



GOES-R Series Program Update

Greg Mandt

GOES-R System Program Director

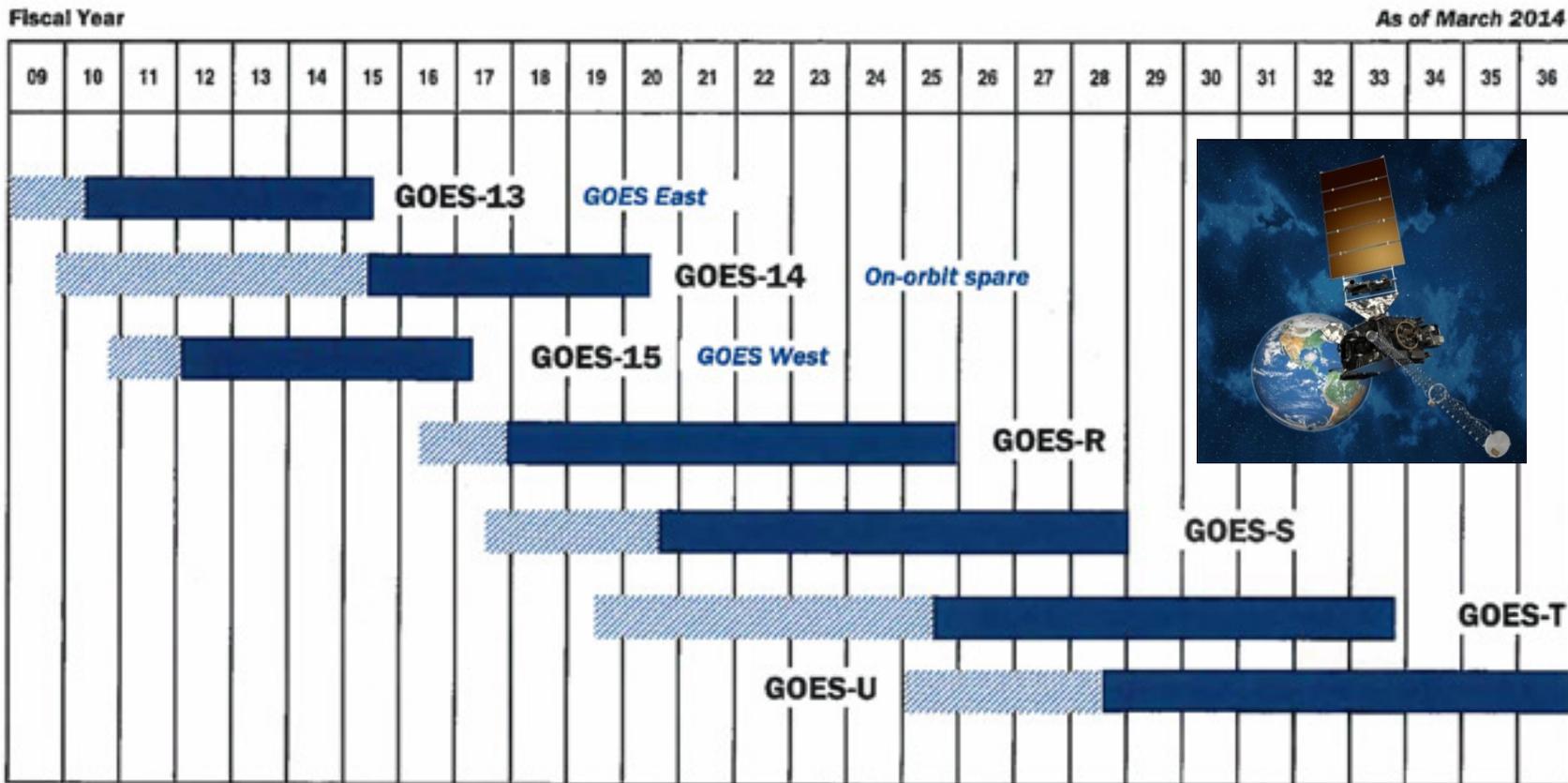


**Satellite Proving Ground/User-Readiness Meeting
June 2, 2014**

GOES-R Architecture Overview



Continuity of GOES Operational Satellite Program



Approved: Mary E. Kucy
 Assistant Administrator for Satellite and Information Services

