EOS Direct Broadcast Real-Time Products for the US National Weather Service

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The Space Science and Engineering Center (SSEC) at the University of Wisconsin-Madison operates an EOS Direct Broadcast ground station which receives data in real time from the Terra and Aqua spacecraft. Data from the MODIS, AIRS, AMSU, and AMSR-E instruments are processed in real time to create a range of products. Recently, the National Weather Service (NWS) in the US Central Region has started to use several of the real time MODIS products from SSEC in their forecast operations. In addition, the NWS office at Kennedy Space Center is now using real-time products to support NASA Space Shuttle launch, abort, and landing operations. This presentation will provide an overview of the DB processing infrastructure at SSEC, starting from acquisition of raw satellite data, through product generation on a cluster computing system, to product dissemination via the NWS Advanced Weather Interactive Processing System (AWIPS) at NWS forecast offices. Examples of NWS applications for EOS real-time products will be presented, including nighttime fog detection, daytime high temperature forecasting, and precipitation type and duration forecasting.

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