

Outreach, Education, and Training Opportunities

3rd NOAA User Workshop on the GPMM: Proving Ground

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Overview

- 1) Definitions: Outreach, Education, Training
- 2) GOES-R Program & JPSS Program
- 3) NOAA Testbeds
- 4) Training Orgs & Path to NOAA Operations
(NWS, NESDIS, OAR)

Definition: Outreach

(NWS) Outreach:

- ✓ Outreach defined as interaction with users
- ✓ Designed to build awareness, develop relationships, and inspire action (e.g., behavioral change)
- ✓ Involves information exchange with a target audience
- ✓ Is carefully designed for target audience to include sources and contacts for further information
- ✓ Outreach includes weather, water, and climate information and services, public-affairs related activities, and referral to America's Weather Industry
- ✓ **Think “awareness”, but can lead to deeper learning**

NOAA Outreach

NOAA's Science on a Sphere



NWS TADD



NWS Storm Ready



WHAT IS TADD?



TADD SUCCESS STORIES
AND NEWS FROM ACROSS
THE COUNTRY

RESOURCES:
AV, BROCHURES,
ARTICLES AND
PUBLICATIONS



TURN AROUND DON'T DROWN

TADD

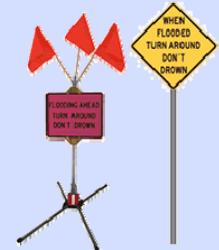


INFORMATION
TOOLBOX

POLICY ON USE OF
TADD PHRASE



TADD ROAD SIGNS



Definition: Education

(NWS) Education:

- ✓ A process by which users develop their weather, water, and climate knowledge, values, and skills
- ✓ For reporting purposes, education refers only to teaching performed by NWS staff
- ✓ Education can be further categorized as formal or informal

Definition: Training

(NWS) Training:

- ✓ Formal education where structured learning takes place
- ✓ Students are required to demonstrate proficiency
- ✓ A process for transferring knowledge and skills using standardized instructional methods and techniques
- ✓ Targeted at professional audiences to develop or enhance professional competencies
- ✓ May create, enhance, or increase certainty of a behavior or change in behavior
- ✓ **Desired result is performance improvement**



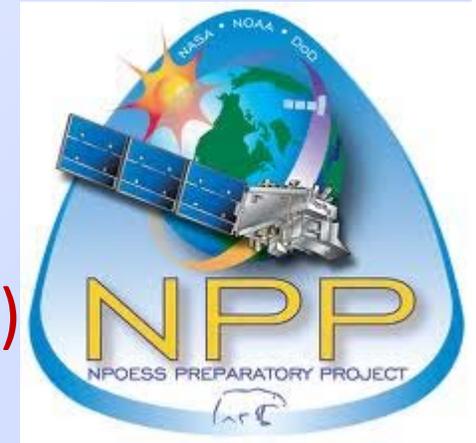
Outreach, Education, and Training

- ✓ Outreach and Education Team chaired by Dann Karlson at GOES-R Program
- ✓ Have produced materials jointly with NOAA/NWS
 - ✓ How Do You Make a Weather Satellite ? (Booklet)
- ✓ Works closely with NASA JPL and GSFC Outreach teams
 - ✓ Scijinks.gov
- ✓ Multimedia section on web site, related links (www.goes-r.gov)
- ✓ Created smartphone app, calendars, posters (down-loadable)
- ✓ Coloring books, rulers, bookmarks, classroom activities
- ✓ Integrated presentation of O/E/T at goes-r.gov
- ✓ Brochures, FAQ, Flyout Schedule, Merchandise
- ✓ GOES User Conferences
- ✓ GOES Fact Sheets, Logos are online
- ✓ User-printable Product List



SNPP & JPSS Outreach, Education, and Training

- ✓ NPP: http://npp.gsfc.nasa.gov/education_outreach.html
- ✓ Social Media Presence (Twitter, Facebook, Flickr)
- ✓ Special Section for Media
- ✓ Working with NASA JPL SciJinks Team
- ✓ Fact Sheets, Brochures
- ✓ 1/22 Scale Paper Model Kit (Joint with Ball)



- ✓ JPSS: <http://www.jpss.noaa.gov/outreach.html>
- ✓ Similar to GOES and SNPP but at early stage
- ✓ K-12 Student Resources
- ✓ FAQ
- ✓ Integrating with other NOAA through NOAA Education Office



Aviation Weather Testbed

AWT tests new science and technology to produce better aviation weather products and services.



