

GOES DCS TWG Introductory Remarks

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NOAA/NESDIS/OSPO/SPSD/DSB

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**GOES-S (17) was launched on
1 March 2018**



Outline

- Logistics
- GOES DCS Today: Current challenges & opportunities
- Review Agenda
- Review Actions from Mar 2018
- News from the field.....



Logistics

- Restrooms
- Emergency Exits
- Breaks / Lunch
- WebEx and Telecon Line
 - <https://spsd.webex.com/spsd/onstage/g.php?MTID=ea4f05b4f77acc48488fb5b996a652be4> (**Password: GOES**)
 - **1-866-423-6708**
 - Leader passcode of 6657708#
 - **Participant passcode of 1961776#**
- Congrats on great training yesterday!

Thank you to everyone: Planning Committee, Presenters, Attendees!

GOES DCS Today: Program Updates

- Transition(s) to GOES-R series:
 - ✓ GOES-16 = GOES-East
 - GOES-17 = GOES-West (FOC 12 Feb 2019))
- Completed Transition from LRIT to HRIT Feb 2019
- DADDs Refresh (hardware & software) complete as of Apr 2019
- New File Format running concurrently with legacy format until 20 May 2019
- DOMSAT service ends on 14 May 2019
- Frequency (spectrum / interference) management
- Program/system management: Channel assignments, system use agreements, user education & assistance, etc.
- Enhanced capabilities & other advances (e.g., 2-way platforms, new file formats, TECH ED SATs use in GOES DCS)

Agenda for Today

- **Session 1 (9 AM to 12 PM):**
 - Introductory Remarks; Review Actions from Mar 2018 Meeting
 - GOES DCS Program Updates
 - Wallops Update
 - STIWG Report
 - User Report
 - Break for Lunch at 12 noon
- **Session 2 (1 PM to 5 PM):**
 - Spectrum Update
 - Small Sat Concept Validation Update
 - Two-Way Prototype Update
 - HRIT New File Format Update
 - Xylem Data Logger Issue
 - Manufacturers Report
 - Draft / Review Action Items
 - Closing Remarks

*Aggressive Schedule:
Need to stay on track*

*WebEx Chat – All Participants
Will try to field comments/questions
through WebEx (audio) & Telecon Line*

*Follow-up if needed:
Letecia.Reeves@noaa.gov*

*Reminder:
Presenters are Requested to Provide
Summary Reports for Minutes (ASAP)*

Review Actions from Mar 2018

- Action 122-1: NOAA to investigate request from Bahamas Met Service to maintain 5-10 years of GOES DCS data on website. See Page 04. **Considering but unlikely.**
- Action 122-2 Investigate how to make configuration files available in the USACE DCP Monitor system. See Page 07. **Incomplete. Need clarification.**
- Action 122-3: As WCDAS puts WMO headers on 89% of messages and sends them to the NWSTG, consider putting WMO headers on all the messages; or assess whether we should be doing this at all by seeing if there are user requirements for this. **Clarify a statement of need and NOAA will scope the task.**
- Action 122-4: Letecia to send out the link to the on-line version of the Alion Survey to all DCS users as well as the Program Manager for HRIT/EMWIN and GRB. See Page 13. **Completed.**
- Action 122-5: Respond to NOAA SPRES Subcontractor, Alion Sciences, by completing the DCS User Survey for All Users. **Outreach to users completed.**
<https://docs.google.com/forms/d/e/1FAIpQLSfbcfa2APQHW6okffTJOfxFW8coIak81jk6jWxBDOm6n-8Dtg/viewform>. This is very time critical to support the contractor schedule under the NOAA Spectrum Pipeline Reallocation Engineering Study (SPRES) which will study if the 1675-1680 MHz spectrum can be shared. Please complete this survey in next 30-60 days. See Page 13.

