under the EOS DIS to develop the integration of earth-observing science with economic, social, and health data. The government has already invested some $70 million in this project, and we would like to try to retain as much of that work and that infrastructure as we can.

CIESIN has been recognized in terms of the successes it's had in data management, and, for example, recently received the—I think some accolades from the Smithsonian Institution museum and a number of other agencies that have indicated that CIESIN's work is very much appreciated in the scientific community.

CIESIN's track record to date has also, in terms of database management, has been utilized more than all eight other DAC facilities combined. So I think that we've got a very good start on, I think, assisting NASA and other Federal agencies in compiling and distributing, as well as analyzing, scientific data, and it would be my hope that we might be able to see CIESIN continue. We recognize that, given the current environment, that we may have to do so in a privatized fashion. We may see CIESIN become more aggressive at promoting its services and do so more as a private entity, which it has been as a consortium.

But I would like to thank you, Mr. Chairman, on your assistance in terms of recognizing the dilemma that we find ourselves in in terms of the CIESIN facility and program up in Michigan, and also to thank you for your gracious cooperation on trying to work out language that the committee would feel comfortable in—

Mr. SENSENBRENNER. Would the gentleman yield?

Mr. BARCIA. Yes.

Mr. SENSENBRENNER. The subcommittee is happy to accept your amendment. I think this makes CIESIN a much more constructive agency than it's been in the past.

The CHAIRMAN. Would the gentleman yield to me?

Mr. BARCIA. Absolutely.

The CHAIRMAN. I thank the gentleman for yielding.

I just do want to make the point that this amendment will be acceptable to the Chair as well. The gentleman has worked with us to try to work out the amendment.

Just so that we are very clear, this amendment does anticipate the privatization of CIESIN. The gentleman has brought to me some legislation aimed at moving CIESIN in that direction. What this amendment would do is simply assure that a privatized CIESIN would still be able to obtain contracts following a full and open competition, and would also not in any way jeopardize the rights of any party under contracts that presently exist. That's what we're—that's what we're attempting to achieve with this amendment, but it needs to be clarified that this does not anticipate a continued funding stream out of NASA for CIESIN other than what they obtain through—

Mr. BARCIA. The open bidding contract—

The CHAIRMAN. Through their open bidding process. And, with that understanding, I think the gentleman has done a valuable work on behalf of CIESIN here. We're moving in the direction that most of us feel comfortable, and I thank him for—for working with us.

Mr. BARCIA. Thank you, Mr. Chairman. And I will say this amendment will address the concern we had with the two-year contract in which CIESIN is in the first year. So that resolves that issue—

The CHAIRMAN. The gentleman's time has expired.

Mr. BARCIA. Thank you.

The CHAIRMAN. By unanimous consent, we grant the gentleman one additional minute so he can yield to the gentleman from California.

Mr. BROWN. Will the gentleman yield to me?

Mr. BARCIA. Yes.

Mr. BROWN. Let me just add my support for the gentleman's amendment and to compliment the gentleman for his long and persistent effort to maintain a strong and improving program at CIESIN. Having worked with him in this effort over the years, past several years, I am aware of the many steps that CIESIN has taken to achieve a world class capability there. I think that while it has been uncomfortable sometimes to be forced to move in the direction that CIESIN has moved because of a cutoff of funding, in the long run the operation may emerge as a stronger and more effective organization, and I certainly will do everything I can to help the gentleman.

The CHAIRMAN. The Chair is prepared to put the question—oh, the gentleman from Michigan.

Mr. EHLERS. Thank you, Mr. Chairman.

Just very briefly, I would like to go on record as supporting this amendment and supporting the Consortium for International Earth Science Information Network. I think they've done a marvelous job in the last two years of coming up to speed, and it's very important that they be allowed to continue their work and cooperate with NASA on a competitive basis.

Thank you.

The CHAIRMAN. Are there any further members that wish to be recognized?

[No response.]

If not, the Chair will put the question. Those in favor of the gentleman from—Mr. Barcia's amendment will say aye. Those opposed will say no. The ayes have it. The amendment is agreed to. Are there any further amendments?

[No response.]

Hearing none, the question is on the bill, H.R. 2043, the National Aeronautics and Space Administration Authorization Act for Fiscal Year 1996, as amended. Those in favor will say aye. Those opposed will say no. In the opinion of the Chair, the ayes have it. The gentleman from California.

Mr. BROWN. Mr. Chairman, before putting the question, before moving to report the bill, I'd like to make a parliamentary inquiry. My staff keeps thrusting the rules of the committee in front of me and asking me to make certain inquiries about them. And I want to ask if the Chair's intent is not to insure that the provisions of Rule 21(b) with regard to report language not containing any matter which indicates a funding level more explicitly than the text of the bill, that will be observed in the process of preparing the report?

The CHAIRMAN. Did the—in just a moment, after we have the gentleman's motion, I will, in fact, recognize Mr. Sensenbrenner for a motion that, pursuant to the rules, we'll permit us to go forward with the report in accordance with the rules.

Mr. BROWN. And let me—let me hasten to offer the motion, Mr. Chairman. I move that the committee report the bill, H.R. 2043, as amended, to make technical and conforming amendments, prepare the legislative report, and that the chairman take all necessary steps to bring the bill before the House for consideration.

The CHAIRMAN. The committee has heard the motion. Those in favor will say aye. Those opposed will say no. The ayes have it. The motion is agreed to. Without objection, the motion to reconsider is laid upon the table.

Mr. BROWN. And, Mr. Chairman, I further move that the Members have three legislative days to submit supplemental minority and additional views in which I will explain why I voted no.

The CHAIRMAN. With objection—without objection.

[Laughter.]

Mr. SENSENBRENNER. Mr. Chairman.

The CHAIRMAN. I recognize Mr. Sensenbrenner for a motion.

Mr. SENSENBRENNER. Mr. Chairman, I move that the committee adopt as a part of the legislative report on H.R. 2043 the summary chart which the Members have before them.

The CHAIRMAN. The question is on the motion of the gentleman from Wisconsin. Those in favor will say aye. Those opposed will say no. The motion is agreed to.

[The Summary Chart follows:]

	[illegible] funding	[illegible] req	[illegible] mark	comments
[illegible] FLIGHT	3575.3	3548.6	[illegible]	[illegible] million authorized in HR 1601, conference authorization DOE $2,114,000,000
SPACE SHUTTLE	3165.1	3291.8	3175.8	
[illegible]	2416.3	2363.8	[illegible]	[illegible] savings from folio closure
[illegible] upgrades	730.8	697.8	697.8	
[illegible] & Operations	598.1	316.8	316.8	
[illegible] Construction	*100.0	*100.0	*100.0	[illegible] in bill for Station Construction outside of Station
[illegible] & TECH	8749.2	8704.8	8801.8	
[illegible]	1196.8	1131.1	[illegible]	[illegible]
[illegible]	617.1	657.8	[illegible]	
[illegible]	404.7	388.3	[illegible]	
[illegible]	1236.1	*1357.0	*[illegible]	[illegible]
[illegible] & Technology	*927.4	498.5	[illegible]	[illegible]
[illegible] & Technology	882.8	917.3	[illegible]	[illegible]
[illegible] Services	491.3	491.3	491.3	
[illegible] Facilities	102.2	116.7	[illegible]	[illegible] million reduce to $98 level
[illegible]	2869.2	2728.2	2864.4	
[illegible]	38.7	37.8	37.8	
[illegible] Services	228.5	316.4	316.4	
[illegible] & Plant Eng	2168.0	2202.8	[illegible]	[illegible] NASA outsource, layout savings
[illegible] of Facilities	135.0	135.4	132.0	[illegible] general reduction
[illegible]	16.0	17.3	17.3	
Half Accomodation Facilities (wind tunnels)	400.0			
TOTAL	12300.0	12148.2	11947.4	[illegible] 2 - 2114.8 [illegible] = 11947.4
*includes $ for Space Station				
OCST		6.5	6.0	[illegible] general reduction
OC & Space Commercialization		6.5	6.0	
NASA $ for ty DE $12,002.3M				

Mr. BROWN. Mr. Chairman, an inquiry? This is in sort of a parliamentary inquiry, if the Chair will indulge me. I've been looking at this chart for several days, and out of deference to my age and declining capabilities in terms of seeing, I wonder if we could have this chart put in a form which is slightly more readable for the older Members of the committee.

[Laughter.]

The CHAIRMAN. Either that or we'll come up with some technology that will allow—

Mr. BROWN. Use—use the computer technology to expand that slightly.

The CHAIRMAN. That's not a bad idea, and as I say, maybe we can have some new technology that will get us by the burden.

Mr. Ehlers?

Mr. EHLERS. Mr. Chairman, I move, pursuant to Clause 1, Rule 20, of the House of—Rules of the House of Representatives that the committee authorize the chairman to offer such motions as may be necessary in the House to go to conference with the Senate on the bill H.R. 2043 or a similar Senate bill.

