

leadership is not addressing the real problems. There seems to be an emerging question of the confidence in our military's senior leadership. There is a growing concern that the top leadership is not willing to make the hard decisions to restrain our military missions to the available human and material resources or to expand those resources to meet the increasing demand.

That brings us back to the question of money. There is simply not enough money in the defense budget as it is currently projected to do everything that needs to be done. There is an effort underway to provide emergency supplemental funding for military readiness. I support that effort. However, this will not solve the bigger problems.

Our military leaders are beginning to agree. In a recent Armed Services Committee Hearing with the Joint Chiefs, U.S. military leaders finally conceded that they do, indeed, have a severe problem. The \$1 billion in supplemental funding will help, but according to the most recent Joint Chiefs' testimony, between \$10 to \$13.5 billion would be necessary in the coming year to meet U.S. defense needs.

One thing is blatantly clear. We must strive to adequately feed, house, and train our most precious military resource—the men and women in our armed forces. To do this will mean more resources for our defense budget and it will mean better management of the resources—human and material—that we already have.

For next year, for the fiscal year 2000 budget, I believe, we need to start the new millennium by at least stopping the ebbing tide and end the 15 year decline.

Each year the Armed Services Committee is given the difficult task of balancing between current and long-term readiness under current budget constraints. In recent years, they have had the impossible task of ensuring that personnel, quality of life, readiness, and modernization programs are adequately supported, while funding levels remain insufficient to achieve that objective.

The Committee recognizes, as do most of us concerned about our national defense, that combat readiness of our armed forces is at risk. The risk is a function of older equipment resulting from inadequate modernization and a force structure too small to meet ongoing demands. Aging equipment and weary soldiers cannot possibly defend this country adequately. Nor can dominance result from this equation.

I am gravely concerned about preparedness, modernization and procurement. However, I am most concerned about the human element of our armed forces. The best equipment and the most rigorous training cannot compensate for too lengthy, too frequent deployments and time away from loved ones.

Mr. President, the solution is clear. We must stop the ebbing tide in our na-

tional defense budget. If we don't the hollowing out of our military forces will continue. Our national security will be at risk during a time of international uncertainty and growing threats. Our soldiers deserve better and U.S. citizens are counting on us.

Mr. THURMOND. How much time do I have remaining?

The PRESIDING OFFICER. Six minutes 10 seconds.

Mr. THURMOND. Mr. President, I want to thank the leadership of the Senate for their cooperation and support in bringing this conference report to the floor for approval of the Senate. The bipartisan support of both the majority and the minority leaders is critical to successful passage of the conference report of such magnitude.

The majority leader, Senator LOTT, a former member of our committee, recognizes the importance of this bill and has always given his full support and assistance in passing a bill of this nature. I thank him for his time and support and all he has done in this respect.

I extend my appreciation to the leadership staff and the floor staff for their assistance which is essential to passing this large, complex bill.

In that connection, Mr. President, I wish to especially commend Les Brownlee, staff director of the Armed Services Committee. He has rendered yeoman service to this committee, and I can't say enough in support of all he has done. George Laufer, the deputy staff director, has also been most faithful and has done an outstanding job. We appreciate that and thank him for what he has done in this connection. I also wish to thank David Lyles on the other side, and those who worked with him, for their fine cooperation and support. They have been most cooperative and have rendered a great service.

Mr. President, we appreciate the work of two House Members. We thank FLOYD SPENCE, who happens to be from my State, for handling the House bill. He is an outstanding gentleman of character and ability, and I thank him for all he has done in cooperating with us on the defense legislation. IKE SKELTON, a Democrat, who works with Congressman SPENCE, has also been cooperative and helpful, and I express my appreciation to him, too.

I yield the floor.

The PRESIDING OFFICER. The Chair, in his capacity as a Senator from the State of Washington, suggests the absence of a quorum and, without objection, directs that the time be divided equally between the two sides.

The clerk will call the roll.

The assistant legislative clerk proceeded to call the roll.

Mr. THURMOND. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. THURMOND. Mr. President, how much time do I have left?

The PRESIDING OFFICER. Two and one-half minutes.

Mr. THURMOND. Mr. President, I yield that to the able Senator from Texas.

