TCORF 2026

2026 NOAA/NESDIS Update

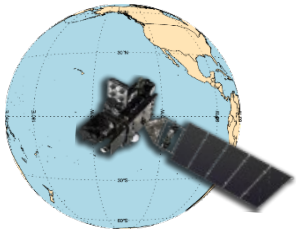
NOAA/NESDIS/OSPO/SPSD

Presenter: Emily Smail

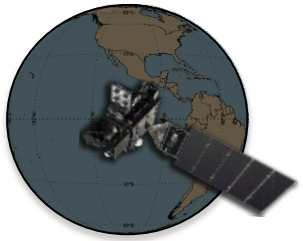
Status of Satellites

GOES Constellation

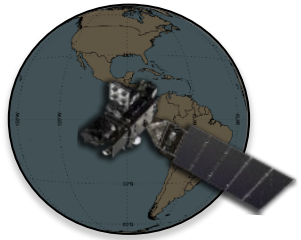
GOES-West
GOES-18
137.0°W



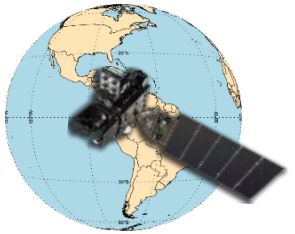
Standby
GOES-16
104.7°W



Storage
GOES-17
89.5° West

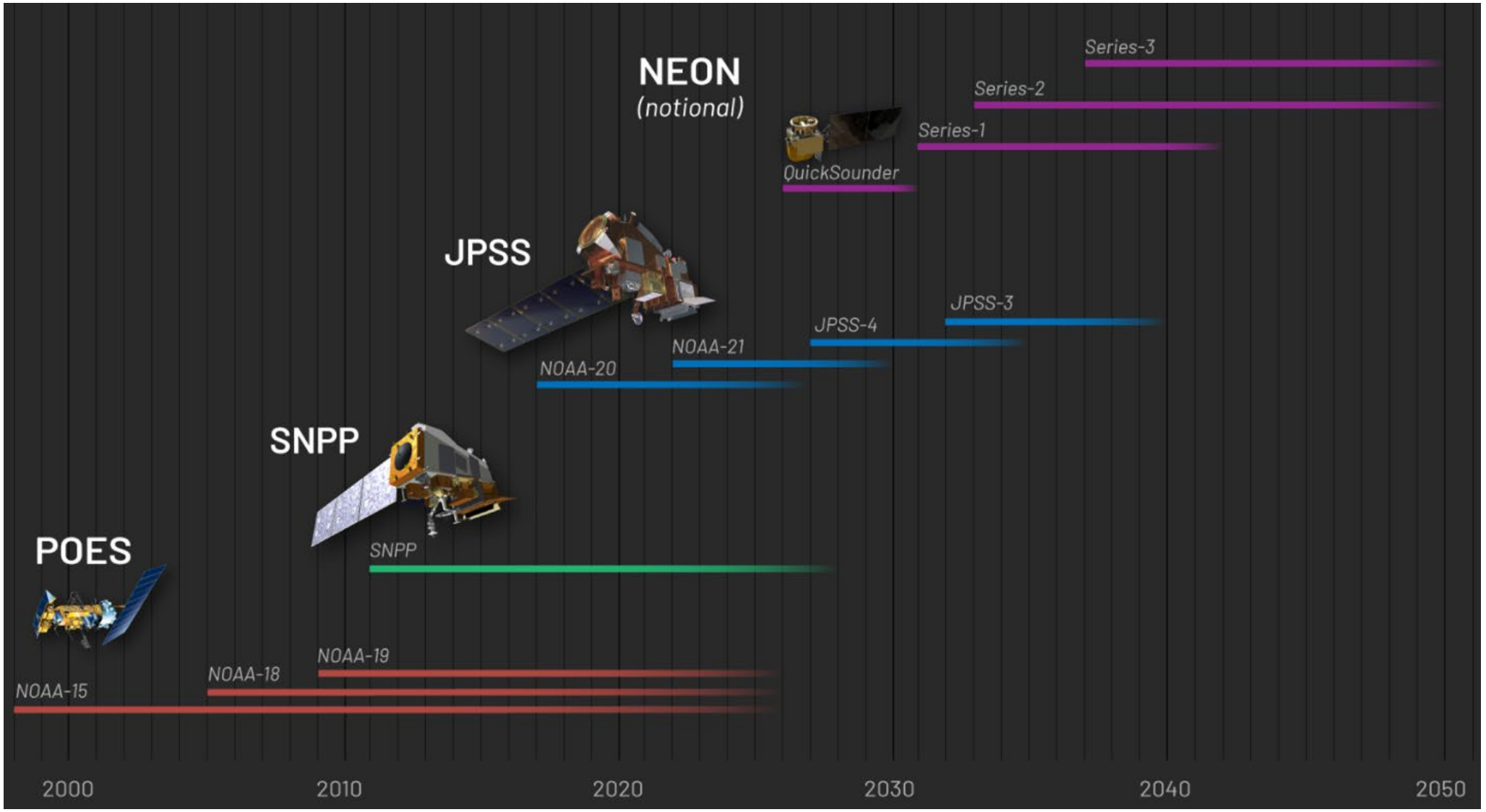


GOES-East
GOES-19
75.2°W



- Following drift to Standby position in June 2025, GOES-16 declared GOES-backup. GOES-17 moved to test position in July 2025
- GOES-14 was declared a residual asset and transferred over to USSF in 2025 Q4

NOAA Polar Satellite Programs - Including NEON



POES Decommissioning

- NOAA-15 Decommissioned Nominally on August 19th 2025
  - NOAA-19 Decommissioned on August 13th 2025
    - Emergency Decommissioning occurred after a Battery Failure transitioned the satellite into a Power Survival Safe State (PSSS)
  - NOAA-18 Decommissioned on June 6th 2025
    - Emergency Decommissioning executed after a unexpected power failure on the S-Band Transmitter (7 Watt Output to .8 Watt Output)

Suomi-NPP Life Cycle Phase and Decommissioning

- S-NPP launched on 28 Oct 2011 (> 13 years on-orbit)
- No planned stakeholder review is scheduled to occur for S-NPP Decommissioning via direction from NOAA/NESDIS Leadership
- Decommissioning and disposal plan activities will continue in the interim while a decision is pending on establishing life cycle milestone end.
  - OSPO will have validated all S-NPP Decommissioning procedures by Q1 CY26
  - Awaiting confirmation from the NESDIS AA to start Decommissioning Notifications and development of any formal timeline.

Upcoming JPSS Mission Events and Look Ahead

Current Performance

- **Constellation Status:** Fully meeting availability and latency requirements for spacecraft and data products.

Future Missions

- **JPSS-4 (Target: Nov 2027):** Launch remains on track; instrument integration is currently underway.
- **JPSS-3 (Forecast: CY 2032):** Entering final preparations for long-term storage.

S-NPP Decommissioning & End-of-Life (EOL)

- **Timeline:** Decommissioning planned by end of FY26; Deorbit No Earlier Than (NET) 2026.
- **Deorbit Simulations:** Initial 6-burn test successful; full 2-week campaign simulation (burn every other day) set for late June 2025.
- **EOL Operations:** Test planning has initiated. Users should actively monitor upcoming ESPC Notices for impacts.

