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NeXolve Celebrates NASA's James Webb Space Telescope's Major Science Milestone

The company's Sunshield technology is protecting the James Webb Space Telescope from extreme heat in space allowing its cameras to obtain detailed science images

Huntsville, AL, July 12, 2022 – NeXolve Holding Company is celebrating the release of the first science images from NASA's James Webb Space Telescope. The Huntsville-based company's one-of-a-kind sunshield technology is protecting the telescope from extreme heat in space allowing the science instruments to capture depths of space never seen before.

Webb is equipped with the most advanced tools ever assembled, including NeXolve's sunshield layers. After its historic launch in December 2021, Webb successfully completed one of the most complex deployments ever performed in space.

The sunshield is performing as designed, cooling down the telescope to approximately -400 degrees Fahrenheit, as needed to capture the detailed images and spectra that will be used to explore the early universe, the evolution of galaxies through time, the lifecycle of stars, and other worlds.

"Our Team at NeXolve has been celebrating each step in the complex deployment sequence and calibration required to prepare the telescope for its science mission," said NeXolve President Jim Moore. "We are proud to have played an important role on the incredible international team assembled by NASA and Northrop Grumman to accomplish this mission."

After years of research and development, the company delivered the Sunshield Membrane Assembly (SMA), a tennis court-size, 5-layer thin film structure, that prevents the sun's heat from reaching the telescope mirrors. This innovative technology makes NASA's James Webb Space Telescope mission possible by keeping the instruments and mirrors extremely cold, allowing them to see the faint infra-red light emitted by some of the oldest objects in the universe.

The sunshield uses five layers of a polymer film, each thinner than a human hair and coated with reflective coatings, to reflect and redirect the sun's heat away from the instruments. The sunshield is extremely effective, dropping the temperature from approximately 230 degrees Fahrenheit on the sun side to around -394 degrees Fahrenheit on the cold side facing the telescope.

Designing, manufacturing, and testing a sunshield this large and light weight required development of many new technologies. NeXolve worked diligently with NASA, Northrop Grumman, ManTech International, and the other partners to successfully develop and implement the Sunshield.

About NeXolve Holding Company, LLC

NeXolve Holding Company, a leading provider of advanced technology and engineering services, provides high-performance materials and hardware to commercial and government customers worldwide. Since its founding, the Huntsville-based company has worked closely with NASA, DoD, and commercial companies to manufacture and design aerospace products and high-performance polymer materials for electronics, display, and aerospace applications.

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