The CHAIRMAN. The Chair—the committee has heard the motion. Those in favor will say aye. Those opposed will say no. The ayes have it. The motion is agreed to.

This concludes our Committee markup on the measure H.R. 2043, the National Aeronautics and Space Administration Act, Fiscal Year 1996. The Chair declares the committee adjourned.

[Whereupon, at 2:08 p.m., the committee adjourned subject to the call of the Chair.]

[Additional material follows:]

COMMITTEE ON SCIENCE
FULL COMMITTEE MARKUP - JULY 25, 1995

AMENDMENT ROSTER

H.R. 2043, the National Aeronautics and Space Administration Authorization Act, Fiscal Year 1996

--Motion to adopt the bill, as amended: Adopted by a voice vote
--Motion to report the bill, as amended: Adopted by a voice vote
--Motion to adopt the summary chart as part of the legislative report: Adopted by a voice vote

No.	Sponsor	Description	Results
1.	Mr. Brown	Amendment In The Nature Of A Substitute	--Defeated by a voice vote
2.	Mr. Roemer	Amendment would restore partial funding for the Regional Technology Transfer Centers	--Withdrawn
3.	Mr. Roemer	Amendment reprioritizes funds in the Aeronautics R&D program to improve funding for advance subsonics	--Defeated by a roll call vote: Y-13; N-24.
4.	Ms. Harman	Amendment to increase funding for the Mission to Planet Earth with corresponding general reduction	--Adopted, as amended, by a voice vote
4a.	Mr. Bartlett	Amendment to the Amendment Offered by Ms. Harman -- adds (c) Limitation on Obligation and Expenditure	--Adopted by a voice vote
5.	Ms. Lofgren	Amendment to restructure the NASA field centers	--Defeated by a division vote: Y-6; N-23.
6.	Mr. Hilleary	Amendment inserts the following new section: Sec. 215--Unitary Wind Tunnel Plan Act of 1949 Amendments	--Adopted by a voice vote

7.	Mr. Rohrabacher	Amends Sec. 212--Privatization of Microgravity Parabolic Flight Operations; strike reference to FAA	--Adopted by a voice vote
8.	Mr. Curt Weldon	On page 8, lines 3 and 4, strike ", the Global Observations to Benefit the Environment,".	--Adopted by a voice vote
9.	Mr. Barcia	Amendment inserts the following new section to the bill: Sec. 106 -- Limited Availability on CIESIN	--Adopted by a voice vote

AMENDMENT TO H.R. 2043, AS REPORTED BY THE SUBCOMMITTEE ON SPACE AND AERONAUTICS ON JULY 19, 1995

Strike all after the enacting clause and insert in lieu thereof the following:

1 **SECTION 1. SHORT TITLE.**

2 This Act may be cited as the "National Aeronautics
3 and Space Administration Authorization Act, Fiscal Year
4 1996".

5 **SEC. 2. FINDINGS.**

6 The Congress makes the following findings:

7 (1) The National Aeronautics and Space Ad-
8 ministration has failed to request sufficient funds to
9 perform all missions it has proposed in annual budg-
10 et requests. For fiscal year 1996, the budget re-
11 quested is $140,000,000 below the amount required
12 to fulfill program commitments made by the fiscal
13 year 1995 budget approved by Congress. The re-
14 quest for fiscal year 1996 proposes continued
15 underfunding of the requirements of the National
16 Aeronautics and Space Administration by
17 $439,000,000 for fiscal year 1997, $847,000,000 for

1 fiscal year 1998, $1,189,000,000 for fiscal year
2 1999, and $1,532,000,000 for fiscal year 2000.
3 (2) In order to close the gap between projected
4 program requirements and the underfunding re-
5 quested, the National Aeronautics and Space Admin-
6 istration should aggressively pursue actions and re-
7 forms directed at reducing institutional costs, includ-
8 ing management restructuring, facility consolidation,
9 procurement reform, personnel base downsizing, and
10 convergence with other defense and private sector
11 systems.
12 (3) While institutional reforms, restructurings,
13 and downsizing hold the promise of comporting the
14 projected needs of the National Aeronautics and
15 Space Administration with funding levels requested
16 by the Administration, such reforms provide no
17 guarantee against cancellation of missions in the
18 event reform efforts fail to achieve cost reduction
19 targets.
20 (4) The National Aeronautics and Space Ad-
21 ministration must reverse its current trend toward
22 becoming an operational agency, and return to its
23 proud history as the Nation's leader in basic sci-
24 entific air and space research.

1 (5) Commercial space activity is in a delicate
2 stage of growth but has the potential to eclipse Fed-
3 eral space activity in its economic return to the Na-
4 tion if not stifled.
5 (6) The United States is on the verge of creat-
6 ing and using new technologies in microsatellites, in-
7 formation processing, and space launch that could
8 radically alter the manner in which the Government
9 approaches its space mission.
10 (7) The overwhelming preponderance of the
11 Federal Government's requirements for routine, non-
12 emergency manned and unmanned space transpor-
13 tation can be most effectively, efficiently, and eco-
14 nomically met by a free and competitive market in
15 privately developed and operated launch services.
16 (8) In formulating a national space transpor-
17 tation service policy, the National Aeronautics and
18 Space Administration should agressively pursue re-
19 verse contracting opportunities to support the pri-
20 vate sector development of advanced space transpor-
21 tation technologies including reusable space vehicles,
22 single-stage-to-orbit vehicles, and manned space sys-
23 tems.

1 (9) International cooperation in space explo-
2 ration and science activities serves the United States
3 national interest—
4 (A) when it—
5 (i) reduces the cost of undertaking
6 missions the United States Government
7 would pursue unilaterally;
8 (ii) enables the United States to pur-
9 sue missions that it could not otherwise af-
10 ford to pursue unilaterally; or
11 (iii) enhances United States capabili-
12 ties to use and develop space for the bene-
13 fit of United States citizens; and
14 (B) when it does not—
15 (i) otherwise harm or interfere with
16 the ability of United States private sector
17 firms to develop or explore space commer-
18 cially;
19 (ii) interfere with the ability of Fed-
20 eral agencies to use space to complete their
21 missions;
22 (iii) undermine the ability of United
23 States private enterprise to compete favor-
24 ably with foreign entities in the commercial
25 space arena; or

1 (iv) transfer sensitive or commercially
2 advantageous technologies or knowledge
3 from the United States to other countries
4 or foreign entities except as required by
5 those countries or entities to make their
6 contribution to a multilateral space project
7 in partnership with the United States, or
8 on a quid pro quo basis.
9 (10) The National Aeronautics and Space Ad-
10 ministration and the Department of Defense can co-
11 operate more effectively in leveraging their mutual
12 capabilities to conduct joint space missions that im-
13 prove United States space capabilities and reduce
14 the cost of conducting space missions.
15 **SEC. 3. DEFINITIONS.**
16 For purposes of this Act—
17 (1) the term "Administrator" means the Ad-
18 ministrator of the National Aeronautics and Space
19 Administration; and
20 (2) the term "institution of higher education"
21 has the meaning given such term in section 1201(a)
22 of the Higher Education Act of 1965 (20 U.S.C.
23 1141(a)).

TITLE I—AUTHORIZATION OF APPROPRIATIONS

Subtitle A—Authorizations

SEC. 101. HUMAN SPACE FLIGHT.

(a) AUTHORIZATIONS.—There are authorized to be appropriated to the National Aeronautics and Space Administration for fiscal year 1996 for Human Space Flight the following amounts:

(1) For Space Shuttle Operations, $2,341,800,000.

(2) For Space Shuttle Safety and Performance Upgrades, $837,000,000.

(3) For Payload and Utilization Operations, $315,000,000.

(4) For Russian Cooperation, $100,000,000.

(b) CONSTRUCTION OF FACILITIES.—(1) Of the funds authorized to be appropriated under subsection (a)(2), $5,000,000 are authorized for modernization of the Firex System, Pads A and B, Kennedy Space Center.

(2) Of the funds authorized to be appropriated under subsection (a)(2), $7,500,000 are authorized for replacement of the Chemical Analysis Facility, Kennedy Space Center.

(3) Of the funds authorized to be appropriated under subsection (a)(2), $4,900,000 are authorized for replace-

1 ment of the Space Shuttle Main Engine Processing Facil-
2 ity, Kennedy Space Center.