JPSS Calendar of Events

Upcoming spacecraft maneuvers and other known events that may impact data distribution or broadcast:

	S-NPP	NOAA-20	NOAA-21
Drag Make-Up Maneuver (DMU)	–	28 Jan 2026 DMU 17	–
VIIRS Lunar Calibration Non-Rolls	29 Jan 2026	28 Jan 2026	28 Jan 2026
Inclination Adjustment Maneuver (IAM)	–	–	–
VIIRS Day-Night Band (DNB) Calibration	17 Feb 2026 18 Mar 2026	17 Feb 2026 18 Mar 2026	17 Feb 2026 18 Mar 2026

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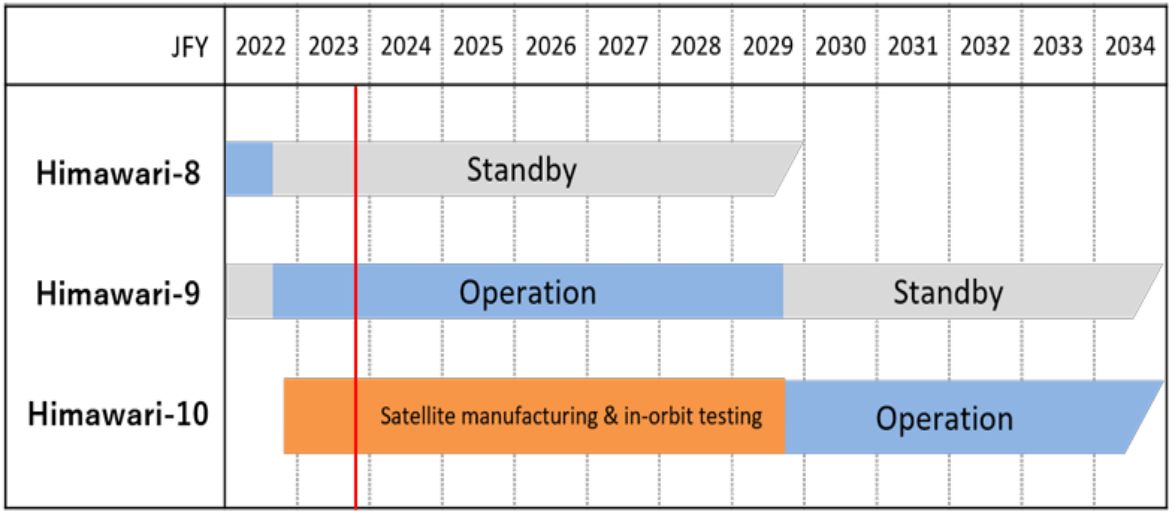
Himawari-8/9/10 Updates



- **HIM-10 is slated to launch in Japan Fiscal Year 2030**
- At 1530 UTC on October 11th, 2025, **Himawari-9** experienced an anomaly leading **Himawari-8** to takeover operations at 2320 UTC on October 11th
  - Himawari-9 was restored at 0500 UTC on November 26, 2025
- An additional internal anomaly occurred at 1550 UTC on October 14th, 2025 which caused **Himawari-8** data to stop flowing
  - At 2052 UTC on October 14th, 2025 the system was repaired and data was backfilled to 1600 UTC

Meteosat Missions Updates

SATELLITE	LIFETIME	POSITION	SERVICES
Meteosat-11	7/15/2015 – Fuel lifetime is until 2033	**9.5°E**	Rapid Scan Service. Real-time Imagery. Tertiary backup option for 0º full disc service.
Meteosat-10	7/5/2012– Fuel lifetime is until 2030	**0°**	Secondary parallel ops of 0º SEVIRI real-time image Data.Will serve as backup to MET-12 through Q2 2027 (TBC). Also backup for RSS.
Meteosat-9	12/22/2005 – Fuel lifetime is until 2022, but was extended until 2027. Another extension to 2028 is being considered.	**45.5° E**	Primary IODC service started 6/1/22.
Meteosat-12 (MTG-I1)	Launched 12/13/2022	**0°**	Primary parallel ops of 0º real-time image data. Parallel with MET-10 as backup through Q2 2027 (TBC).

