

## GOES-R PROVING GROUND AND USER READINESS

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### ABSTRACT

The key mission of the Satellite Proving Ground is to demonstrate new satellite observing data, products and capabilities in the operational environment to be ready on Day 1 to use the Geostationary Operational Environmental Satellite (GOES-R) suite of measurements. Algorithms, tools, and techniques must be tested, validated, and assessed by end users for their utility before they are finalized and incorporated into forecast operations. The GOES-R Proving Ground proxy data for the 16-channel Advanced Baseline Imager (ABI) and Geostationary Lightning Mapper (GLM) focus on evaluating how the infusion of the new technology, algorithms, decision aids, or tailored products integrate with other available tools in the hands of the forecaster responsible for issuing forecasts and warning products. Proxy fields and products for ABI are derived from simulated mesoscale model data and satellite sensors such as the Earth Observing System (EOS) Terra/Aqua MODIS and Meteosat SEVERI. The GLM proxy data are derived from the EOS Lightning Imaging Sensor and available ground-based total lightning VHF mapping networks. Additionally, the testing concept fosters operation and development staff interactions which will improve training materials and support documentation development.

The GOES-R Satellite Proving Ground project engages the NWS forecast and warning community in pre-operational demonstrations of selected capabilities anticipated from the next generation of NOAA geostationary earth observing systems. The Proving Ground project objective is to bridge the gap between research to operations by:

- Utilizing current systems (satellite, terrestrial, or model/synthetic) to emulate various aspects of future GOES-R capabilities
- Infusing GOES-R products and techniques into the NWS operational environment, with emphasis on the Advanced Weather Information Processing System (AWIPS) and transitioning to AWIPS-II.
- Engaging in a two-way dialogue to provide feedback to the developers from the users

The Proving Ground accomplishes its mission through:

- Sustained interaction between the developers and end users for the purposes of training, product evaluation, and solicitation of user feedback.
- Close coordination with the GOES-R Algorithm Working Group (AWG) and Risk Reduction programs as sources of demonstration products, and will enhance the operational transition pathway for those programs.

The intended outcomes of this project are Day-1 readiness and maximum utilization for both developers and users of the GOES-R observing system, and an effective transition of GOES-R research products to the operational weather community.

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