

Land Surface Temperature Production and Validation Tool development for GOES-R Mission

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Development of land surface temperature (LST) algorithm for the U.S. Geostationary Operational Environmental Satellite (GOES) R series (GOES-R) satellite mission has been conducted since 2006 at the U.S. National Oceanic and Atmospheric Administration (NOAA) SaTellite Applications and Research center (STAR). While the 100% readiness delivery of the LST algorithm package was delivered in 2010, LST group of Land applications and product team of the GOES-R Applications Working Group (AWG) has been working on development of validation tools for the GOES-R LST product since then. The tasks include the tools for satellite-satellite and satellite-ground data match-up, stringent cloud filtering, site characterization and corrections of ground LST measurements, user-friendly graphic interface, and possible adjustment of the algorithm coefficients. Ground data sets from the GOES coverage area (mainly over US) and the MSG (European geostationary satellite) coverage have been collected, processed and compared with the corresponding GOES-R proxy satellite data (MODIS and SEVIRI, respectively). This poster presentation gives detail descriptions and results of the above tasks accomplished in the past year.

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