GOES: Geostationary Operational Environmental Satellite

- On-orbit storage
- Operational
- Operational beyond design life

GOES-R Milestones

		2010	2011	2012	2013	2014	2015	2016
Program/ System		✓ Mission SDR		✓ Mission PDR		Mission Readiness Review ●	Launch Readiness Review ●	
				✓ Mission CDR				
Flight Segment	Spacecraft	✓ S/C SDR	✓ S/C PDR			✓ S/C Propulsion Core Delivery	✓ S/C System Module Delivery	● S/C System Module and Propulsion Core Mate
	Instruments	✓ All instruments have passed CDR		S/C CDR ✓	EXIS FM1 PSR ✓	ABI FM1 PSR ✓	SEISS FM1 PSR ✓	SUVI FM1 PSR ✓
						ABI FM1 Delivery	EXIS FM1 Delivery	SEISS FM1 Delivery
						SUVI FM1 Delivery	GLM FM1 Delivery ●	
Ground Segment		✓ Core GS PDR		✓ Core GS CDR	Antenna-EI Integration W1	✓		
		✓ Antenna System PDR	✓ GS Project PDR	✓ Antenna System CDR	RMMU Interim Release Available	✓	Antenna-EI Integration N1 ●	EI Interim Release Available ●
	✓ 100 % delivery of baseline product algorithms		✓ ESPDS CDR	✓ CLASS CDR	IPS Interim Release Available ●		MMFR Interim Release Available ●	FPS Interim Release Available ●
			✓ GS Project CDR					

Launch Readiness 2Q FY 2016



GOES- R Flight Segment Progress



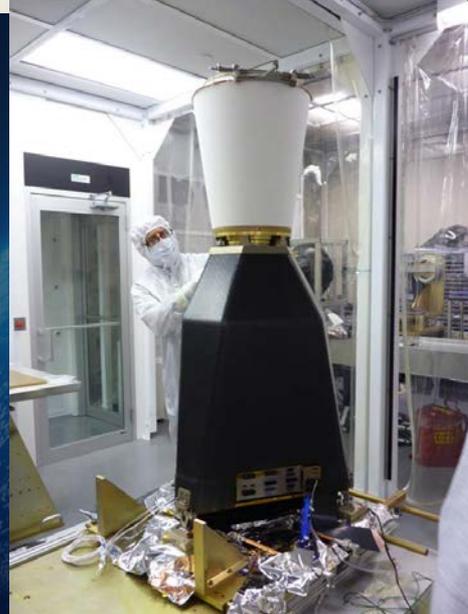
**GOES-R Propulsion Module
and System Module delivered to Littleton**



**SUVI and EXIS installed on the Sun Pointing
Platform**



**SEISS DPU integrated to
System Module**



GLM vibration testing complete



Solar Array Wing deployment

GOES-R Ground Segment Progress

NSOF N-1 9.1m antenna upgrade complete and is available for GOES-N/O/P operations.



Completed tier 1, system-level Radio Frequency Compatibility Testing



RBU antenna R-3 structure



Installed antenna system racks at RBU



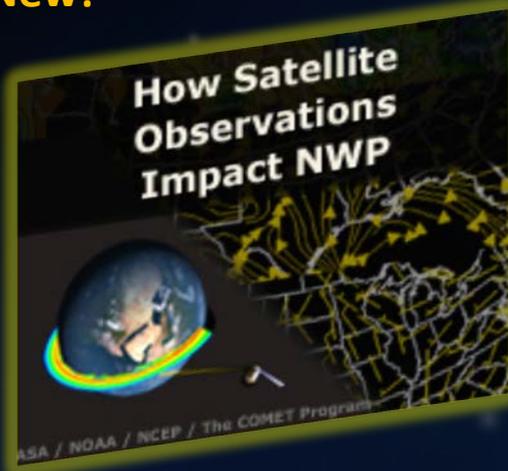
Completed RMMU installation at NSOF and handover to ops team.



Installed R-1 feed at RBU

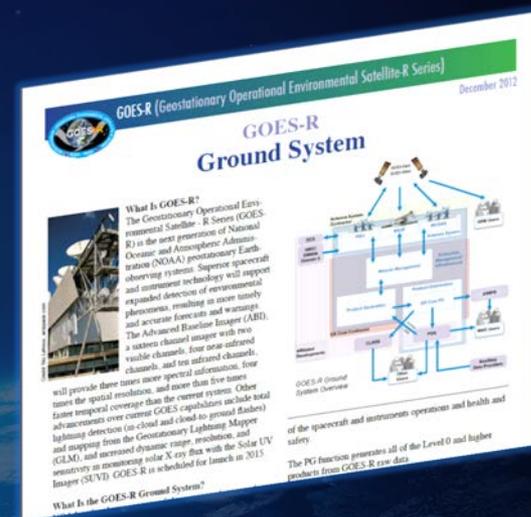


New!