Primary Imaging Operations

- Operational MET-12 (MTG-I1) data is available in NCCF, PDA I&T and at STAR
- Current timeline estimates MET-12 data will be released to PDA OPS (and subject to 24/7 monitoring) March 2, 2026
- First pre-operational products from both Metop-SG-A1 and MTG-S1 are anticipated this spring (March/April)

DMSP and WSF-M Updates

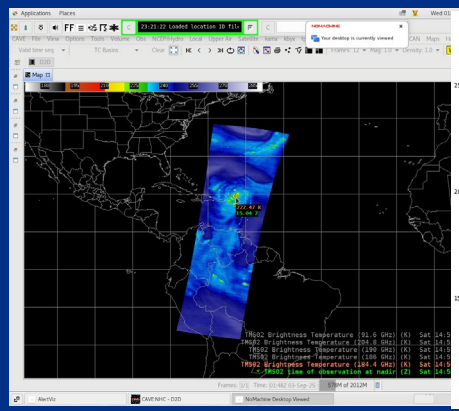
- All DMSP satellites (F16, F17, F18) are well beyond their planned mission life. The program is also addressing extreme obsolescence of critical ground segment hardware components. The timeframe of the sunset of the mission is still under discussions that are held internal to DoD.
- Possible sunsetting discussed for FY26, however, depends upon USSF and staffing availability of NOAA controllers.
- The Weather System Follow-on Microwave (WSF-M) satellite launched in April 2024. WSF-M has experienced many outages and challenges both aboard the spacecraft and on the ground. It is not yet in Full Operational Capacity (FOC). NOAA and USSF are still navigating data availability agreements (MOU) to allow broader sharing and dissemination.

Commercial Data Pilot: Microwave Sounder (MWS)

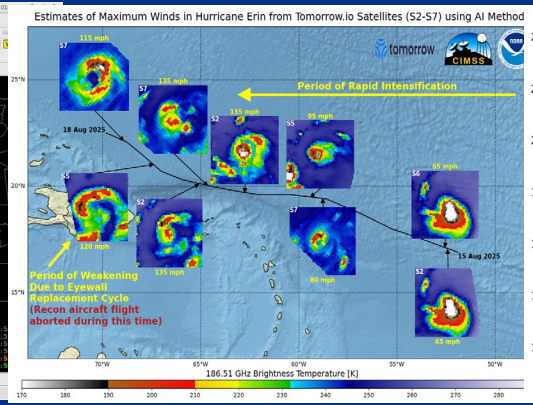
NOAA awarded two Microwave Sounder Pilots to Tomorrow.io and Orbital Micro Systems (OMS)

- **Purpose:** Evaluate commercial MWS data to enhance NWP and improve forecaster situational awareness
- **Status:**
  - Initial demonstration of Tomorrow.io MWS capabilities for NOAA applications.
  - Calibration focused on radiometric accuracy, noise, and geophysical performance to ensure L1B/L1C data quality, and the evaluation is now complete.
  - Current focus is on refining algorithms to establish best operational practices, including the use of AI methods to expedite end-to-end data analysis and prepare for operation.
  - Constellation performance limitations were identified but are improving; ongoing assessment includes EMC impact analysis.

