

NASA/SPoRT AWIPS II Activities

NASA Short-term Prediction Research and Transition Center

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SPoRT focuses on specific Weather Forecast Office's short-term forecasting problems, providing NASA and NOAA data and technology to assist in solving them.

SPoRT began in 2002 – working with 9 WFOs in the Southern Region. The successful paradigm was, and remains, an iterative feedback process (diagrammed at right), training forecasters on the new products inside their decision support system (**AWIPS/AWIPS II**) and then improving the product as determined through assessment. As of 2012, SPoRT works with 23 partner WFOs in five NWS regions and several National Centers.

As the **AWIPS II** era begins, SPoRT is developing new software to enable partner WFOs to visualize existing products, as well as new and innovative products and techniques to speed and enhance the decision-making process.



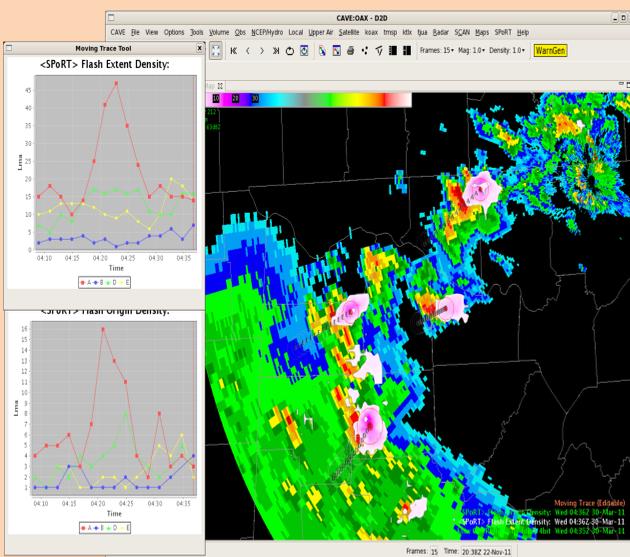
Planned AWIPS II capabilities

- Cross sections (e.g., LMA, moving trace)
- Advanced RGB methodologies
- Polar orbit overpass prediction
- 3-D functionality

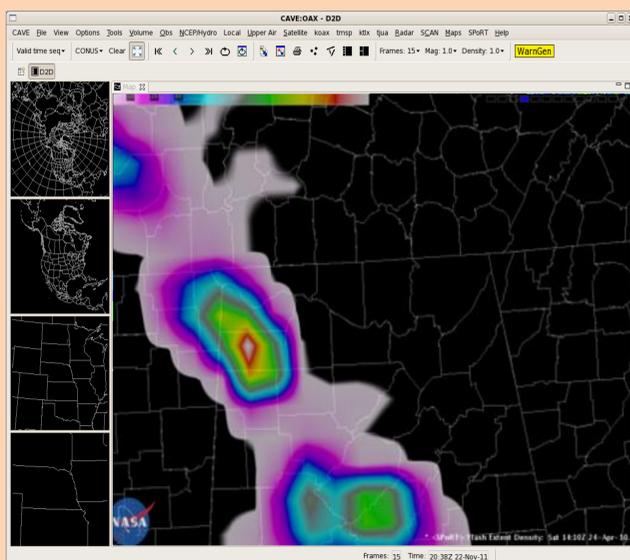
- Current Plug-ins for SPoRT products -

[Brackets] indicate the format of ingested files by EDEX.

Total Lightning Products

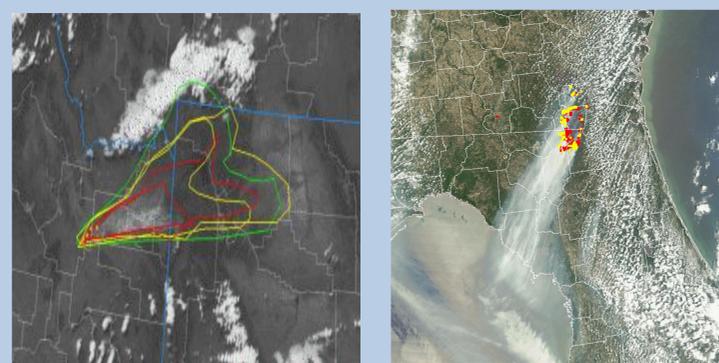


Two LMA products [netCDF] from the North Alabama LMA network are displayed over RADAR data. The corresponding AWIPS II **Moving Trace Tool** plug-in charts are shown to the left, indicating lightning maxima in tracking circles in each frame (shown over four lightning cell tracks).



The Pseudo Geostationary Lightning Mapper data [netCDF] is displayed over the North Alabama region. The P-GLM data is being used while the official Proxy GLM is under development.

