

The NASA Short-term Prediction Research and Transition (SPoRT) Center

GOES-R Proving Ground Update

12 March, 2012

Contributions from:

Gary Jedlovec, Kevin Fuell, Geoffrey Stano, Matt Smith, Andrew Molthan

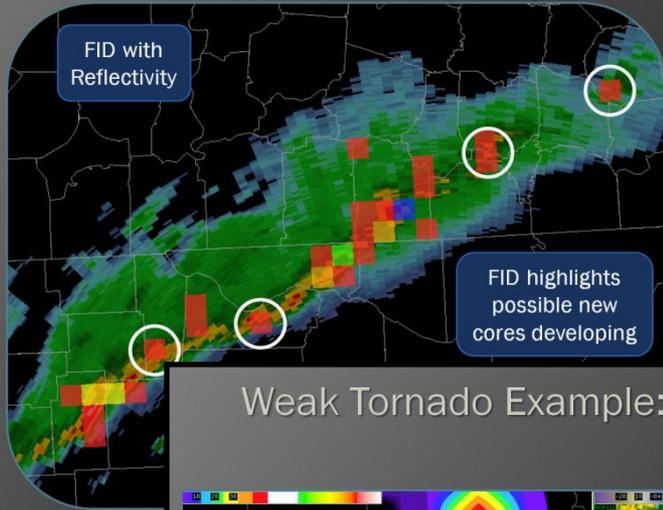


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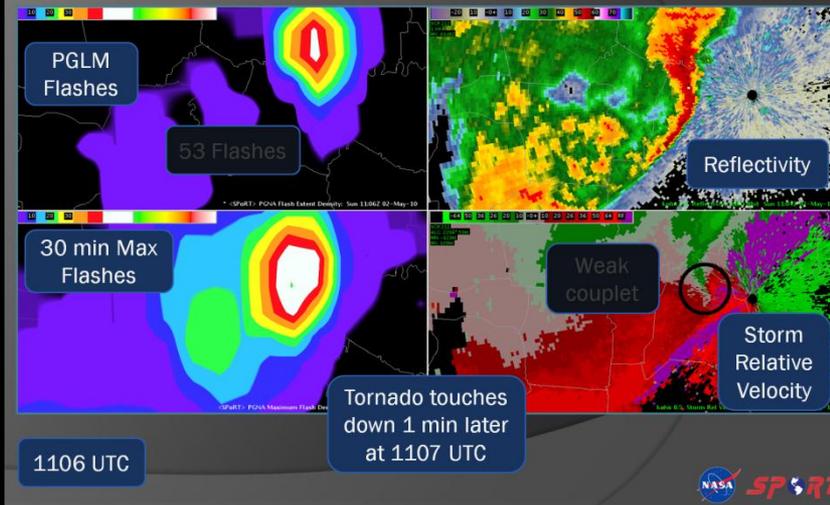


