

NOAA

GeoXO Science Working Groups

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GOES-R is here to support TEMPO

- GeoXO is interested in supporting synergistic use of TEMPO with ABI as a forerunner of ACX / AXI synergy.
- The sub-TEMPO-pixel information on aerosol, dust, smoke and cloud evolution offers new areas of research.

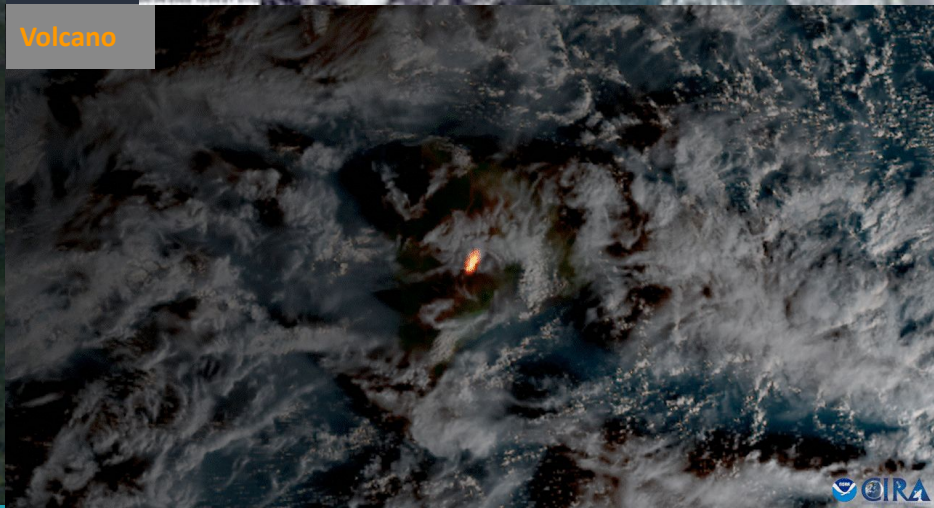
Saharan Dust



Fire and Smoke



Volcano



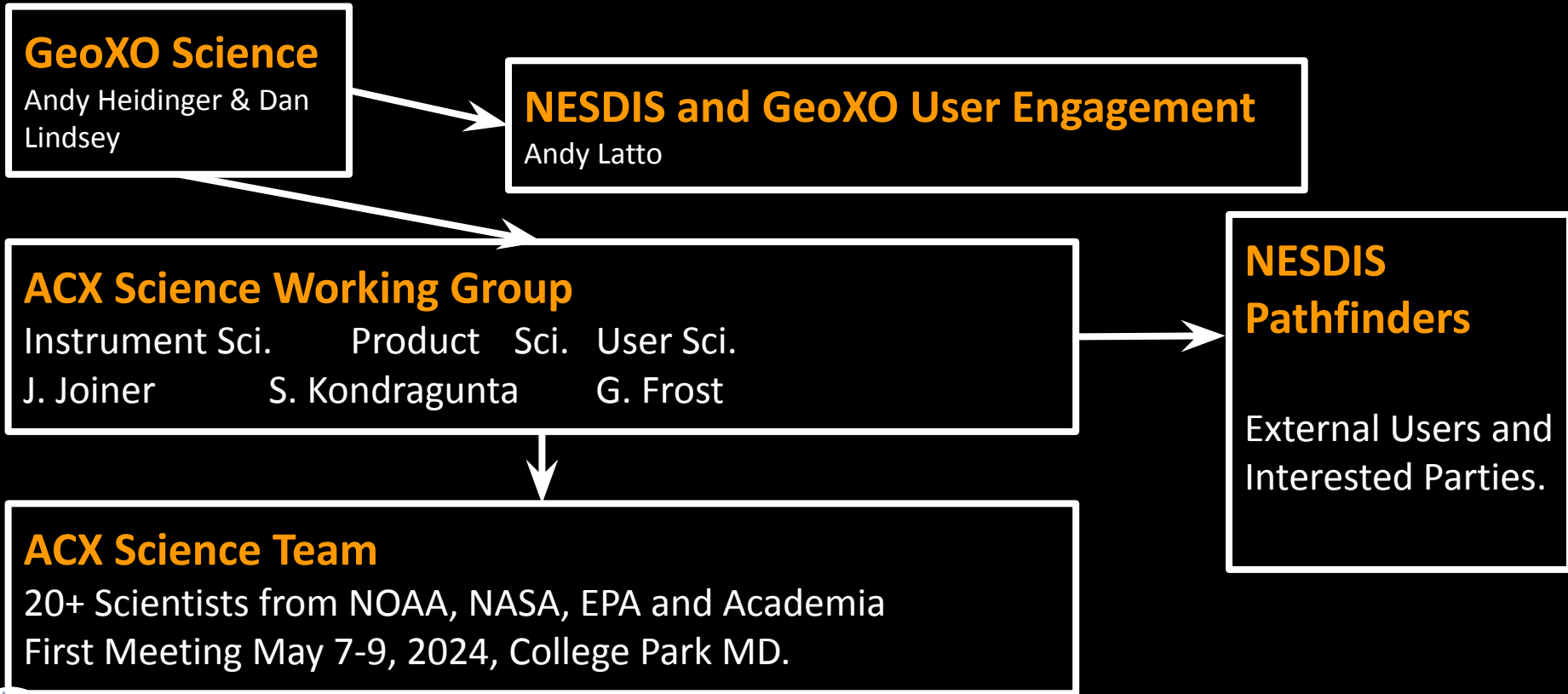
Why did we form SWGs?

