

Training in NOAA Satellite Proving Ground

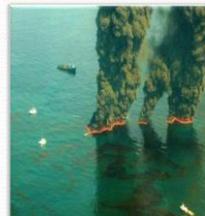
Anthony Mostek
NOAA/NWS/Training Division

Wendy Abshire
UCAR/COMET

With help from
Jim Gurka and Tim Schmit
NOAA/Satellite Information Service

A Changing World

Events of 2010



Deepwater Horizon
Over 100 days'
deployment



"Snowmagedon"
DC – Baltimore Paralyzed
for 7 days



Iceland Volcanic Ash
\$2B Aviation Impacts

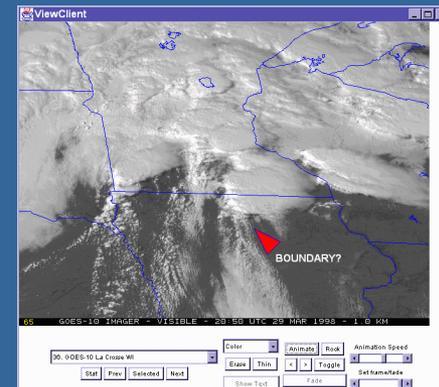
Supporting these events *singularly* stretched NWS resources and capabilities

GOES-R PG Workshop
17 May 2011



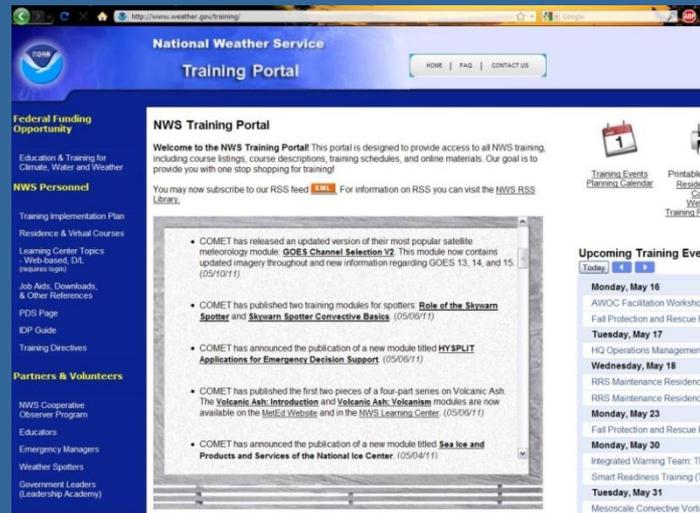
Key Points for Training

- Integral to NOAA Programs/Goals
 - Satellite Training Community
 - NOAA GOES-R Proving Ground
 - Services 2020 – Decision Support
- Keeping Pace with Evolving Operations
- **Training Talk Take Away!**



Training Community

- Dedicated NWS Training Division -
1 Center and 2 Branches
- Many Partners in NOAA - -
Cooperative Institutes & Programs
- US Agencies (DOD, NASA, DHS, DOT,...)



The screenshot shows the National Weather Service Training Portal. The header includes the NOAA logo and navigation links for HOME, FAQ, and CONTACT US. The main content area is titled "NWS Training Portal" and features a welcome message, a RSS feed link, and a list of recent updates. The left sidebar contains links for Federal Funding Opportunity, Education & Training for Climate, Water and Weather, NWS Personnel, and Partners & Volunteers. The right sidebar includes a Training Events Planning Calendar and an Upcoming Training Event list.

NWS Training Portal

Welcome to the **NWS Training Portal**! This portal is designed to provide access to all NWS training, including course listings, course descriptions, training schedules, and online materials. Our goal is to provide you with one stop shopping for training!

You may now subscribe to our RSS feed [RSS](#). For information on RSS you can visit the [NWS RSS Library](#).

