**Results from Evaluating Different GOES-R Scanning Strategies**

**at the Operations Proving Ground**

Chad M. Gravelle

National Weather Service Operations Proving Ground
University of Wisconsin - CIMSS
Kansas City, MO

Kim J. Runk

National Weather Service Operations Proving Ground
Kansas City, MO

Between February and April of 2015, the National Weather Service (NWS) Operations Proving Ground (OPG) hosted and facilitated an evaluation of the usefulness of 1-minute satellite imagery for NWS operations in the Geostationary Operational Environmental Satellite (GOES)-R Series era. The overarching goal of the evaluation was to provide quantitative and qualitative guidance to NWS management, including the regional NWS Scientific Services Division Chiefs, on how satellite imagery with a refresh rate of 1 minute impacts NWS forecaster decision making. In total, seventeen NWS forecasters completed eight simulations that were developed using imagery from the 2013 and 2014 GOES-14 Super Rapid Scan Operations for GOES-R.

During the simulations, forecasters evaluated 1-minute and 5-minute satellite imagery scanning modes while completing tasks ranging from aviation forecasting and wildfire decision support services to monitoring where convective initiation would occur and integrating the imagery into the convective warning decision-making process. Each week, feedback was gathered to assess if the satellite imagery had influence on forecaster decision making, if the satellite imagery provided them with more confidence in making those decisions, if forecasters could assimilate the data into operational practices, and if there was adverse impact on forecaster workload. Forecasters overwhelming felt that 1-minute satellite imagery improved their ability and increased their confidence to make effective forecast and warning decisions. The majority of participants explained that their conceptual models were more refined with the 1-minute imagery and that it was most useful in the wildfire, fog and low stratus, and convective initiation simulations. In these simulations, the vast majority of participants also expressed that they were able to internally assimilate the imagery with ease. However, the feedback gathered when forecasters were asked how useful and easy the imagery was to use in convective warning operations was mixed. Some forecasters felt that it was difficult incorporating the satellite information while issuing convective warnings with radar data, while others felt that with ample training and experience the imagery would be invaluable in warning operations. This presentation will provide a brief overview of the evaluation and a detailed analysis of the forecaster feedback with recommendations on incorporating 1-minute satellite imagery in the GOES-R era.