



# User Input from past GOES Users' Conferences

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*7<sup>th</sup> GOES Users' Conference*

*Birmingham AL*

*October 20, 2011*





# Recurring Messages from Past Conferences



## Users must be ready on day 1



- **Use proxy and simulated data sets to test and validate data processing and distribution systems;**
- **Provide test data sets well in advance of operations;**
- **Leverage NPP/ NPOESS synergy and experiences;**
- **Need to utilize GOES-R data in mesoscale analysis and forecast models**
- **Develop and validate new or improved products including decision-aids before launch;**
- **Multiple recommendations on data archiving**



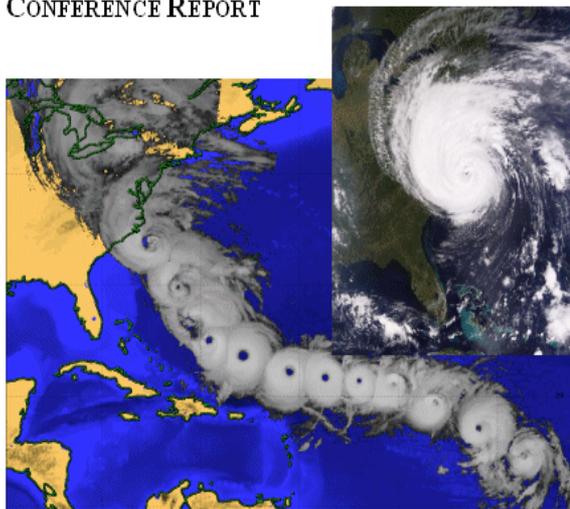
# Recurring Messages from Past Conferences



## 3<sup>RD</sup> GOES-R USERS CONFERENCE

May 10-13, 2004  
Broomfield, Colorado

### CONFERENCE REPORT



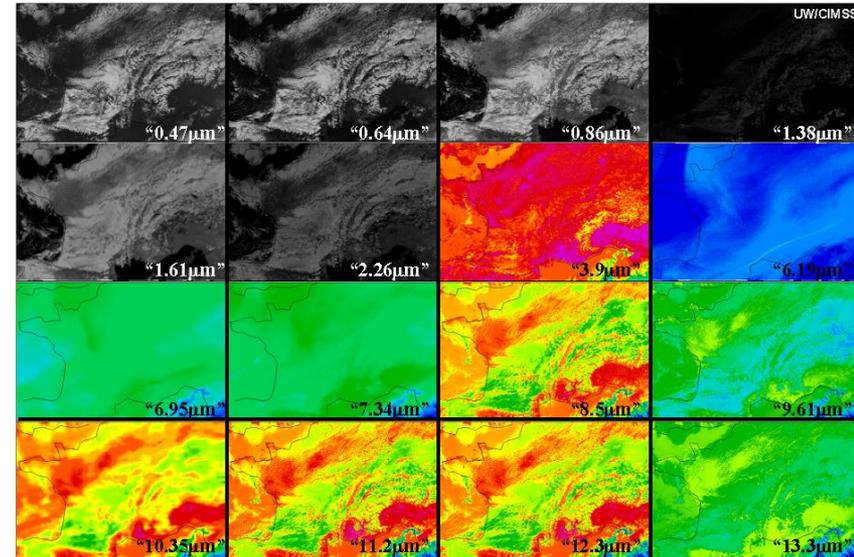
- **Users must be ready on day 1**
  - **Re-package products to support multiple levels of users;**
  - **User education is critical**
  - **User input is critical**
  - **GOES-R System should be tested end-to-end before launch**
  - **Use proving ground/ testbed approach**

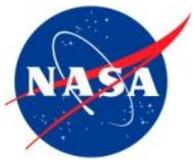


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- Use proxy and simulated data sets to test and validate data processing and distribution systems;

- MODIS
- AIRS
- IASI
- SEVIRI
- NAST-I
- NPP/ VIIRS/ CrIS
- TRMM/LIS
- Computer Simulated atmospheres





# Recommendations from GUC-4



## – Need for Decision Aids

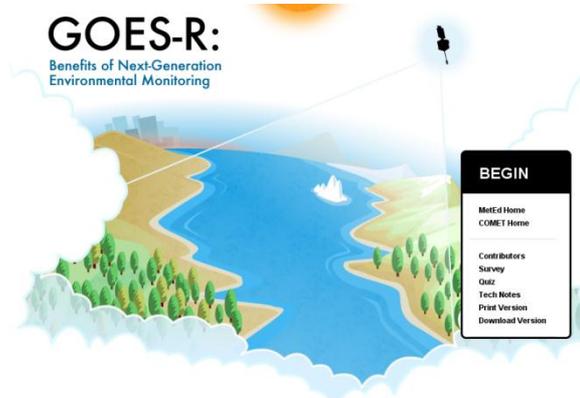
- Volume of data and products will mandate use of decision aids to focus user attention
- NEXRAD provides good model: alerts for critical values of VIL, Gate to Gate Shear, TVS;
- Satellite candidates:
  - Enhanced V;
  - Fog formation;
  - Rapid changes in stability;
  - Mismatch between model forecasts and satellite observation
    - cloud cover, water vapor, winds, precipitation, lightning, rate of fog formation or dissipation