Mrs. HUTCHISON. Parliamentary inquiry, Mr. President. Is it possible for me to ask unanimous consent to go into morning business rather than take from Senator THURMOND's time? I wanted to talk about the 40th anniversary of NASA.

The PRESIDING OFFICER. There is an order that a vote occur on the defense authorization bill at noon. The request is in order and will probably be charged against both sides.

Mrs. HUTCHISON. If that is acceptable, I ask unanimous consent to have 5 minutes to speak on the 40th anniversary of NASA.

The PRESIDING OFFICER. Is there objection?

Without objection, it is so ordered.

THE 40TH ANNIVERSARY OF NASA

Mrs. HUTCHISON. Mr. President, on October 1, 1958, the National Aeronautics and Space Administration (NASA) was created. No other Government agency better represents the hopes and experiences of our Nation during the course of its existence than NASA. To recall why that is so, let's look back to where we were 40 years ago.

In October 1957, the Soviet Union launched Sputnik 1, the world's first artificial satellite. Many have claimed this had a "Pearl Harbor" effect on the American people and galvanized public opinion in favor of an aggressive U.S. space program. Americans believed that the Soviet Union had gained a significant technological advantage over the United States—bomb shelters were built at an even more rapid rate as we turned our attention to the space race.

Then-Senator Lyndon Johnson, from my state of Texas, said that the launch of Sputnik was " * * * a new era of history dawning over the world." He warned a Texas audience that, "The mere fact that the Soviets can put a satellite in the sky * * * does not alter the world balance of power. But it does mean they are in a position to alter the balance of power."

Shortly thereafter, Senator Johnson introduced legislation to create NASA and harnessed the energies, talents, and aspirations of a nation embarking on a bold, new enterprise. The act reflected a remarkable unanimity by the American people and a commitment to science and exploration.

NASA wasted no time in bringing America into the space race. Shortly after it was formed, NASA conducted several exciting programs that launched us ahead of the Soviet Union in our quest to conquer space.

One of the most important initiatives involved human space flight—Mercury's single astronaut program, Project Gemini's operations and Project Apollo to explore the Moon. These names conjure up strong images of fearless astronauts doing the impossible. In 1961, Alan B. Shepard became

the first American to fly in space. Of course, we remember him because he died just recently. In 1962, JOHN GLENN, who now serves with us in the U.S. Senate, became the first American to orbit the Earth. Project Gemini allowed two astronauts to travel in space. On Gemini IV, Edward White became the first American to conduct a space walk.

In 1969, just 11 years after the creation of NASA, and less than a decade after President Kennedy committed America to the project, Apollo 11 landed on the Moon and Neil Armstrong and Buzz Aldrin made the dramatic "leap" for mankind. NASA completed five more lunar missions and learned much about the origins of the Moon, as well as how to support humans in outer space. Twelve American astronauts walked on the Moon during the six Apollo missions. Nothing symbolizes the uniqueness of this great Nation better than the American flag flying on the lunar surface.

In 1975, NASA joined hands with its former competitor in the space race and cooperated with the Soviet Union to achieve the first international human space flight. This project successfully tested joint rendezvous and docking procedures for spacecraft from the United States and the Soviet Union.

In 1981, the advent of the space shuttle ushered in a new era of space travel and exploration. By creating a reusable launch vehicle, NASA was making access to space now more affordable. The disaster of the *Challenger* brought the shuttle program to a rapid standstill. It was a harsh reminder that the exploration of space is a dangerous and unpredictable undertaking. Seven astronauts gave their lives on that mission in an effort to further our knowledge of the universe. We owe them and their families our eternal gratitude and respect.

Two years after the CHALLENGER disaster, we returned to space. Through mid-1998, NASA has safely launched 65 shuttle missions. These missions have included a wide variety of scientific and engineering missions. There are currently four shuttles in NASA's fleet and NASA is working with the private sector to reduce the cost of space flight even more. Two experimental vehicles, the X-33 and X-34, are prototypes for cheaper, more efficient reusable launch vehicles that would provide commercial entities with access to space. I commend NASA for continuing to look to the future and the challenges that lie there.

One of our colleagues, JOHN GLENN, is scheduled to return to space on October 29th. It was in NASA's earliest days that JOHN GLENN made history by bringing the first American to orbit the Earth. Now he is making history again by being the oldest person to fly in space.