- COMET has released an updated version of their most popular satellite meteorology module: **GOES Channel Selection V2**. This module now contains updated imagery throughout and new information regarding GOES 13, 14, and 15. (05/10/11)
- COMET has published two training modules for spotters: **Role of the Skywarn Spotter** and **Skywarn Spotter Convective Basics**. (05/06/11)
- COMET has announced the publication of a new module titled **HYSPLIT Applications for Emergency Decision Support**. (05/06/11)
- COMET has published the first two pieces of a four-part series on Volcanic Ash: **The Volcanic Ash: Introduction and Volcanic Ash: Volcanism** modules are now available on the MetEd Website and in the NWS Learning Center. (05/06/11)
- COMET has announced the publication of a new module titled **Sea Ice and Products and Services of the National Ice Center**. (05/04/11)

Upcoming Training Event

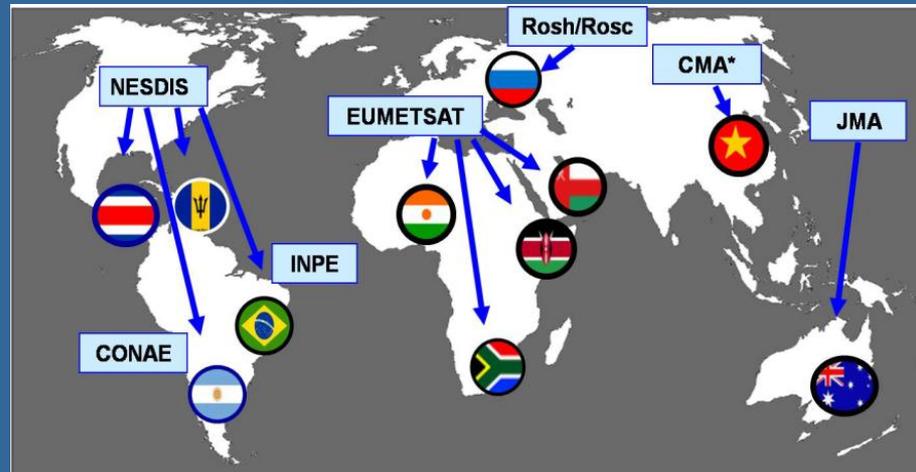
Monday, May 16
AWOC Facilitation Workshop #
Fall Protection and Rescue Re-
Tuesday, May 17
HQ Operations Management B
Wednesday, May 18
RRS Maintenance Residence C
RRS Maintenance Residence C
Monday, May 23
Fall Protection and Rescue Re-
Monday, May 30
Integrated Warning Team: The I
Smart Readiness Training (Ter
Tuesday, May 31
Mesoscale Convective Vortices



Training Community

International Collaboration

- WMO Space Programme Virtual Laboratory, Centres of Excellence (Argentina, Barbados, Brazil, Costa Rica), Canada, EUMETSAT, and more...





VISIT & Satellite (SHyMet) Courses

VISIT Virtual Institute for Satellite Integration Training

- VISIT Home
- Training Sessions
- Training Calendar
- Blog Sites
- The VISIT Program
- VISIT People
- VISIT FAQ
- Links / Tutorials
- RAMSDIS Online

VISIT Home

Water Vapor Imagery Analysis for Severe Thunderstorm Forecasting

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.



COMET MetEd

Satellite Meteorology

Topics:

Languages:

In this topic area, find out how current and future satellites and their sensors work, how to interpret what they tell us, and how to make forecasts and other weather products from their data.

Modules

Courses

Sort by:



1 - 40 out of 55 results



Satellite Meteorology:
GOES Channel Selection
V2

Languages: [English](#)

Publish Date: 2011-05-04

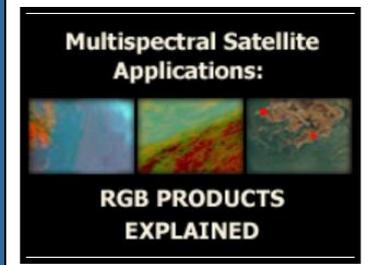
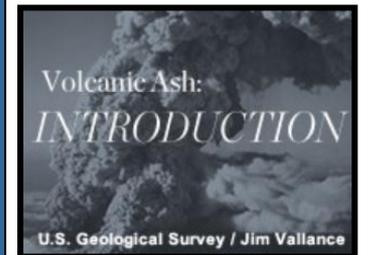
Skill Level: **2**

