# Using the SPoRT POES/GOES Hybrid Product in OCONUS Forecasting

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The SPoRT (Short-term Prediction and Research Transition) Program at the NASA/Marshall Space Flight Center has been providing unique NASA and NOAA data and techniques to partner Weather Forecast Offices (WFOs) for ten years. Data are provided in the Decision Support System used by WFO forecasters: AWIPS. For the last couple of years, SPoRT has been producing the POES/GOES Hybrid. This suite of products combines the strength of 15-minute animations of GOES imagery – providing temporal continuity, with the higher resolution, relatively random availability, of polar orbiting (POES) imagery data. The product was first introduced with only MODIS data from NASA's Terra and Aqua satellites, but recently the VIIRS instrument onboard the Suomi-NPP satellite was added, providing better high-resolution coverage. These products represent SPoRT's efforts to prepare for higher resolution, higher frequency GOES-R imagery – as well as helping to move VIIRS (JPSS) data into the mainstream of weather forecasting.

SPoRT generates 5 products for this dataset: Visible, Longwave Infrared (11 μm), Shortwave IR (3.7 μm), Water Vapor (6.7 μm), and Fog (Difference of 11 μm and 3.7 μm channels). The Water Vapor hybrid product has a Red-Blue-Green image from MODIS inlaid, since it provides even more qualitative information than water vapor alone. Animated examples of the products will be shown in this presentation.

While the resolution at nadir of GOES imagery is nominally 1km (4km for IR channels), the inlaid polar orbiter imagery has a resolution of 250m (1km for IR channels). This has tremendous application in the continental US. However, in high latitudes, since the usefulness of GOES degrades poleward rapidly, the contrast of GOES and POES data is stark. The consistent temporal nature of GOES, even though at a reduced resolution at high latitudes, provides basic situational awareness, but the introduction of polar data is very helpful in seeing the big picture with clarity – even if only briefly. This presentation will offer real situations where these products helped forecasters make better informed decisions quickly. Plans to augment the product further with the addition of data from several AVHRR instruments will be described.