



GOES-R Proving Ground Update

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Outline



- Recent Events
- Ongoing and Future Demonstrations



Recent Events

GOES-R Satellite Scenario at IMET Workshop



- 21-25 March, 2011
- Performed GOES-R satellite fire scenario at the IMET Workshop.
- Two groups of 5 IMETs and 1 FBAN developed forecasts for the 2007 Witch fire in FxNet; one group using GOES 11 data, one using GOES 11 and simulated GOES-R.
- Both groups had access to typical synoptic data and models.
- Successful working demonstration showcasing GOES-R capabilities and enhancements and the GOES-R “team” provided finer detail in their forecasts due to the increased spectral and spatial resolution in simulated GOES-R data.
- Scenario was well received and generated a lot of enthusiasm for GOES-R capabilities.



Recent Events

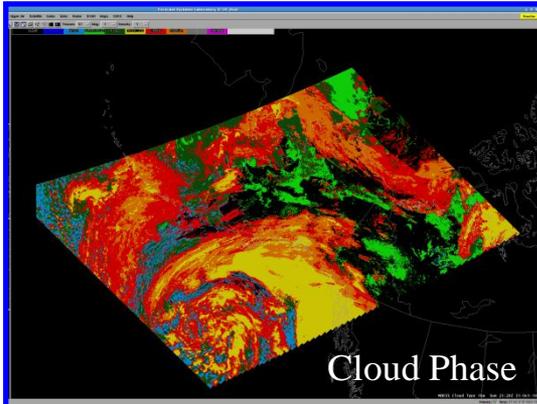
Satellite Proving Ground and User Readiness Workshop



- 17-19 May; Boulder, CO
- Discussions at workshop included the future of the NWS towards data fusion, GOES-R Program Status, AWG and R3 Updates, Proving Ground demonstrations, CIRA, CIMSS, and SPoRT satellite data capabilities developments, WFO perspectives on the GOES-R Proving Ground, and training needs.
- Breakout groups with the following topics occurred on Thursday: (1) Training/ User Readiness, (2) Integrated Observation/Analysis & Derived Information, and Next-Generation Analysis, Watch, (3) Warning, Decision Support Systems.
- SSD Chiefs continued to express desire to become more involved in WFO-based PG activities; effort under way to introduce new governance of PG Program addressing this desire.