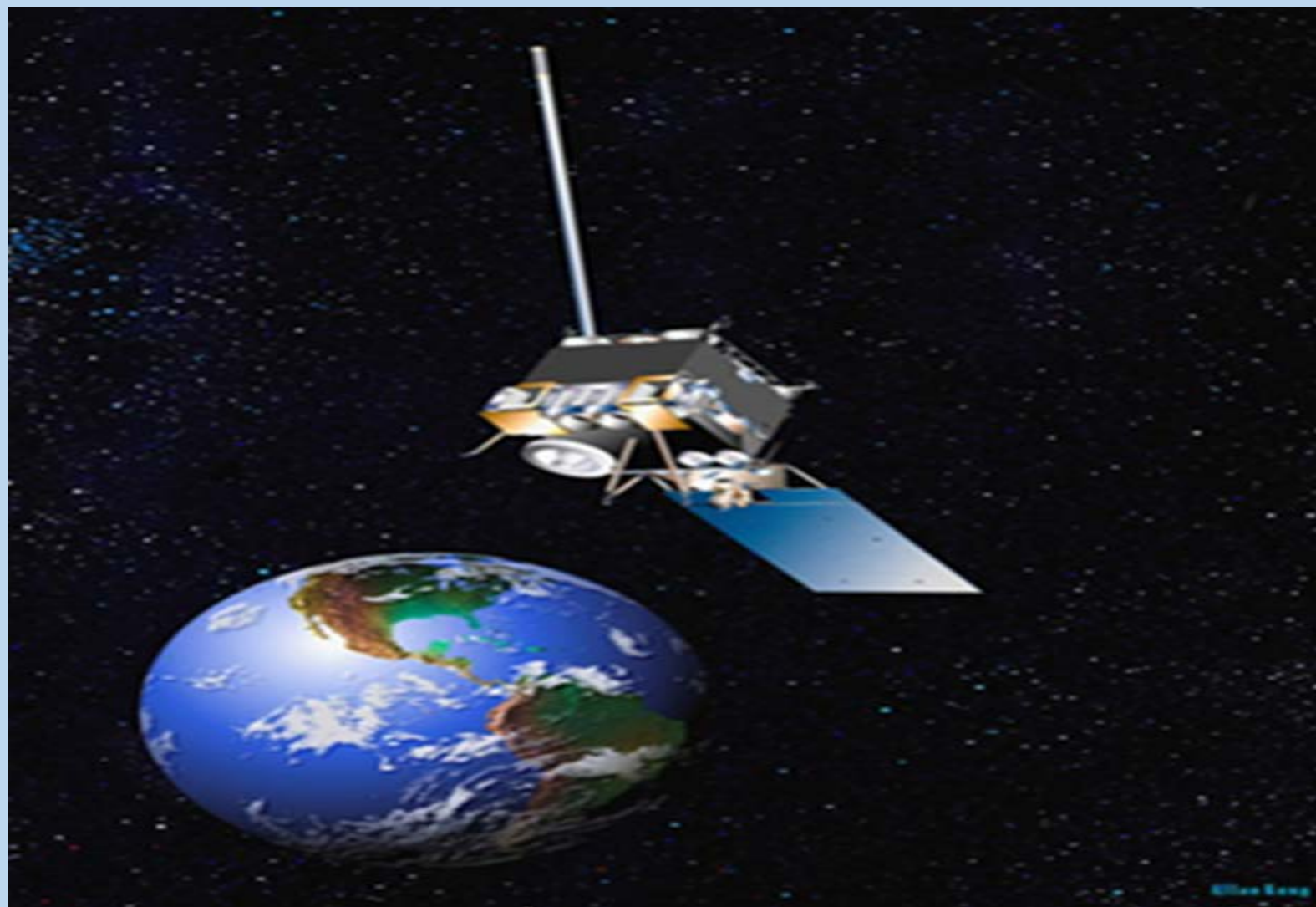
Review Actions from Mar 2018 cont.