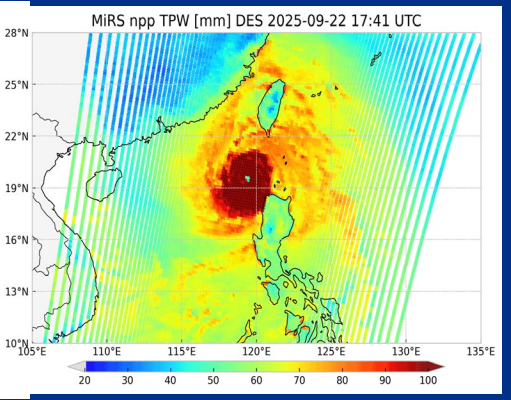
Tropic Cyclone imagery in AWIPS2

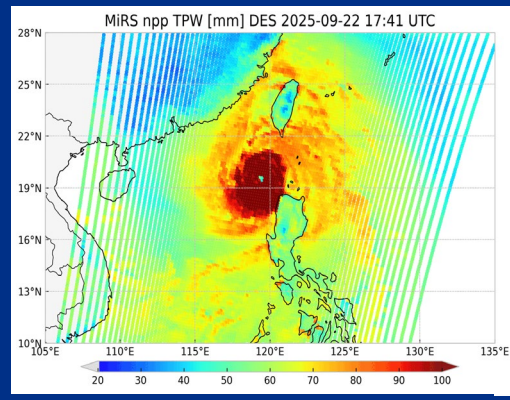


Tropical Intensity AI Demonstration

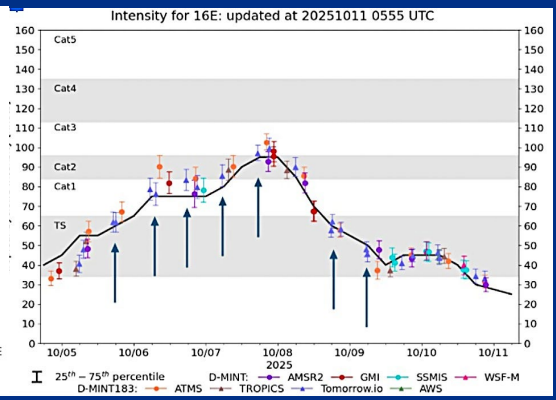


JPSS & MetOp TPW Coverage: Standard vs. Tomorrow.io Supplemented

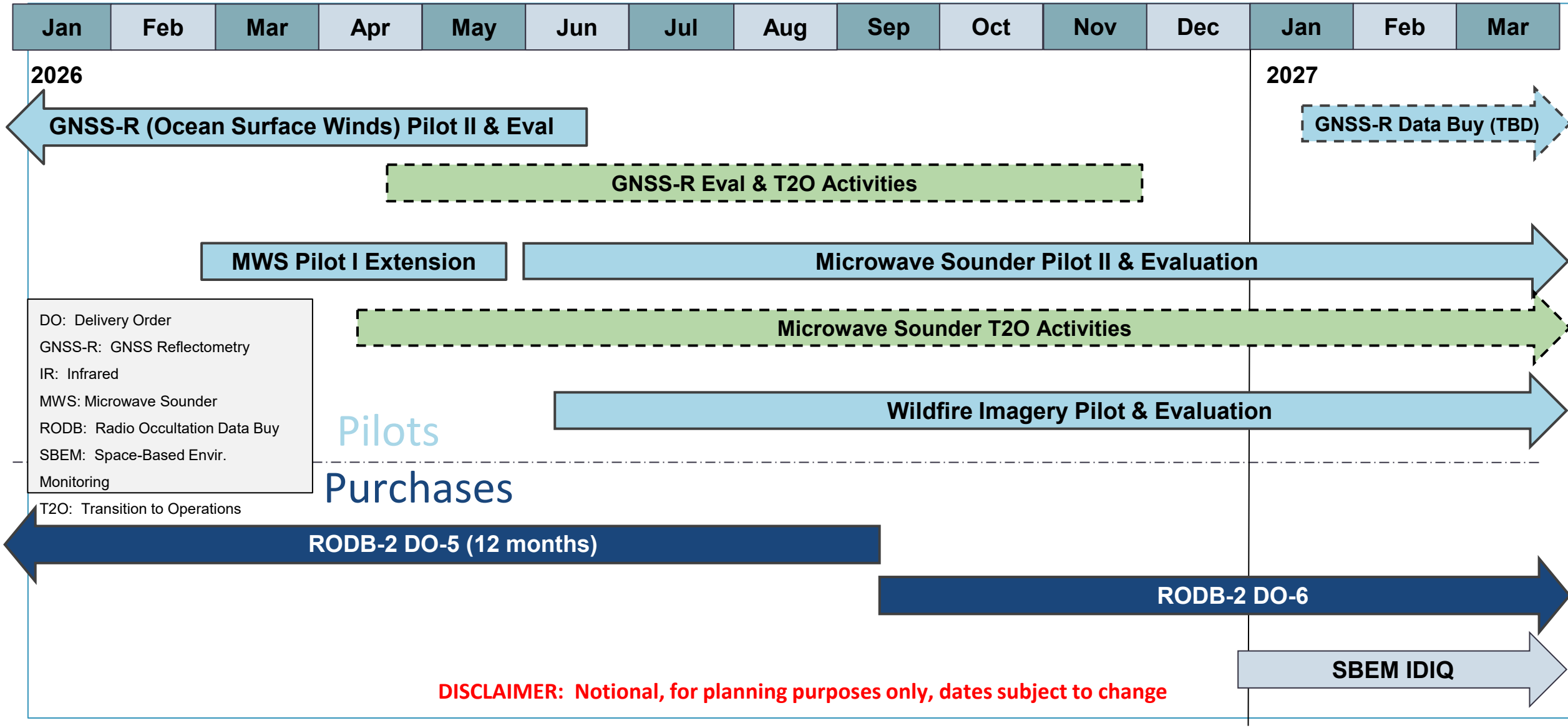




Hurricane Intensity Estimates



2026-2027 NESDIS CDP Planning - Pilots & Purchases



DISCLAIMER: Notional, for planning purposes only, dates subject to change

Status of NESDIS Satellite Tropical Products

NESDIS Satellite Tropical Products (Automated)

Operational TC Products	Science Teams	Operation major milestones
ADT Advanced Dvorak Technique	John Knaff, Tim Olander, Chris Velden *NESDIS/STAR, CIMSS*	2007 - Initial version (McIDAS-based system) on the heritage machine. 2013-2022 - upgraded to non-McIDAS version and migrated to NDE. 2024 - Migrated from NDE to NCCF in AWS cloud. 2025 - Upgraded to the ADTv10, the AI-enhanced Dvorak Technique (AiDT). **2026 - Adding MTG-I1 capability**
eTRaP Ensemble Tropical Rainfall Potential	Bob Kuligowski *NESDIS/STAR*	2009 - Initial version (McIDAS-based system) on the heritage machine. 2010-2024 - Upgraded for new satellite capabilities (e.g. N20/N21,MetOp-B/C). **2025 – System upgraded and migrated to NCCF operations.** **2026 – Ongoing bug fixes and performance enhancements.**
HISA Hurricane Intensity and Strength Algorithm	John Knaff, Mark DeMaria *NESDIS/STAR, CIRA*	2011 - Initial version (AMSU TC) on the heritage machine. 2013 - Added NPP ATMS capability, implemented at NDE. 2024 - Upgraded to HISA(combined AMSU TC and NPP TC) and migrated to NCCF.

NESDIS Satellite Tropical Products (Automated)