Online Training Modules

- How Satellite Observations Impact NWP
- GOES-R ABI: Next Generation Satellite Imaging (COMET)
- GOES-R: Benefits of Next-Generation Environmental Monitoring (COMET)
- Satellite Hydrology and Meteorology for Forecasters (SHyMet)
- SPoRT product training modules
- VISIT Training Resources
- Commerce Learning Center

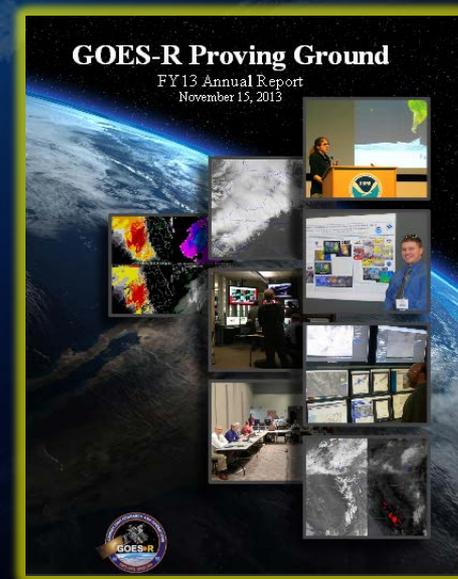


New!



Printed Materials

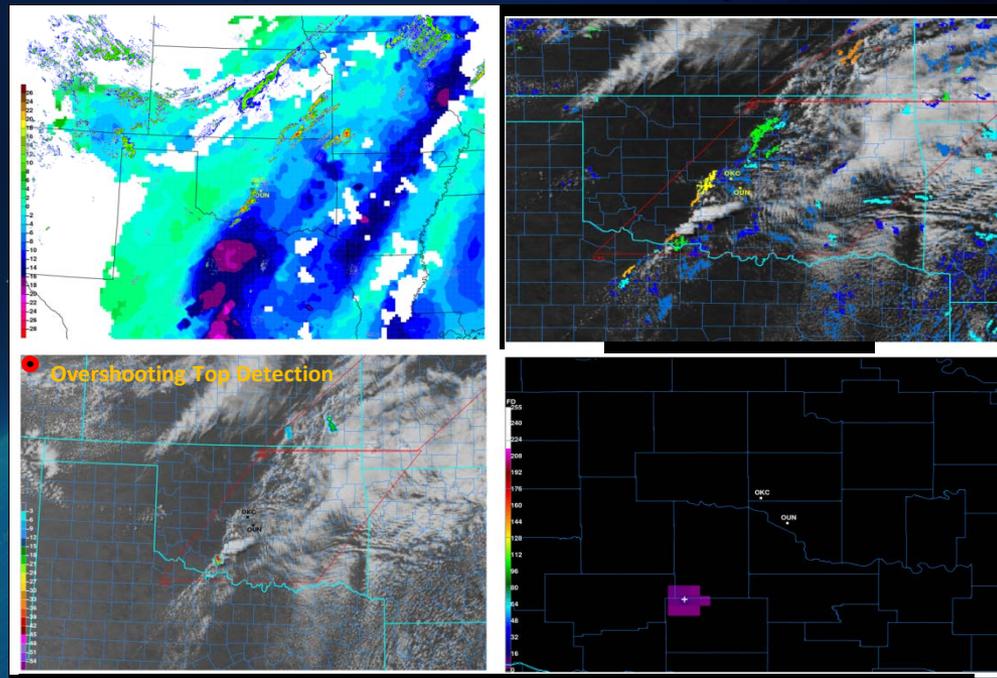
- GOES-R Fact Sheets (18)
- User Readiness Plan
- GRB Downlink Specifications and Product Users Guide
- Proving Ground Demonstration Final Reports and Annual Reports



GOES-R Science Seminars

- Promote more frequent communication with the user community about GOES-R science and demonstration activities
 - Semi-monthly virtual science seminars
 - Allow scientists to highlight their work to the rest of the community
 - <http://www.goes-r.gov/users/sci-sem/index.html>

GOES-R Convective Situational Awareness Display Moore, OK Tornado Outbreak May 20, 2013



