

Ball Aerospace Supports Preliminary Design Review for NASA's SPHEREx Mission

Ball is building the spacecraft for the Medium-class Explorer mission, which will probe the origin of the universe

BOULDER, Colo., Dec. 9, 2020 /PRNewswire/ -- Ball Aerospace supported the completion of the preliminary design review (PDR) for NASA's Spectro-Photometer for the History of the Universe, Epoch of Reionization and Ices Explorer (SPHEREx). With PDR complete, the SPHEREx project will proceed toward critical design review and the project team will now complete the Key Decision Point C process in coordination with NASA prior to beginning the implementation phase.

Ball is responsible for building the spacecraft and telescope as well as system integration and test, support for integration of the spacecraft onto a launch vehicle and commissioning of the spacecraft after launch.

"This latest program milestone is an important step forward in realizing NASA's mission to peer into the history of the universe," said Dr. Makenzie Lystrup, vice president and general manager, Civil Space, Ball Aerospace. "Ball has a long heritage of delivering new and innovative solutions for tomorrow's science questions, partnering with our customers and the science community to provide science at any scale."

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.

The SPHEREx bus will be based on the Ball Aerospace customizable and proven line of [Ball Configurable Platform](#) (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 has served as the spacecraft for past explorer-class missions such as the Wide-Field Infrared Survey Explorer, or WISE. Exceeding its spacecraft design life, WISE was later repurposed as [NEOWISE](#) after completing its primary mission in order to hunt for near-Earth objects. The BCP for the SPHEREx mission builds on the heritage of the success of WISE/NEOWISE and leverages current investments in the platform resulting in increased performance and reduced cost and schedule.

Powered by endlessly curious people with an unwavering mission focus, **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 aluminum 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 more than 18,300 people worldwide and reported 2019 net sales of \$11.5 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 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 capacity, supply, and demand constraints and fluctuations, including due to virus and disease outbreaks and responses thereto; availability/cost of raw materials, equipment, and logistics; competitive packaging, pricing and substitution; changes in climate and weather; footprint adjustments and other manufacturing changes, including the startup of new facilities and lines; failure to achieve synergies, productivity improvements or cost reductions; mandatory deposit or other restrictive packaging laws; customer and supplier consolidation; power and supply chain interruptions; potential delays and tariffs related to the U.K's departure from the EU; 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; and tariffs, trade actions, or other governmental actions, including business restrictions and shelter-in-place orders in any country or jurisdiction affecting goods produced by us or in our supply chain, including imported raw materials, such as those related to COVID-19 and those pursuant to Section 232 of the U.S. Trade Expansion Act of 1962 or Section 301 of Trade Act of 1974; 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: the extent to which sustainability-related opportunities arise and can be capitalized upon; changes in senior management, succession, and the ability to attract and retain skilled labor; 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; the ability to manage cyber threats and the success of information technology initiatives; litigation; strikes; disease; pandemic; 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 policies, orders and actions related to COVID-19, the U.S. government elections, stimulus package(s), budget, sequestration and debt limit; reduced cash flow; interest rates affecting our debt; and successful or unsuccessful joint ventures, acquisitions and divestitures, and their effects on our operating results and business generally.

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