PGLM Total Lightning Activities

Flash Initiation Density (FID) Product



Weak Tornado Example: Tornado Forms

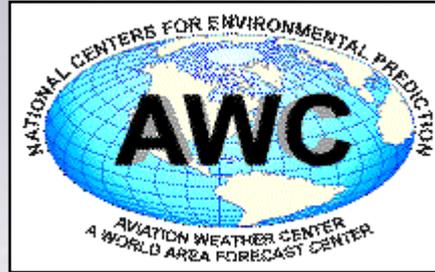


2012
Training
Update

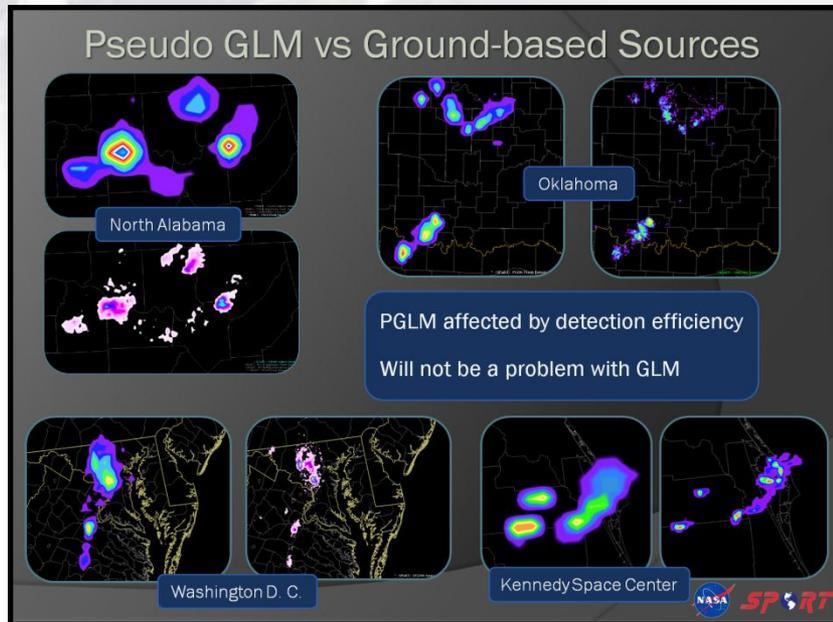
Updated Training

- Update of 2010 module
- New AWIPS II graphics
- More discussion on available total lightning networks
- New operational example
 - Provided by WFO Nashville
- Training on PGLM variants
 - Flash initiation density
 - Maximum flash density

Visiting Scientist Activities



- Pseudo-GLM involved with the visiting scientist program
- Two trips finalized
 - Storm Prediction Center
 - Aviation Weather Center
- Primary goals
 - Training of total lightning
 - Learn operational needs
- Secondary goals
 - Expand total lightning to national centers
 - Look for ways to utilize limited total lightning domains