Completion Time: 1.25 - 1.50

Topics:

[Satellite Meteorology](#)

This module is an update to the previous Satellite Meteorology: GOES Channel Selection module. It reviews the five GOES imager channels and their use, incorporating conceptual visualizations and numerous imagery examples. The module also includes updated information on ... [Read more](#) »

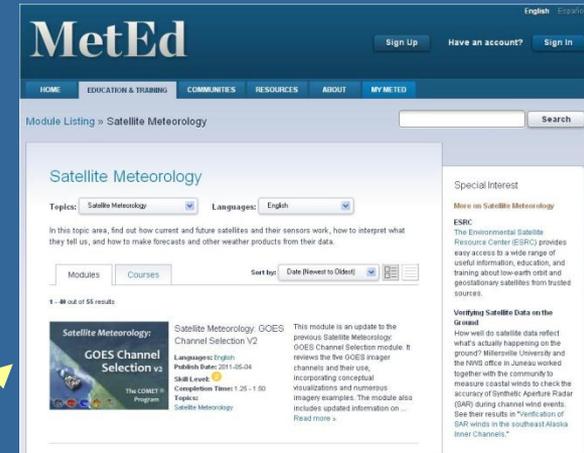


NOAA & Partners

Working Together for Satellite Training



VISIT (CIRA/CIMSS)

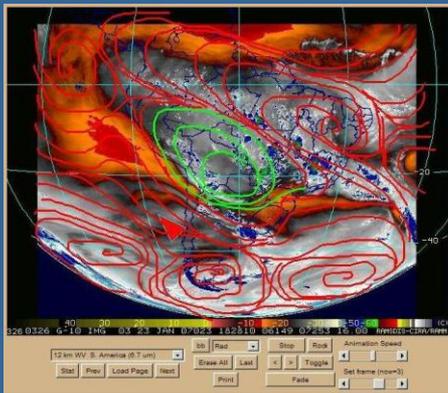


UCAR/COMET

EUMETSAT, DOD,
NASA, DOT,
Canada,...

Satellite
Proving Ground

Users & Developers
& ???



WMO (Virtual Lab)

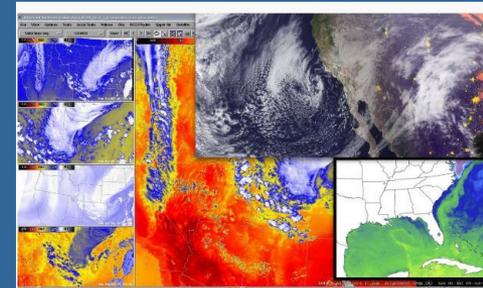


NWS Training Division

Training in GOES-R Proving Ground

Prepare NOAA Users, **Developers, & ???**

- Rapidly Evolving Technology & Operations
- Human Performance → Support Services
- Evolving Societal Needs & Impacts



Examples of GOES-R Proving Ground images and products

GOES-R Satellite Proving Ground Mission Statement

The Geostationary Operational Environmental Satellite (GOES-R) Satellite Proving Ground project engages the National Weather Service (NWS) forecast and warning community in pre-operational demonstrations of selected capabilities anticipated from the next generation of National Oceanic and Atmospheric Administration (NOAA) geostationary earth observing systems...



Proving Ground Mission Statement

GOES-R Proving Ground engages NWS in pre-operational demonstrations of selected capabilities of next generation GOES

- The Proving Ground accomplishes its mission through:
Sustained interaction between developers and end users for **training**, product evaluation, and solicitation of user feedback.