Ongoing Demonstrations 2011

High Latitude and Arctic Experiment



Location

- Alaska Region
 - GINA
 - WFO Fairbanks
 - WFO Anchorage
 - WFO Juneau
 - AAWU

Focus

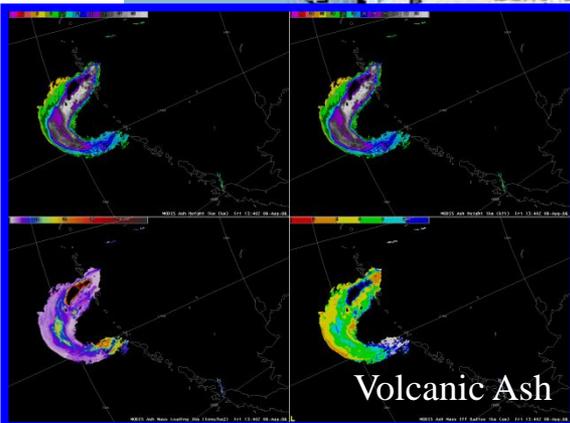
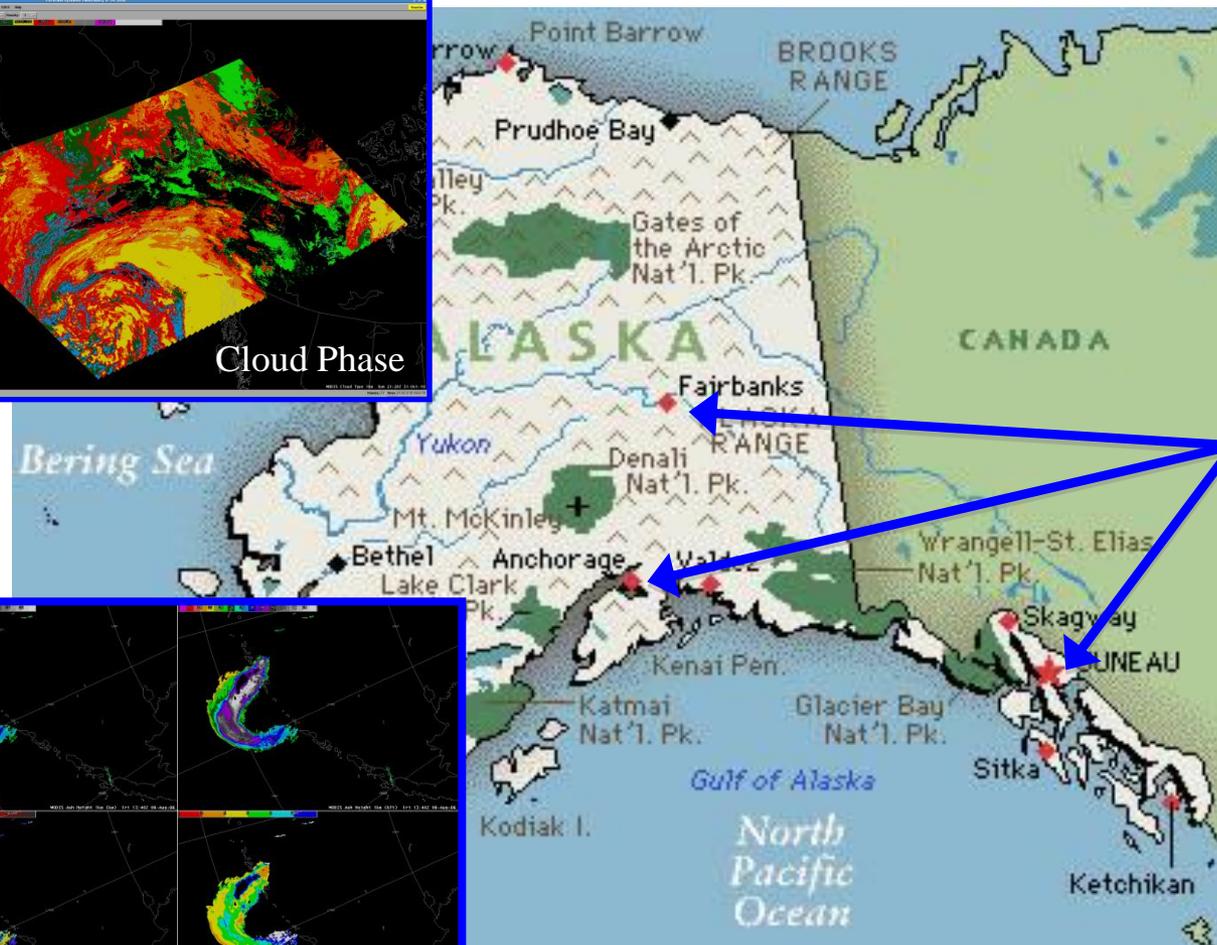
- Snow/Cloud/Ash/Aviation

Products

- Cloud Mask
- Cloud Phase
- Low Cloud and Fog
- SO2 Detection
- Volcanic Ash Detection and Height

