

# NASA to launch latest high-tech weather satellite

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NASA's GOES-P meteorological satellite is lifted into the mobile service tower at Launch Complex 37 on Cape Canaveral Air Force Station. Credit: NASA/Jack Pfaller

The United States is poised to launch Thursday the latest in its family of high-tech meteorological satellites that watch storm development and weather conditions on Earth from high in space.

The launch window for the Geostationary Operational Environmental Satellite-P (GOES-P) will open at 6:17 pm (2317 GMT) on Thursday and close an hour later, US [space](#) agency NASA said in a statement.

A [Delta IV rocket](#) will carry the satellite to its orbit around 22,000 miles (35,406 kilometers) above the Earth's surface.

From orbit, GOES-P will collect and send back to Earth data that will be used by scientists to monitor [weather](#), make forecasts and issue warnings about meteorological incidents.

The satellite will also detect ocean and land temperatures, monitor space weather, relay communications and provide search-and-rescue support.

The first GOES satellite was launched in 1975. GOES-P is the latest in the most recent generation of US geostationary weather satellites.

GOES-P will be launched for NASA and the National Oceanic and Atmospheric Administration (NOAA), which oversees the US National Weather Service, by United Launch Alliance, a joint venture of Boeing and Lockheed Martin.

"GOES are the backbone of NOAA's severe weather forecasts, monitoring fast-changing conditions in the atmosphere that spawn hurricanes, tornadoes, floods and other hazards," said Steve Kirkner, GOES program manager at NASA's Goddard Space Flight Center in Maryland.

Instruments on board GOES-P -- which will swap the letter P for the number 15 once in space -- include an imager that senses energy from areas of Earth, and a "sounder" that uses a scan system to gather data from which scientists can calculate temperatures, moisture profiles and ozone distribution.

The GOES-P also has a space environment monitor, which will beam real-time data to Earth about energetic particles in space that pose a risk to satellites and astronauts and can disrupt navigation and

communications systems.

The space environment monitor includes an X-ray telescope that will measure solar X-ray emissions and the intensity and duration of solar flares, which can lead to changes in ionospheric conditions that disrupt radio communications and Global Positioning System (GPS) signals.

A key piece of equipment on GOES-P is the Solar X-Ray Imager, which every minute will capture an image of the sun's atmosphere, providing space weather forecasters with information they need to determine when to issue alerts of conditions that may harm space and ground systems.

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