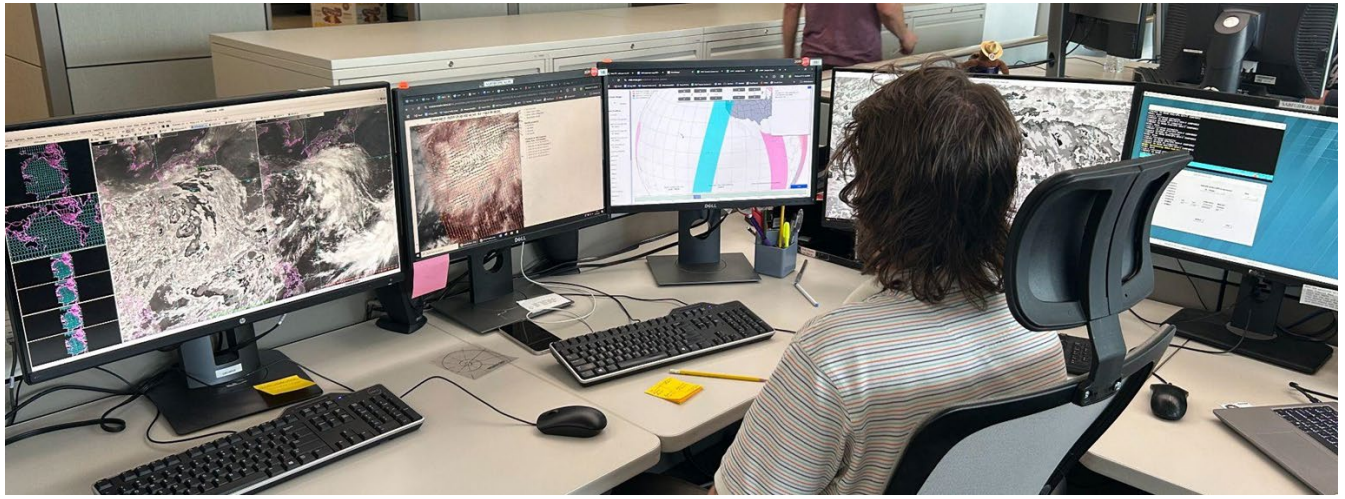
Operational TC Products	Science Teams	Operation major milestones
MTCSWA Multi-platform Tropical Cyclone Surface Winds Analysis	John Knaff, Jack Dostalek *NESDIS/STAR, CIRA*	2011 - Initial version (McIDAS-based system) on the heritage machine. 2022 - Upgraded to non-McIDAS version and migrated to NDE. 2024 - Migrated from NDE to NCCF. **2026 - Adding MTG-I1 capability**
TCFP Tropical Cyclone Formation Probability	Chris Slocum, John Knaff *NESDIS/STAR, CIRA*	2013 - Initial version (McIDAS-based system) on the heritage machine. 2021- Updated for switching to the daily Reynolds SST product. 2024 - Upgraded to TCFP v4 and migrated to NCCF. **2026 - Adding MTG-I1 capability**
ASCAT UHR ASCAT Ultra High-Res Storm Winds	Paul Chang *NESDIS/STAR*	2008 - Initial MetOp-A version. 2010-2020 - Upgraded and enabled MetOp-B cabilitity. 2024- Upgraded to include MetOp-C and migrated to NCCF.
SAR TC Winds Sentinel Tropical Cyclone Winds	Marilyn Yuen Murphy, Chris Jackson *NESDIS/STAR*	2025- Initial version transitioned to operation in NCCF. **2026 - Added Sentinel -1C capability and included TC winds at 3km**
SATCON SATellite CONsensus	**Chris Slocum** ***NESDIS/STAR, CIRA***	**2026 - R2O translation to AO kicked off in February**

NESDIS Satellite Tropical Products (Human-in-the-loop)

Operational TC Products	Science Teams	Operation major milestones
Dvorak Manual Dvorak Technique	**Paul Lee** ***NESDIS/OSPO/SAB***	1974 - Initial estimates for entire globe 2012 - Subtropical classifications terminated 2013 - Bulletins added for systems in Western Hemisphere 2021 - Classifications done worldwide on the synoptic hours **2025 - Classifications terminated for the South Indian Ocean and South Atlantic** **2027 - Transition Manual Dvorak classifications to NWS**

