

Ball Aerospace's Land Imaging Instrument on NASA's Landsat 9 Satellite Launches Successfully

BROOMFIELD, Colo., Sept. 27, 2021 /PRNewswire/ -- The Ball Aerospace-built Operational Land Imager 2 (OLI-2) instrument successfully launched today aboard Landsat 9, the latest in a series of joint missions between NASA and the United States Geological Society (USGS) that has provided essential monitoring of key natural and economic resources from orbit for nearly 50 years.

"It is an honor to be a part of this important launch that will carry the Landsat mission into its next decade of existence and continue the longest-running Earth observation program," said Dr. Makenzie Lystrup, vice president and general manager, Civil Space, Ball Aerospace. "Our goal was to develop a technologically advanced solution that was both cost effective and capable of delivering highly-calibrated multispectral imagery and improved land surface information. This launch is the culmination of a lot of hard work by a lot of talented people to achieve that goal."



In addition to the instrument (OLI-2), Ball designed and built the cryocooler that will keep Landsat 9's Thermal Infrared Sensor 2 (TIRS-2) chilled to a frigid 40 Kelvin (-388 F). The TIRS-2 instrument, designed and built by NASA Goddard Space Flight Center, measures thermal radiance emitted from the Earth's surface.

The OLI-2 instrument, similar to its predecessor - OLI-1 launched in 2013 - is a push-broom sensor with a four-mirror telescope that takes measurements in the visible, near infrared and shortwave infrared portions of the electromagnetic spectrum. The OLI-2 instrument on Landsat 9 will image the Earth every 16 days in an eight-day offset with Landsat 8. Landsat 9 will collect as many as 750 scenes per day, and with Landsat 8, the two satellites will add nearly 1,500 new scenes a day to the USGS Landsat archive.

Since 1972, Landsat satellites have provided essential measurements to help the Nation make informed decisions about natural resource management, including compiling routine drought assessments; developing wildfire prevention strategies; monitoring land surface changes; evaluating agricultural production; and understanding the Earth's ecosystem.

As Landsat 9 begins its tour of duty, Ball is already exploring innovative technologies that could support future Landsat missions. It recently completed [three studies for NASA](#) examining the potential for precisely calibrated sensors that are significantly smaller, lighter and use less power. Additionally, Ball was selected in August to conduct [two six-month architecture studies](#) on extending Ball's Operational Land Imager (OLI) and Reduced Envelope Multispectral Imager (REMI) instrument designs to address new spectral bands, improved spatial resolution and new orbit parameters.

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