Climate Testbed

CTB accelerates transition of scientific advances from the climate research community to improved NOAA climate forecast products and services. (Charter)



Coastal & Ocean Modeling Testbed

COMT accelerates transition of advances from the coastal and ocean modeling research community to improved operational ocean products and services. (Charter)



Developmental Testbed Center

DTC improves weather forecasts by facilitating transition of the most promising new NWP techniques from research into operations. (Charter)



GOES-R Proving Ground

GRPG tests and evaluates simulated GOES-R products before the GOES-R satellite is launched into space. (Charter)



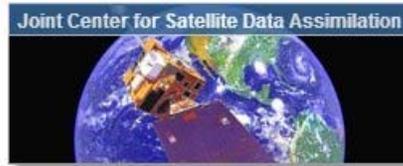
Hazardous Weather Testbed

HWT accelerates transition of new meteorological insights and technologies into advances in forecasting and warning for hazardous weather events. (Charter)



Hydrometeorology Testbed

HMT conducts research on precipitation and weather conditions that can lead to flooding, and fosters transition of scientific advances and new tools into forecasting operations. (Charter)



Joint Center for Satellite Data Assimilation

JCSDA accelerates and improves use of research and operational satellite data in weather, ocean, climate and environmental analysis and prediction systems. (Charter)



Joint Hurricane Testbed

JHT is a competitive, peer-reviewed, granting process to choose the best mature research products for testing and transitioning to operations. Includes modeling, data gathering, and decision support components. (Charter)



Operations Proving Ground

OPG serves as a framework to advance NWS decision-support services and science & technology for a weather-ready nation. (Charter)



Space Weather Prediction Testbed

SWPT supports development and transition of new space weather models, products, and services. Infuses new research to improve accuracy,



NWS Forecast Decision Training Branch

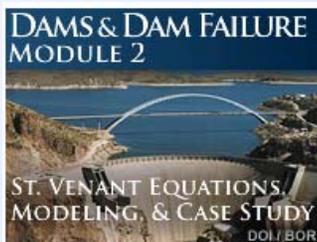


Mission:

“Improve performance of NOAA/NWS personnel and core partners during operational forecast and warning processes.”

Vision:

“Transferring Knowledge into Forecaster Performance.”



VISIT Virtual Institute for Satellite Integration Training

VISIT Home

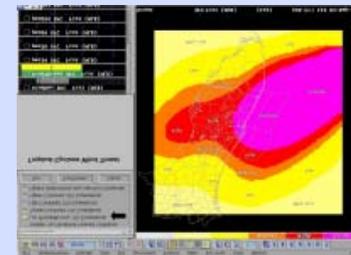
- VISIT Home
- Training Sessions
- Training Calendar
- Blog Sites
- VISIT Satellite Chat
- The VISIT Program
- VISIT Contributors
- VISIT FAQ
- Links / Tutorials
- RAMSDS Online
- VISIT Training DVD

Utilizing Synthetic Imagery from the NSSL 4-km WRF-ARW model in Forecasting Cyclogenesis



VISIT is a joint effort involving NOAA-NESDIS Cooperative Institutes, the National Environmental Satellite Data and Information Service (NESDIS), and the National Weather Service (NWS). The primary mission of VISIT is to accelerate the transfer of research results based on atmospheric remote sensing data into NWS operations using distance education techniques.

Teletraining Calendar, Signup and Installation



Satellite Training Community Works Together



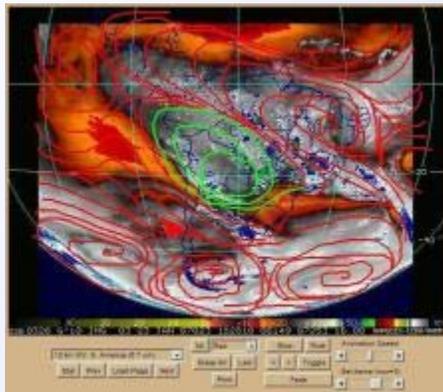
VISIT (CIRA/CIMSS)