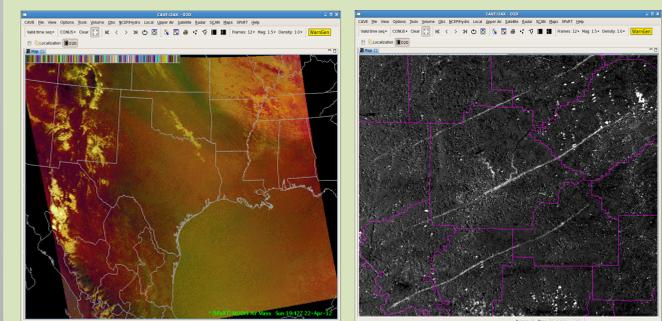
HMS & FIRMS Smoke & Fire Products



Smoke polygons [KML] are displayed over a MODIS visible image.

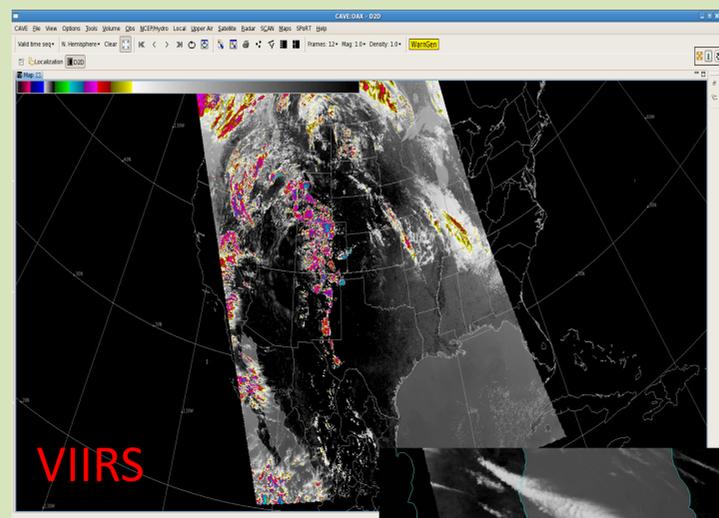
FIRMS hotspots [ASCII] are displayed over a MODIS RGB natural color image.

McIDAS imagery



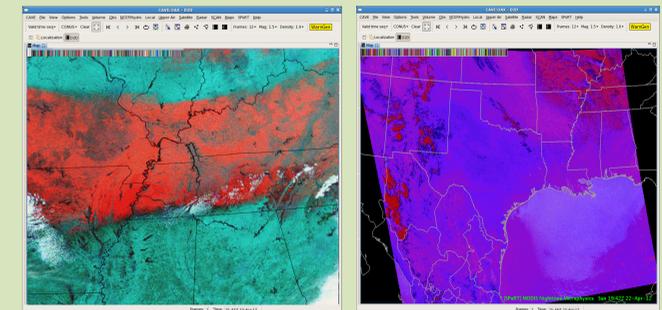
A MODIS RGB Air Mass image [AREA] over the Southern CONUS. Several other RGB products (from the EUMETSAT suite) are provided.

A MODIS difference image [AREA] (channels 1 & 2), revealing tornado tracks across Alabama from the outbreak of 27 April 2011. The center track is the EF-4 through Tuscaloosa and Birmingham.



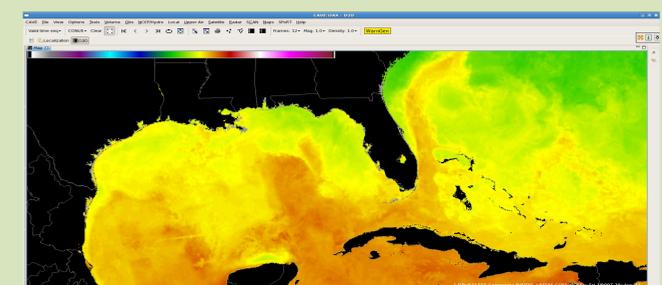
Above, a swath aggregate of 8 VIIRS Infrared swath granules [AREA] showing the instrument's large 3000-km width.

At right, the edge-of-swath image [AREA] shows VIIRS high-resolution retained throughout the swath.



A MODIS RGB False Color image [AREA] over the midsouth CONUS. Red colors show a wide snowfall swath.

A MODIS RGB Nighttime Microphysics image [AREA] over the Southern CONUS – providing an improved awareness of low clouds & fog.



An SST Composite (of MODIS, GOES/POES – from NESDIS) image [AREA] showing 2-km resolution temperatures in the Atlantic.