3 **SEC. 102. SCIENCE, AERONAUTICS, AND TECHNOLOGY.**

4 (a) AUTHORIZATIONS.—There are authorized to be
5 appropriated to the National Aeronautics and Space Ad-
6 ministration for fiscal year 1996 for Science, Aeronautics,
7 and Technology the following amounts:

8 (1) For Space Science, $1,995,400,000, of
9 which—

10 (A) $1,167,600,000 are authorized for
11 Physics and Astronomy, of which $51,500,000
12 shall be for the Gravity Probe B, except that no
13 funds are authorized for the Space Infrared
14 Telescope Facility; and

15 (B) $827,800,000 are authorized for Plan-
16 etary Exploration, of which $30,000,000 shall
17 be for the New Millennium Spacecraft, includ-
18 ing $5,000,000 for the National Aeronautics
19 and Space Administration's participation in
20 Clementine 2 (Air Force Program Element
21 0603401F Advanced Spacecraft Technology).

22 (2) For Life and Microgravity Sciences and Ap-
23 plications, $293,200,000.

24 (3) For Mission to Planet Earth,
25 $1,013,100,000, of which $21,500,000 shall only be

1 for activities described in section 208(7)(A), except
2 that no funds are authorized for the Consortium for
3 International Earth Science Information Network,
4 the Global Observations to Benefit the Environment,
5 or the Topex Poseidon Follow-On mission. Funds
6 authorized by this paragraph may not be expended
7 to duplicate private sector or other Federal activities
8 or to procure systems to provide data unless the Ad-
9 ministrator certifies to Congress that no private sec-
10 tor or Federal entity can provide suitable data in a
11 timely manner. Notwithstanding any other provision
12 of law, funds in excess of those authorized by this
13 paragraph may not be obligated for Mission to Plan-
14 et Earth.
15 (4) For Space Access and Technology,
16 $639,800,000 of which—
17 (A) $193,000,000 are authorized for Ad-
18 vanced Space Transportation;
19 (B) $10,000,000 are authorized to be
20 made available for defraying the costs of con-
21 verting or redesigning commercially inconsistent
22 elements of former Federal facilities or to take
23 actions required for conformance with Federal
24 laws or regulations relating to commercial space

1 transportation infrastructure, to remain avail-
2 able until expended;
3 (C) $20,000,000 shall be for continuing
4 the Launch Voucher Demonstration Program
5 authorized under section 504 of the National
6 Aeronautics and Space Administration Author-
7 ization Act, Fiscal Year 1993 (15 U.S.C.
8 5803); and
9 (D) $33,900,000 are authorized for the
10 Small Spacecraft Technology Initiative, except
11 that funds for such Initiative may not be ex-
12 pended to duplicate private sector activities or
13 to fund any activities that a private sector en-
14 tity is proposing to carry out for commercial
15 purposes. No funds are authorized under this
16 paragraph for the Partnership for Next Genera-
17 tion Vehicle.
18 (5) For Aeronautical Research and Technology,
19 $826,900,000, of which—
20 (A) $354,700,000 are authorized for Re-
21 search and Technology Base activities;
22 (B) $245,500,000 are authorized for High
23 Speed Research;
24 (C) $133,000,000 are authorized for Ad-
25 vanced Subsonic Technology, except that no

1 funds are authorized for concept studies for Ad-
2 vanced Traffic Management and Affordable De-
3 sign and Manufacturing;
4 (D) $40,200,000 are authorized for High-
5 Performance Computing and Communications;
6 and
7 (E) $48,100,000 are authorized for Nu-
8 merical Aerodynamic Simulation.
9 (6) For Mission Communication Services,
10 $461,300,000.
11 (7) For Academic Programs, $102,200,000.
12 (b) CONSTRUCTION OF FACILITIES.—(1) Of the
13 funds authorized to be appropriated under subsection
14 (a)(3), $17,000,000 are authorized for construction of the
15 Earth Systems Science Building, Goddard Space Flight
16 Center.
17 (2) Of the funds authorized to be appropriated under
18 subsection (a)(5), $5,400,000 are authorized for mod-
19 ernization of the Unitary Plan Wind Tunnel Complex,
20 Ames Research Center.
21 (3) Of the funds authorized to be appropriated under
22 subsection (a)(2), $3,000,000 are authorized for the con-
23 struction of an addition to the Microgravity and Develop-
24 ment Laboratory, Marshall Space Flight Center.

1 SEC. 103. MISSION SUPPORT.

2 There are authorized to be appropriated to the Na-
3 tional Aeronautics and Space Administration for fiscal
4 year 1996 for Mission Support the following amounts:

5 (1) For Safety, Reliability, and Quality Assur-
6 ance, $37,600,000.

7 (2) For Space Communication Services,
8 $319,400,000.

9 (3) For Construction of Facilities, including
10 land acquisition, $152,600,000, of which—

11 (A) $6,300,000 shall be for restoration of
12 Flight Systems Research Laboratory, Ames Re-
13 search Center;

14 (B) $3,000,000 shall be for restoration of
15 chilled water distribution system, Goddard
16 Space Flight Center;

17 (C) $4,800,000 shall be for replacing
18 chillers, various buildings, Jet Propulsion Lab-
19 oratory;

20 (D) $1,100,000 shall be for rehabilitation
21 of electrical distribution system, White Sands
22 Test Facility, Johnson Space Center;

23 (E) $4,200,000 shall be for replacement of
24 main substation switchgear and circuit break-
25 ers, Johnson Space Center;

1 (F) $1,800,000 shall be for replacement of
2 15kV load break switches, Kennedy Space Cen-
3 ter;
4 (G) $9,000,000 shall be for rehabilitation
5 of Central Air Equipment Building, Lewis Re-
6 search Center;
7 (H) $4,700,000 shall be for restoration of
8 high pressure air compressor system, Marshall
9 Space Flight Center;
10 (I) $6,800,000 shall be for restoration of
11 Information and Electronic Systems Labora-
12 tory, Marshall Space Flight Center;
13 (J) $1,400,000 shall be for restoration of
14 canal lock, Stennis Space Center;
15 (K) $2,500,000 shall be for restoration of
16 primary electrical distribution system, Wallops
17 Flight Facility;
18 (L) $30,000,000 shall be for repair of fa-
19 cilities at various locations, not in excess of
20 $1,500,000 per project;
21 (M) $30,000,000 shall be for rehabilitation
22 and modification of facilities at various loca-
23 tions, not in excess of $1,500,000 per project;
24 (N) $2,000,000 shall be for minor con-
25 struction of new facilities and additions to exist-

1 ing facilities at various locations, not in excess
2 of $750,000 per project;
3 (O) $10,000,000 shall be for facility plan-
4 ning and design not otherwise provided for; and
5 (P) $35,000,000 shall be for environmental
6 compliance and restoration.
7 (4) For Research and Program Management,
8 including personnel and related costs, travel, and re-
9 search operations support, $2,094,800,000.
10 SEC. 104. INSPECTOR GENERAL.
11 There are authorized to be appropriated to the Na-
12 tional Aeronautics and Space Administration for Inspector
13 General, $17,300,000 for fiscal year 1996.
14 SEC. 105. TOTAL AUTHORIZATION.
15 Notwithstanding any other provision of this title, the
16 total amount authorized to be appropriated to the Na-
17 tional Aeronautics and Space Administration under this
18 Act shall not exceed $11,547,400,000 for fiscal year 1996.

19 Subtitle B—Restructuring the Na-
20 tional Aeronautics and Space
21 Administration

22 SEC. 111. FINDINGS.
23 The Congress finds that—
24 (1) the restructuring of the National Aero-
25 nautics and Space Administration is essential to ac-

1 complishing the space missions of the United States
2 while simultaneously balancing the Federal budget;
3 (2) to restructure the National Aeronautics and
4 Space Administration rapidly without reducing mis-
5 sion content and safety requires objective financial
6 judgment;
7 (3) no effort has been undertaken by the Na-
8 tional Aeronautics and Space Administration to per-
9 form a formal economic review of its missions and
10 the Federal assets that support them;
11 (4) therefore it is premature and unwarranted
12 to attempt closing any National Aeronautics and
13 Space Administration field center until an asset-
14 based review of United States space missions and
15 capabilities to support them is performed; and
16 (5) cost savings from the closing of National
17 Aeronautics and Space Administration field centers
18 are speculative and potentially injurious to mission
19 goals, unless derived from an asset-based analysis.
20 **SEC. 112. ASSET-BASED REVIEW.**
21 (a) REQUEST FOR PROPOSALS.—Not later than 30
22 days after the date of the enactment of this Act, the Ad-
23 ministrator shall publish in the Commerce Business Daily
24 a request for proposals to perform a National Aeronautics
25 and Space Administration asset-based review.

