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Transition, Training, and Assessment of Multispectral Composite Imagery in Support of the NWS Aviation Forecast Mission

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The NASA/Short-term Prediction, Research, and Transition (SPoRT) Program works closely with NOAA/NWS weather forecasters to transition unique satellite data and capabilities into operations in order to assist with nowcasting and short-term forecasting issues. Several multispectral composite imagery (i.e. RGB) products were introduced to users in the early 2000s to support hydrometeorology and aviation challenges as well as incident support. These activities lead to SPoRT collaboration with the GOES-R Proving Ground efforts where instruments such as MODIS (Aqua, Terra) and S-NPP/VIIRS imagers began to be used as near-realtime proxies to future capabilities of the Advanced Baseline Imager (ABI). One of the composite imagery products introduced to users was the Night-time Microphysics RGB, originally developed by EUMETSAT. SPoRT worked to transition this imagery to NWS users, provide region-specific training, and assess the impact of the imagery to aviation forecast needs. This presentation discusses the method used to interact with users to address specific aviation forecast challenges, including training activities undertaken to prepare for a product assessment. Users who assessed the multispectral imagery ranged from southern U.S. inland and coastal NWS weather forecast offices (WFOs), to those in the Rocky Mountain Front Range region and West Coast, as well as high-latitude forecasters of Alaska. These user-based assessments were documented and shared with the satellite community to support product developers and the broad users of new generation satellite data.