Intended outcomes are Day-1 readiness and maximum utilization for both developers and users of GOES-R products, and an effective transition to operations

GOES-R Proving Ground

Ultimate tool to Ensure User Readiness

-
- Validate & optimize **Decision Aids**
- Optimize product display techniques
- Environmental event simulator for user & developer training
- Open up venues **for direct user-developer** interaction
- Direct links into **Satellite Training Community**



GOES-R Proving Ground

>> Home >> GOES-R Proving Ground

Resources

Proving Ground Products
List (Table)

[CIMSS NOAA Testbed
Support Products](#)
[CIRA Products](#)
[SPoRT Products](#)
[CIMSS "MODIS Imagery
in D-2D"](#)

[Meetings and
Presentations](#)
[Teleconferences](#)

[NWS Collaborative Site
Visits](#)
[Proving Ground Timeline](#)

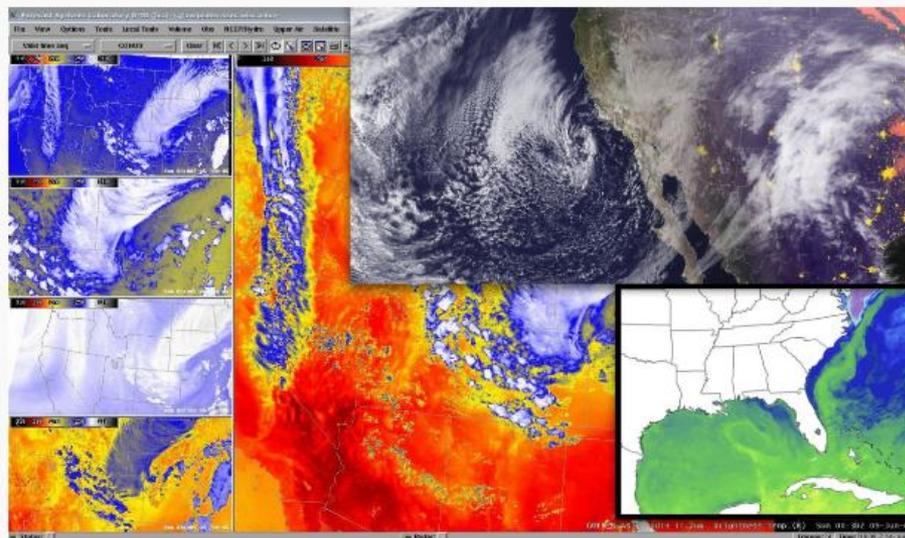
Proving Ground Partners

[Two-Page PPF](#)
[Two-Page PDF](#)
[Page 1 PNG](#)
[Page 2 PNG](#)

[GOES-R Advanced
Baseline Imager \(ABI\)
Bands](#)
[GOES-R ABI Sample
Product Table](#)
[GOES-R ABI Weighting
Function Examples](#)

Related Links

[Proving Ground Overview](#)
[GOES-R "101" VISITview
lesson](#)
[COMET GOES-R:
Benefits of Next
Generation Environmental](#)



Examples of GOES-R Proving Ground images and products

GOES-R Satellite Proving Ground Mission Statement

The Geostationary Operational Environmental Satellite ([GOES-R](#)) Satellite Proving Ground project engages the National Weather Service (NWS) forecast and warning community in pre-operational demonstrations of selected capabilities anticipated from the next generation of National Oceanic and Atmospheric Administration (NOAA) geostationary earth observing systems...

[>> Read more](#)

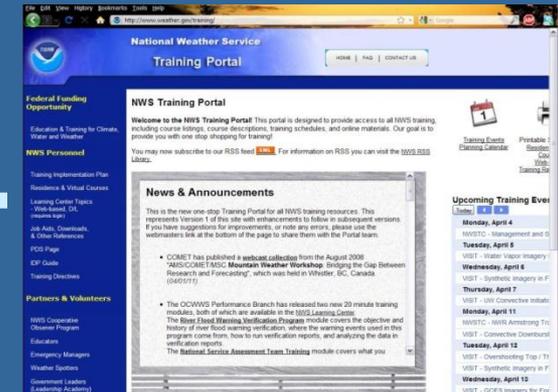
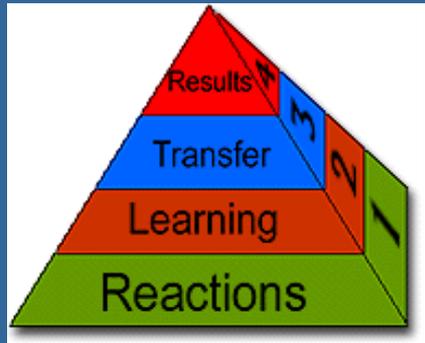
Proving Ground Initial Training

