Ball Aerospace to Build Spacecraft for NASA's SPHEREx Mission

The Medium-class Explorer will probe the origin of the universe, evolution of galaxies and explore whether planets around stars could harbor life

BOULDER, Colo., Feb. 14, 2019 /PRNewswire/ -- Ball Aerospace was selected by NASA to build the spacecraft for the Spectro Photometer for the History of the Universe, Epoch of Reionization and Ices Explorer (SPHEREX), a Medium-class Explorer mission. Ball is also responsible for the system integration and test, support for integration of the spacecraft onto a launch vehicle and commissioning of the spacecraft after launch.

The SPHEREx mission will study the nature of physics that drove cosmic inflation in the early universe; determine the properties of interstellar ices, a key reservoir for water and biogenic material in the early phases of star and planet formation; and probe the cosmic history of galaxy formation. Dr. James Bock of the California Institute of Technology (CalTech) is the principal investigator for SPHEREx and NASA's Jet Propulsion Laboratory (JPL) is the managing center.

"Ball Aerospace is committed to supporting the goals of NASA and the science community to explore and understand our universe," said Dr. Makenzie Lystrup, vice president and general manager, Civil Space, Ball Aerospace. "Our extensive heritage across a wide breadth of NASA science and exploration mission classes informs our development of technology that will enable the science of tomorrow - providing science at any scale."



The SPHEREx bus will be based on the Ball Aerospace customizable and proven line of <u>Ball Configurable Platform</u> (BCP) spacecraft, designed for flexible, cost-effective applications, using a common spacecraft bus and standard payload interfaces to reduce cost, streamline payload accommodation and minimize delivery time. The BCP series consistently exceeds spacecraft design life – including serving as the spacecraft for explorer-class missions such as the Wide-Field Infrared Survey Explorer, or WISE. WISE mapped the celestial sky and was later repurposed as <u>NEOWISE</u> after completing its primary mission in order to hunt for near-Earth objects.

Ball Aerospace pioneers discoveries that enable our customers to perform beyond expectation and protect what matters most. We create innovative space solutions, enable more accurate weather forecasts, drive insightful observations of our planet, deliver actionable data and intelligence, and ensure those who defend our freedom go forward bravely and return home safely. Go Beyond with Ball.® For more information, visit www.ball.com/aerospace or connect with us on Facebook or Twitter.

About Ball Corporation

Ball Corporation (NYSE: BLL) supplies innovative, sustainable packaging solutions for beverage, personal care and household products customers, as well as aerospace and other technologies and services primarily for the U.S. government. Ball Corporation and its subsidiaries employ 17,500 people worldwide and reported 2018 net sales of \$11.6 billion. For more information, visit www.ball.com, or connect with us on Facebook or Twitter.

Forward-Looking Statements

This release contains "forward-looking" statements concerning future events and financial performance. Words such as "expects," "anticipates," "estimates," "believes," "targets," "likely," "positions" and similar expressions typically identify forward-looking statements, which are generally any statements other than statements of historical fact. Such statements are based on current expectations or views of the future and are subject to risks and uncertainties, which could cause actual results or events to differ materially from those expressed or implied. You should therefore not place undue reliance upon any forward-looking statements and any of such statements should be read in conjunction with, and, qualified in their entirety by, the cautionary statements referenced below. 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 factors, risks and uncertainties that could cause actual outcomes and results to be different 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. Additional factors that might affect; a) our packaging segments include product demand fluctuations; availability/cost of raw materials and logistics; competitive packaging, pricing and substitution; changes in climate and weather; competitive activity; footprint adjustments and other manufacturing changes; failure to achieve synergies, productivity improvements or cost reductions; mandatory deposit or other restrictive packaging laws; customer and supplier consolidation, power and supply chain influence; changes in major customer or supplier contracts or a loss of a major customer or supplier; political instability and sanctions; currency controls; changes in foreign exchange or tax rates, including due to the effects of the 2017 U.S. Tax Cuts and Jobs Act; and tariffs or other governmental actions in any country affecting goods produced by us or in

our supply chain, including imported raw materials, such as pursuant to section 232 of the U.S. Trade Expansion Act of 1962; 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; 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 geopolitical events and governmental policies both in the U.S. and in other countries, including the U.S. government elections, budget, sequestration and debt limit, including the partial government shutdown; reduced cash flow; interest rates affecting our debt; and successful or unsuccessful joint ventures, acquisitions and divestitures, including with respect to the Rexam PLC acquisition and its integration, or the associated divestiture; the effect of the acquisition or the divestiture on our business relationships, operating results and business generally.

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