- Action 122-6: Provide the location, exact latitude and longitude for all Federal and non-Federal stations (including foreign) for DRGS, LRIT, HRIT/EMWIN to the NOAA SPRES Contractor Shared Spectrum Company so that they have a correct and comprehensive list of receiving stations. Send to Dr. Todd Martin at tmartin@shedspectrum.com and please copy beau.backus@noaa.gov. Please provide within next 30-60 days along with a point of contact with email and phone for your organization. See Page 13. **In progress.**
- Action 122-7: Item: Microcom Design to share DCPI test results with the user community as they become available. See Page 17. **Completed.**
- Action 122-8: DCS Program to prepare some vehicle for getting user input on the DCPI two-way communication project. See Page 17. **Review Report before adding status?????**
- Action 122-9: DCS Program manager to prepare a briefing for OSPO and NESDIS Management on estimates on the costs to bring the DCPI two-way communication project to completion for GOES-R Series and the next generation of satellites. See Page 17. **In progress of executing a project with Microcom. Presentation of recent work his afternoon.**

Review Actions from Mar 2018 cont.

- Action 122-10: NOAA to investigate back-up (remote) pilot options including reuse of Goddard equipment or a new system for the CBU. See Page 11. **Short term project complete; long term solution in progress.**
- Action 122-11: Investigate planning a test for a dual feed of DCS with the old and new formats. See Page 19. **Completed.**
- Action 122-12: Work with the HRIT/EMWIN Program Manager to plan for up to 10% DCS usage on HRIT/EMWIN. See Page 19. **Status with HRIT Program.**
- Action 122-13: Investigate planning a test for a dual feed of DCS with the old and new formats on GOES-16. See Page 19. **Completed.**
- Action 122-14: Microcom to share the proposals with Aerospace (Dr. Esteban Valles) for the software defined radio prototype. See Page 19. **Completed.**

DCS in Action.....!

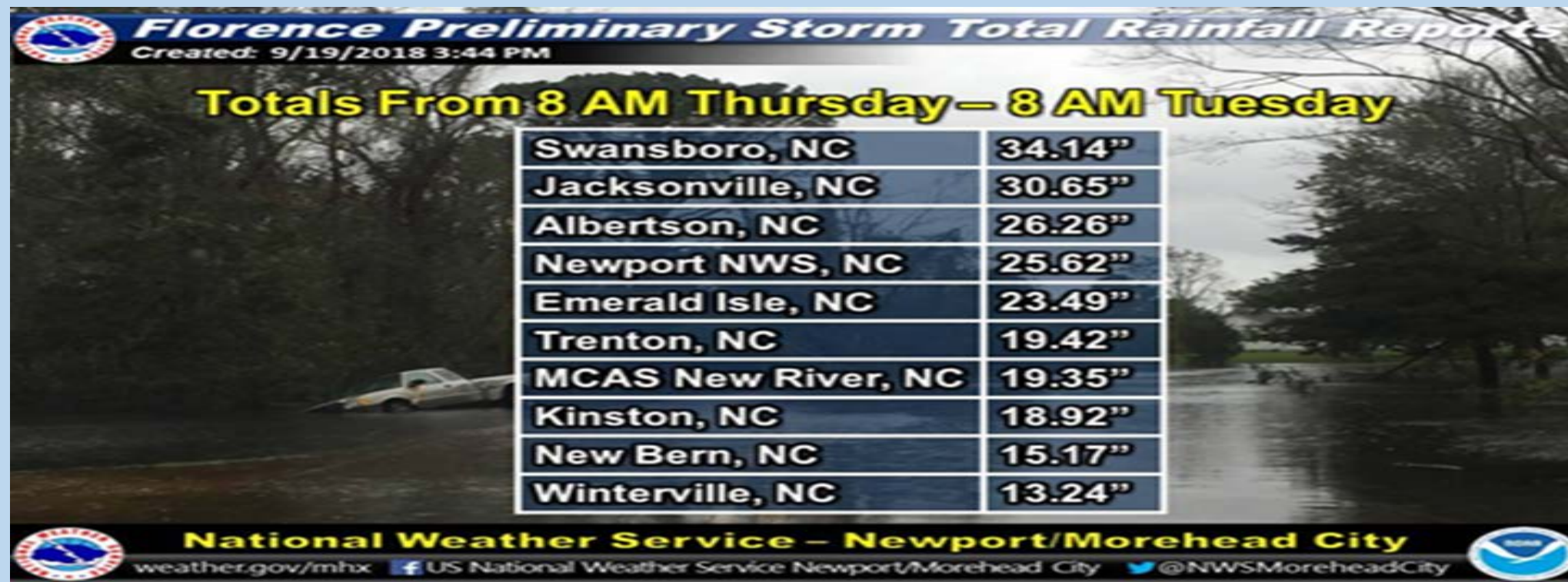


Federal and Local Needs.....

