

Ball Aerospace Green Propellant Infusion Mission to Host Three Defense Department Space Experiments

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BOULDER, Colo., Oct. 15, 2014 /[PRNewswire](#)/ -- The NASA and Ball Aerospace & Technologies Corp. Green Propellant Infusion Mission ([GPIM](#)) will fly three Defense Department experimental hosted payloads when it launches in 2016. GPIM's mission will validate a non-toxic fuel for future satellite missions, which could replace hydrazine and provide additional performance benefits.

The Department of Defense (DOD) Space Experiments Review Board (SERB) selected the three payloads to fly on GPIM. The SERB chooses experiments based on a high potential to provide new or enhanced warfighting capabilities for the DOD.

"This cooperative effort is an outstanding example of government organizations working with industry to solve technology challenges," said Jim Oschmann, vice president and general manager for Ball's Civil Space and Technologies business unit.

The GPIM recently completed spacecraft is based on the successful STPSat-2 and STPSat-3 satellites built for the U.S. Air Force. Two of the three SERB payloads selected to fly aboard GPIM previously flew on STPSat-3, which launched in 2013. This is the third time Ball has integrated SERB payloads to small spacecraft bus platforms. Ball's series of small satellites are designed to host a minimum of four independent payloads.

"The GPIM spacecraft capitalizes on Ball's experience with STPSat-3 to maximize the reuse of engineering and minimize risk in the development timeline," said Oschmann.

In addition to the primary GPIM payload being developed at Aerojet Rocketdyne, the three DOD payloads selected to fly aboard the project include:

- Integrated Miniaturized Electrostatic Analyzer Reflight (iMESA-R), a U.S. Air Force Academy mission designed to measure plasma densities and temperatures
- Small Wind and Temperature Spectrometer (SWATS), a Naval Research Laboratory (NRL) mission to provide in-situ, co-located measurements of the atmospheric neutral and ion density, composition, temperature, and winds on a global scale
- Space Object Self-tracker (SOS), a pathfinder experiment built by the U.S. Air Force Institute of Technology (AFIT) to decrease space collisions

The integration contract is valued at \$3.4 million and extends the mission duration of GPIM from two months to a year.

GPIM is a technology demonstration mission managed by the Space Technology Mission Directorate at NASA. Ball is leading the on-orbit test of a new Hydroxyl Ammonium Nitrate propellant blend, AF-M315E, developed by U.S. Air Force Research Laboratory at Edwards Air Force Base. As the prime contractor and principal investigator, Ball collaborates with a team of co-investigators from Aerojet Rocketdyne, NASA Glenn Research Center, NASA Goddard Space Flight Center, NASA Kennedy Space Center and the U.S. Air Force Research Laboratory at Edwards Air Force Base, with additional mission support from the U.S. Air Force Space and Missile Systems Center at Kirtland Air Force Base on the GPIM project.

Ball Aerospace & Technologies Corp. supports critical missions for national agencies such as the Department of Defense, NASA, NOAA and other U.S. government and commercial entities. The company develops and manufactures spacecraft, advanced instruments and sensors, components, data exploitation systems and RF solutions for strategic, tactical and scientific applications. For more information, visit www.ballaerospace.com.

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Forward-Looking Statements

This release contains "forward-looking" statements concerning future events and financial performance. Words such as "expects," "anticipates," "estimates" and similar expressions identify forward-looking statements. Such statements are subject to risks and uncertainties, which could cause actual results to differ materially from those expressed or implied. The company undertakes no obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or otherwise. Key risks and uncertainties are summarized in filings with the Securities and Exchange Commission, including Exhibit 99 in our Form 10-K, which are available on our website and at www.sec.gov. Factors that might affect: a) our packaging segments include product demand fluctuations; availability/cost of raw materials; competitive packaging, pricing and substitution; changes in climate and weather; crop yields; competitive activity; failure to achieve productivity improvements or cost reductions; mandatory deposit or other restrictive packaging laws; changes in major customer or supplier contracts or loss of a major customer or supplier; political instability and sanctions; and changes in foreign exchange or tax rates; b) our aerospace segment include funding, authorization, availability and returns of government and commercial contracts; and delays, extensions and technical uncertainties affecting segment contracts; c) the company as a whole include those listed plus: changes in senior management; successful or unsuccessful acquisitions and divestitures; regulatory action or issues including tax, environmental, health and workplace safety, including U.S. FDA and other actions or public concerns affecting products filled in our containers, or chemicals or substances used in raw materials or in the manufacturing process; technological developments and innovations; litigation; strikes; labor cost changes; rates of return on assets of the company's defined benefit retirement plans; pension changes; uncertainties surrounding the U.S. government budget, sequestration and debt limit; reduced cash flow; ability to achieve cost-out initiatives; interest rates affecting our debt.

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