NASA/SPoRT, NRL



UCAR/COMET®



**WMO, EUMETSAT,
Canada**

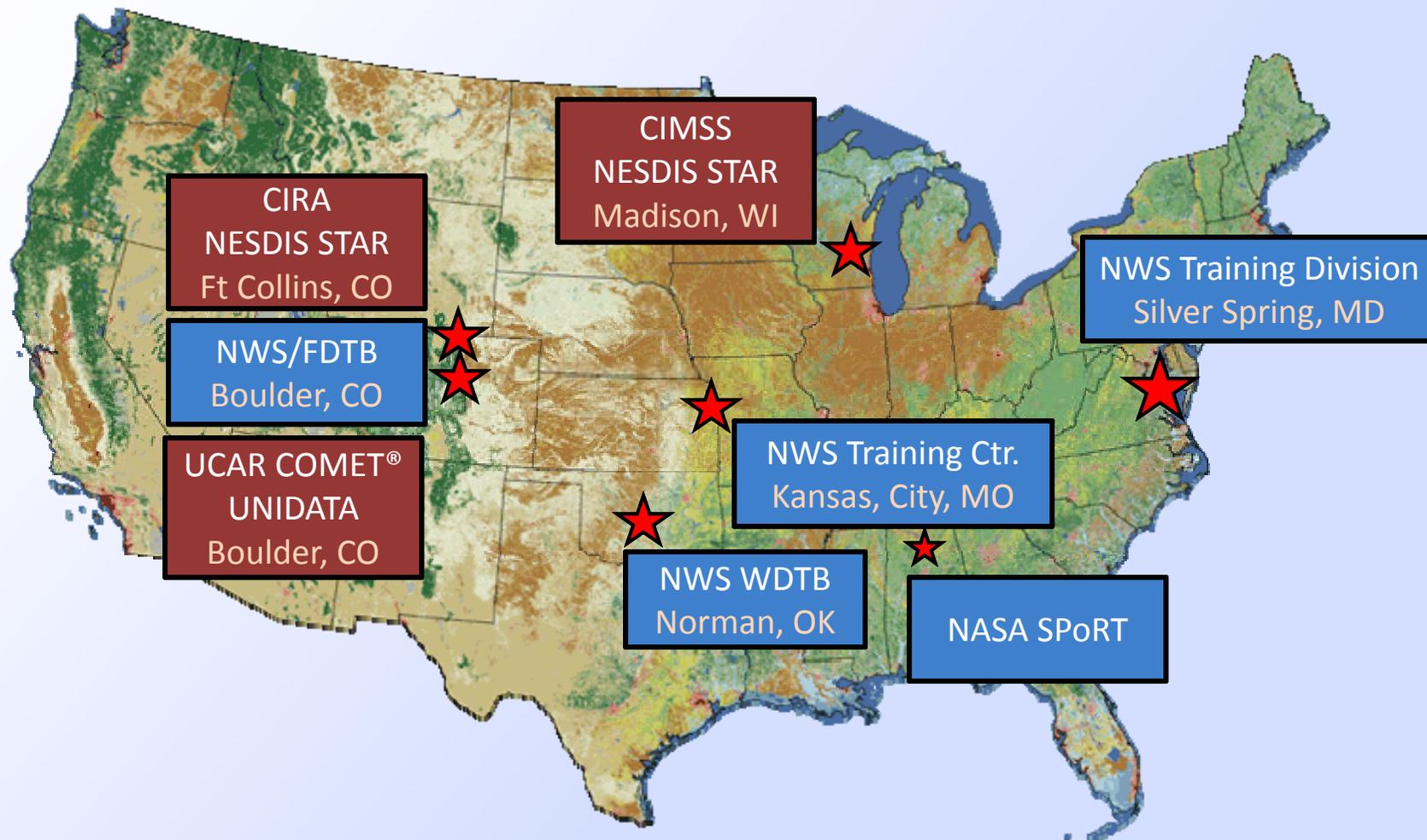


Users & Developers



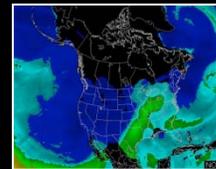
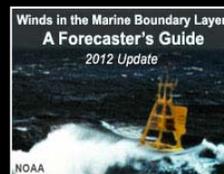
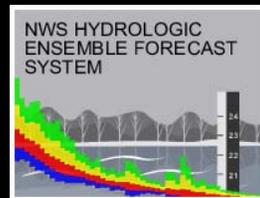
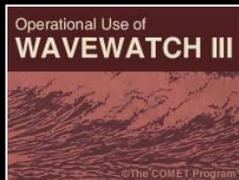
**NWS Training Division
+ SOOs & DOHs**