Duration

- 6 Dec 2010 – 31 Aug 2011





Ongoing Demonstrations 2011

HWT/SPC Spring Experiment



Location

- Hazardous Weather Testbed/Storm Prediction Center, Norman, OK

Focus

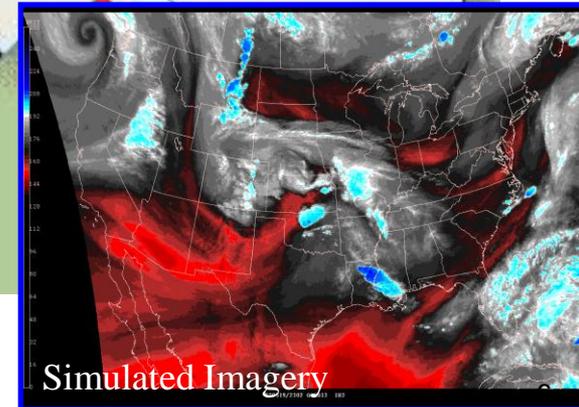
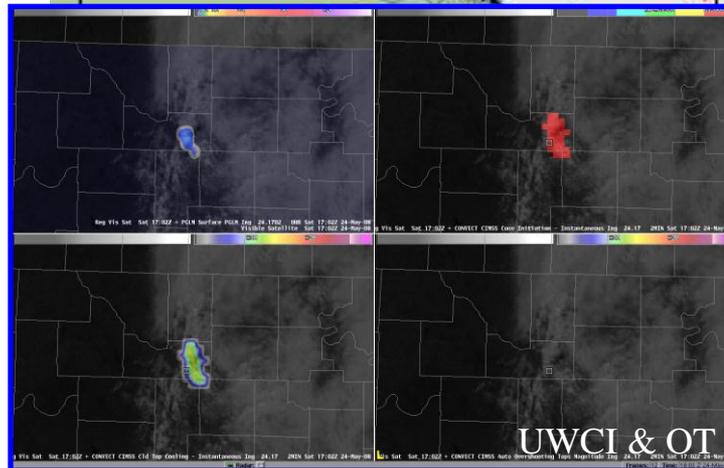
- Convection

Products

- Cloud and moisture imagery
- Convective initiation
 - 3 products
- Overshooting-top / Enhanced-V detection
- Total lightning detection
 - 2 products
- Severe hail probability

Duration

- 17 May – 18 June 2011



UWCI & OT



Ongoing Demonstrations 2011

Aviation Weather Experiment



Location

-Aviation Weather Center,
Kansas City, KS

Focus

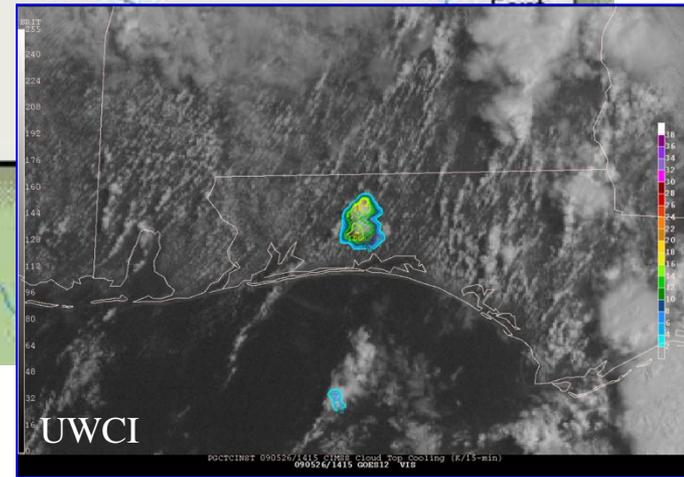
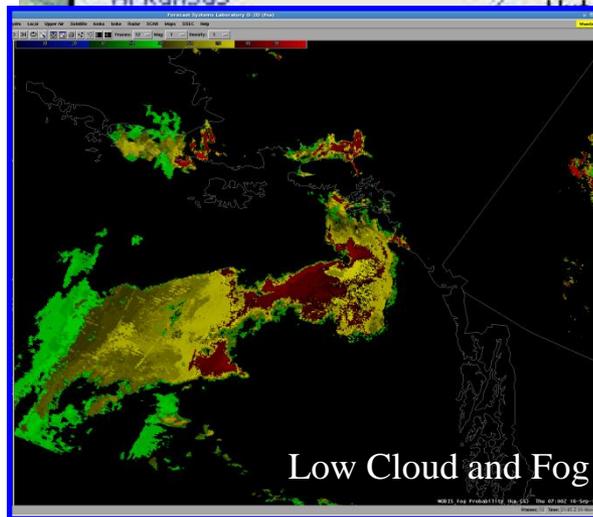
-Aviation

Products

- Low Cloud and Fog
- SO₂ Detection
- Volcanic Ash Detection and Height
- Aircraft Icing Threat
- UW Convective Initiation
- Nearcasting Model

Duration

-1 Jun – 31 Oct (TBD) 2011





Ongoing Demonstrations 2011 OPC and SAB Demonstration



Location

- Ocean Prediction Center, Camp Springs, MD
- NESDIS Satellite Analysis Branch, Camp Springs, MD

