

including two national parks, four national wildlife refuges, and the Florida Keys National Marine Sanctuary—one of the most diverse marine ecosystems in the Nation. The natural and cultural resources and environmental setting of the area make it among the most diverse in North America. Within the surrounding waters are resources deserving of special consideration and protection, including America's only living barrier coral reef.

This designation is part of a global effort to raise public awareness of the value of coral reefs, the significance of the threats faced by coral reef systems, and to mobilize action to develop and implement innovative solutions and strategies to protect and conserve these important natural resources. Coral reef systems provide economic, environmental, and cultural benefits to millions of people around the world and are vital in protecting shorelines and supporting coastal economies. Coral reefs are some of the most valuable and spectacular places on earth. Covering less than 1 percent of the planet's surface, coral reefs and their associated mangrove, sea grass, and other habitats are the world's most biologically diverse marine ecosystems.

Last September, I had the distinct opportunity of participating in a dive to the Aquarius Undersea Laboratory in the Florida Keys. While in Aquarius, I participated in a live, underwater question and answer session with schoolchildren on topics such as coral reef conservation and the dangers of offshore drilling. This visit demonstrated how the Aquarius facility plays a direct role in improving our youngsters' understanding and appreciation of the marine environment.

As part of my passion for preserving the environment, I am proud to serve as co-Chair of the National Marine Sanctuary Caucus along with my colleague Congresswoman LOIS CAPPAS. The National Marine Sanctuary Caucus is a bipartisan coalition of Members dedicated to increasing awareness and strengthening commitment to our Nation's cherished marine sanctuaries. The caucus promotes understanding of how national marine sanctuaries help to safeguard our natural heritage and economic well-being. It also serves to inform local communities about the importance of maintaining these ecosystems for future generations to enjoy, educates Members of Congress on the importance of sanctuary protection and management, and ensures that adequate resources are directed to foster and restore these vital habitats.

I would like to also take this time to recognize the incredible National Marine Sanctuary officials in my district, including Billy Causey and Commander Dave Score, as well as Sanctuary System Director Dan Basta, for all of their work on behalf of our underwater ecosystems.

Once again, I would like to express my support for designating 2008 as the International Year of the Reef. Through this designation, it is my hope that it will encourage further research and development efforts to preserve coral reefs around the world.

Mr. BAIRD. Mr. Speaker, I have no further requests for time and would yield back the balance of my time and urge a "yes" vote.

The SPEAKER pro tempore. The question is on the motion offered by

the gentleman from Washington (Mr. BAIRD) that the House suspend the rules and agree to the resolution, H. Res. 1112.

The question was taken; and (two-thirds being in the affirmative) the rules were suspended and the resolution was agreed to.

A motion to reconsider was laid on the table.

#### CELEBRATING 35 YEARS OF SPACE-BASED OBSERVATIONS OF THE EARTH BY THE LANDSAT SPACECRAFT

Mr. BAIRD. Mr. Speaker, I move to suspend the rules and agree to the resolution (H. Res. 891) celebrating 35 years of space-based observations of the Earth by the Landsat spacecraft and looking forward to sustaining the longest unbroken record of civil Earth observations of the land, as amended.

The Clerk read the title of the resolution.

The text of the resolution is as follows:

#### H. RES. 891

Whereas the year 2007 represents 35 years of continuous collection of space-based observations of the Earth's land cover by the United States Landsat satellites, which have enabled increased scientific understanding of the interrelationships of the Earth's land cover, energy balance, and biogeochemical processes as well as the realization of numerous societal benefits from the applied uses of the data;

Whereas on July 23, 1972, the National Aeronautics and Space Administration launched Landsat 1, originally called the Earth Resources Technology Satellite, as the first civilian Earth observation satellite to study the Earth's land cover and monitor natural resources;

Whereas since 1972, the United States Geological Survey has led the data archiving and distribution efforts for the Landsat program, which has continued to collect data without interruption through the successful launches of Landsats 2, 3, 4, 5, and 7, and has established the longest and most comprehensive record of global land surface data ever collected;

