

National Aeronautics and
Space Administration



EXPLORE EARTH

**NASA Atmosphere Discipline Team
Meeting**

NASA Headquarters Program Objectives
and Updates

May 2nd 2022

Program Objectives and Updates

Terra, Aqua, and Aura

- The NASA EOS era is coming to a close:
 - Terra, Aqua, and Aura are aging spacecraft
 - Still collecting data and producing data products, but the number of spacecraft anomalies is increasing, especially over the last year
 - The missions are increasingly expensive to operate (~90 mil/yr; spacecraft operations; product team support), taking away from the execution of future ESO missions
 - Phase F is imminent for these spacecraft. Thus, we need to prepare for their end of life
 - Current thinking from HQ leadership: End of missions **will likely** be in FY2023
 - Data collection stops FY23 (summer); Missions will **not likely** participate in the next senior review
 - Last senior review funds Terra and Aqua missions through FY25, which includes 2 years of Phase F funding
 - Phase F funding for 2 years (FY23-25) of mission wrap-up which should be used for mission closeout (decommissioning of all assets, finalizing, reprocessing, and archiving data sets, writing final reports).

Soumi-NPP & JPSS

- SNPP and JPSS satellite sensors are being looked to for continuity products
- It's not 100% clear how long NOAA intends to operate SNPP, NASA to continue to support until EOM
- NASA JPSS support to continue

Program Objectives and Updates

Going Forward

- NASA HQ and the community have worked to help ensure continuity and stable data products between sensors on TASNPP & JPSS platforms
- We think we are close for many MODIS/VIIRS products but need to be informed of issues that the community sees
- During KDP-F there can/will be a discussion on which products need to continue to be maintained and how they should be funded
- In the Senior Review guidance letters, the Terra Project was directed to hold a Users' Workshop to communicate quantitative changes in the Terra datasets, and to prepare users for the mission's end-of-life, including evaluation of continuity products NLT 2022. It's not clear to us at HQ if this process has started
- When Terra mission ends, NASA EOS AM observations stop. This is a big problem for operational wildfire data products, among others. We need to come up with a continuity solution for AM observations (Sentinel and MetOps?). Discussion like this should be starting/happening now

Program Objectives and Updates

Feedback from the Land Discipline Team Meeting

- From the perspective of land data product continuity, VIIRS puts us in decent shape for the continuity of some data products. There is some degradation in product quality, but it seems workable.
- The loss of Terra AM observations will have significant negative impacts for some land data products, such as active fire detections (relied on heavily by operational partners such as USFS), LAI, and others that rely on AM observations.
- The project teams are surprised that they may not be invited to senior review (they have heard this rumor for a bit, but still are surprised). They do not feel that preparing a proposal is an onerous task. The project teams feel like the senior review process is an effective avenue to demonstrate data product needs/reliance from the community.
- According to some prelim data analysis, the orbital drift impacts on Terra MODIS data products will be minimal. They will be doing a deeper dive on this analysis.
- Shutting down T/A in 2023 will impact many of the A.33 selections from the last round, which go into 2024, so we will need to find solutions/work arounds for those projects.

The background of the slide is a composite of two cosmic images. The top half features a dark blue and black space filled with numerous small stars and a prominent, bright blue nebula on the right side. The bottom half shows a similar starry field but with a warm, golden-yellow and greenish glow, suggesting a different nebula or star formation region. The word "Questions" is centered in a white, sans-serif font across the middle of the slide.

Questions