Focus

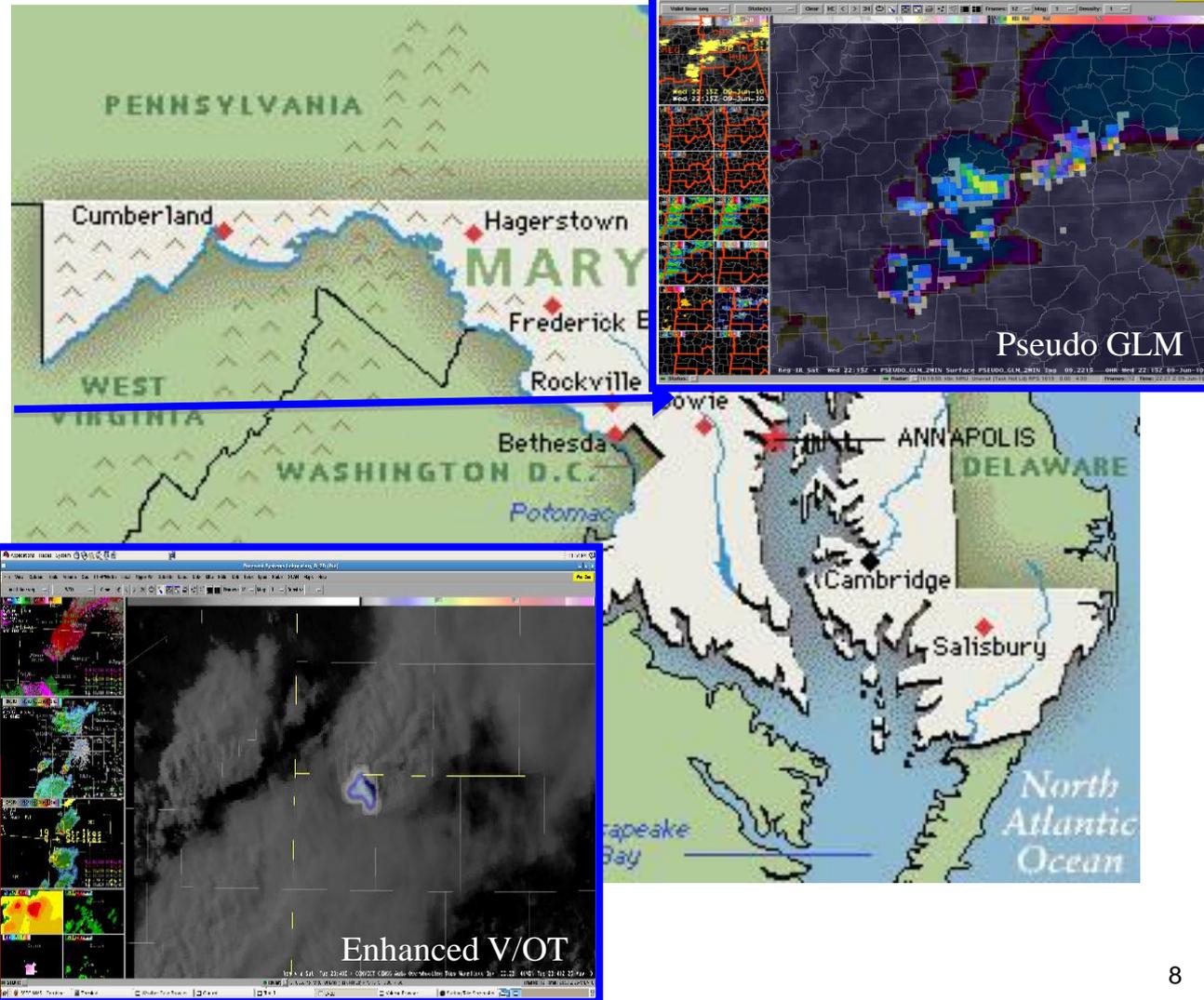
- Offshore T-Storms

Products

- Cloud/Moisture Imagery
- Convective Initiation
- Cloud Top Phase
- Cloud Top Height
- Cloud Top Temperature
- Enhanced “V”/Overshooting Top Detection
- Lightning Detection

