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Redwire Technology Enabling NASA Mission to Observe Black Holes and Neutron Stars

JACKSONVILLE, Fla.--(BUSINESS WIRE)-- Redwire Corporation (NYSE: RDW), a leader in space infrastructure for the next generation space economy, is supplying vital navigation and power generation components for NASA's Imaging X-Ray Polarimetry Explorer (IXPE) mission. IXPE is the first satellite dedicated to measuring polarized X-rays from objects, such as neutron stars and supermassive black holes, to reveal previously hidden details of the universe. It is scheduled to launch on December 9, 2021, from Kennedy Space Center in Florida.

Redwire delivered a rigid solar panel array under a 2018 contract with Ball Aerospace to design, manufacture and deliver a solar array for the IXPE mission. The solar array for IXPE consists of five interconnected rigid panels that are wrapped around the spacecraft when stowed for launch and then deployed once launch is complete. Each panel in the solar array consists of SolAero heritage ZTJ multi-junction photovoltaic solar cells. In addition, Redwire delivered twelve Coarse Sun Sensor (CSS) detectors. The CSS detectors will be used for solar array pointing, sun acquisition, and fail-safe recovery of the IXPE spacecraft.

“Redwire is proud to partner with Ball Aerospace and NASA on this mission and it’s exciting to see our technology play a role in better understanding the universe,” said Andrew Rush, President and COO of Redwire. “As a critical mission partner, we are leveraging our flight-proven technology to enable missions like IXPE that will yield knowledge on the physics of black holes, pulsars and other exotic objects and expand humanity's fundamental understanding of the universe.”

Led by NASA’s Marshall Space Flight Center in Huntsville, Alabama, IXPE is a Small Explorer mission that is part of NASA's Astrophysics Explorers Program. IXPE will analyze the polarization of X-rays from exotic sources like black holes, magnetars and pulsars. Polarization of X-rays and other forms of light is related to how electromagnetic waves are oriented as they travel through space. Studying the polarization of X-rays promises to yield insights into how X-rays are generated by these exotic objects and help improve our understanding of the universe.

Redwire's broad expertise in flexible and rigid solar panel technology will help make the IXPE mission a reality. In addition to IXPE, Redwire has provided solar power solutions for a variety of space applications, including the patented Roll-Out Solar Arrays (ROSA) that power the International Space Station. Redwire has a proven track record of meeting the needs of many commercial and government spaceflight customers, and is producing modular solar arrays for future spaceflight missions, including Maxar's Power and Propulsion Element for NASA's Gateway program and NASA's Double Asteroid Redirection Test (DART) mission.

The CSS detectors delivered under contract with Ball Aerospace also demonstrate a long record of engineering success. CSS technology has successfully performed in highly elliptical, geostationary and low and medium Earth orbits, on various interplanetary missions to the Moon and Mars and in deep space. CSS technology is currently providing critical navigation capability on NASA's Lucy mission, the first mission to Jupiter's Trojan asteroids.

Decades of flight heritage and continual breakthroughs in new space technology enable Redwire to deliver critical sensors and other components to government and commercial customers, improving capabilities in low Earth orbit and beyond.

About Redwire

Redwire Corporation (NYSE: RDW) is a leader in space infrastructure for the next generation space economy, with valuable IP for solar power generation and in-space 3D printing and manufacturing. With decades of flight heritage combined with the agile and innovative culture of a commercial space platform, Redwire is uniquely positioned to assist its customers in solving the complex challenges of future space missions. For more information, please visit www.redwirespace.com.

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