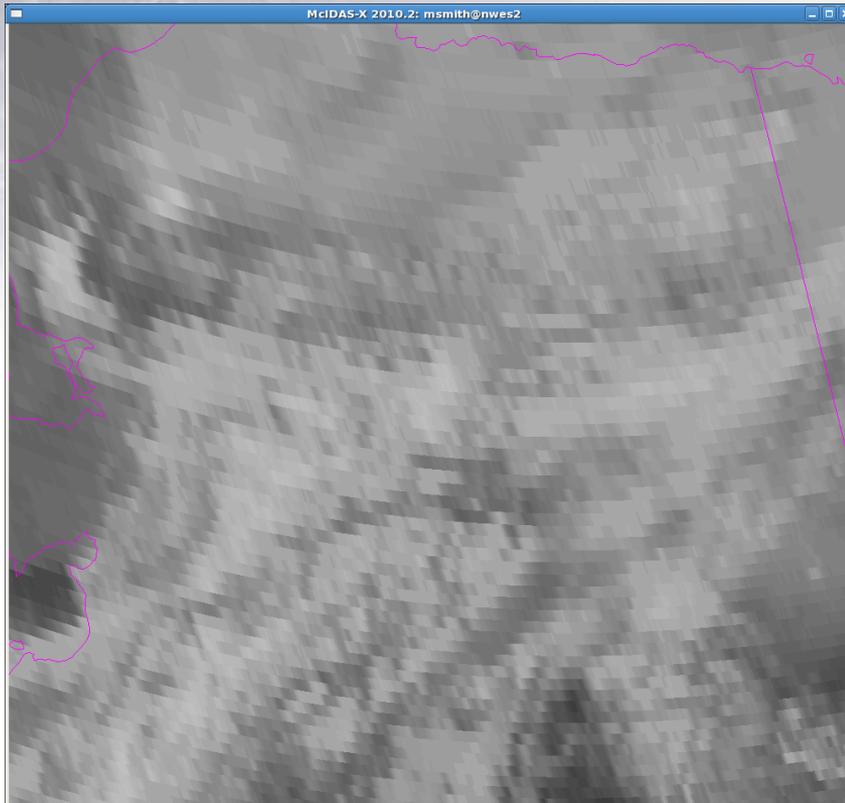
OCONUS Activities - QPE

- QPE (Quantitative Precipitation Estimate)
 - Coordination call with SPoRT, NESDIS, and AK users
 - Alaska RFC (POC: Eric Holloway) volunteering to be initial evaluator for testing at high latitudes
 - Bob Kuligowski to make adjustments to predictors based on initial look at product at high latitudes
 - IR predictor seeing bare ground but using the values as if they are clouds
 - See “holes” within the product where it would seem that maximum values of QPE should be located.
 - Future:
 - Pacific domain, Interest from HPC to be explored as well

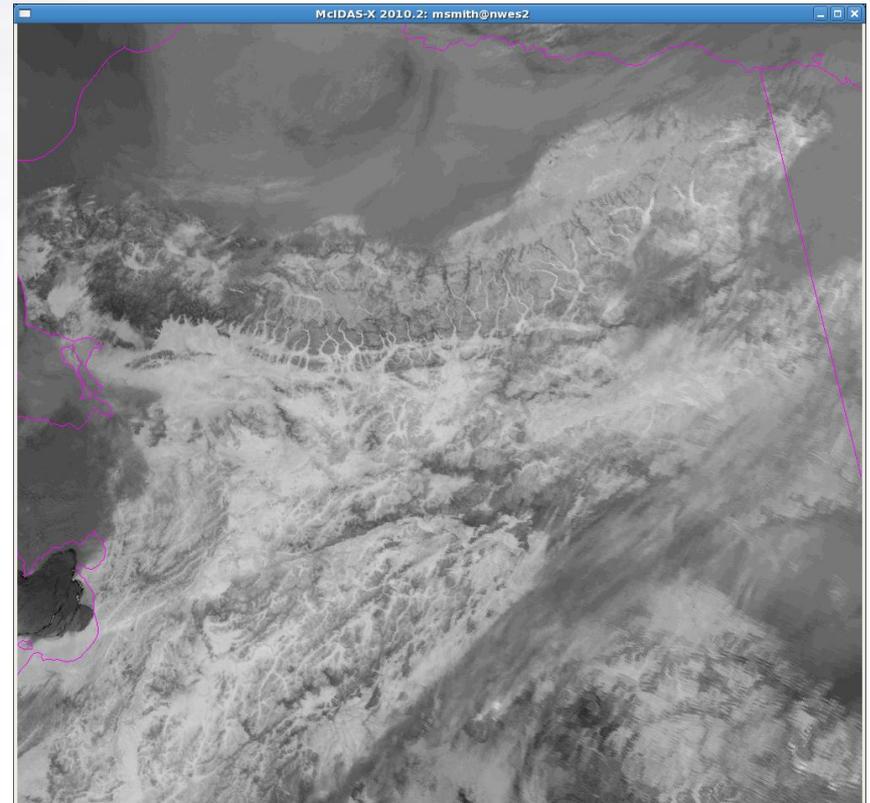
OCONUS Activities – MODIS/VIIRS

Have access for AK and HI via University of Alaska Fairbanks (GINA)

- Working on AK Region Hybrid Imagery using both MODIS and VIIRS
- Future: RGB Imagery for Alaska and over Pacific and Atlantic basins



