

Utility of SPoRT VIIRS Imagery to Detect Small-Scale Blowing Dust

ABSTRACT

On October 29th, 2013 a localized dust storm resulted in a fatal multi-vehicle accident on Interstate 10 in south central Arizona. Winds that caused the dust storm were not particularly strong as sensor readings and estimates were in the 20 to 25 mph range. Due to the small scale of the dust storm, it was not detectable on Geostationary Operational Environmental Satellite (GOES) imagery available on the Advanced Weather Interactive Processing System (AWIPS) at the National Weather Service Forecast Office in Tucson (WFO TWC). However, MODIS Visible Infrared Imaging Radiometer Suite (VIIRS) RGB imagery from the NASA Short-term Prediction Research and Transition (SPoRT) Center available on the WFO TWC AWIPS was able to distinguish small areas of blowing dust in the vicinity of the accident. While in this case, the imagery was not available until after the accident occurred, the utility of detecting of small scale blowing dust with the SPoRT MODIS VIIRS imagery is encouraging.