

Ball Aerospace-Built Spacecraft for NASA X-Ray Astrophysics Mission Successfully Launches from Kennedy Space Center

CAPE CANAVERAL, Fla., Dec. 9, 2021 /PRNewswire/ -- NASA's Imaging X-Ray Polarimetry Explorer spacecraft built by Ball Aerospace successfully launched today aboard a SpaceX Falcon 9 rocket from NASA's Kennedy Space Center in Florida. After reaching its final orbital position, the small explorer will begin its mission of observing polarized X-rays from extreme objects, such as neutron stars, stellar and super massive black holes.

"IXPE is going to provide unprecedented insight into how the universe works," said Dr. Makenzie Lystrup, vice president and general manager, Ball Aerospace. "By measuring X-ray polarization with spatial, spectral and temporal resolution, we will gain a far better understanding of the geometry of extreme magnetic fields over a wide range of spatial scales, from the polar jets of Active Galactic Nuclei, to the near-surface of extremely magnetic neutron stars called magnetars."



As part of the NASA Astrophysics Explorers Program, the mission addresses NASA's science goal "to probe the origin and destiny of our universe, including the nature of black holes, dark energy, dark matter, and gravity." It is led by principal investigator Dr. Martin C. Weisskopf at NASA's Marshall Space Flight Center, with support from Ball Aerospace, the Italian Space Agency (ASI), Laboratory for Atmospheric and Space Physics (LASP) at University of Colorado Boulder and other partners.

In addition to the mechanical and structural elements of the payload and observatory assembly, Ball Aerospace provided the IXPE spacecraft and conducted integration and testing. The spacecraft is based on the smallest Ball Configurable Platform (BCP) model. The BCP has a broad spectrum of capabilities, is highly reliable with proven stability and pointing performance, which are essential for astrophysics missions, such as IXPE.

As part of Ball Aerospace's commitment to sustainability, a similar BCP was developed for NASA's technology demonstration Green Propellant Infusion Mission (GPIM) and is currently in the design phase for the BCP spacecraft for NASA's Spectro-Photometer for the History of the Universe, Epoch of Reionization and Ices Explorer (SPHEREx).

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About Ball Corporation

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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," "believes," 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 and changes in consumption patterns; 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; unfavorable mandatory deposit or packaging laws; customer and supplier consolidation; power and supply chain interruptions; changes in major customer or supplier contracts or 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; 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 above 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 actions or issues including those related to tax, ESG reporting, competition, 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; 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; 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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