From January 24, 2014 Science Seminar on Severe Weather. These products provide enhanced situational awareness of the convective environment. Courtesy of Chad Gravelle, CIMSS

GRB Simulators

- On-site testing of user ingest and data handling systems
- Four simulators designated for loan
 - Verification of GRB receive system compatibility with GRB transmission
 - <http://go.usa.gov/WvXY>
- Latest software release notes
 - <http://www.goes-r.gov/users/docs/GRB-Sim-SW-Release-Notes-4.pdf>
- Geo Direct Broadcast study with CIMSS



Front

Rear



International Collaboration

- Japan Meteorological Agency (JMA)
 - Information exchange and collaborative research on volcanic ash and cloud analysis science
 - Algorithm Working Group team member visits
 - Access to full resolution HIMAWARI imagery for PG demonstrations
- European Organization for the Exploitation of Meteorological Satellites (EUMETSAT)
 - Collaboration in research and applications through the Convection Working Group and the Satellite Application Facilities
 - Collaboration with GLM cal/val activities
 - Development of training materials through the World Meteorological Organization (WMO) Virtual Laboratory



2014 EUMETSAT Convection Working Group workshop, April 7–11, Zagreb, Croatia.



Summary

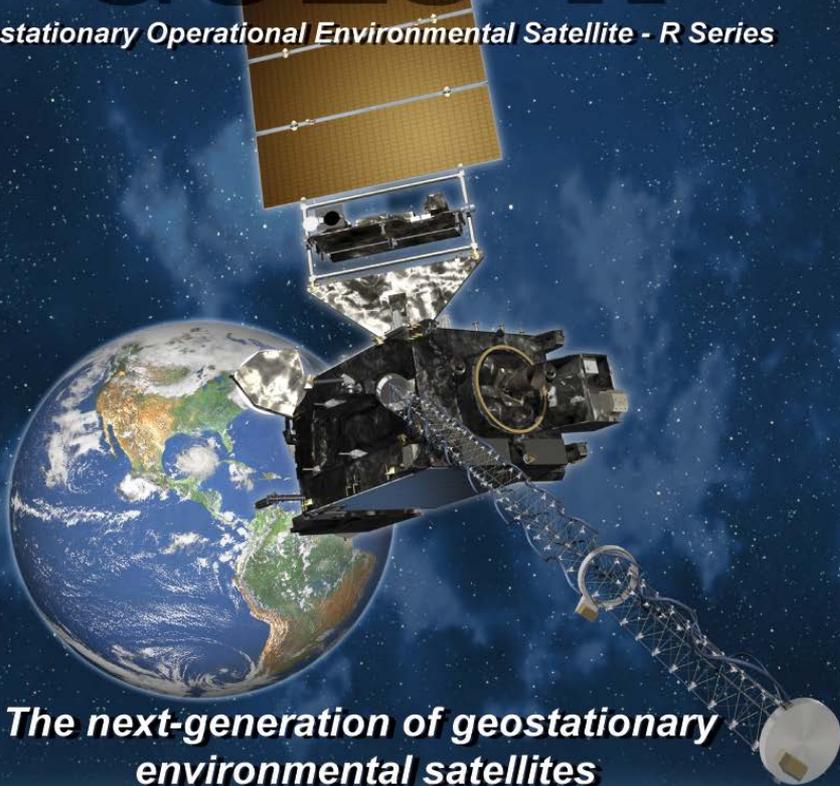


- Launch Readiness Date: no later than 2nd Quarter FY 2016
- User Readiness components: User System, Risk Reduction, Proving Ground, Training
- Joint Center for Satellite Data Assimilation (JCSDA)/National Centers for Environmental Prediction (NCEP) preparations for GOES-R underway
- Products available for testing 40 days after launch, also made available to users for science assessment/validation
- Program studying request for GOES-R operations following Post-Launch Testing (PLT)
- AWG/CWG continued pre-launch assessments and planning PLT
- AWG developing of deep dive L1B and L2 product monitoring tools
- CLASS archives L1B and L2 products
- 1-min Super Rapid Scan 2014 Experiment



GOES-R

Geostationary Operational Environmental Satellite - R Series



The next-generation of geostationary environmental satellites



**Advanced imaging
for accurate forecasts**



**Real-time mapping
of lightning activity**



**Improved monitoring
of solar activity**

Thank you!

For more information
visit www.goes-r.gov

