SPoRT Total Lightning Activities and Updates

Geoffrey Stano

NASA SPoRT / ENSCO, Inc.

2014 SPoRT Partners Virtual Workshop
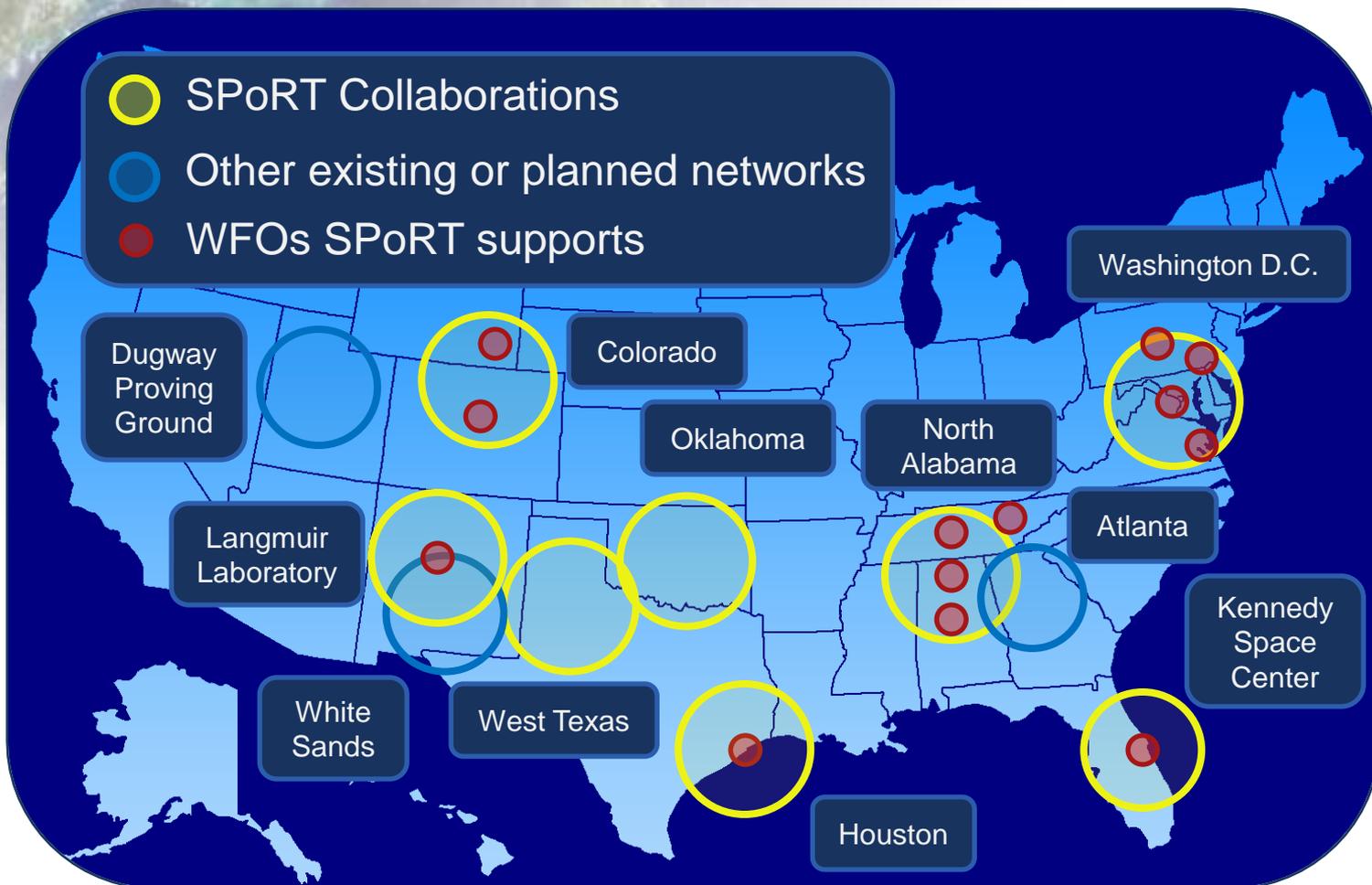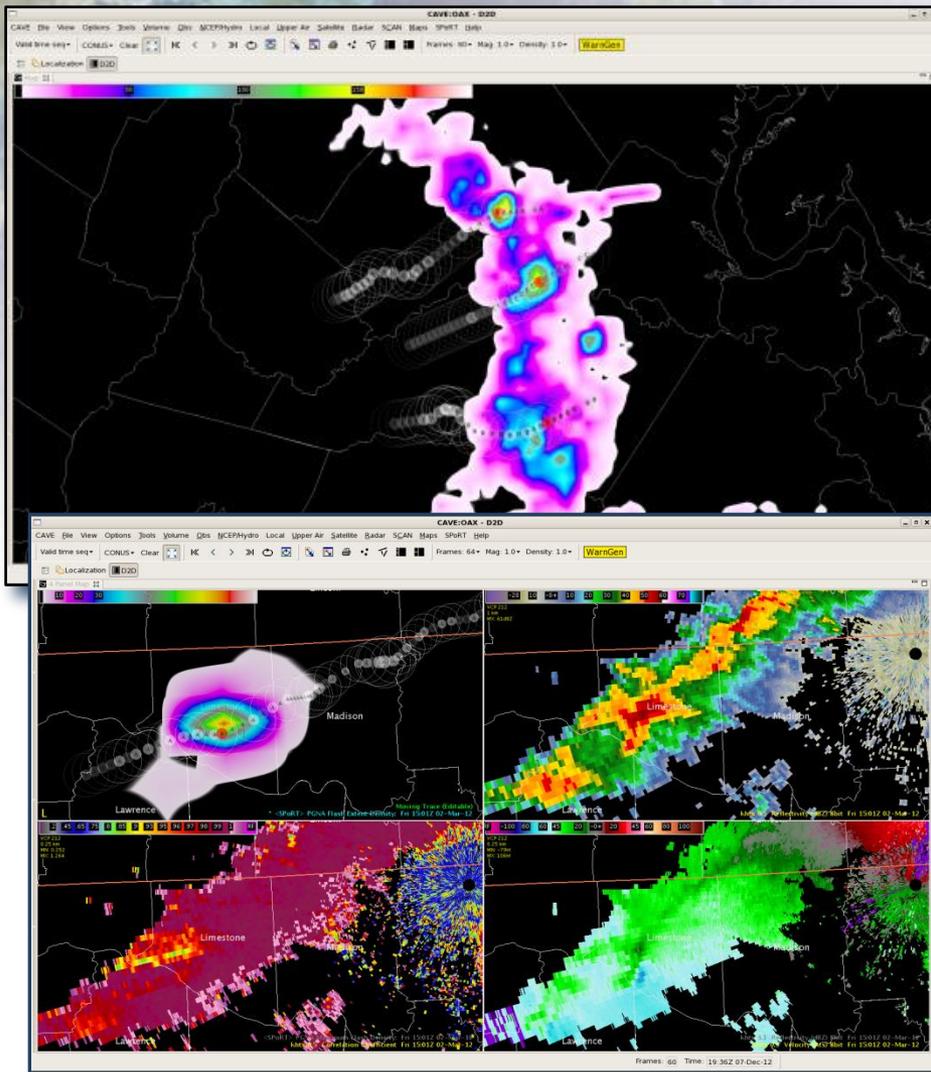
13 February 2014