Whereas the National Aeronautics and Space Administration, the United States Geological Survey, the Department of Commerce, the Department of Defense, and the private sector have all played a role in Landsat's history;

Whereas Landsat greatly enhanced remote sensing science, helped give rise to a global change research plan and international initiatives to study the Earth system, and led to new types of careers in engineering and natural sciences;

Whereas Landsat data have been used for multiple scientific and applied purposes including cartography, land surveys and land use planning, agricultural forecasting, water resource management, forest management, mapping of sea ice movement, assessment of tropical deforestation, food security, mineral and oil exploration, and global change research;

Whereas Landsat data are being widely used by Federal, local, county, and State governments, and by foreign nations, non-governmental organizations, private industry, and universities;

Whereas Landsat data are collected at a scale that enables the study of both natural and human-induced changes in land cover over time and their impacts on the Earth's ecosystems;

Whereas Landsat data illuminated for the first time how human decisions, such as the expansion of cities, led to large-scale impacts on the environment;

Whereas the U.S. Climate Change Science Program has recognized Landsat and its long-term data record as instrumental to the study of climate and environmental change, noting that "Landsat data are invaluable for studying the land surface and how it affects and is affected by climate"; and

Whereas the scientific and societal benefits of the Landsat program and its 35-year data record illustrate the significant return on the public investment in Earth observations and the need for continued support for this critical national asset: Now, therefore, be it Resolved, That the House of Representatives—

(1) expresses its appreciation to all of the dedicated scientists, engineers, and program personnel who have contributed to the successful development and operation of the Landsat program over the past 35 years;

(2) looks forward to another 35 years of continuous Landsat-like observations of the Earth;

(3) urges the continuation of the Landsat program and data record so as to sustain Landsat's value to scientific research, especially the study of global and climate change, and to the myriad applied uses of the data for societal benefit; and

(4) believes that the Nation should continue to support the research, technological improvements, educational outreach, and development of decision making tools required to expand the use of Landsat data separately and as integrated with other Earth observations data.

The SPEAKER pro tempore. Pursuant to the rule, the gentleman from Washington (Mr. BAIRD) and the gentleman from Oklahoma (Mr. LUCAS) each will control 20 minutes.

The Chair recognizes the gentleman from Washington.

#### GENERAL LEAVE

Mr. BAIRD. Mr. Speaker, I ask unanimous consent that all Members have 5 legislative days to revise and extend their remarks and include extraneous material on H. Res. 891, the resolution now under consideration.

The SPEAKER pro tempore. Is there objection to the request of the gentleman from Washington?

There was no objection.

Mr. BAIRD. Mr. Speaker, I yield myself such time as I may consume.

Mr. Speaker, I rise on this occasion, again I mention it is on Earth Day, to seek support for House Resolution 891, as amended, celebrating 35 years of space-based observation of the Earth by the Landsat spacecraft.

This resolution celebrates the world's longest unbroken record of civil Earth observations of the land beginning with the launch of the first Landsat satellite on July 23, 1972. The data collected from Landsat satellites have helped advance our scientific understanding of global change and fostered applications that benefit our private

sector, as well as our State, local, regional and Federal Government activities.

Mr. Speaker, the scientific and applied uses of these space-based land observations are vast. Landsat data are used to monitor crop patterns, manage natural resources such as water and forests, assist in land use and urban growth planning, help protect wildlife habitats and support national security objectives, to name just a few examples. Landsat's 35 year data record has also been critical in helping to understand the interactions between land cover changes and variations in the Earth's climate.

The most recent report of the U.S. Climate Change Science Program Report references Landsat as one of two critical satellites. It states, "Without these satellite observations, the current pace of discovery and innovation in global land use and land cover change climate research would not be possible."

Mr. Speaker, this celebration of Landsat's continuous 35 years record of land observations provides a clear example of the societal benefits derived from our Nation's space program. But there is more to be gained from Landsat data. Increases in computing and communications capabilities are stimulating innovative approaches to using Earth observations data such as Landsat. One need only look to the Internet, where anyone can access images of neighborhoods, cities and regions to see firsthand the ways in which Landsat data are finding their ways into our lives.