- GOES-R had 2 earth viewing sensors and had a weather-centric mission and developed a strong and effective relationship with the Weather Service.
- GeoXO has expanded to 5 earth-viewing sensors and these sensors support all NOAA Mission Service Areas (Weather, Climate, Oceans and Coasts).
- We decided to form Science Working Groups (SWG) of 3 principal scientists to support and guide the program with
 - instrument formulation
 - user readiness
 - product development and innovation
- SWGs connect GeoXO to the NOAA LO's and very valuable in our advocacy and value assessment activities.





GeoXO ACX Organization

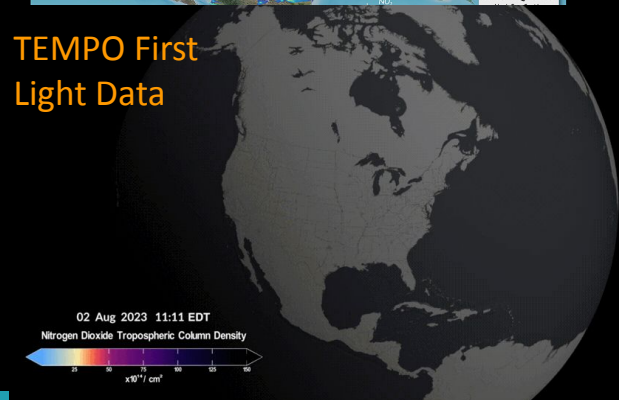


GeoXO ACX SWG Activity

- Support for the AEROMMA Field Campaign
- Value Studies for ACX at GMU, U of Iowa and OAR/CSL
- TEMPO Aerosol Products by NESDIS/STAR
- TEMPO NO₂ by NESDIS/STAR
- TEMPO Validation using PANDORA



TEMPO First Light Data



User Engagement Roadmap

Through FY 2025

- ★ GeoXO road shows
- ★ Support the User Scientists in their respective UE events and track progress
- ★ Identify prospective Pathfinders
- ★ Build contact database and stakeholder relationships for future user readiness campaigns

ACX Team

- Shobha Kondragunta (Prod)
- Greg Frost (User)
- Joanna Joanna (Instr)

FY 26-28

- ★ Finalize User Needs Assessments
- ★ User Readiness Activities
- ★ Product/Infrastructure/Process Readiness Development
- ★ Follow-on workshops

FY 28+

- ★ Finalize User Readiness
- ★ Organizational Readiness
- ★ Pathfinders
- ★ Training



GeoXO

GEOSTATIONARY
EXTENDED OBSERVATIONS





Thank You

For more information visit

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Backup



Synergy: GeoXO Information with an ACX Pixel

Assuming each ACX Pixel is 4x8km, it will contain:

- 2 IR spectra from GXS (1600 channels) with similar temporal updates **providing profile on gases day and night**
- 512 250m (VIS) imager pixels, 32 1km (NIR) observations, 8 2km IR observations from each of two GXI sensors - **providing sub-pixel characterization and multi-angle information.**
- Coastal regions will have roughly 160 hyperspectral OCX measurements - **providing complementary information at higher spatial and coarser spectral resolution**