1 (b) QUALIFIED PROPOSALS.—Qualified proposals to
2 perform the asset-based review under this section shall be
3 from United States persons whose primary business is cor-
4 porate financial strategy, investment banking, accounting,
5 or asset management. All proposals shall, at a minimum,
6 propose to review, for each capital asset owned by the Na-
7 tional Aeronautics and Space Administration—
8 (1) its primary function or purpose in relation-
9 ship to a program, mission, or activity of the Na-
10 tional Aeronautics and Space Administration;
11 (2) the existence of other capital assets which
12 duplicate or overlap with such function or purpose;
13 (3) the Federal and non-Federal users thereof;
14 and
15 (4) its necessity to carry out a program, mis-
16 sion, or activity of the National Aeronautics and
17 Space Administration.
18 (c) REPORT.—The contractor selected to perform the
19 asset-based review under this section shall complete such
20 review and transmit to the Administrator and the Con-
21 gress, no later than July 31, 1996, a report containing,
22 at a minimum—
23 (1) for each National Aeronautics and Space
24 Administration field center facility—

1 (A) a list of capital assets that should be
2 permanently retired or disposed of;
3 (B) a list of capital assets that may be
4 transferred to non-Federal institutions and cor-
5 porations, if the transfer of such asset is cost
6 effective; and
7 (C) a list of capital assets essential to the
8 conduct of National Aeronautics and Space Ad-
9 ministration programs, missions, or activities,
10 and a justification for retaining the asset;
11 (2) for each National Aeronautics and Space
12 Administration program element—
13 (A) a list of capital assets essential to the
14 conduct of the program element; and
15 (B) a plan for achieving the most cost-ef-
16 fective consolidation and efficient use of nec-
17 essary capital assets to support such program
18 element, including the use of non-Federal assets
19 where appropriate; and
20 (3) for each National Aeronautics and Space
21 Administration capital asset—
22 (A) the total annual cost of maintaining
23 and operating such capital asset, including Fed-
24 eral employee and contractor costs;

1 (B) the depreciated cost, replacement cost,
2 and salvage value; and
3 (C) the most cost-effective strategy for
4 maintaining, replacing, upgrading, or disposing
5 of the capital asset, as appropriate.
6 (d) IMPLEMENTATION.—The Administrator shall
7 consider the results of the asset-based review conducted
8 under this section, and based on the Administrator's rec-
9 ommendations, the President shall propose to Congress
10 legislation required to implement those recommendations
11 no later than September 30, 1996.
12 (e) CLOSING OF FIELD CENTERS.—The Adminis-
13 trator shall not close any National Aeronautics and Space
14 Administration field center until after the asset-based re-
15 view report is transmitted under subsection (c), and may
16 only close field centers that would become obsolete as a
17 result of the implementation of the Administrator's rec-
18 ommendations, and may do so only after enactment of leg-
19 islation implementing those recommendations.

20 Subtitle C—Limitations and
21 Special Authority

22 SEC. 121. USE OF FUNDS FOR CONSTRUCTION.
23 (a) AUTHORIZED USES.—Funds appropriated under
24 sections 101(a), 102(a), and 103 (1) and (2), and funds
25 appropriated for research operations support under sec-

1 tion 103(4), may be used for the construction of new fa-
2 cilities and additions to, repair of, rehabilitation of, or
3 modification of existing facilities at any location in support
4 of the purposes for which such funds are authorized.

5 (b) LIMITATION.—None of the funds used pursuant
6 to subsection (a) may be expended for a project, the esti-
7 mated cost of which to the National Aeronautics and
8 Space Administration, including collateral equipment, ex-
9 ceeds $500,000, until 30 days have passed after the Ad-
10 ministrator has notified the Committee on Science of the
11 House of Representatives and the Committee on Com-
12 merce, Science, and Transportation of the Senate of the
13 nature, location, and estimated cost to the National Aero-
14 nautics and Space Administration of such project.

15 (c) TITLE TO FACILITIES.—If funds are used pursu-
16 ant to subsection (a) for grants to institutions of higher
17 education, or to nonprofit organizations whose primary
18 purpose is the conduct of scientific research, for purchase
19 or construction of additional research facilities, title to
20 such facilities shall be vested in the United States unless
21 the Administrator determines that the national program
22 of aeronautical and space activities will best be served by
23 vesting title in the grantee institution or organization.
24 Each such grant shall be made under such conditions as
25 the Administrator shall determine to be required to ensure

1 that the United States will receive therefrom benefits ade-
2 quate to justify the making of that grant.

3 **SEC. 122. AVAILABILITY OF APPROPRIATED AMOUNTS.**

4 To the extent provided in appropriations Acts, appro-
5 priations authorized under subtitle A may remain avail-
6 able without fiscal year limitation.

7 **SEC. 123. REPROGRAMMING FOR CONSTRUCTION OF FA-**
8 **CILITIES.**

9 (a) IN GENERAL.—Appropriations authorized under
10 any paragraph of section 101(b), 102(b), or 103(3)—
11 (1) may be varied upward by 10 percent in the
12 discretion of the Administrator; or
13 (2) may be varied upward by 25 percent, to
14 meet unusual cost variations, after the expiration of
15 15 days following a report on the circumstances of
16 such action by the Administrator to the Committee
17 on Science of the House of Representatives and the
18 Committee on Commerce, Science, and Transpor-
19 tation of the Senate.
20 The aggregate amount authorized to be appropriated
21 under sections 101(b), 102(b) and 103(3) shall not be in-
22 creased as a result of actions authorized under paragraphs
23 (1) and (2) of this subsection.
24 (b) SPECIAL RULE.—Where the Administrator deter-
25 mines that new developments in the national program of

1 aeronautical and space activities have occurred; and that
2 such developments require the use of additional funds for
3 the purposes of construction, expansion, or modification
4 of facilities at any location; and that deferral of such ac-
5 tion until the enactment of the next National Aeronautics
6 and Space Administration Authorization Act would be in-
7 consistent with the interest of the Nation in aeronautical
8 and space activities, the Administrator may use up to
9 $10,000,000 of the amounts authorized under section
10 101(b), 102(b), or 103(3) for each fiscal year for such
11 purposes. No such funds may be obligated until a period
12 of 30 days has passed after the Administrator has trans-
13 mitted to the Committee on Commerce, Science, and
14 Transportation of the Senate and the Committee on
15 Science of the House of Representatives a written report
16 describing the nature of the construction, its costs, and
17 the reasons therefor.

18 **SEC. 124. CONSIDERATION BY COMMITTEES.**

19 Notwithstanding any other provision of law—

20 (1) no amount appropriated to the National
21 Aeronautics and Space Administration may be used
22 for any program for which the President's annual
23 budget request included a request for funding, but
24 for which the Congress denied or did not provide
25 funding;

1 (2) no amount appropriated to the National
2 Aeronautics and Space Administration may be used
3 for any program in excess of the amount actually
4 authorized for the particular program by subtitle A;
5 and
6 (3) no amount appropriated to the National
7 Aeronautics and Space Administration may be used
8 for any program which has not been presented to
9 the Congress in the President's annual budget re-
10 quest or the supporting and ancillary documents
11 thereto,
12 unless a period of 30 days has passed after the receipt
13 by the Committee on Science of the House of Representa-
14 tives and the Committee on Commerce, Science, and
15 Transportation of the Senate of notice given by the Ad-
16 ministrator containing a full and complete statement of
17 the action proposed to be taken and the facts and cir-
18 cumstances relied upon in support of such proposed ac-
19 tion. The National Aeronautics and Space Administration
20 shall keep the Committee on Science of the House of Rep-
21 resentatives and the Committee on Commerce, Science,
22 and Transportation of the Senate fully and currently in-
23 formed with respect to all activities and responsibilities
24 within the jurisdiction of those committees. Except as oth-
25 erwise provided by law, any Federal department, agency,

1 or independent establishment shall furnish any informa-
2 tion requested by either committee relating to any such
3 activity or responsibility.

4 **SEC. 125. LIMITATION ON OBLIGATION OF UNAUTHORIZED**
5 **APPROPRIATIONS.**

6 (a) REPORTS TO CONGRESS.—Not later than 30 days
7 after the later of the date of enactment of an Act making
8 appropriations to the National Aeronautics and Space Ad-
9 ministration for fiscal year 1996 and the date of enact-
10 ment of this Act, the Administrator shall submit a report
11 to Congress and to the Comptroller General which speci-
12 fies—

13 (1) the portion of such appropriations which are
14 for programs, projects, or activities not authorized
15 under subtitle A of this title, or which are in excess
16 of amounts authorized for the relevant program,
17 project, or activity under this Act; and

18 (2) the portion of such appropriations which are
19 authorized under this Act.

20 (b) FEDERAL REGISTER NOTICE.—The Adminis-
21 trator shall, coincident with the submission of the report
22 required by subsection (a), publish in the Federal Register
23 a notice of all programs, projects, or activities for which
24 funds are appropriated but which were not authorized
25 under this Act, and solicit public comment thereon regard-

1 ing the impact of such programs, projects, or activities on
2 the conduct and effectiveness of the national aeronautics
3 and space program.

4 (c) LIMITATION.—Notwithstanding any other provi-
5 sion of law, no funds may be obligated for any programs,
6 projects, or activities of the National Aeronautics and
7 Space Administration for fiscal year 1996 not authorized
8 under this Act until 30 days have passed after the close
9 of the public comment period contained in the notice re-
10 quired in subsection (b).