NOAA/NASA Collaborative Training Community



Forecast Decision Training Branch

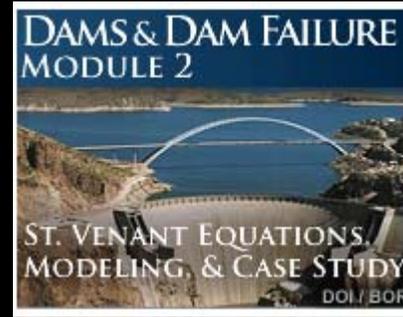
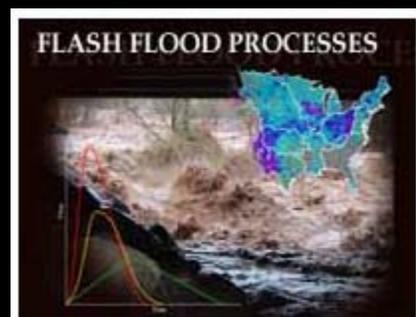
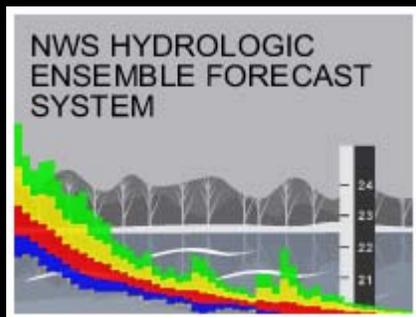
- National hydrology, geospatial training and support
- Marine, Aviation and Hydrology training development and Professional Development Series (PDS) facilitation
- National SOO Science and training support
- Numerical Weather Prediction (NWP) operational training
- Tropical Weather PDS support and training
- AWIPS-2 User Training
- **Lead NWS Satellite Training Program**
 - Virtual Institute for Satellite Integration Training (VISIT) Program
 - NOAA Satellite Proving Ground and more...



Hydrology Training Activities

National hydrology, geospatial training and support:

- Hydrology Professional Development Series, ongoing
Aid with staff training, better qualified candidates for advertised positions
- Flash Flood virtual workshop – April 9 to 11, 2013
Case reviews, virtual floodplain tour, distributed modeling, FFMP, Enhanced FFG, urbanization
Offices already sent notifications (28 WFOs, 2 RFCs)
- AWIPS2 GIS team member
Integration of GIS capabilities into AWIPS2
- Online development of hydrology and geospatial modules.
Preparing Hydro-climate Inputs for Climate Change in Water Resource Planning (BOR)
“Geospatial 101” under development – concepts and standards



NOAT

NWS Operational Advisory Team

Best state of the atmosphere and boundary conditions (3-d analysis of the current state)

Challenge – boundary layer and integration of various datasets

Basis for:

- Initial zero hour of the forecast database
- Initial conditions to next generation modeling systems
- Assisting the forecaster for monitoring /QCing the forecast database
- Situational awareness
- Verification

How do you fit?

Smoke and dust
Moisture/clouds
Derived winds
Fire hot spots
QPE
SST
TPW
Snow/ice cover
Sea ice
Volcanic ash
Low clouds/fog
Visibility

VISIT Training – Focus on Satellite Proving Ground

- Synthetic Imagery Applications from NSSL WRF
- Plans for Fog/LS and Lightning in support of Testbeds & prepare for AWIPSII
- VISIT Chat – Monthly Interactive Sessions
- Completions tracked on NWS LearnCenter in CLC