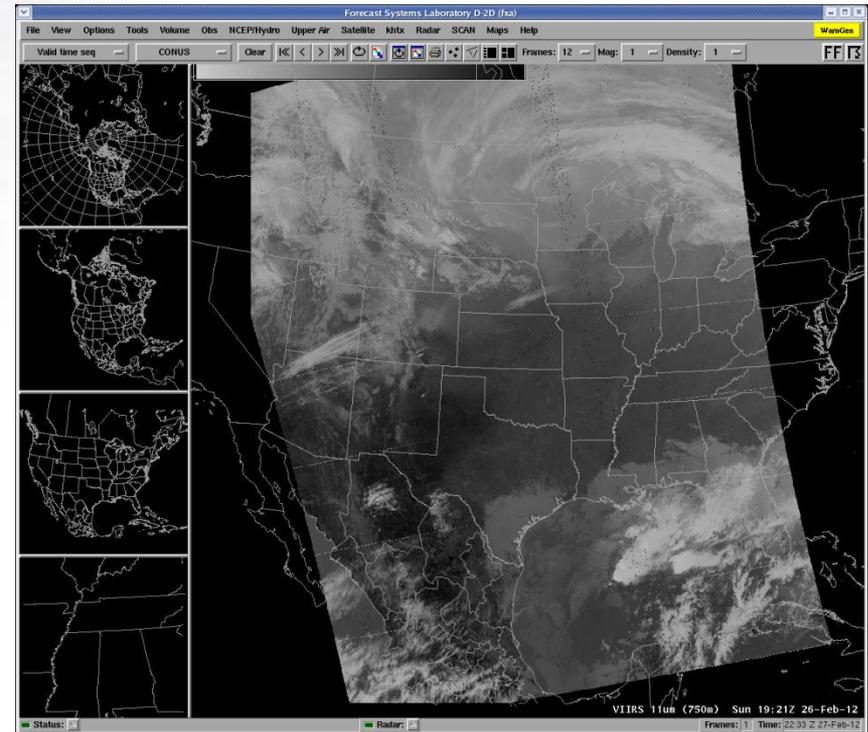
Longwave IR, GOES West over Alaska



Longwave IR, MODIS-GOES Hybrid over Alaska

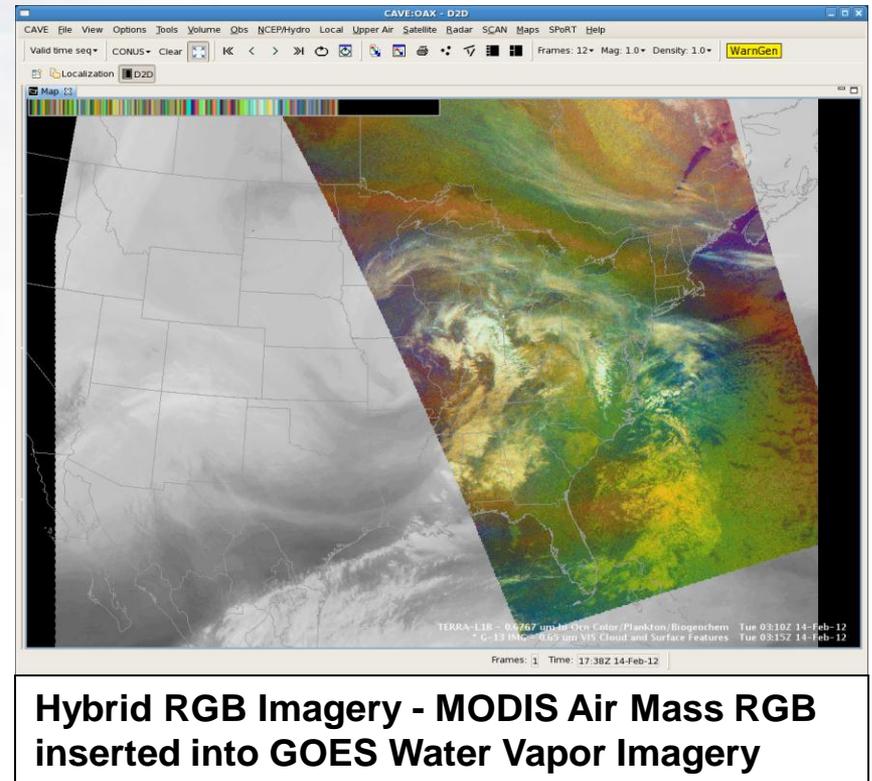
S-NPP/VIIRS

- Have server for VIIRS in McIDAS X
 - Allows batch mode processing for AWIPS I or AWIPS II
 - Working on Hybrid that handles use of both MODIS and VIIRS