11 **SEC. 126. USE OF FUNDS FOR SCIENTIFIC CONSULTATIONS**
12 **OR EXTRAORDINARY EXPENSES.**

13 Not more than $30,000 of the funds appropriated
14 under section 102 may be used for scientific consultations
15 or extraordinary expenses, upon the authority of the Ad-
16 ministrator.

17 **SEC. 127. LIMITATION ON TRANSFERS TO RUSSIA.**

18 (a) LIMITATION.—No funds authorized to be appro-
19 priated to the National Aeronautics and Space Adminis-
20 tration for fiscal year 1996 may be paid or otherwise
21 transferred to Russia unless—

22 (1) the payment or transfer is authorized by
23 this Act;

24 (2) the payment or transfer is made in ex-
25 change for goods or services that have been provided

1 to the National Aeronautics and Space Administra-
2 tion in accordance with a written agreement between
3 the National Aeronautics and Space Administration
4 and Russia;
5 (3) the Government of the Russian Federation
6 agrees to provide a monthly report to the National
7 Aeronautics and Space Administration during the
8 term of such written agreement, that fully accounts
9 for the disposition of the funds paid or transferred,
10 including information with respect to the preceding
11 month on—
12 (A) the amount of the funds received, and
13 the date of receipt;
14 (B) the amount of the funds converted
15 from United States currency, the currency into
16 which the funds have been converted, and the
17 date and rate of conversion;
18 (C) the amount of non-United States cur-
19 rency, and of United States currency, that is
20 disbursed to any contractor or subcontractor,
21 the identity of such contractor or subcontractor,
22 and the date of disbursement; and
23 (D) the balance of the funds not disbursed
24 as of the date of the report;

1 (4) Russia has provided all monthly reports
2 with respect to which an agreement was made pur-
3 suant to paragraph (3); and
4 (5) the President, before such payment or
5 transfer and annually upon submission of the Presi-
6 dent's budget request for fiscal years after fiscal
7 year 1996, has certified to the Congress that—
8 (A) the presence of any troops of the Rus-
9 sian Federation or the Commonwealth of Inde-
10 pendent States; and
11 (B) any action by the Russian Federation
12 or the Commonwealth of Independent States,
13 in Estonia, Latvia, Lithuania, or any other inde-
14 pendent state of the former Soviet Union do not vio-
15 late the sovereignty of those independent states.
16 (b) DEFINITION.—For purposes of this section, the
17 term "Russia" means the Government of the Russian
18 Federation, the Russian Space Agency, or any agency or
19 instrumentality of the Government of the Russian Federa-
20 tion or the Russian Space Agency.

21 **TITLE II—MISCELLANEOUS**
22 **PROVISIONS**

23 **SEC. 201. COMMERCIAL SPACE LAUNCH AMENDMENTS.**
24 (a) AMENDMENTS.—Chapter 701 of title 49, United
25 States Code, is amended—

1 (1) in the table of sections—

2 (A) by amending the item relating to sec-

3 tion 70104 to read as follows:

"70104. Restrictions on launches, operations, and reentries.";

4 (B) by amending the item relating to sec-

5 tion 70108 to read as follows:

"70108. Prohibition, suspension, and end of launches, operation of launch sites and reentry sites, and reentries.";

6 and

7 (C) by amending the item relating to sec-

8 tion 70109 to read as follows:

"70109. Preemption of scheduled launches or reentries.";

9 (2) in section 70101—

10 (A) by inserting "microgravity research,"

11 after "information services," in subsection

12 (a)(3);

13 (B) by inserting ", reentry," after "launch-

14 ing" both places it appears in subsection (a)(4);

15 (C) by inserting ", reentry vehicles," after

16 "launch vehicles" in subsection (a)(5);

17 (D) by inserting "and reentry services"

18 after "launch services" in subsection (a)(6);

19 (E) by inserting ", reentries," after

20 "launches" both places it appears in subsection

21 (a)(7);

1 (F) by inserting ", reentry sites," after
2 "launch sites" in subsection (a)(8);
3 (G) by inserting "and reentry services"
4 after "launch services" in subsection (a)(8);
5 (H) by inserting "reentry sites," after
6 "launch sites," in subsection (a)(9);
7 (I) by inserting "and reentry site" after
8 "launch site" in subsection (a)(9);
9 (J) by inserting ", reentry vehicles," after
10 "launch vehicles" in subsection (b)(2);
11 (K) by striking "launch" in subsection
12 (b)(2)(A);
13 (L) by inserting "and reentry" after "com-
14 mercial launch" in subsection (b)(3);
15 (M) by striking "launch" after "and trans-
16 fer commercial" in subsection (b)(3); and
17 (N) by inserting "and development of re-
18 entry sites," after "launch-site support facili-
19 ties," in subsection (b)(4);
20 (3) in section 70102—
21 (A) by inserting "from Earth" after "and
22 any payload" in paragraph (3);
23 (B) by redesignating paragraphs (10)
24 through (12) as paragraphs (14) through (16),
25 respectively;

1 (C) by inserting after paragraph (9) the
2 following new paragraphs:
3 "(10) 'reenter' and 'reentry' mean to return or
4 attempt to return, purposefully, a reentry vehicle
5 and its payload, if any, from Earth orbit, from exo-
6 atmospheric flight, or from outer space to Earth.
7 "(11) 'reentry services' means—
8 "(A) activities involved in the preparation
9 of a reentry vehicle and its payload, if any, for
10 reentry; and
11 "(B) the conduct of a reentry.
12 "(12) 'reentry site' means the location on Earth
13 to which a reentry vehicle is intended to return (as
14 defined in a license the Secretary issues or transfers
15 under this chapter).
16 "(13) 'reentry vehicle' means a vehicle designed
17 to return from Earth orbit or outer space to Earth,
18 or a reusable launch vehicle designed to return from
19 outer space or exo-atmospheric flight to Earth, sub-
20 stantially intact."; and
21 (D) by inserting "or reentry services" after
22 "launch services" each place it appears in para-
23 graph (15), as so redesignated by subparagraph
24 (B) of this paragraph;
25 (4) in section 70103(b)—

1 (A) by inserting "AND REENTRIES" after
2 "LAUNCHES" in the subsection heading;
3 (B) by inserting "and reentries" after
4 "space launches" in paragraph (1); and
5 (C) by inserting "and reentry" after
6 "space launch" in paragraph (2);
7 (5) in section 70104—
8 (A) by amending the section designation
9 and heading to read as follows:
10 **"§ 70104. Restrictions on launches, operations, and**
11 **reentries";**
12 (B) by inserting "or reentry site, or reen-
13 ter a reentry vehicle," after "operate a launch
14 site" each place it appears in subsection (a);
15 (C) by inserting "or reentry" after "launch
16 or operation" in subsection (a)(3) and (4);
17 (D) in subsection (b)—
18 (i) by striking "launch license" and
19 inserting in lieu thereof "license";
20 (ii) by inserting "or reenter" after
21 "may launch"; and
22 (iii) by inserting "or reentering" after
23 "related to launching"; and
24 (E) in subsection (c)—

1 (i) by amending the subsection head-
2 ing to read as follows: "PREVENTING
3 LAUNCHES AND REENTRIES.—";
4 (ii) by inserting "or reentry" after
5 "prevent the launch"; and
6 (iii) by inserting "or reentry" after
7 "decides the launch";
8 (6) in section 70105—
9 (A) by inserting "or reentry site, or re-
10 entry of a reentry vehicle," after "operation of
11 a launch site" in subsection (b)(1); and
12 (B) by striking "or operation" and insert-
13 ing in lieu thereof ", operation, or reentry" in
14 subsection (b)(2)(A);
15 (7) in section 70106(a)—
16 (A) by inserting "or reentry site" after
17 "observer at a launch site"; and
18 (B) by inserting "or reentry vehicle" after
19 "assemble a launch vehicle";
20 (8) in section 70108—
21 (A) by amending the section designation
22 and heading to read as follows:

1 **"§ 70108. Prohibition, suspension, and end of**
2 **launches, operation of launch sites and**
3 **reentry sites, and reentries"**;
4 and
5 (B) in subsection (a)—
6 (i) by inserting "or reentry site, or re-
7 entry of a reentry vehicle," after "oper-
8 ation of a launch site"; and
9 (ii) by inserting "or reentry" after
10 "launch or operation";
11 (9) in section 70109—
12 (A) by amending the section designation
13 and heading to read as follows:
14 **"§ 70109. Preemption of scheduled launches or reen-**
15 **tries"**;
16 (B) in subsection (a)—
17 (i) by inserting "or reentry" after
18 "ensure that a launch";
19 (ii) by inserting ", reentry site," after
20 "United States Government launch site";
21 (iii) by inserting "or reentry date
22 commitment" after "launch date commit-
23 ment";
24 (iv) by inserting "or reentry" after
25 "obtained for a launch";