VISIT Virtual Institute for Satellite Integration Training

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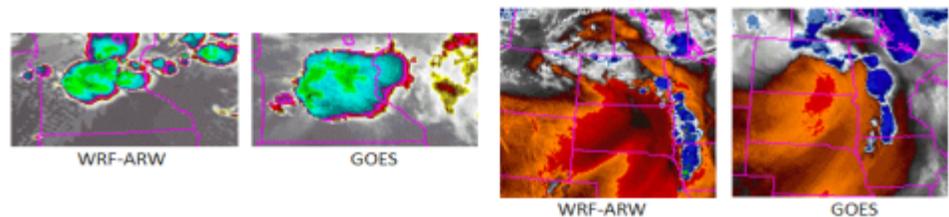
Utilizing Synthetic Imagery from the NSSL 4-km WRF-ARW model in Forecasting Cyclogenesis



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Teletraining Calendar, Signup and Installation

Utilizing Synthetic Imagery from the NSSL 4-km WRF-ARW model in forecasting Severe Thunderstorms



NWS Learning Center (LC)

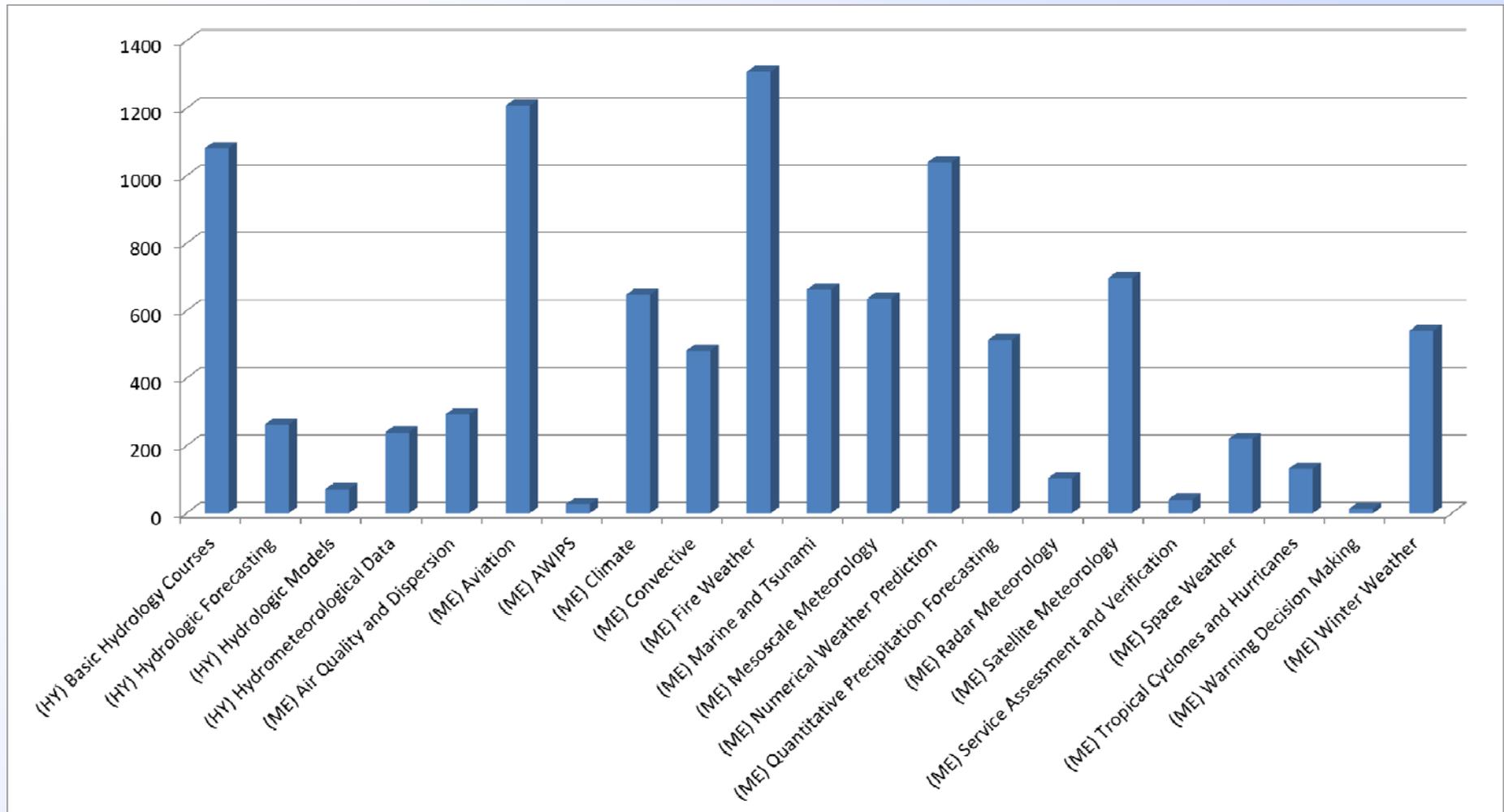
- Provide completion reports twice/week in MS Excel.
- Implement new Instructor Led Training (ILT) Import Tool for SOOs – FY13.
- Use for all Training Division modules and classes.
- Includes COMET and VISIT Training.