Duration

- Approx. June – Sept 2011





Future Demonstrations 2011 Hurricane Season Experiment



Location

-National Hurricane Center,
Miami, FL

Focus

-Tropical Weather

Products

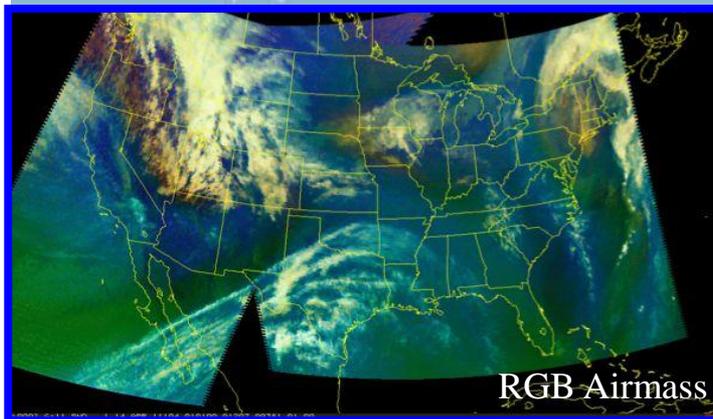
- Hurricane Intensity Estimate
- Enhanced "V"/Overshooting
Tops
- Super Rapid Scan Imagery
- False color imagery product
- GOES-R natural color
imagery product
- Rapid Intensity Index
- RGB Aerosol/Dust Product
- RGB Airmass Product
- Saharan Air Layer Product

Duration

-1 Aug – 30 Nov 2011



NHC 2010



Future Demonstrations 2011

HPC and SAB Demonstration

Location

- Hydrometeorological Prediction Center, Camp Springs, MD
- NESDIS Satellite Analysis Branch, Camp Springs, MD