1 (v) by inserting ", reentry site," after
2 "access to a launch site";
3 (vi) by inserting ", or services related
4 to a reentry," after "amount for launch
5 services"; and
6 (vii) by inserting "or reentry" after
7 "the scheduled launch"; and
8 (C) in subsection (c), by inserting "or re-
9 entry" after "prompt launching";
10 (10) in section 70110—
11 (A) by inserting "or reentry" after "pre-
12 vent the launch" in subsection (a)(2); and
13 (B) by inserting "or reentry site, or re-
14 entry of a reentry vehicle," after "operation of
15 a launch site" in subsection (a)(3)(B);
16 (11) in section 70111—
17 (A) by inserting "and reentry services"
18 after "launch services" in subsection (a)(1)(B);
19 (B) by inserting "or reentry services" after
20 "or launch services" in subsection (a)(2);
21 (C) by inserting "or reentry" after "com-
22 mercial launch" both places it appears in sub-
23 section (b)(1);
24 (D) by inserting "or reentry services" after
25 "launch services" in subsection (b)(2)(C);

1 (E) by striking "or its payload for launch"
2 in subsection (d) and inserting in lieu thereof
3 "or reentry vehicle, or the payload of either, for
4 launch or reentry"; and
5 (F) by inserting ", reentry vehicle," after
6 "manufacturer of the launch vehicle" in sub-
7 section (d);
8 (12) in section 70112—
9 (A) by inserting "or reentry" after "one
10 launch" in subsection (a)(3);
11 (B) by inserting "or reentry services" after
12 "launch services" in subsection (a)(4);
13 (C) by inserting "or reentry services" after
14 "launch services" each place it appears in sub-
15 section (b);
16 (D) by striking ", Space, and Technology"
17 in subsection (d);
18 (E) by inserting "OR REENTRIES" after
19 "LAUNCHES" in the heading for subsection (e);
20 and
21 (F) by inserting "or reentry site or a re-
22 entry" after "launch site" in subsection (e);
23 (13) in section 70113(a)(1) and (d)(1) and (2),
24 by inserting "or reentry" after "one launch" each
25 place it appears;

1 (14) in section 70115(b)(1)(D)(i)—

2 (A) by inserting "reentry site," after

3 "launch site,"; and

4 (B) by inserting "or reentry vehicle" after

5 "launch vehicle" both places it appears;

6 (15) in section 70117—

7 (A) by inserting "or reentry site or reenter

8 a reentry vehicle" after "operate a launch site"

9 in subsection (a);

10 (B) by inserting "or reentry" after "ap-

11 proval of a space launch" in subsection (d);

12 (C) by amending subsection (f) to read as

13 follows:

14 "(f) LAUNCH NOT AN EXPORT; REENTRY NOT AN

15 IMPORT.—A launch vehicle, reentry vehicle, or payload

16 that is launched or reentered is not, because of the launch

17 or reentry, an export or import, respectively, for purposes

18 of a law controlling exports or imports."; and

19 (D) in subsection (g)—

20 (i) by striking "operation of a launch

21 vehicle or launch site," in paragraph (1)

22 and inserting in lieu thereof "reentry, op-

23 eration of a launch vehicle or reentry vehi-

24 cle, or operation of a launch site or reentry

25 site,";

1 (ii) by striking "or" at the end of
2 paragraph (1);
3 (iii) by inserting "reentry," after
4 "launch," in paragraph (2);
5 (iv) by striking the period at the end
6 of paragraph (2) and inserting in lieu
7 thereof "; or"; and
8 (v) by adding at the end the following
9 new paragraph:
10 "(3) any amateur and similar small rocket ac-
11 tivities, as defined by the Secretary by regulation.";
12 (16) in section 70119, by inserting the follow-
13 ing after paragraph (2):
14 "There are authorized to be appropriated to the Secretary
15 of Transportation $6,000,000 to carry out this chapter for
16 fiscal year 1996. None of the funds authorized by this sec-
17 tion may be expended for policy development or analysis
18 activities not directly related to the Secretary's regulatory
19 responsibilities under this chapter.".
20 (b) ADDITIONAL AMENDMENTS.—(1) Section 70105
21 of title 49, United States Code, is amended—
22 (A) by inserting "(1)" before "A person may
23 apply" in subsection (a);
24 (B) by striking "receiving an application" both
25 places it appears in subsection (a) and inserting in

1 lieu thereof "accepting an application in accordance
2 with criteria established pursuant to subsection
3 (b)(2)(D)";
4 (C) by adding at the end of subsection (a) the
5 following new paragraph:
6 "(2) In carrying out paragraph (1), the Secretary
7 may establish procedures for certification of the safety of
8 a launch vehicle, reentry vehicle, or safety system, proce-
9 dure, service, or personnel that may be used in conducting
10 licensed commercial space launch or reentry activities.";
11 (D) by striking "and" at the end of subsection
12 (b)(2)(B);
13 (E) by striking the period at the end of sub-
14 section (b)(2)(C) and inserting in lieu thereof ";
15 and";
16 (F) by adding at the end of subsection (b)(2)
17 the following new subparagraph:
18 "(D) regulations establishing criteria for ac-
19 cepting or rejecting an application for a license
20 under this chapter within 60 days after receipt of
21 such application."; and
22 (G) by inserting ", or the requirement to obtain
23 a license," after "waive a requirement" in subsection
24 (b)(3).

1 (2) The amendment made by paragraph (1)(B) shall
2 take effect upon the effective date of final regulations is-
3 sued pursuant to section 70105(b)(2)(D) of title 49, Unit-
4 ed States Code, as added by paragraph (1)(F) of this sub-
5 section.
6 (3) Section 70102(5) of title 49, United States Code,
7 is amended—
8 (A) by redesignating subparagraphs (A) and
9 (B) as subparagraphs (B) and (C), respectively; and
10 (B) by inserting before subparagraph (B), as so
11 redesignated by subparagraph (A) of this paragraph,
12 the following new subparagraph:
13 "(A) activities directly related to the prep-
14 aration of a launch site or payload facility for
15 one or more launches;".
16 (4) Section 70103(b) of title 49, United States Code,
17 is amended—
18 (A) in the subsection heading, by inserting
19 "AND STATE SPONSORED SPACEPORTS" after "AND
20 REENTRIES"; and
21 (B) in paragraph (1), by inserting "and State
22 sponsored spaceports" after "private sector".
23 (5) Section 70105 of title 49, United States Code,
24 is amended by inserting "The Secretary shall submit to
25 the Committee on Science of the House of Representatives

1 and the Committee on Commerce, Science, and Transpor-
2 tation of the Senate a written notice not later than 7 days
3 after any occurrence when a license is not issued within
4 the deadline established by this subsection.".
5 (6) Section 70111 of title 49, United States Code,
6 is amended—
7 (A) in subsection (a)(1), by inserting after sub-
8 paragraph (B) the following:
9 "The Secretary shall establish criteria and procedures for
10 determining the priority of competing requests from the
11 private sector and State governments for property and
12 services under this section.";
13 (B) by striking "actual costs" in subsection
14 (b)(1) and inserting in lieu thereof "additive costs
15 only"; and
16 (C) by inserting after subsection (b)(2) the fol-
17 lowing new paragraph:
18 "(3) The Secretary shall ensure the establishment of
19 uniform guidelines for, and consistent implementation of,
20 this section by all Federal agencies.".
21 (7) Section 70112 of title 49, United States Code,
22 is amended—
23 (A) in subsection (a)(1), by inserting "launch,
24 reentry, or site operator" after "(1) When a";

1 (B) in subsection (b)(1), by inserting "launch,
2 reentry, or site operator" after "(1) A"; and
3 (C) in subsection (f), by inserting "launch, re-
4 entry, or site operator" after "carried out under a".

5 **SEC. 202. OFFICE OF AIR AND SPACE COMMERCIALIZATION**
6 **AUTHORIZATION.**

7 There are authorized to be appropriated to the Sec-
8 retary of Commerce for the activities of the Office of Air
9 and Space Commercialization, $457,000 for fiscal year
10 1996.

11 **SEC. 203. REQUIREMENT FOR INDEPENDENT COST**
12 **ANALYSIS.**

13 The Chief Financial Officer for the National Aero-
14 nautics and Space Administration shall be responsible for
15 conducting independent cost analyses of all new projects
16 estimated to cost more than $5,000,000 and shall report
17 the results annually to Congress at the time of the submis-
18 sion of the President's budget request. In developing cost
19 accounting and reporting standards for carrying out this
20 section, the Chief Financial Officer shall, to the extent
21 practicable and consistent with other laws, solicit the ad-
22 vice of expertise outside of the National Aeronautics and
23 Space Administration.