RGB Imagery

- Continue production suite for National Centers
 - Planning with Folmer to develop training case of Hurricane Philippe
- MODIS-based RGBs for WFOs (and National Centers)
 - Interest increasing from WFOs due to demonstrations during coordination calls and blog post examples
 - Hybrid form of Air Mass, Dust, NT Microphysics RGBs to be transitioned to WFOs for Spring/Summer evaluation
 - Quick Guides for operations to be developed from existing examples



Summary of 6th SPoRT Science Advisory Committee (SAC) meeting (February 27-March 1, 2012)

Objective:

- *provide a comprehensive overview of SPoRT activities to an outside review committee on recent research and transition activities and partner interactions*
- *response / action taken to previous SAC recommendations*

SPoRT Science Advisory Committee (SAC) meets every two years to provide:

- *feedback on strengths, weaknesses, and accomplishments*
- *direction for future activities, other program guidance*
- *report that summarizes meeting and provides recommendations for the future (to be delivered with 3 months of meeting)*

Benefits:

- *SPoRT scientists – improve focus of activities*
- *NASA / NOAA Headquarters program manager– program emphasis and justification for funding support*



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SAC Members / Observers

- Tsengdar Lee - *NASA ESD/SMD, Washington, DC*
- Allen White - *NOAA/ERSL/PSD, Boulder, CO (attending for Marty Ralph – 2007ff)*
- David (Rusty) Billingsley – *2007ff - Chief, Science and Technology Services, NWS Southern Region, Fort Worth, TX – Chair of SAC*
- Mitch Goldberg - *2005ff - NOAA/NESDIS/STAR, Camp Springs, MD*
- Ronald Gelaro – *2007ff - NASA/GSFC/GMAO, Greenbelt, MD*
- Jim Yoe - *NOAA/JCSDA, Camp Springs, MD (attending for Dr. Lars Peter Riishojgaard – 2008ff)*
- Jack Kain - *2009ff – NOAA/OAR/NSSL, Norman, OK*

Observers:

- o Bill Lapenta – *NOAA/NCEP/EMC, Camp Springs*
- o Steve Goodman – *NOAA/NESDIS GOES-R Project Scientist*
- o Kim Richardson – *Naval Research Lab, Monterey, CA*
- o Brian Motta - *NOAA/ESRL, Boulder*
- o Mike Johnson - *NOAA/NWS / OST, Silver Spring*
- o Dave Novak – *NOAA HPC, Camp Springs*

Role: provide additional feedback to SAC



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Preliminary Feedback

- SAC was quite impressed with the energy, commitment, and progress of the SPoRT program and was pleased that SPoRT embraced many of FY09 recommendations
- The actions taken by SPoRT on expansion exceeded SAC expectations.
- SAC is please that the collaborations SPoRT has initiated with other entities outside WFOs.
- The SAC is please with the progress made in developing more quantified metrics for success.
- The efforts to “port” SPoRT products and applications to AWIPS / AWIPS II / NAWIPS are impressive.
- The community recognizes that the SPoRT paradigm is a key component to its success.
- SPoRT’s recent work ---- with new and core products such as the MODIS hybrid and RGB imagery, the pGLM, LIS, and total lightning products --- is a home run – from start to finish!
- SPoRT has smoothly enhanced collaboration with other NOAA CI’s like CIMSS and CIRA through its integration with the GOES-R PG program
- The SAC commends SPoRT on its training and assessment efforts
- Suggestions for future R2O activities will be available in final report



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