Focus

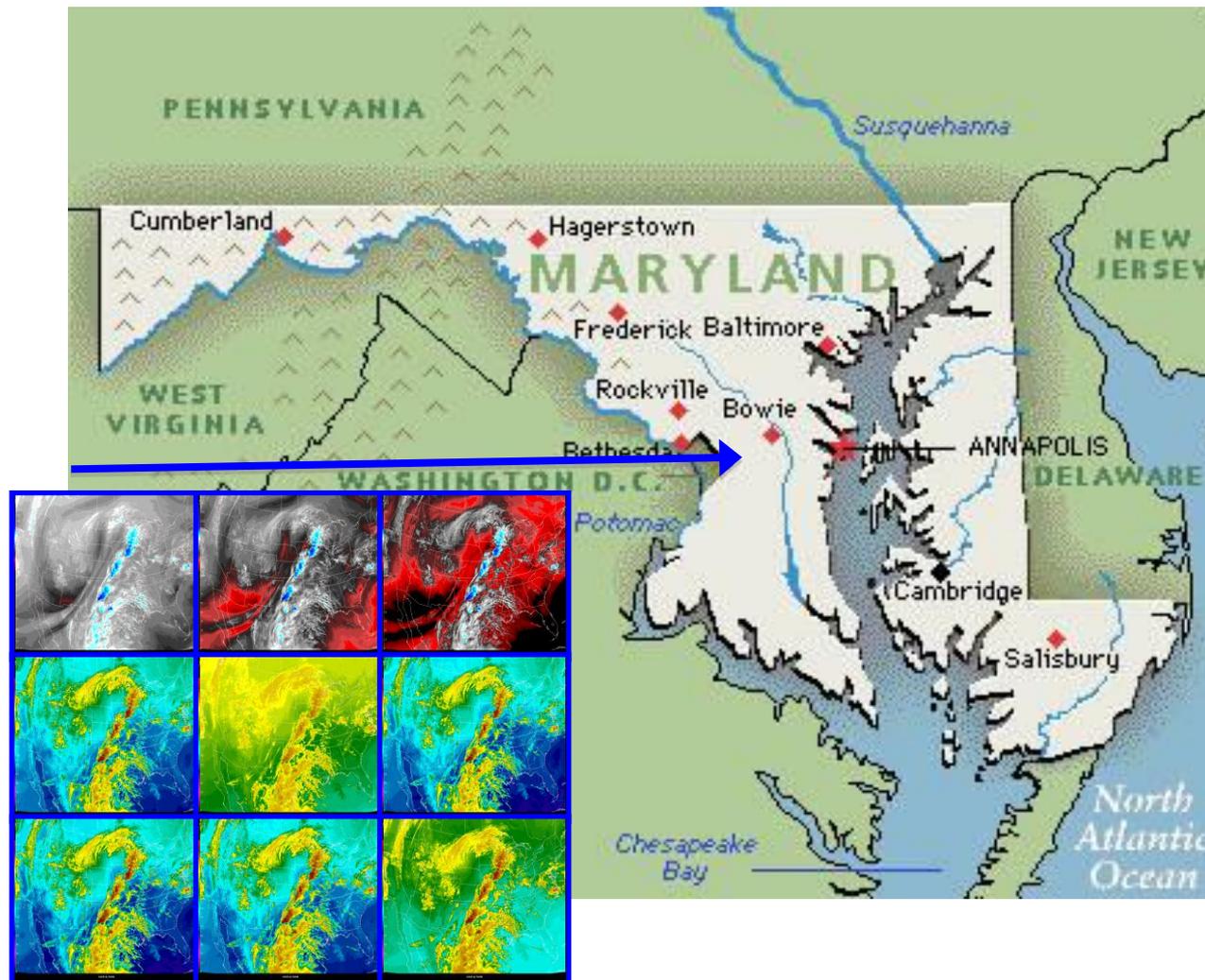
- Precipitation/QPF

Products

- Cloud/Moisture Imagery
- Derived Motion Winds
- RGB Airmass
- Rainfall Rate/QPE

Duration

- Approx. July – Oct 2011



Simulated Satellite Imagery



Future Demonstrations 2011 Air Quality Experiment



Location

- UMBC
- EPA Region III

Focus

- Air Quality

Products

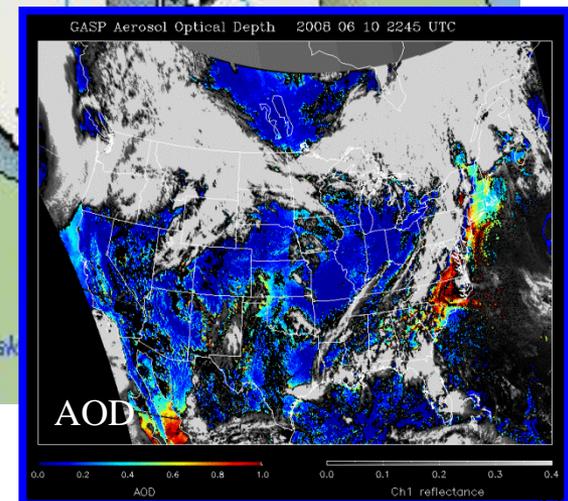
- Aerosol Optical Depth
- Aerosol Detection (Smoke/Dust)
- Fire/Emissions
- RGB Imagery

Duration

- Approx. 11 July – 24 2011

Notes

- Coincides with the DISCOVER-AQ experiment





Future Demonstrations 2011 Pacific Region Demonstration



Location

-Pacific Region

Focus

- Tropical Cyclone
- Heavy Rainfall
- Aviation

Products (List is under Review)

- Tropical Cyclone Intensity
- Lightning Detection
- Volcanic Ash Detection and Height
- SO2 Detection
- Aerosol Detection
- Rainfall Rate/QPE
- Orographic Rain Index
- Total Precipitable Water
- Atmospheric Rivers
- UW Convective Initiation

Start Date

-TBD





Future Demonstrations



- 2012 and Beyond
 - Demonstrate products and decision aids in NOAA Testbeds, NCEP Centers, WFOs, and the NWS Proving Ground Training Center
 - Transition from demonstrating Warning Related Products to demonstrating the remaining GOES-R Products, Day 2 Products, Decision Aids, and Fused decision support
 - Continue to develop, demonstrate, and test fused decision support services
 - Identify JPSS opportunities