Mr. Speaker, in reflecting on the contributions that Landsat has made over the past 35 years and the growing applications of these data, we must remember that the success of Landsat begins and continues with people. We owe our gratitude to the many talented and hard-working scientists, engineers and other professionals who have been involved in the Landsat program.

I urge my colleagues to support H. Res. 891. As we address the implications of climate change and the pressure on our environment and resources, it is important that we ensure the continuation of the Landsat program and ensure the research, technology and educational investments that are required to expand the use of Landsat data and the benefits they provide to science and society.

Mr. Speaker, I reserve the balance of my time.

Mr. LUCAS. Mr. Speaker, I yield myself such time as I may consume.

Mr. Speaker, I rise to join my colleague in support of H.R. 891, celebrating 35 years of continuous operation of the Federal Government's Earth observing Landsat satellite program. Generations of Landsat satellites have taken and continue to take an uninterrupted record of images of

Earth's oceans and lands, enabling resource managers, geologists, climate researchers and scientists to closely monitor land use changes, water consumption, forestry, agricultural and the effects of climate change through the regular acquisition and cataloging of these photographs. This detailed and continuous record of observations offers an unambiguous insight into the changes that are occurring on a global, regional and local scale.

Landsat data and the research findings they enable would not be possible without the excellent cooperation and joint management between NASA, who designs, builds and launches the satellites, and the United States Geological Survey and the Department of Interior, who manage the archives of Landsat data at the National Satellite Land Remote Sensing Data Archives, what a title, located in Sioux Falls, South Dakota. Their data records extend back 33 years.

The early history of Landsat offers a remarkable insight into the events, culture, personalities and institutional jealousies of the 1960s and 1970s. When our earliest astronauts returned from the Mercury and Gemini missions with photographs of the Earth taken from their spacecraft, scientists and engineers quickly began to envision the value of using robotic spacecraft as a means of monitoring land use changes.

However, the Department of Defense initially objected to a space-based civilian reconnaissance satellite out of concern that it would compromise their own spy satellite programs. The Office of Management and Budget also objected, arguing that land use data could be more cheaply acquired by high-flying aircraft.

According to NASA historians, then Secretary of the Interior Stewart L. Udall, being convinced of the value of space-based civil reconnaissance satellites, announced in 1966 that his department was initiating its own Earth observing satellite program. His pronouncement apparently spurred NASA to take the initiative to proceed in an ambitious manner to build Landsat.

Today, Landsat 5 and Landsat 7 continue to operate in Earth orbit, although both are nearing the end of their operational lives and may not last long enough to overlap the launch of their successor in 2011, called the Landsat Data Continuity Mission. If they both fail, the 35 year record of continuous Landsat coverage will be interrupted, and though it will be disappointing, I am optimistic that other methods of data collection will be able to fill in most of the gaps during that interim.

The Landsat program's data records are an invaluable national resource. The tenacity and the brilliance of the men and women at NASA, at USGS, and the contractors who helped design, build and launch the satellites, as well

as manage the huge volume of data generated by the family of Landsat satellites, have created a legacy that will continue to serve our Nation's needs for many, many years to come.

Mr. Speaker, I urge my colleagues to support House Resolution 891.

With that, I reserve the balance of my time.

Mr. BAIRD. I want to thank the gentleman from Oklahoma. It is an astonishing history, isn't it? The fact that we have now got a continuous record of changes at all sorts of levels, changes in ground cover, changes in agriculture, changes in the water resources, et cetera, is an extraordinary resource for a host of uses. Our agriculture community benefits from this, our national parks benefit from this, flood control managers benefit from this.

This Landsat satellite system, which was, as the gentleman from Oklahoma pointed out, once rather controversial, is now seen as something that would be very difficult to plan without. It has produced enormous economic benefits and economic savings.

Who would have thought many decades ago before the space program that one day we would be able to send up remote instruments to look back down on Earth, not from the 40,000 foot level, but much higher, to give us the broad sweep; but not only the temporary snapshot, but the vast look over time, so you can see changes, both constructive changes and the losses. Absolutely incredible and important.