- US Fish & Wildlife Service (John Wallace)
 - Nat'l Key Deer RAWS at Big Pine during Hurricane Irma
 - DCPs reported until failure under 130 MPH gusts!
 - Satellite transmissions never stopped during the weather Event...
 - Positioned First Responders and information to Weather Channel report
- Bureau of Land Management (Robbie Swofford)
 - Covered 52 fire incidents in 2018
 - 117 IRAWS (Incident Remote Automatic Weather Stations) were deployed
 - Between federal & state over 533 stations in California

NOAA/ National Weather Service

- NWS (Sarah Jamison): Hurricane Florence, Sep 2018, in Eastern Carolina; a region that knows severe weather
 - Record rainfall, flooding and storm surge as well as flash floods!
 - River gage readings including Rapid Deployment Gages provided critical info
 - 20 Flood warnings and 3 flash food emergencies
 - Lost of life was minimal even though tragic even if it is just one....



NOAA/ National Weather Service Cont.

- NWS (Katie Landry): In 2017 Hurricane Harvey brought historic rainfall and flooding to South East Texas...
 - Thousands of lives and property were saved because of DCS information
 - 33 of 67 river forecast points reached record flood levels..
 - No issues with GOES transmission compared to external partner depending on other means to provide gauge data
 - That team loss data during peak rainfall while GOES DCS data continued....
 - Saved lives today and collected valuable information for tomorrow...
- NWS (Kevin Kodama): GOES DCS provides critical hydrologic information at over 230 sites across the state of Hawaii
 - Hourly data and USGS data coming in random transmissions
 - The Hanalei River basin on the island of Kauai gets an hour of lead time because of USGS DCP information
 - Allows fire, ambulance and police to be staged and children to get home safe....
- NWS (Paul Fajman):
 - GOES DCS Data providing river levels to the inch where that 1" or 2" makes all the difference in road, bridge or levee being over topped (NWS Omaha)
 - Data from BRONI (CE7810AE) critical to shut down call of Nuclear station near Missouri River at Brownville

NOAA/ National Weather Service cont.

- NWS (Ronald Miller)
 - Mar 2017 at Paradise Creek in Moscow, ID (PACII)
 - NWS advised EM partners of potential flooding in this area but, there are no official forecasts for this creek
 - Real time data is monitored by NWS and a heads up call is given to Moscow City Public Works