1 **SEC. 204. NATIONAL AERONAUTICS AND SPACE ACT OF 1958**
2 **AMENDMENTS.**

3 (a) DECLARATION OF POLICY AND PURPOSE.—Sec-
4 tion 102 of the National Aeronautics and Space Act of
5 1958 (42 U.S.C. 2451) is amended—

6 (1) by striking subsection (e) and redesignating
7 subsections (f) through (h) as subsections (e)
8 through (g), respectively; and

9 (2) in subsection (g), as so redesignated by
10 paragraph (1) of this subsection, by striking "(f),
11 and (g)" and inserting in lieu thereof "and (f)".

12 (b) REPORTS TO THE CONGRESS.—Section 206(a) of
13 the National Aeronautics and Space Act of 1958 (42
14 U.S.C. 2476(a)) is amended—

15 (1) by striking "January" and inserting in lieu
16 thereof "May"; and

17 (2) by striking "calendar" and inserting in lieu
18 thereof "fiscal".

19 (c) DISCLOSURE OF TECHNICAL DATA.—Section 303
20 of the National Aeronautics and Space Act of 1958 (42
21 U.S.C. 2454) is amended—

22 (1) in subsection (a)(C), by inserting "or (c)"
23 after "subsection (b)"; and

24 (2) by adding at the end the following new sub-
25 section:

1 "(c)(1) The Administration may delay for a period
2 not to exceed 5 years the unrestricted public disclosure
3 of technical data in the possession of, or under the control
4 of, the Administration that has been generated in the per-
5 formance of experimental, developmental, or research ac-
6 tivities or programs funded jointly by the Administration
7 and the private sector.
8 "(2) Within 1 year after the date of the enactment
9 of the National Aeronautics and Space Administration Au-
10 thorization Act, Fiscal Year 1996, the Administrator shall
11 issue regulations to carry out this subsection. Paragraph
12 (1) shall not take effect until such regulations are issued.
13 "(3) Regulations issued pursuant to paragraph (2)
14 shall include—
15 "(A) guidelines for a determination of whether
16 data is technical data within the meaning of this
17 subsection;
18 "(B) a requirement that a determination de-
19 scribed in subparagraph (A) that particular data is
20 technical data shall be reported to the Committee on
21 Science of the House of Representatives and the
22 Committee on Commerce, Science, and Transpor-
23 tation of the Senate;
24 "(C) provisions to ensure that technical data is
25 available for dissemination within the United States

1 to United States persons and entities in furtherance
2 of the objective of maintaining leadership or com-
3 petitiveness in civil and governmental aeronautical
4 and space activities by the United States industrial
5 base; and
6 "(D) a specification of the period or periods for
7 which the delay in unrestricted public disclosure of
8 technical data is to apply to various categories of
9 such data, and the restrictions on disclosure of such
10 data during such period or periods, including a re-
11 quirement that the maximum 5-year protection
12 under this subsection shall not be provided unless at
13 least 50 percent of the funding for the activities or
14 programs is provided by the private sector.
15 "(4) Along with the initial publication of proposed
16 regulations under paragraph (2), the Administrator shall
17 include a list of those experimental, developmental, or re-
18 search activities or programs conducted by, or funded in
19 whole or in part by, the Administration that may result
20 in products or processes of significant value in maintain-
21 ing leadership or competitiveness in civil and governmental
22 aeronautical and space activities by the United States in-
23 dustrial base. Such list shall be updated biannually.
24 "(5) For purposes of this subsection, the term 'tech-
25 nical data' means any recorded information, including

1 computer software, that is or may be directly applicable
2 to the design, engineering, development, production, man-
3 ufacture, or operation of products or processes that may
4 have significant value in maintaining leadership or com-
5 petitiveness in civil and governmental aeronautical and
6 space activities by the United States industrial base.".

7 **SEC. 205. PROCUREMENT.**

8 (a) PROCUREMENT DEMONSTRATION PROGRAM.—

9 (1) IN GENERAL.—The Administrator shall es-
10 tablish within the Office of Space Access and Tech-
11 nology a program of expedited technology procure-
12 ment for the purpose of demonstrating how innova-
13 tive technology concepts can rapidly be brought to
14 bear upon space missions of the National Aero-
15 nautics and Space Administration.

16 (2) PROCEDURES AND EVALUATION.—The Ad-
17 ministrator shall establish procedures for actively
18 seeking from persons outside the National Aero-
19 nautics and Space Administration innovative tech-
20 nology concepts relating to the provision of space
21 hardware, technology, or services to the National
22 Aeronautics and Space Administration, and for the
23 evaluation of such concepts by the National Aero-
24 nautics and Space Administration's Advisory Council
25 against mission requirements.

1 (3) REQUIREMENT.—At least 1 percent of
2 amounts authorized to be appropriated under section
3 102(a)(4) shall be used for innovative technology
4 procurements that are determined under paragraph
5 (2) of this subsection to meet mission requirements.
6 (4) SPECIAL AUTHORITY.—In order to carry
7 out this subsection the Administrator shall recruit
8 and hire for limited term appointments persons from
9 outside the National Aeronautics and Space Admin-
10 istration with special expertise and experience relat-
11 ed to the innovative technology concepts with respect
12 to which procurements are made under this sub-
13 section.
14 (5) SUNSET.—This subsection shall cease to be
15 effective 10 years after the date of its enactment.
16 (b) TECHNOLOGY PROCUREMENT INITIATIVE.—
17 (1) IN GENERAL.—The Administrator shall co-
18 ordinate National Aeronautics and Space Adminis-
19 tration resources in the areas of procurement, com-
20 mercial programs, and advanced technology in order
21 to—
22 (A) fairly assess and procure commercially
23 available technology from the marketplace in
24 the most efficient manner practicable;

1 (B) achieve a continuous pattern of inte-
2 grating advanced technology from the commer-
3 cial sector, and from Federal sources outside
4 the National Aeronautics and Space Adminis-
5 tration, into the missions and programs of the
6 National Aeronautics and Space Administra-
7 tion;
8 (C) incorporate private sector buying and
9 bidding procedures, including fixed price con-
10 tracts, into procurements; and
11 (D) provide incentives for cost-plus con-
12 tractors of the National Aeronautics and Space
13 Administration to integrate commercially avail-
14 able technology in subsystem contracts on a
15 fixed-price basis.
16 (2) CERTIFICATION.—Upon solicitation of any
17 procurement for space hardware, technology, or serv-
18 ices that are not commercially available, the Admin-
19 istrator shall certify, by publication of a notice and
20 opportunity to comment in the Commerce Business
21 Daily, for each such procurement action, that no
22 functional equivalent, commercially available space
23 hardware, technology, or service exists and that no
24 commercial method of procurement is available.

1 SEC. 206. ADDITIONAL NATIONAL AERONAUTICS AND
2 SPACE ADMINISTRATION FACILITIES.
3 The Administrator shall not construct or enter into
4 a new lease for facilities to support National Aeronautics
5 and Space Administration programs unless the Adminis-
6 trator has certified to the Congress that the Administrator
7 has reviewed existing National Aeronautics and Space Ad-
8 ministration and other federally owned facilities, including
9 military facilities scheduled for closing or reduction, and
10 found no such facilities appropriate for the intended use.
11 SEC. 207. PURCHASE OF SPACE SCIENCE DATA.
12 (a) IN GENERAL.—To the maximum extent possible,
13 the National Aeronautics and Space Administration shall
14 purchase from the private sector space science data. Ex-
15 amples of such data include scientific data concerning the
16 elemental and mineralogical resources of the moon and the
17 planets, Earth environmental data obtained through re-
18 mote sensing observations, and solar storm monitoring.
19 (b) COMPETITIVE BIDDING.—(1) Contracts for the
20 purchase of space data under this section shall be awarded
21 in a process of full, fair, and open competitive bidding.
22 (2) Submission of cost data, either for the purposes
23 of supporting the bid or fulfillment of the contract, shall
24 not be required of bidders.
25 (3) Conformance with military specifications
26 (Milspec) or National Aeronautics and Space Administra-

1 tion specifications systems with respect to the design, con-
2 struction, or operation of equipment used in obtaining
3 space science data under contracts entered into under this
4 section shall not be a requirement for a commercial pro-
5 vider bidding to provide such services.

6 (4) Contracts under this section shall not provide for
7 the Federal Government to obtain ownership of data not
8 specifically sought by the Federal Government.

9 **SEC. 208. REPORT ON MISSION TO PLANET EARTH.**

10 (a) REQUIREMENT.—The Administrator shall, within
11 6 months after the date of the enactment of this Act,
12 transmit to the Congress a report on Mission to Planet
13 Earth.