The screenshot shows the NWS Learning Center website. At the top, it says "NWS LEARNING CENTER" and "NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION". There is a navigation bar with links for "MY TRAINING", "HOT COURSES", "COURSE CATALOG", "REQUIRED TRAINING", "LEARNING CENTERS", and a "NEED HELP?" button. A "Coordinator Menu" section contains links for "COORDINATOR INFO PAGE", "Updated 10/12/08", "LEARNING CENTER TRAINING", "NWS TEST SUB", and "Control Panel Access is now at the bottom of the page." Below this, there are two main sections: "NEW NWS COURSES" and "NWS News & Announcements". The "NEW NWS COURSES" section lists several courses: "Crisis Communications Module 2", "Local Customer Outreach and Climate Services", "Handling Space Weather Inquiries", "QMS: Implementation in Meteorological Services", "Synthetic Imagery in Forecasting Low Clouds and Fog", and "2012 Tropical Cyclone Impacts Graphics Update". The "NWS News & Announcements" section contains information about a 2012 NOAA IT Security Awareness Course, a new Space Weather Course, and an EEOC Seminar. At the bottom, there is a table with four columns: "I am a New NWS Employee", "AWIPS-2 Training", "Dual-Pol Radar Training", and "Tropical Training". Each column contains a brief description and links to relevant resources.

I am a New NWS Employee	AWIPS-2 Training	Dual-Pol Radar Training	Tropical Training
<p>Welcome to the NWS! There are many great courses of interest to new NWS Employees. Get started with these:</p> <p>Welcome to the NWS NOAA IT Security Course NOAA Safety Course</p>	<p>AWIPS-2 is Coming to a WFO Near you!</p> <p>Get started on your AWIPS-2 Training today. For detailed info, visit:</p> <ul style="list-style-type: none"> • AWIPS 2 Transition Page • AWIPS 2 Exercise Page 	<p>Get your Dual-Pol on!</p> <p>Sign up for a Dual-Pol Storm Of The Month webinar, or view previous webinars on the Dual-Pol Storm of the Month page. Also track your progress through Dual-Pol courses on the Dual-Pol Training Page</p>	<p>New Learning Plans for the 2012 Tropical Training are now available. Visit the Tropical Training Page for more information.</p>
Workplace Skills Training	NOAA Programs	COMET Courses	SkillSoft Course Library

NWS Learning Center COMET Module Completions (Feb 2012 – Jan 2013)