Description	Contact	Training	Quicklooks	Validation	Satellite Platform
<u>Convective Initiation</u> (UWCI)	<u>Wayne Feltz</u>	<u>UWCI (Visit)</u> <u>UWCI (ppt)</u>	<u>Convective Decision Support</u>	<u>Convective Initiation Products</u>	GOES Imager
<u>Overshooting Top</u> (OTTC) and <u>Enhanced-V</u>	<u>Wayne Feltz</u>	<u>OTTC (PPT)</u>			GOES Imager, MODIS/AVHRR
<u>WRF Simulated Radiances</u> (ABI Simulated Radiances)	<u>Justin Sieglaff</u>	<u>WRF (PDF)</u>	<u>WRF</u>		
<u>WildFire ABBA</u> (WFABBA)	<u>Chris Schmidt</u>				GOES Imager
NearCast	<u>Ralph Petersen</u>	<u>UW NearCasting (VISIT)</u>	<u>NearCast</u>		GOES Imager, GOES Sounder
Volcanic Ash	<u>Mike Pavolonis</u>	TBD			MODIS, SEVIRI
Low Clouds/Fog	<u>Mike Pavolonis</u>	TBD			MODIS-Alaska, GOES-CONUS
Cloud Type	<u>Mike Pavolonis</u>	TBD			MODIS-Alaska, GOES-CONUS
SO₂	<u>Mike Pavolonis</u>	TBD			MODIS

How Does Training Program Work?

Assess User Needs

Develop Training –
Implementation Plan



Evaluate

Implement

Proving Ground Advanced Training (PGAT)

- Focus on **Human Performance**
- All NOAA Staff
- Commerce Learning Center, VISIT, SHyMet & COMET/METED
- Quizzes & Evaluations
- Simulations-**Weather Event Simulator - WES**
- Expand to **External Users**



Decision Support Services

- Shift from **product**-centric to **services**-centric operations
- Increase accuracy, timeliness, access to information
- Utilize relationships with **Emergency Managers & Media**
Prepare for extraordinary events
- Strengthen relationships at Federal, State & Local Levels
- **Flexible workforce** that adapts new technologies
- Improve understanding of **societal impacts**

A Changing World

Events of 2010



Deepwater Horizon
Over 100 days'
deployment



"Snowmageddon"
DC – Baltimore Paralyzed
for 7 days



Iceland Volcanic Ash
\$2B Aviation Impacts

Supporting these events *singularly* stretched NWS' resources and capabilities

**2011 – More Snow, Tornado Outbreaks, Floods, Fires
& Earthquake/Tsunami**

Southern Region Decision Support Program

Why this demand for “DSS”?