14 (b) CONTENTS.—The plan required by subsection (a)
15 shall include—

16 (1) an analysis of Earth observation systems of
17 other countries and the ways in which the United
18 States could benefit from such systems, including by
19 eliminating duplication of effort;

20 (2) an analysis of how the Department of De-
21 fense's airborne and space sensor programs could be
22 used in Mission to Planet Earth;

23 (3) a plan for infusing advanced technology into
24 the Mission to Planet Earth program, including

1 milestones and an identification of available re-
2 sources;
3 (4) a plan to solicit proposals from the private
4 sector on how to innovatively accomplish the most
5 critical research on global climate change;
6 (5) an integrated plan for research in the Sci-
7 entific Research and Mission to Planet Earth enter-
8 prises of the National Aeronautics and Space Ad-
9 ministration;
10 (6) a plan for developing metrics and milestones
11 to quantify the performance of work on Mission to
12 Planet Earth; and
13 (7) an analysis of how the United States Gov-
14 ernment can—
15 (A) most effectively utilize space-based and
16 airborne Earth remote sensing data, services,
17 distribution, and applications provided by the
18 United States private sector to meet Govern-
19 ment goals for Mission to Planet Earth; and
20 (B) evaluate and foster commercial data
21 sources, commercial archiving services, commer-
22 cial applications, and commercial distribution of
23 Mission to Planet Earth data.

1 **SEC. 209. SHUTTLE PRIVATIZATION.**

2 (a) POLICY AND PREPARATION.—The Administrator
3 shall prepare for an orderly transition from the Federal
4 operation, or Federal management of contracted oper-
5 ation, of space transportation systems to the Federal pur-
6 chase of commercial space transportation services for all
7 nonemergency launch requirements, including human.
8 cargo, and mixed payloads. In those preparations, the Ad-
9 ministrator shall take into account the need for short-term
10 economies, as well as the goal of restoring the National
11 Aeronautics and Space Administration's research focus
12 and its mandate to promote the fullest possible commercial
13 use of space. As part of those preparations, the Adminis-
14 trator shall plan for the potential privatization of the
15 Space Shuttle program.

16 (b) REQUEST FOR PROPOSALS.—Within 30 days
17 after the date of the enactment of this Act, the Adminis-
18 trator shall publish in the Commerce Business Daily a re-
19 quest for proposals to achieve a single prime contract for
20 the space shuttle program. The request for proposals shall
21 include—

22 (1) a timetable and milestones for selecting a
23 single prime contractor not later than September 30.
24 1996;

25 (2) criteria for selection of the single prime con-
26 tractor:

1 (3) the annual target cost to be achieved by the
2 single prime contractor;
3 (4) proposed terms and conditions of the single
4 prime contract, including fee and incentives for
5 achieving the target cost, and for savings below the
6 target cost; and
7 (5) a requirement that each proposal be accom-
8 panied by a plan by the proposer to privatize the
9 space shuttle program.
10 (c) PRIVATIZATION PLANS.—The Administrator shall
11 forward all privatization plans received pursuant to sub-
12 section (b)(5) to the Congress not later than 30 days after
13 the deadline for submitting proposals under subsection
14 (b).
15 (d) LIMITATION ON USE OF FUNDS.—None of the
16 funds authorized by this Act shall be used to plan or pre-
17 pare for Federal Government, or federally contracted, op-
18 eration of the Space Shuttle beyond the year 2012, nor
19 for studying, designing, or developing upgrades to the
20 Shuttle whose sole purpose is to extend the operational
21 life of the Space Shuttle system beyond 2012. Nothing in
22 this Act shall preclude the Federal, or federally con-
23 tracted, operation of the Space Shuttle through the year
24 2012, or the privatized operation of the Space Shuttle
25 after the year 2012.

1 SEC. 210. AERONAUTICAL RESEARCH AND TECHNOLOGY
2 FACILITIES.

3 Notwithstanding any other provision of law, no funds
4 may be obligated for fiscal year 1996 for Aeronautical Re-
5 search and Technology programs of the National Aero-
6 nautics and Space Administration in excess of amounts
7 authorized by this Act, except to the extent that the Ad-
8 ministrator receives from non-Federal sources full reim-
9 bursement of such excess amounts through payment of
10 costs associated with research at the aeronautical research
11 and technology facilities of the National Aeronautics and
12 Space Administration.

13 SEC. 211. LAUNCH VOUCHER DEMONSTRATION PROGRAM
14 AMENDMENTS.

15 Section 504 of the National Aeronautics and Space
16 Administration Authorization Act, Fiscal Year 1993 (15
17 U.S.C. 5803) is amended—

18 (1) in subsection (a)—

19 (A) by striking "the Office of Commercial
20 Programs within"; and

21 (B) by striking "Such program shall not
22 be effective after September 30, 1995.";

23 (2) by striking subsection (c); and

24 (3) by redesignating subsections (d) and (e) as
25 subsections (c) and (d), respectively.

1 SEC. 212. PRIVATIZATION OF MICROGRAVITY PARABOLIC
2 FLIGHT OPERATIONS.

3 (a) FINDING.—The Congress finds that no national
4 security or mission critical justification exists for the Na-
5 tional Aeronautics and Space Administration to maintain
6 its own fleet of aircraft to provide a short duration micro-
7 gravity environment via parabolic flight.

8 (b) PRIVATIZATION OF FLIGHT OPERATIONS.—(1)
9 The Administrator shall privatize all parabolic flight air-
10 craft operations conducted by or for the National Aero-
11 nautics and Space Administration in support of micro-
12 gravity research, astronaut training, and other functions,
13 through issuance of one or more long-term, renewable,
14 block purchase contracts for the performance of such oper-
15 ations by United States private sector providers.

16 (2) Within 30 days after the date of the enactment
17 of this Act, the Administrator shall issue a request for
18 proposals to provide services as described in paragraph
19 (1). The Administrator shall coordinate the process of re-
20 view of such proposals, and shall oversee the transfer of
21 such operations to the private sector.

22 (3) Within 6 months after the issuance of a request
23 for proposals under paragraph (2), the Administrator shall
24 award one or more contracts for microgravity parabolic
25 flight services, and shall cease all National Aeronautics
26 and Space Administration-operated parabolic aircraft

1 flights, and shall thereafter procure all microgravity
2 parabolic flight services from private sector providers. Na-
3 tional Aeronautics and Space Administration experi-
4 menters, and National Aeronautics and Space Administra-
5 tion-funded experimenters, who would otherwise use Na-
6 tional Aeronautics and Space Administration-owned or op-
7 erated microgravity parabolic flight aircraft, shall be is-
8 sued vouchers for the procurement of microgravity
9 parabolic flight services from the private sector.

10 (c) REGULATORY ASSISTANCE.—The Congress en-
11 courages the Federal Aviation Administration to facilitate
12 and expedite regulatory activity associated with parabolic
13 aircraft flight for persons awarded contracts under sub-
14 section (b) relating to large seat pallet certification, air
15 space clearances, and aircraft certification for parabolic
16 flight. The Administrator of the Federal Aviation Admin-
17 istration shall deliver to the Congress a report on such
18 Administration's activities described in the preceding sen-
19 tence, and the results thereof, not later than one year after
20 the date of the enactment of this Act.

21 **SEC. 213. ELIGIBILITY FOR AWARDS.**

22 (a) IN GENERAL.—The Administrator shall exclude
23 from consideration for awards of financial assistance made
24 by the National Aeronautics and Space Administration
25 after fiscal year 1995 any person who received funds,

1 other than those described in subsection (b), appropriated
2 for a fiscal year after fiscal year 1995, from any Federal
3 funding source for a project that was not subjected to a
4 competitive, merit-based award process. Any exclusion
5 from consideration pursuant to this section shall be effec-
6 tive for a period of 5 years after the person receives such
7 Federal funds.

8 (b) EXCEPTION.—Subsection (a) shall not apply to
9 awards to persons who are members of a class specified
10 by law for which assistance is awarded to members of the
11 class according to a formula provided by law.

12 **SEC. 214. PROHIBITION OF LOBBYING ACTIVITIES.**

13 None of the funds authorized by this Act shall be
14 available for any activity whose purpose is to influence leg-
15 islation pending before the Congress, except that this shall
16 not prevent officers or employees of the United States or
17 of its departments or agencies from communicating to
18 Members of Congress on the request of any Member or
19 to Congress, through the proper channels, requests for leg-
20 islation or appropriations which they deem necessary for
21 the efficient conduct of the public business.

22 **SEC. 215. LIMITATION ON APPROPRIATIONS.**

23 (a) EXCLUSIVE AUTHORIZATION FOR FISCAL YEAR
24 1996.—Notwithstanding any other provision of law, no
25 sums are authorized to be appropriated for fiscal year

1 1996 for the activities for which sums are authorized by
2 this Act unless such sums are specifically authorized to
3 be appropriated by this Act.
4 (b) SUBSEQUENT FISCAL YEARS.—No sums are au-
5 thorized to be appropriated for any fiscal year after fiscal
6 year 1996 for the activities for which sums are authorized
7 by this Act unless such sums are specifically authorized
8 to be appropriated by Act of Congress with respect to such
9 fiscal year.

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