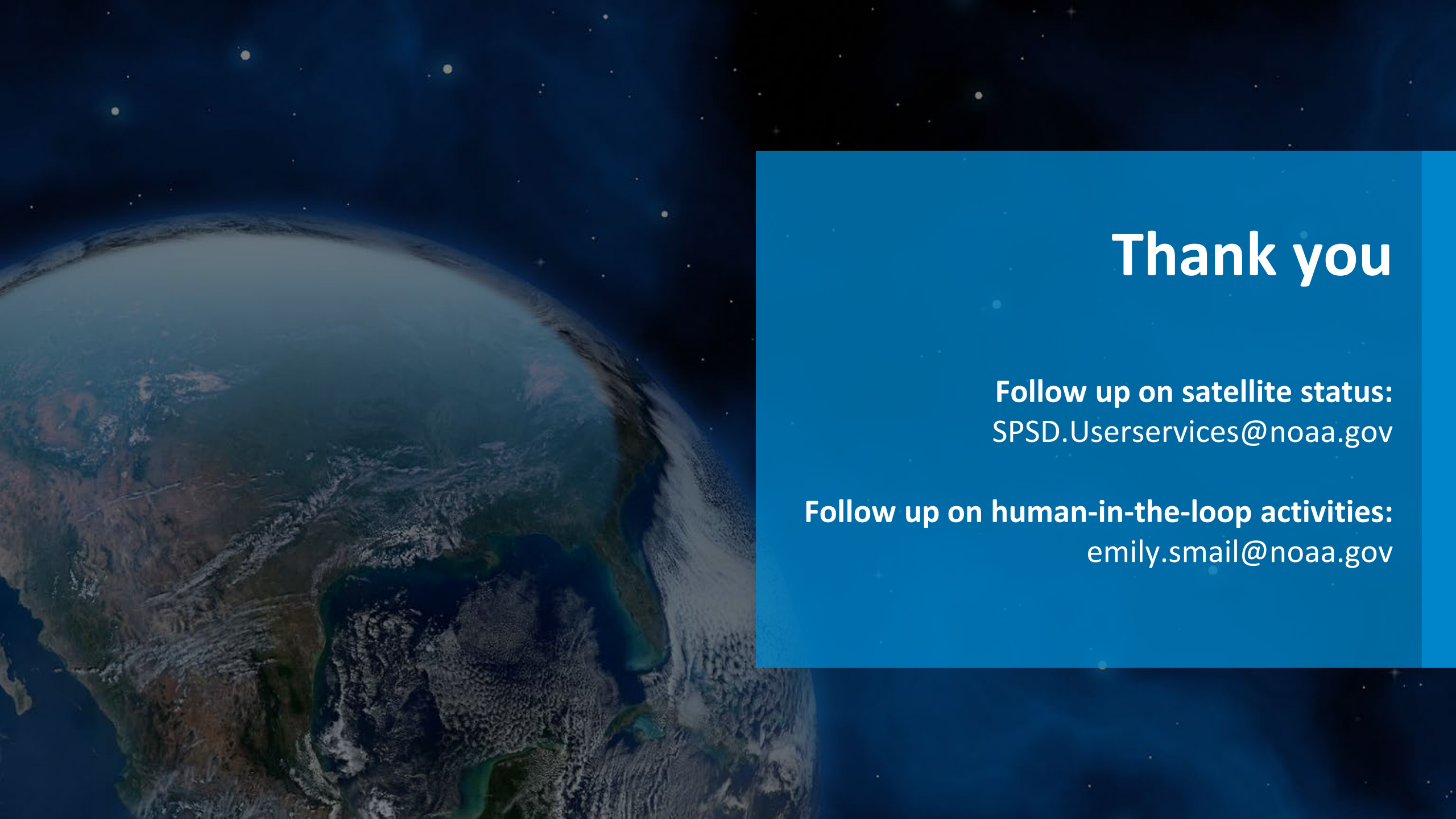
Future of NESDIS Human-in-the-loop activities

Working to gather requirements for new products and/or activities that the NESDIS Satellite Analysis Branch can support for Tropical Cyclones



Future of NESDIS Human-in-the-loop activities

- Launched a Tropical Cyclone Proving Ground in 2025 to:
  - Test, evaluate, and validate the 24/7 workflow of developing TC detection algorithms and products in **daily operations**
  - Engage in two-way interactions, **providing prompt feedback** between researchers/developers and product users
  - Support integration of TC detection algorithms and products into **OSPO's operational product portfolio**
- Objective techniques currently being examined include:
  - Cooperative Institute for Meteorological Satellite Studies' (CIMSS) TC product suite
  - STaR Synthetic Aperture Radar (SAR) Tropical Cyclone Winds
  - Adding the CIRA Tropical Cyclone Formation Probability Guidance Product (TCFP)



Thank you

Follow up on satellite status:
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Follow up on human-in-the-loop activities:
emily.smail@noaa.gov