GOES-R User Engagement

Steve Superczynski, GOES-R User Services Coordinator

AMS Short Course: GOES-R and JPSS Satellite Data and Tools
Available through Cloud Service Providers
Baltimore, MD
January 28, 2024
GOES-R User Engagement

- GOES-R users are any individual, institution, or company that make use of the GOES-R datasets to perform a desired function
  - National Weather Service (NWS) Weather Forecast Offices (WFOs) and Regional Centers via Advanced Weather Interactive Processing System (AWIPS)
  - Product Distribution Access (PDA) system users (e.g. NWS, NCEP, EUMETSAT)
  - Direct Readout (GRB, HRIT/EMWIN, etc.) users (e.g. CSPP Geo)
  - Users that retrieve data from NOAA’s Consolidated Large Array Data Stewardship System (CLASS)
  - Cloud data access
    - NOAA Open Data Dissemination (NODD)
    - NOAA Common Cloud Framework (NCCF) (future)

- GOES-R User Engagement (UE) has largely entered into a “sustainment” phase as GeoXO UE efforts increase
GOES-R User Engagement Activities

- **Satellite Book Club** — Weekly seminar series with NOAA Scientists highlighting their work using satellite data
  - Watch past sessions on YouTube

- **NOAA Satellite Information System (NOAASIS) website** — Resources related to Direct Readout Services; as well as Product Quality information, including validation review materials for each satellite and product

- **NODD Office Hours: NOAA GOES-R Satellite Data in the Cloud**
  - Held this past November, this event focused on the GOES-R Cryosphere products and the open data access provided by Microsoft Azure
GOES-R User Engagement Activities

- **GOES-R DataJam**
  - Virtual competition open to undergraduate and graduate students to showcase GOES-R data
  - Talk by Katie Pitts Tues. Jan 30th @ 2:15, Rm 308

- **International satellite training & workshops with WMO Regions III/IV**
  - Offered in both hybrid and remote formats
  - Provides training opportunities to help educate international satellite data users and close knowledge gaps

- **GOES-R Beginners Guide**
  - available on the GOES-R website [here](#) or [here](#)
GOES-R User Engagement Success Story

• Feedback gained through Total Operational Weather Readiness-Satellites (TOWR-S) CloudReach initiative in 2023 with Indianapolis Center Weather Service Unit (CWSU) about the cadence of the Cloud Cover Layers (CCL) CONUS scene spurred us to change from an hourly product to one produced every 5 minutes.

• The increased frequency helps to better inform decision makers in the aviation operations community.
# GOES-R Series Product Portfolio & Distribution

## ABI L1b in GRB, PDA, CLASS, NODD
- Radiiances

## GLM L2 in GRB, PDA, CLASS, NODD
- Lightning: Events, Groups, Flashes

## SEISS L1b in GRB, PDA, CLASS, NODD
- Energetic Heavy Ions
- Magnetospheric e⁻/p⁺: Low Energy
- Magnetospheric e⁻/p⁺: High Energy
- Solar & Galactic Protons

## EXIS L1b in GRB, PDA, CLASS, NODD
- Solar Flux: EUV
- Solar Flux: X-ray Irradiance

## SUVI L1b in GRB, PDA, CLASS, NODD
- Solar EUV Imagery

## GMAG L1b in GRB, PDA, CLASS, NODD
- Geomagnetic Field

## ABI L2+ Products in PDA, AWIPS, CLASS, NODD
- Cloud and Moisture Imagery (CMI) and Sectorized CMI (KPP)
- Aerosol Detection (Smoke & Dust)
- Aerosol Optical Depth
- Clear Sky Mask *
- Cloud Cover Layers *
- Cloud Optical Depth *
- Cloud Particle Size Distribution *
- Cloud Top Height *
- Cloud Top Phase *
- Cloud Top Pressure *
- Cloud Top Temperature *
- Derived Motion Winds
- Derived Stability Indices
- Downward S/W Radiation: Surface

## GLM L2+ Products in AWIPS
- Gridded Flash Extent Density, Minimum Flash Area, Total Optical Energy

## Legend:
- * Enterprise Algorithm

Some products also delivered via HRIT/EMWIN and GNC-A

January 28, 2023
Looking ahead

- Completing the GOES-R ABI L2 Enterprise Algorithm updates in early 2024
- User outreach and readiness ahead of the final GOES-R series launch (GOES-U)
- The seamless transition of products to the cloud will be the primary focus of UE in the final stage of the GOES-R mission
- GOES-R will continue to invest in advancements that benefit the user community
- Leveraging GOES-R and other satellite data to better prepare users for GeoXO
  - Session chaired by Pam Sullivan (GEO Director) and Andy Heidinger (GEO/GeoXO Program Scientist): Overview and Applications of the Next Generation GEO Satellite Series - Thursday Feb 1st, 8:30 - 10:00 AM