International DCS

Cristian Orrego Nelson

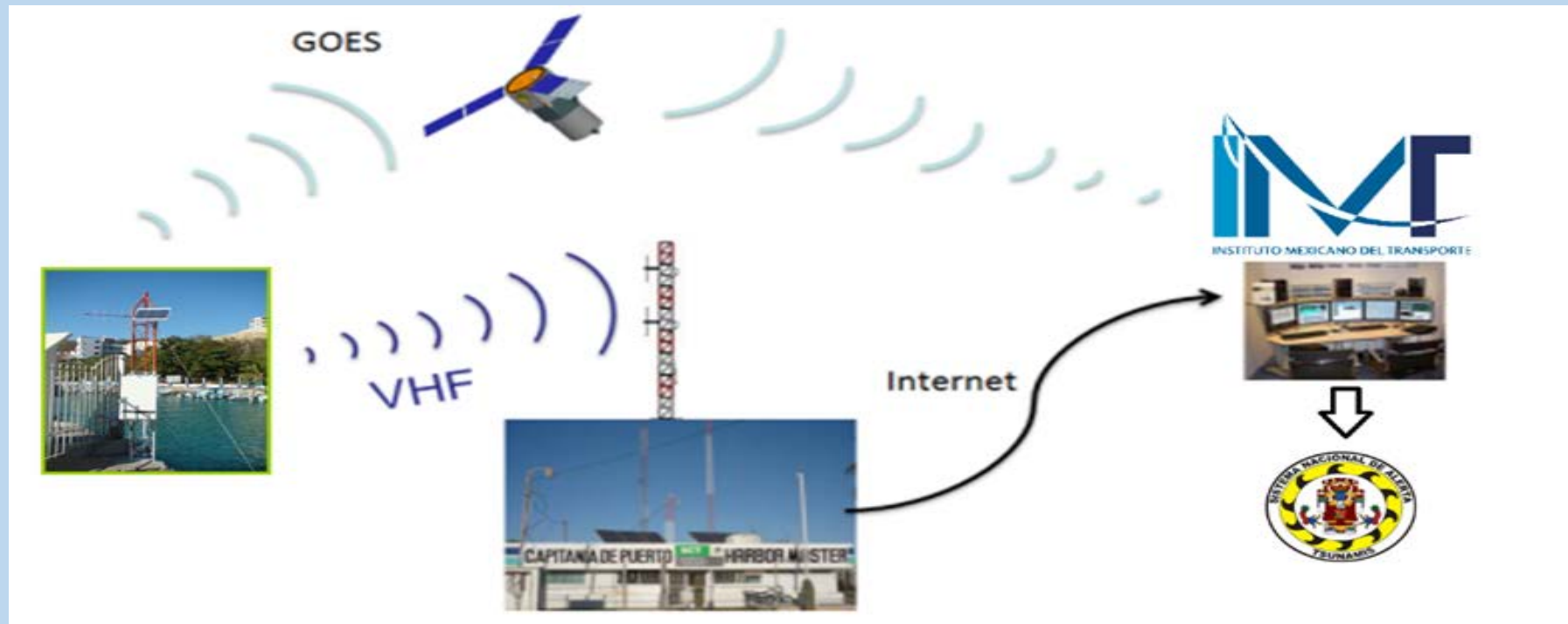
- Chile: Centro de Estudios Avanzados en Zonas Aridas (CEAZA) generates information for publications and decision makers
- 50 AWS from the Pacific coast to the Andes providing hydrological and snow fall information
- Glaciology team installed AWS in the Andes
- GOES DCS allows snowfall data collection throughout year vs. “research only off-line” weather stations



International DCS continued.....

Noé F. Toledano V., José Alfredo López L., J. Miguel Montoya R., Rodolfo Ramírez X., David Segura Q.

- Mexico: The Mexican Institute of Transportation (IMT) operates the Nat'l Network of Oceanographic Stations – wave characteristics, meteorological conditions and sea level variations at main ports
- Data two ways: VHF radio to the port Harbor Master and through the GOES satellite system with IMT facilities and Tsunami Warning Center as info destination



International DCS continued.....

- Mexico: In Sept 2017 the Nat'l Seismological Service of Mexico (SSN) reported earthquake at 8.2 on the Richter scale
- Gulf of Tehuantepec, Mexico; a Tsunami was generated (coast of Chiapas)
- Electrical power was lost in the region
- IMT tide stations sent data through the GOES satellite system w/o interruption to the Tsunami Warner Center
- Special thanks offered by this customer partner to Letecia Reeves and Stuart Weinstein for support with the GOES transmission



International DCS continued

- Canada (Leona Hyde) Gov't of Newfoundland and Labrador:
 - More than 267 communities in the province affected by flooding; \$262M in damage over 64 years
 - In Jan of 2018 the town of Deer Lake was under flood alert for over a week
 - DCS monitoring provided flood levels on the hour providing first responders and residents needed information to be prepared for evacuations
 - 142 stations throughout the province (hydrometric, weather, RAWS, water quality)
- Canada (Lakmal Ratnayake) Parks Canada:
 - Parks Canada use the DCS system for Wildfire Management in the summer and Avalanche Control in the winter
 - Clear source for determining fire danger as well as a wide variety of incidents

Backup

- Backup

Fall 2017 User Assessment: “What is your data retrieval system currently?” (98 Responses)

Primary:

LRGS: 29.6%

DADDS: 28.6%

LRIT/HRIT: 19.3%

DOMSAT: 7.1%

DRGS: 5.1%

NWSTG: 3.1%

(Plus 8 other/unique
(write-in) replies)