SPoRT

NASA

SPoRT and Total Lightning

- Supporting real-time use since 2003
- Working with several data providers
- Core SPoRT activity with the GOES-R Proving Ground

SPoRT Collaborations
Other existing or planned networks
WFOs SPoRT supports

Washington D.C.
Dugway Proving Ground
Colorado
Oklahoma
North Alabama
Atlanta
Langmuir Laboratory
Kennedy Space Center
White Sands
West Texas
Houston

AWIPS II Availability

- Successful transition in 2011 to Huntsville

  - Houston and SMG followed shortly thereafter

  - WFO Boulder successful yesterday

- SPoRT working to baseline the plug-in

  - Discussing with NOAA on using plug-in to support Earth Networks data visualization

- Will provide greater flexibility than current AWIPS I display

Transitioning unique NASA data and research technologies to operations

Shifting from Sources to Flashes

Source Density
~200 sources

Flash Density
~55 sources
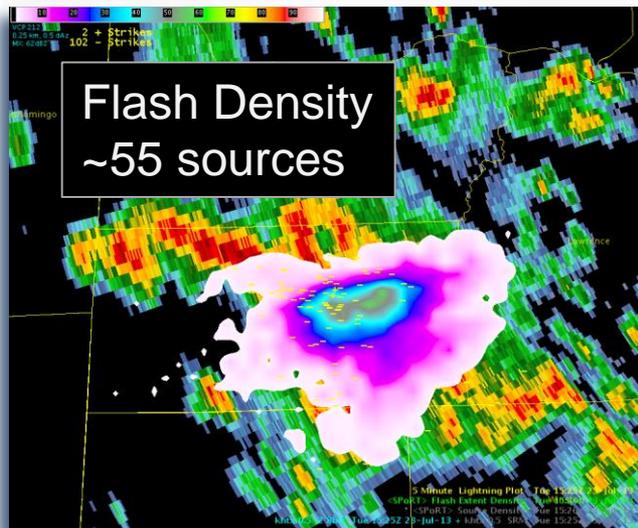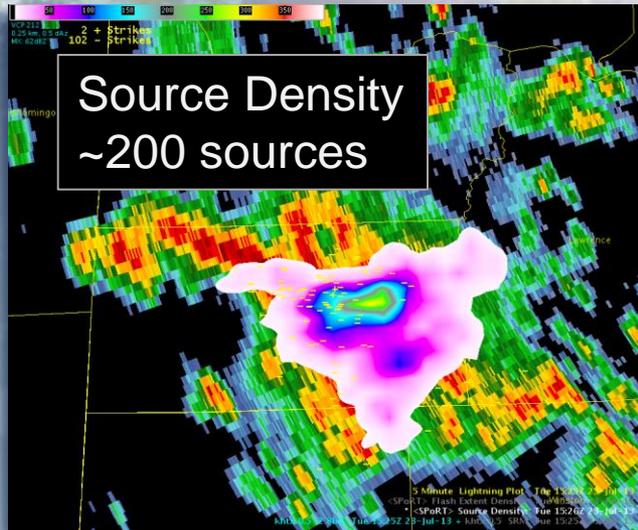
- Flashes are used in scientific literature (e.g., lightning jump)