I want to share the gentleman's concern. We need that continuity to continue. Let us hope that the good engineers of NASA have produced an instrument which can last much longer, as they have in many cases, as we see in the Mars rover system, for example. But we need that continuity in the data records so scientists can see what changes have occurred over time without interruption. We need to continue that not only with the proximate, the next Landsat satellite, but future generations as well.

Mr. Speaker, I thank the scientists and engineers, and thank the gentleman from Oklahoma for his support of this resolution.

Mr. Speaker, I reserve the balance of my time.

Mr. LUCAS. Mr. Speaker, I have no further requests for time, and I yield back the balance of my time.

Mr. BAIRD. Again, I want to commend my colleagues for introducing this legislation. I think this is absolutely appropriate, particularly on Earth Day. But it is helpful for us to remember down here on Earth that our lives on Earth are made better by the space program and the observing network that we have up in space that help us anticipate all kinds of potential disasters and avoid those, and also guide us in doing proactive things to improve the health of our great planet.

Mr. UDALL of Colorado. Mr. Speaker, I am pleased that the House yesterday passed my resolution, H. Res. 891, on Celebrating 35 Years of Space-Based Observations of the Earth by Landsat Spacecraft. I would like to thank my colleague, Representative REGULA from Ohio, who has joined me as an original cosponsor of this resolution.

It is only fitting that we celebrate Landsat and its thirty-five year record of space-based observations of the land at a time when we are beginning to address the current and future implications of climate change. The U.S. Climate Change Science Program recently recognized Landsat noting that "Landsat data are invaluable for studying the land surface and how it affects and is affected by climate." I thank my colleagues in Congress for continuing to support Landsat and for enabling the development of these long time-series data that are so important for research on climate variability.

The data collected by Landsat satellites are being used by almost all Federal agencies, by state, regional, and local governments, by researchers and private industry. I held a field hearing earlier this month in Colorado on the important ways in which remote sensing data, including Landsat imagery, can help our state and local officials carry out their responsibilities more effectively. The broad application of these data to provide scientific and societal benefits testifies to the nation's sound investment in space technology. We owe our thanks and appreciation to the talented and dedicated scientists, engineers, and professionals who have contributed to Landsat and its success.

Mr. Speaker, there is more to be gained from the data collected by Landsat satellites, and there are still issues to be resolved to ensure that the nation can get the best return on its investment in Landsat's capabilities. However, I have no doubt that through support for the research, technology, and education required to improve Landsat data collection and applications, the returns from this national investment will continue to multiply. I urge my colleagues to join me in ensuring that the benefits derived from this important record of civil observations of the land, as collected from Landsat satellites, continue to expand for another 35 years.

Ms. JACKSON-LEE of Texas. Mr. Speaker, I rise today in strong support of H. Res. 891, celebrating 35 years of space-based observations of the earth by the Landsat spacecraft and looking forward to sustaining the longest unbroken record of civil earth observations of the land, introduced by my distinguished colleague from Colorado, Representative MARK UDALL. This important legislation recognizes the longest running enterprise for acquisition of imagery of Earth from space.

The program was initiated in 1966 as the Earth Resources Observation Satellites program but was later changed to Landsat in 1975. On July 23, 1972, the National Aeronautics and Space Administration launched Landsat 1, originally called the Earth Resources Technology Satellite, as the first civilian Earth observation satellite to study the Earth's land cover and monitor natural resources. Since 1972, the Landsat program has continued to collect data without interruption through the successful launches of

Landsats 2, 3, 4, 5, and 7, and has established the longest and most comprehensive record of global land surface data ever collected.

The year 2007 represents 35 years of continuous collection of space-based observations of the Earth's land cover by the United States Landsat satellites, which have enabled increased scientific understanding of the interrelationships of the Earth's land cover, energy balance, and biogeochemical processes as well as the realization of numerous societal benefits from the applied uses of the data. The consistency of Landsat data over three decades of acquisition offers opportunities to compare land cover changes over time. Landsat greatly enhances remote sensing science that helps give rise to a global change research plan and international initiatives to study the Earth system. Landsat images are also invaluable for emergency response and disaster relief. Advances made in data reception and processing permit rapid access to imagery in times of natural or human-made disaster. Within hours of data acquisition, the USGS Center for Earth Resources Observation and Science provides relief organizations worldwide with satellite images for disaster response, as well as image-derived products that incorporate information on population density, elevation, and other relevant topics.