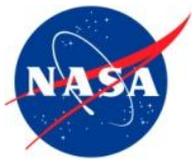


# Education and Training



- **Primary Goal: Ensure that all data are fully utilized immediately following start of operations**
  - Major education and training venues:
    - COMET, VISIT, schools, universities, workshops, conferences, online;
  - Key to success: Trainers fully integrated with developers, evaluators, users, and program managers
  - Need for training tailored for unique user needs such as NWS forecasters
    - Prepare NOAA users for new products within new operations
    - Environmental event simulators: key tool
      - Interactivity increases knowledge retention





# Proving Ground Concept for GOES-R



- Fund 1 extra person at 3 nearby NWS forecast offices
- FY 08 – 16
- Candidate Locations:
  - Ft. Collins (CIRA)/BOU and CYS
  - Madison (CIMSS)/LaCrosse, Sullivan WFOs
  - Leverage existing Testbeds – Norman, Boulder, Huntsville (SPoRT)



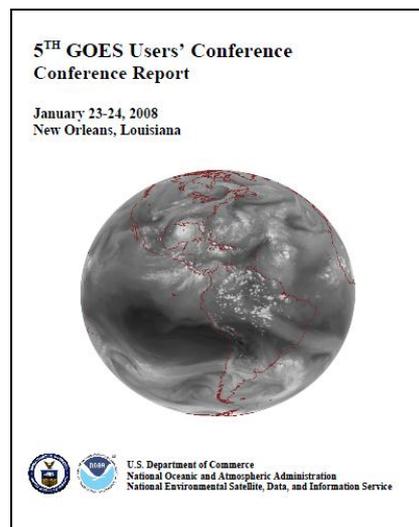


# Recommendations from Previous GUCs



## – Proving Ground/ Testbed Concept

- **Proving Ground is ultimate tool to ensure user readiness**
  - **Use proxy and simulated data sets to test and validate processing and distribution systems**
  - **Validate new or improved products**
  - **Validate/ optimize decision aids**
  - **Optimize product display techniques**
  - **Environmental event simulator for user education**
- **Venue for direct user input**
- **Proven successful in NEXRAD program**

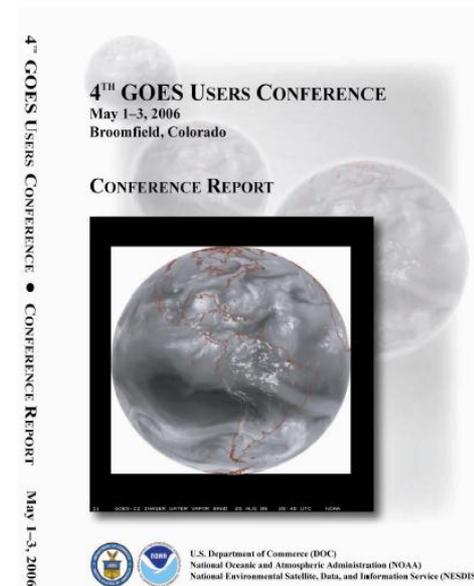




# Recommendations from GUC-4



- **What suggestions or feedback do you have on the proving ground concept to help ensure it will contribute to a successful beginning of operations for GOES-R?**
  - Cross representation between AWG and proving ground
  - Need good communication for work at each of 3 centers
  - Mission objectives of proving ground need to be communicated
    - Working level users involved early
  - Get forecasters involved at conceptual level
  - Need to gain broad support within disciplines of NOAA
  - Use lessons learned from Aqua/Terra, GOES I-M
  - Include an RFC/National Center at one of the proving grounds





# Recommendations from GUC-6



- **15 pages of recommendations and 14 pages of Q&A (see report on GOES-R web site)... sample of recurring themes below:**
  - Use a variety of methods for communicating, educating and demonstrating—road shows, working groups, publications, customer forums, conferences
  - Provide proxy data/code to users early, showing the exponential increase in data
  - Revitalize current GOES products and calibration info for more effective use now to get ready for GOES-R
  - Explore new concept of operations
  - Proxy datasets for local decision aid development
  - Information on integrated and blended products



# Recommendations from GUC-6



- **15 pages of recommendations and 14 pages of Q&A (see report on GOES-R web site)... sample of recurring themes below:**
  - Long lead time for engaging partners in CAL/VAL
  - Need to extend GOES-R commissioning phase to at least one year
  - Will GOES East and West be in Synch?
  - Need talks/handouts for what different channels do
  - What will NWS offices get? What subset? Bandwidth limitations/politics?
  - Need fact sheets for users
  - CD with simulated data needed
  - ABI simulator data availability– Vendors would find it useful



