110TH CONGRESS
1ST SESSION

S. 1509

To improve United States hurricane forecasting, monitoring, and warning capabilities, and for other purposes.

IN THE SENATE OF THE UNITED STATES

MAY 24, 2007

Ms. LANDRIEU (for herself, Mr. KERRY, Mr. NELSON of Florida, and Mr. MARTINEZ) introduced the following bill; which was read twice and referred to the Committee on Commerce, Science, and Transportation

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A BILL

To improve United States hurricane forecasting, monitoring, and warning capabilities, 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 ''Improved Hurricane Tracking and Forecasting Act of 2007''.

SEC. 2. FINDINGS.

Congress makes the following findings:

(1) Scatterometers on satellites are state-of-the-art radar instruments which operate by transmitting high-frequency microwave pulses to the ocean sur-

face and measuring echoed radar pulses bounced back to the satellite.

(2) Scatterometers can acquire hundreds of times more observations of surface wind velocity each day than can ships and buoys, and are the only remote-sensing systems able to provide continuous, accurate and high-resolution measurements of both wind speeds and direction regardless of weather conditions.

(3) The Quick Scatterometer satellite (QuikSCAT) is an ocean-observing satellite launched on June 19, 1999, to replace the capability of the National Aeronautics and Space Administration Scatterometer (NSCAT), an instrument which lost power in 1997, 9 months after launch in September 1996.

(4) The QuikSCAT satellite has the operational objective of improving weather forecasts near coastlines by using wind data in numerical weather-and-wave prediction, as well as improve hurricane warning and monitoring and acting as the next ''El Nino watcher'' for the National Aeronautics and Space Administration.

(5) The QuikSCAT satellite was built in just 12 months and was launched with a 3-year design life,

but continues to perform per specifications, with its backup transmitter, as it enters into its 8th year—5 years past its projected lifespan.

(6) The QuikSCAT satellite provides daily coverage of 90 percent of the world's oceans, and its data has been a vital contribution to National Weather Service forecasts and warnings over water since 2000.

(7) Despite its continuing performance, the QuikSCAT satellite is well beyond its expected design life and a replacement is urgently needed because, according to the National Hurricane Center, without the QuikSCAT satellite—

(A) hurricane forecasting would be 16 percent less accurate 72 hours before hurricane landfall and 10 percent less accurate 48 hours before hurricane landfall resulting in—

(i) with a 16 percent loss of accuracy at 72 hours before landfall, the area expected to be under hurricane danger would rise from 197 miles to 228 miles on average; and

(ii) with a 10 percent loss of accuracy at 48 hours before landfall, the area expected to be under hurricane danger would

rise from 136 miles to 150 miles on average; and

(B) greater inaccuracy of this type would lead to more ''false alarm'' evacuations along the Gulf Coast and Atlantic Coast and decrease the possibility of impacted populations sufficiently heeding mandatory evacuations.

(8) According to recommendations in the National Academies of Science report entitled ''Decadal Survey'', a next generation ocean surface wind vector satellite mission is needed during the three year period beginning in 2013.

(9) According to the National Hurricane Center, a next generation ocean surface vector wind satellite is needed to take advantage of current technologies that already exist to overcome current limitations of the QuikSCAT satellite and enhance the capabilities of the National Hurricane Center to better warn coastal residents of possible hurricanes.

SEC. 3. PROGRAM FOR IMPROVED OCEAN SURFACE WINDS VECTOR SATELLITE.

(a) REQUIREMENT.—The Administrator of the National Oceanic and Atmospheric Administration shall, in consultation with the Administrator of the National Aeronautics and Space Administration and the head of any

other department or agency of the United States Government designated by the President for purposes of this section, carry out a program for an improved ocean surface winds vector satellite.

(b) PURPOSES.—The purposes of the program required under subsection (a) shall be to provide for the development of an improved ocean surface winds vector satellite in order to—

(1) address science and application questions related to air-sea interaction, coastal circulation, and biological productivity;

(2) improve forecasting for hurricanes, coastal winds and storm surge, and other weather-related disasters;

(3) ensure continuity of quality for satellite ocean surface vector wind measurements so that existing weather forecasting and warning capabilities are not degraded;

(4) advance satellite ocean surface vector wind data capabilities; and

(5) address such other matters as the Administrator of the National Oceanic and Atmospheric Administration, in consultation with the Administrator of the National Aeronautics and Space Administration, considers appropriate.

(c) ANNUAL REPORTS.—

(1) REPORTS REQUIRED.—Not later than six months after the date of the enactment of this Act and annually thereafter until the termination of the program required under subsection (a), the Administrator of the National Oceanic and Atmospheric Administration shall submit to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science and Technology of the House of Representatives a report on the program required under subsection (a).

(2) ELEMENTS.—Each report under paragraph (1) shall include the following:

(A) A current description of the program required under subsection (a), including the amount of funds expended for the program during the period covered by such report and the purposes for which such funds were expended.

(B) A description of the operational status of the satellite developed under the program, including a description of the current capabilities of the satellite and current estimate of the anticipated lifespan of the satellite.

(C) A description of current and proposed uses of the satellite by the United States Gov-

ernment, and academic, research, and other private entities, during the period covered by such report.

(D) Any other matters that the Administrator of the National Oceanic and Atmospheric Administration, in consultation with the Administrator of the National Aeronautics and Space Administration, considers appropriate.

(d) AUTHORIZATION OF APPROPRIATIONS.—There is authorized to be appropriated to the National Oceanic and Atmospheric Administration $375,000,000 to carry out the program required under subsection (a).

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