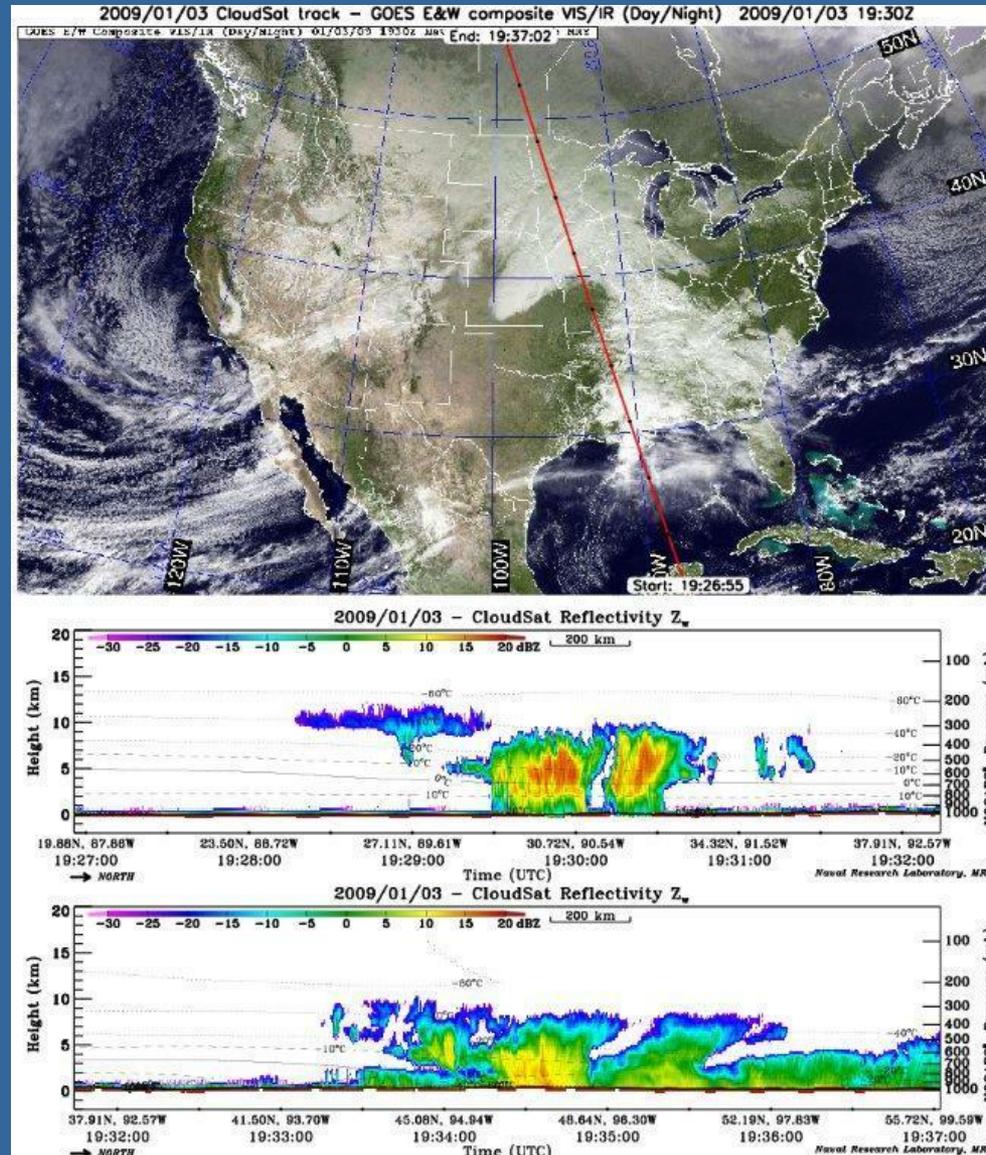
NWS has been and still is Decision Support. Our mission has not changed...the **environment** in which our mission has.
How?

- Huge increase of instantly available information
- Our reach has been extended (new collaborative world)
- 9/11
- Rapid technological advances
- The value of our science has improved
- Demographics

Radical Changes in Access to Data

Fingertip,
Just In Time,
Real Time
Meso
Analysis

Data Fusion,
GEO/LEO
Synergy



What can we learn from DWH in terms of NWS DSS Efforts?



Deepwater Horizon was a long-duration, high impact event for WFO New Orleans and Mobile (and to a lesser extent, all offices in the Gulf area). While most offices are unlikely to experience a response on the scale and magnitude of this oil spill, there is one overarching operational lesson that can be taken from this tragedy: the need to be flexible in the face of a dynamic and rapidly escalating event. Unlike DWH, most high impact responses by the NWS can be measured in minutes and hours, not days and weeks. However, the importance of the information to decision making is just as great.

“There is one overarching operational lesson that can be taken from this tragedy: the need to be flexible in the face of a dynamic and rapidly escalating event.”

To our WFO Managers: How would you rapidly adjust your operations to meet a critical, “no-notice” need? And to our operational staffs: How well can you jump out of your daily routines to meet a sudden, unanticipated demand for decision support? Can you adapt? These are important questions we must ask ourselves as we face a future service landscape increasingly dotted with non-weather induced societal impacts comparable to those encountered along the Gulf Coast this spring and summer. Let’s get ready now.