Looking forward to the next 40 years, NASA's future is as bright as its past. NASA's core mission of any future

space exploration will be man's departure from Earth orbit and journeys to the Moon or Mars. This will require extended, even permanent, stays in space and has led NASA to begin construction of the International Space Station.

In 1984, Congress authorized NASA to build the space station as a base for further exploration of space. A project of this magnitude was certain to face a multitude of unknowns—and NASA has confronted many of them. As has always been the case, though, NASA will overcome these obstacles and we will reap the rewards of doing so.

For example, NASA has developed a unique technology, a bioreactor, that allows medical researchers to produce breakthrough results by creating "artificial" human tissues outside the human body. This bioreactor has provided new knowledge in cell science and tissue engineering that will bring exciting advances in medicine and the treatment of disease. This amazing technology is already being used by scientists who are growing ovarian tumor samples so they can conduct studies outside the body and without harm to the patient.

The absence of gravity on the space station also will allow new insights into human health and disease prevention and treatment, including heart, lung, and kidney function, cardiovascular disease, osteoporosis, and immune system functions.

In recent years, NASA has obtained scientific data from space experiments that is five times more accurate than that on Earth. None of these benefits will be available unless we have a space station on which we can perform adequate research.

The space station is the greatest peaceful scientific international endeavor undertaken. This is our future and space is one of the last unexplored regions of our universe. It holds untold knowledge and could catapult us into even greater understanding of our world and yet undiscovered worlds. Yes, the station will provide us with fantastic science—but that is only one of the known positives of this great endeavor. The unknowns are limitless and could provide us with unimaginable discoveries. We are on the very cusp of launching the first elements in November of this year, with the second element to follow in December.

Since its inception in 1958, NASA has accomplished many great scientific and technological feats. NASA's technology has been adapted for many non-aerospace uses by the private sector. We can thank NASA for so many things—from car phone technology, satellite imagery, the CAT scan, to Velcro and freeze dried ice cream. At its fortieth anniversary, NASA remains a leading force in scientific research and is one of the best examples of the American spirit and our can-do attitude.

We are proud of what NASA has achieved, and on this 40th anniversary

we do have a number of accomplishments to celebrate.

I thank the Chair and yield the floor.

Mr. SESSIONS addressed the Chair.

The PRESIDING OFFICER. The Senator from Alabama is recognized.

THE 40TH ANNIVERSARY OF NASA

Mr. SESSIONS. Mr. President, I thank the Senator from Texas. We both share a keen interest in space. I will also be speaking on the topic of the 40th anniversary of NASA, which is today.

Mr. President, next month, from launch pad 39B at Cape Canaveral, the Space Shuttle's main engines will fire up, the solid rocket motors will ignite, and the crew of seven will be sent off into orbit around our home planet. One of those seven will be the distinguished Senator from Ohio. More than 36 years after his first flight, JOHN GLENN will again orbit the earth in a United States spacecraft.

I have here a picture of Senator GLENN taken 36 years ago with Dr. Wernher von Braun in Huntsville, Alabama, my home State. They are shown here discussing a proposed lunar landing craft. What an imagination, what a vision, what an exploring capacity they had. Shortly after that first orbital flight, they were already planning a trip to the moon—a vision that many thought could never be achieved and was achieved so successfully.

Senator GLENN's remarkable story is a subplot to the remarkable story of the National Aeronautics and Space Administration. On October 1, 1958, just six months before the distinguished Senator from Ohio was named as one of the original Mercury astronauts, NASA was born. Today, NASA marks its 40th anniversary of service to this Nation.

It is hard to believe that more than 40 years have passed since the Soviet launch of Sputnik. Spurred by concern over the Soviet advantage in space, the Eisenhower administration proposed the creation of a civil space agency to lead our Nation in the exploration of space. Forty years later, the Soviet Union no longer exists. But NASA stands on the threshold of a new millennium, the undisputed world leader in space exploration.

The agency's achievements and discoveries during that 40-year period have changed our world in many ways. Those who are familiar with the space program talk frequently of the many "spinoffs" from the program. There are, in fact, many products and services that are obviously and directly attributable to the space program.

For instance, many Americans do not leave home in the morning before checking the weather forecast. Being from Mobile and just sitting through a hurricane, this was particularly true for me this past weekend. Of course, weather satellites orbiting the earth have revolutionized weather forecasting. Many of us check the forecast by