Secondary:

LRGS: 26.5%

DADDS: 26.5%

LRIT/HRIT: 10.2%

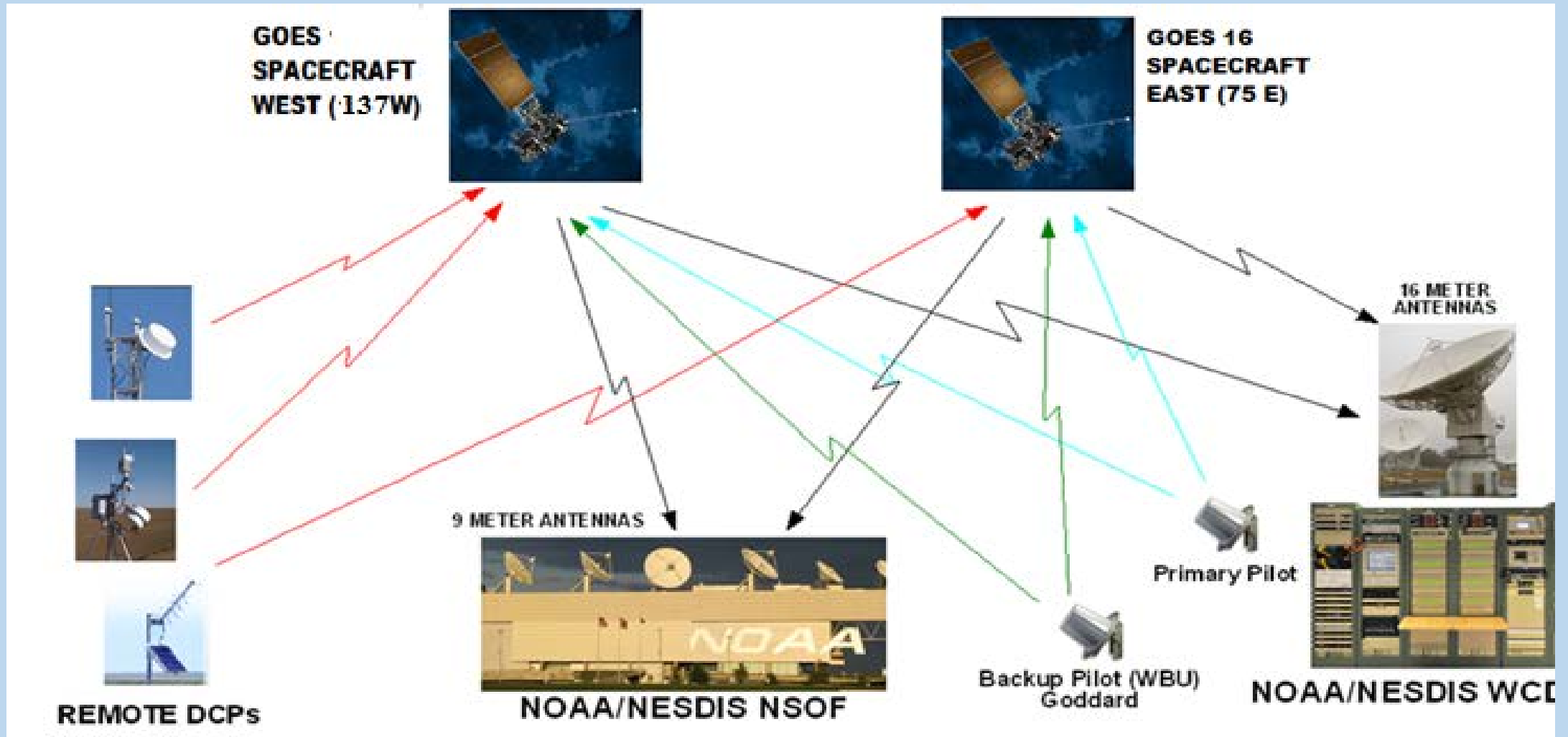
DOMSAT: 6.1%

DRGS: 2.1%

NWSTG: 5.1%

(Plus 18 other/unique
(write-in) replies)

System Overview



User Access