# Recommendations from GUC-6



- **Most Challenging Aspects of GOES-R**
  - Ensuring end-to-end capabilities (building, training, user access)
  - Good news--lots of information; Bad news--lots of information! Risk that information will not be fully utilized
  - Training for all users. Education of users, new paradigm with decision aids, etc, training to help manage/decide what is useful.
  - Creating the proxy data and algorithm test plans to validate the data products; disseminating that to user to test systems; What do the products look like, and how do they fit in existing systems.
  - Display systems i.e. AWIPS II
  - Use of data in NWP

6<sup>TH</sup> GOES Users' Conference  
Conference Report

November 3-5, 2009  
Madison, Wisconsin



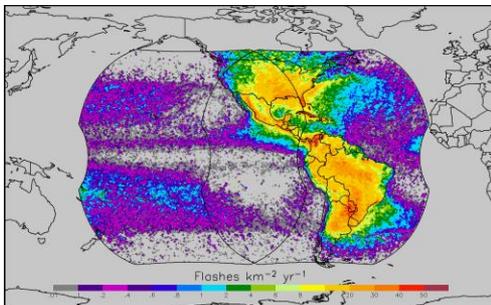
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# GOES Users' Conference Impacts

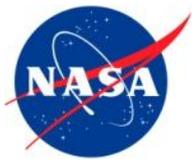


- Before GOES-R Users' Conferences, notional baseline:
  - 8 channel imager
  - 15 minute full disk imager coverage
  - No lightning mapper
  - No onboard visible/nearIR on-orbit calibration
- May 2004 notional baseline:
  - 16 channels imager
  - Imager capable of producing 5 min. full disk
  - Lightning mapper
  - Visible/nearIR on-orbit calibration



Proposed ABI (8 or 12) channels			
Wavelengths	Description		Primary Use
Range (µm) 0.58 - 0.69	Center 0.84	Visible	Daytime cloud, smoke, fog
0.81 - 0.91	0.86*	Solar window	Daytime cloud, NDVI, fog, aerosol, ocean studies
1.36 - 1.39	1.375*	Near IR	Daytime thin cirrus detection
1.58 - 1.64	1.61	Near IR	Daytime clouds/snow, water/ice clouds
3.8 - 4.0	3.9	Shortwave IR	Nighttime low clouds, fog, fire detection
5.7 - 6.6	6.15	Water Vapor 1	Upper tropospheric flow, winds
6.8 - 7.2	7.0	Water Vapor 2	Mid tropospheric flow, winds
8.3 - 8.7	8.5*	IR Window 1	Sulfuric acid aerosols, cloud phase
10.1 - 10.6	10.35*	IR Window 2	Cloud particle size, sfc properties
10.8 - 11.6	11.2	IR Window 3	Clouds, low-level water vapor, fog, winds, SST
11.8 - 12.8	12.3	IR Window 4	Low-level water vapor, volcanic ash, SST
13.0 - 13.6	13.3	Carbon Dioxide	Cloud-top parameters, heights for winds

\* proposed additional channel to baseline of eight channels.

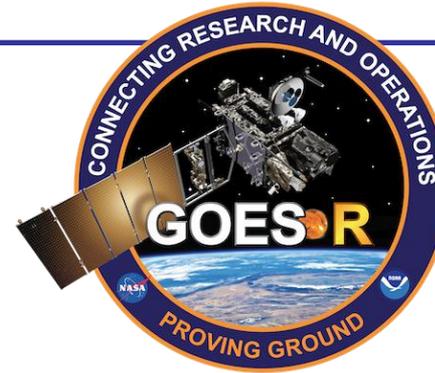


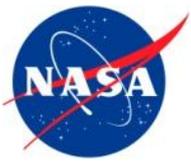
# GOES Users' Conference Impacts



## – Ensure User Readiness:

- Proving Ground
- User Education:
  - Partnering with NWS Training Division, COMET, VISIT, and SHyMet
- Keep the users informed:
  - GOES-R website, COMET's Environmental Satellite Resource Center, Workshops, Conferences, and Fact Sheets
- Use Proxy and simulated data sets to prepare for GOES-R:
  - AWG, CIRA and CIMSS have developed and continue to develop data sets





# Conclusions



- Recommendations from past conferences have impacted GOES-R baseline instruments and plans for user readiness
- NOAA and the GOES-R Program Office committed to keeping lines of communication open with the user communities
- One stop shopping GOES-R web site
  - [www.GOES-R.gov](http://www.GOES-R.gov)
  - <http://www.goes-r.gov/users/conf-mtgs.html#GUC>
- GOES Users' Conferences will continue
- Next Conference tentatively planned for 2013...
  - stay tuned



# Backups

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