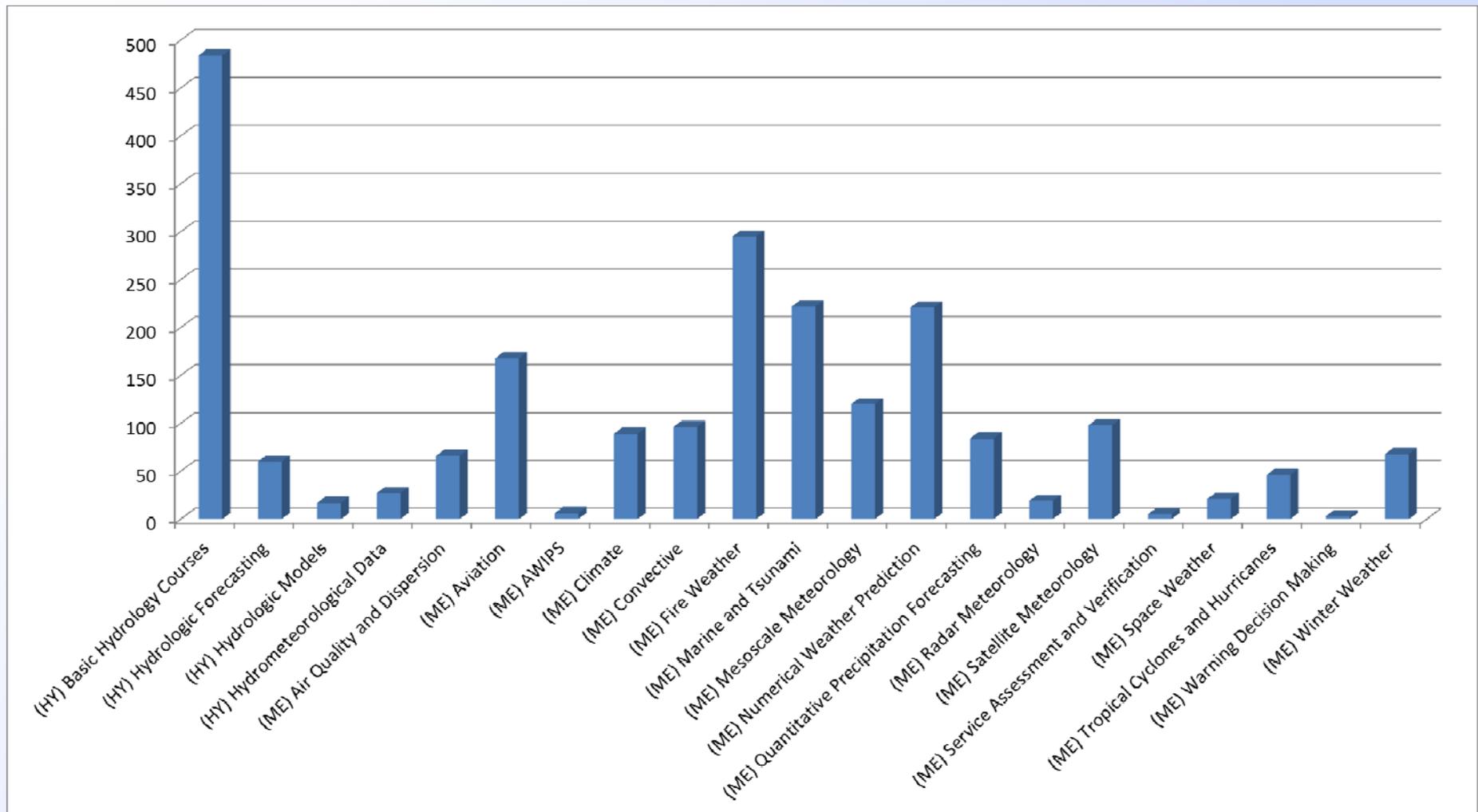
By NWS Learning Center Category



NWS Learning Center COMET Module Completions

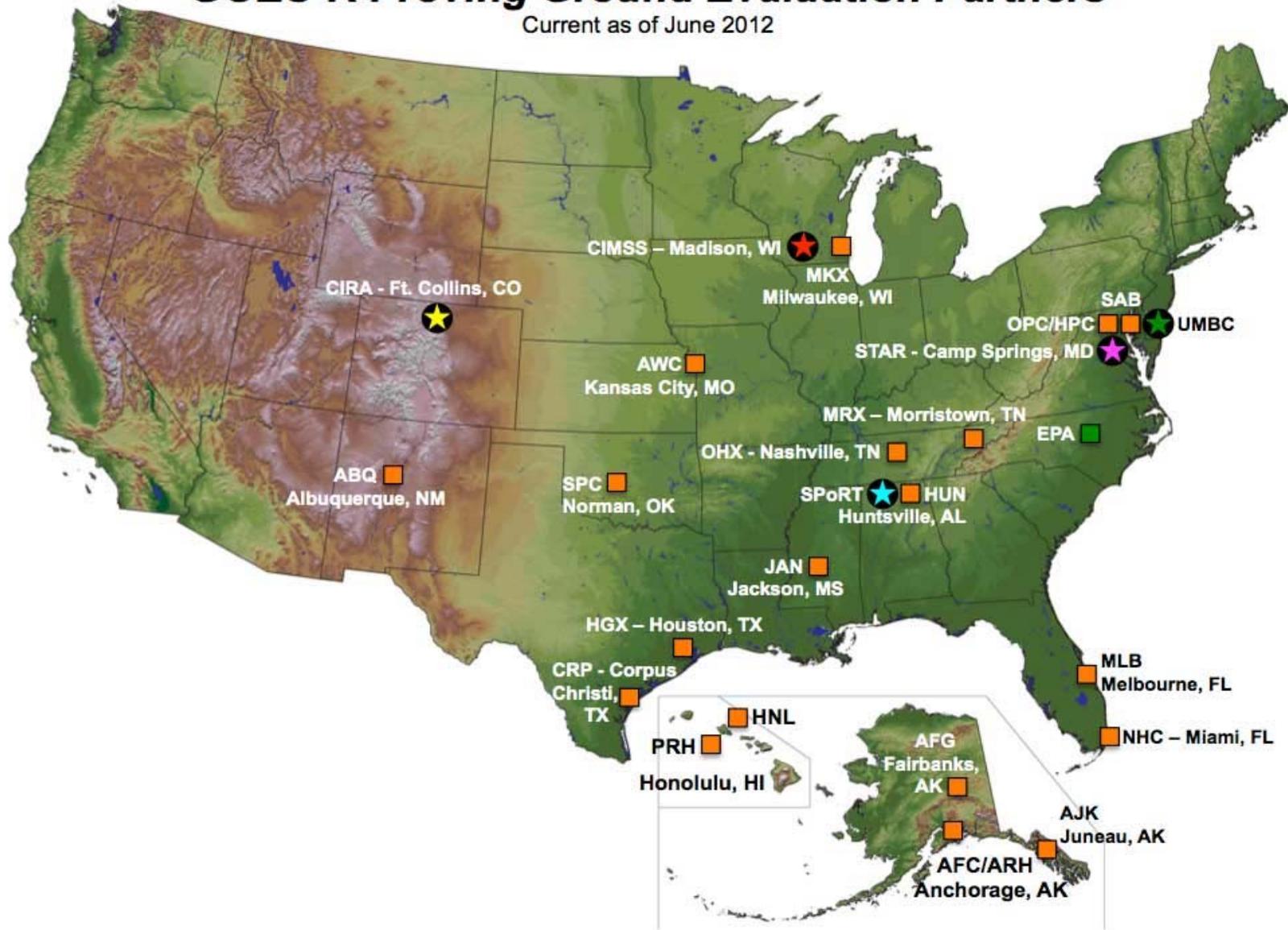
Southern Region (Feb 2012 – Jan 2013)

By NWS Learning Center Category



GOES-R Proving Ground Evaluation Partners

Current as of June 2012



Results from the Central Region Demonstration of the GOES-R Fog and Low Stratus Algorithm Applied to Current Real-time GOES Imagery and Data

2nd NWS Eastern Region Virtual Satellite Workshop – 25 February 2013

Workshop: <http://www.erh.noaa.gov/ssd/erps/satellite/>

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GOES-R Satellite Liaison

CIMSS, University of Wisconsin-Madison/NWS Operations Proving Ground

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Forecast Decision Training Branch

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NOAA/NESDIS/STAR

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University of Wisconsin-Madison



New Lightning Data & GOES-R Lightning Mapper Proxy Products

- **Point CG plots (WWLLN & GLD360) data from Vaisala (aka NLDN).**
Principal change: better coverage globally, especially for tropical systems.
- **Earth Networks Inc. Total Lightning Data available to WFOs, initially via Weatherbug Professional web for evaluation then “operational” Fall 2012.**
Current: OST working with SPC, other lightning experts, AWIPS to specify ENI Total Lightning Data/products available in AWIPS.
Need ENI answers to operational network questions.
Studies found network variations in detection efficiency & performance.
ENI Total Lightning point data could be used for GOES-R GLM Proxy data for user readiness and training.
Key activity at Hazardous Weather Testbed this Spring.
Benefit may be 30-minute lead time over CG detection for areas east of Denver, CO.
- **AWIPS2 ATAN needs approval for Total Lightning Mapping Array data (HUN, HOU, and BOU)**
- **FDTB, WDTB, SPoRT collaborating on training development with OST and GOES-R Lightning Mapper Science Team.**