GOES/POES SATELLITE TRAINING

AN OPERATIONAL PERSPECTIVE

Nezette Rydell
MIC, WFO Boulder, CO

GOES R/16

- *Most exciting thing we seen since WSR-88D*
- *Data is Important, Impactful, useful in ways can't yet imagine*
- *As important as WSR-88D (160 hours of training)*
- *As important as IDSS (130 hours of training)*
- *Don't sacrifice content or quality for time!*

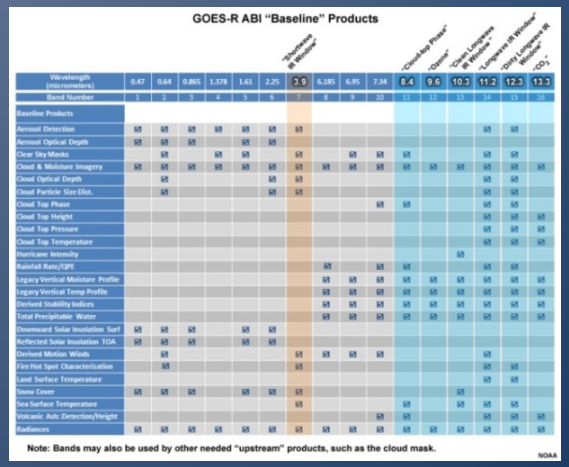
OVERALL

- *Content from all sources was good*
- *Quality/Professionalism not always at expected level*
- *Training Conducted in Operations – on shift, very little dedicated time*
  - *And that's okay. We know how to manage this.*
- *Time estimates to complete must be accurate/reliable*
  - *8.5 hours was stated, 12+ actual time for most staff to complete*
  - *Many complaints about talking too fast*
  - *Anger about misrepresentation of time to complete modules*

This module was estimated to take 9 minutes. There are 36 slides, many with charts and graphics. 9 minutes is a poor estimate of the time that should be allotted for this module. I'd estimate at least 30 minutes for 36 slides. I have found all of the modules from VISIT to underestimate the time needed.

INSTRUCTIONAL DESIGN

- *Need text along with voice, printable lessons, second instance options, etc.*
- *Graphics quality must be sharp*
  - *YouTube not always sharp, doesn't scale, couldn't zoom*
  - *Zoom-able graphics a must*
- *Consider users with bifocals, small screens, dual screens*
- *Staff often pulled out graphics to stand alone for reference*
- *Inconsistent/interchangeable use of channel, band number, and descriptive name among various modules and sources.*
  - *Workaround – edited AWIPS menus, stand-alone graphics*
- *Needless waits on slide completion bar.*



GOES-R ABI "Baseline" Products

							"Shortwave" IR Window				"Cloud-Top Phase"	"Ozone"	"Clean Longwave IR Window"	"Longwave IR Window"	"DirtyLongwave IR Window"	"CO_2"
Wavelength (micrometers)	0.47	0.64	0.865	1.378	1.61	2.25	3.9	6.185	6.95	7.34	8.4	9.6	10.3	11.2	12.3	13.3
Band Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Baseline Products																
Aerosol Detection	☑	☑	☑	☑	☑	☑	☑							☑	☑	
Aerosol Optical Depth	☑	☑	☑		☑	☑										
Clear Sky Masks		☑		☑	☑		☑		☑	☑	☑			☑	☑	
Cloud & Moisture Imagery	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑
Cloud Optical Depth		☑				☑	☑							☑	☑	
Cloud Particle Size Dist.		☑				☑	☑							☑	☑	
Cloud Top Phase										☑	☑			☑	☑	
Cloud Top Height														☑	☑	☑
Cloud Top Pressure														☑	☑	☑
Cloud Top Temperature														☑	☑	☑
Hurricane Intensity													☑			
Rainfall Rate/QPE								☑		☑	☑			☑	☑	
Legacy Vertical Moisture Profile								☑	☑	☑	☑	☑	☑	☑	☑	☑
Legacy Vertical Temp Profile								☑	☑	☑	☑	☑	☑	☑	☑	☑
Derived Stability Indices								☑	☑	☑	☑	☑	☑	☑	☑	☑
Total Precipitable Water								☑	☑	☑	☑	☑	☑	☑	☑	☑
Downward Solar Insolation Surf	☑	☑	☑		☑	☑										
Reflected Solar Insolation TOA	☑	☑	☑		☑	☑										
Derived Motion Winds		☑					☑	☑	☑	☑				☑		
Fire Hot Spot Characterization		☑					☑							☑	☑	
Land Surface Temperature														☑	☑	
Snow Cover	☑	☑	☑		☑	☑	☑						☑			
Sea Surface Temperature							☑				☑		☑	☑	☑	
Volcanic Ash: Detection/Height										☑	☑			☑	☑	☑
Radiances	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑

Note: Bands may also be used by other needed "upstream" products, such as the cloud mask.

NOAA

SUPPLEMENTAL TRAINING AND REFERENCES

- *CIMSS Satellite Blog – Scott Lindstrom*
- *Satellite Liaison Blog and Tweets– Bill Line*
- *VISIT - some training/webinars*

- *Ed Szoke in the building*
- *Demo Products*
  - *GeoColor, Low Cloud /Fog, Synthetic Imagery, Total Lightning*
- *VLAB – not much used*
- *AWIPS Integrated Reference (AIR) Pop-ups – initially some, not much used now, utility for new users*

USING FEATURES OPERATIONALLY

- *CIMSS Satellite Blog – Scott Lindstrom*
- *Satellite Liaison Blog – Bill Line*
  - *RGB – Nothing local, integrating what others have done*
  - *Multi-channel combinations*

- *Synthetic Imagery*

It's always a good idea to take a look at the synthetic imagery once per shift. It would have been quite valuable on the potential record breaking heat day on Saturday, May 26.

- *GLM – COLMA available and doesn't suffer from parallax*
- *JPSS – Training planned for this year delayed, will assign when ready*
  - *Snowfall rates – sparingly, only product of its kind*
  - *NUCAPS – sparingly*
  - *VIIRS – initially, but sparingly now*

SUMMARY POINTS

- *Never underestimate the value of good training. Take the time to do it right and we will too.*
- *Deficiencies in instructional design or production will undercut good content.*
- *"Small blocks of training" concept works.*