Landsat data illuminated for the first time how human decisions led to large-scale impacts on the environment. The U.S. Climate Change Science Program has recognized Landsat and its 3 long-term data record as instrumental to the study of climate and environmental change, noting that Landsat data are invaluable for studying the land surface and how it affects and is affected by climate. The scientific and societal benefits of the Landsat program and its 35-year data record illustrate the significant return on the public investment in Earth observations and the need for continued support for this critical national asset.

Mr. Speaker, I express my appreciation to all of the dedicated scientists, engineers, and program personnel who have contributed to the successful development and operation of the Landsat program over the past 35 years. I urge my fellow colleagues to join me and continue to support the Landsat program and data record so as to sustain Landsat's value to scientific research, especially, the study of global climate change, and to the myriad applied uses of the data for societal benefit.

Mr. BAIRD. Mr. Speaker, I yield back the balance of my time and urge a "yes" vote on this resolution.

The SPEAKER pro tempore. The question is on the motion offered by the gentleman from Washington (Mr. BAIRD) that the House suspend the rules and agree to the resolution, H. Res. 891, as amended.

The question was taken; and (two-thirds being in the affirmative) the rules were suspended and the resolution, as amended, was agreed to.

A motion to reconsider was laid on the table.

□ 1545

#### JOHN ARCHIBALD WHEELER

Mr. BAIRD. Mr. Speaker, I move to suspend the rules and agree to the resolution (H. Res. 1118) honoring the life and achievements of John Archibald Wheeler and expressing condolences on his passing.

The Clerk read the title of the resolution.

The text of the resolution is as follows:

#### H. RES. 1118

Whereas John Archibald Wheeler was born July 9, 1911, in Jacksonville, Florida;

Whereas John Wheeler graduated from high school at age 15 and earned a Ph.D. in physics from Johns Hopkins University at age 21;

Whereas Dr. Wheeler then moved to Copenhagen to work in the field of nuclear physics with pioneering physicist Niels Bohr;

Whereas, while still in his 20s, Dr. Wheeler, then a Professor of Physics at Princeton, along with Dr. Bohr in 1939 worked out the first explanation of how the newly discovered nuclear fission actually worked;

Whereas Dr. Wheeler spent the war years at Hanford, Washington working on the theoretical understanding of nuclear reactions that led to production of plutonium for the bomb dropped on Nagasaki and later worked on the development of the American hydrogen bomb under Project Matterhorn B;

Whereas Dr. Wheeler then returned to Princeton where, after discussion with Albert Einstein, he switched from the study of nuclear physics to working on extending the theory of general relativity, including in 1957 creating the concept of wormholes to describe tunnels in space-time and in 1967 coining the term black hole as part of the theory of gravitational collapse;

Whereas Dr. Wheeler was a visionary who could see farther on the horizon than most people by way of his physical intuition;

Whereas Dr. Wheeler was a beloved academic who trained some of the best minds in the next generation of physicists, a gifted communicator sometimes called a physics poet, and an active researcher for over 70 years; and

Whereas Dr. Wheeler was, in the words of Dr. Max Texmark, the last Titan, the only physics superhero still standing until the time of his death on April 13, 2008: Now, therefore, be it

*Resolved*, That the House of Representatives—

(1) honors the life and accomplishments of Professor John Archibald Wheeler and expresses condolences on his passing; and

(2) recognizes the profound importance of Dr. Wheeler's record as a pioneer in nuclear and theoretical physics and a long-time contributor to advancing mankind's understanding of the nature and workings of the universe.

The SPEAKER pro tempore. Pursuant to the rule, the gentleman from Washington (Mr. BAIRD) and the gentleman from Oklahoma (Mr. LUCAS) each will control 20 minutes.

The Chair recognizes the gentleman from Washington.

#### GENERAL LEAVE

Mr. BAIRD. Mr. Speaker, I ask unanimous consent that all Members may have 5 legislative days in which to revise and extend their remarks and to