Leveraging Training for Performance Improvement

LeRoy Spayd
OCWWS Training Division

LESSON FROM FLIGHT 1549

**“Training is a line item
that’s easy to whack when budgets get tight,
because it’s not always easy to see
its immediate payoff.**

**That misses the
point, however.**



**Training is about
getting people ready to execute and
put their training to the test
when the organization needs it the most.”**

Training Summary

- Collaborative International Training Community
- Help NOAA & Partners Meet Their Goals
- Integral to GOES-R PG & New Services
- Focus on **Human Performance**



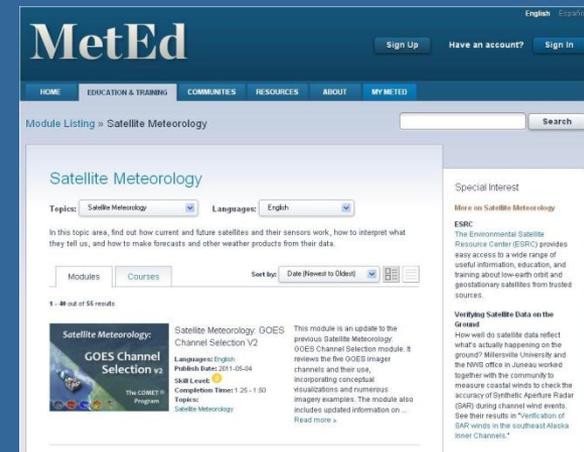
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MetEd

HOME EDUCATION & TRAINING COMMUNITIES RESOURCES ABOUT MY METED

Module Listing » Satellite Meteorology

Satellite Meteorology

Topics: Satellite Meteorology Languages: English

In this topic area, find out how current and future satellites and their sensors work, how to interpret what they tell us, and how to make forecasts and other weather products from their data.

1 - 1 out of 15 results

GOES Channel Selection v2	Satellite Meteorology: GOES Channel Selection V2	This module is an update to the previous Satellite Meteorology: GOES Channel Selection module. It reviews the five GOES imager channels and their use, incorporating conceptual visualizations and numerous imagery examples. The module also includes updated information on...
	<p>Language: English Publish Date: 2011-05-04 30 All Levels Completion Time: 1.25 - 1.50 Topics: Satellite Meteorology</p>	<p>How well do satellite data reflect what's actually happening on the ground? Milesville University and the NOAA office in Juneau worked together with the community to measure coastal winds to check the accuracy of Synthetic Aperture Radar (SAR) during channel wind events. See their results in "Verification of SAR Winds in the Southeast Alaska Inner Channels."</p>

Training Take Away

Improved Human Performance - Better Services Protecting Lives & Property!

The image is a screenshot of the U.S. National Weather Service (NWS) Facebook page. At the top, the Facebook logo is on the left, and login fields for Email and Password are on the right. Below the login fields is a "Sign Up" button and the text "Facebook helps you connect and share with the people in your life." The main content area features the NWS logo on the left and a post from the "U.S. National Weather Service" on the right. The post includes a "Like" button, a "Wall" section, and a "U.S. National Weather Ser... · Top Posts" section. The post text reads: "The Mississippi River crest is slowly moving south, with the river expected to crest at Vicksburg, Miss., and Baton Rouge, La., this week. New Orleans has crested and is expected to remain at near the current level for the next two weeks. Read more..." Below the text is a link to "www.srh.noaa.gov" and a photo of a map. The post is dated "8 hours ago" and has "Like · Comment" options. A comment from "Lynn R. Patton, rakiç Rassiias, Perfect Placement Dental and 15 others" says "like this." Below the comment is a "View all 4 comments" link. In the bottom left corner, the "About" section is visible, showing "NOAA National Weather Service is the U.S. Federal agency responsible for we..." and a "More" link. A red circle highlights the "55,413 people like this" text.

facebook

Email Password

Keep me logged in Forgot your password?

Facebook helps you connect and share with the people in your life.