- Now have capability to reassemble sources into flashes in real-time

- Flashes are "normalized" and have less issues with detection efficiency, particularly at range

- Flashes more intuitive than sources

- Evaluating with WFO Huntsville the effort needed to shift from source density to flash extent density

Another Product Concept

- Based on conversations with WFO Melbourne

- Interest in keeping 1 min time resolution

  - Issue is that 1 min data can look noisey

- Concept based on the previous 30 min maximum density product

  - 30 min max density displayed the largest value for each grid box over the past 30 min

  - Instead will use a 2 min summation updating every minute

  - Use the current observation with the previous observation

  - Need to evaluate if this provides the same level of information as other products

Total Lightning in N-AWIPS
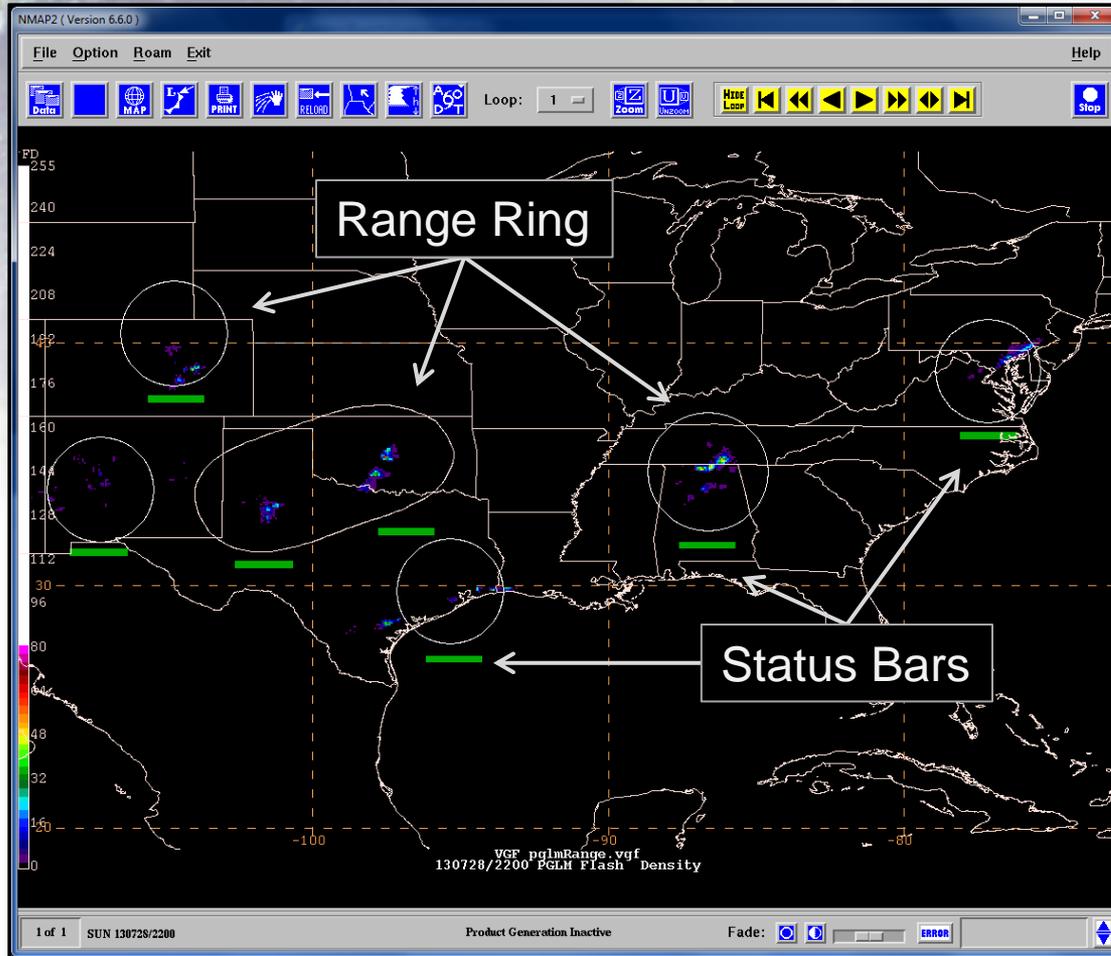
- National Centers using the PGLM mosaic

- Merges all available LMAs into one product

- Includes range rings and network status bars

- Demonstrates the demo product for the Geostationary Lightning Mapper as part of the GOES-R Proving Ground

SP⊙RT

Transitioning unique NASA data and research technologies to operations