U.S. National Weather Service

Government Organization

Wall U.S. National Weather Ser... · Top Posts

U.S. National Weather Service

The Mississippi River crest is slowly moving south, with the river expected to crest at Vicksburg, Miss., and Baton Rouge, La., this week. New Orleans has crested and is expected to remain at near the current level for the next two weeks. Read more...

Major to Record Flooding Expected along the Mississippi and Atchafalaya Rivers

www.srh.noaa.gov

May 14, 2011 - Excessive rainfall in the Middle Mississippi River Valley over the past couple of weeks has produced major to record flooding along much of the lower Mississippi River. In addition, the opening of the Morganza Spillway will produce significant flooding over portions of the Atchafalaya

8 hours ago · Like · Comment

Lynn R. Patton, rakiç Rassiias, Perfect Placement Dental and 15 others like this.

About

NOAA National Weather Service is the U.S. Federal agency responsible for we...

More

55,413 people like this

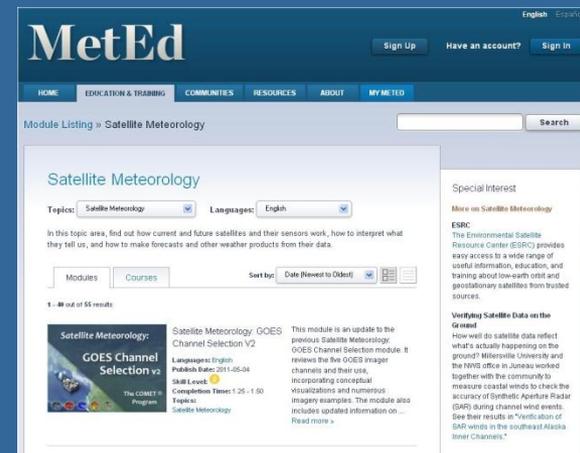
Contact Information

Anthony.Mostek@noaa.gov

VISIT rammb.cira.colostate.edu/visit/visithome.asp

COMET METED meted.ucar.edu

NOAA LMS doc.learn.com/noaa/nws



2007-11 NOAA LMS Statistics*

- Over 14,000 Registered Users
- 500+ NOAA Developed Custom Courses
COMET, VISIT & NWS Training Division
- Over 85,000 certificates (passed Quiz)

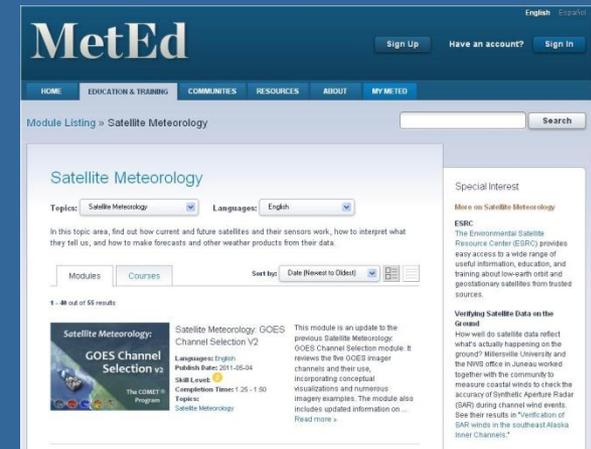
* New LMS started June 07



2007-11 MetEd/COMET Statistics*

- Over 193,000 registered users
- Total Countries 200+
- 80,000+ certificates/completions
- NOAA LMS + MetEd = 165,000+ Certificates!

* Registration Systems Started 2007



The screenshot shows the MetEd website interface. At the top, there is a navigation bar with links for HOME, EDUCATION & TRAINING, COMMUNITIES, RESOURCES, ABOUT, and MY METED. A search bar is located on the right side of the navigation bar. Below the navigation bar, the main content area displays the search results for 'Satellite Meteorology'. The results are filtered by 'Topics: Satellite Meteorology' and 'Languages: English'. There are 11 results out of 55 total. The first result is 'Satellite Meteorology: GOES Channel Selection v2', which is a course in English published on 2011-05-04. The course description mentions that it is an update to the previous Satellite Meteorology: GOES Channel Selection module and reviews the five GOES imager channels and their use, incorporating conceptual visualizations and numerous imagery examples. The course also includes updated information on...