

GeoXO Program Update

May 7, 2024

ACX Science Team Meeting, College Park MD

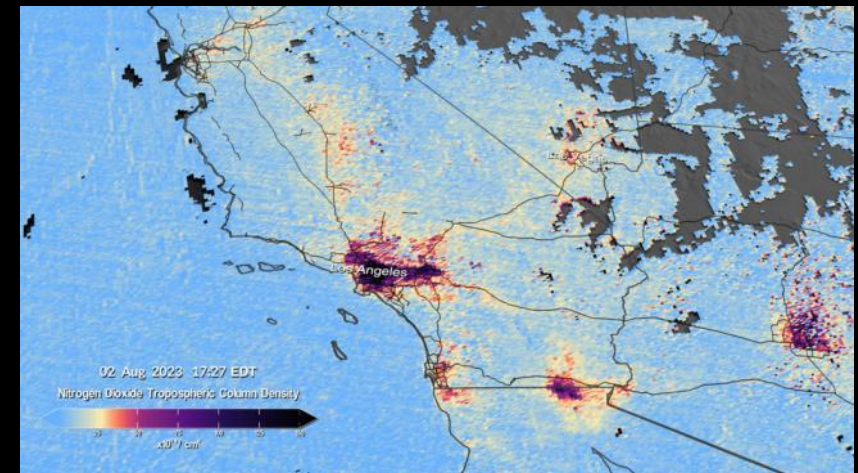
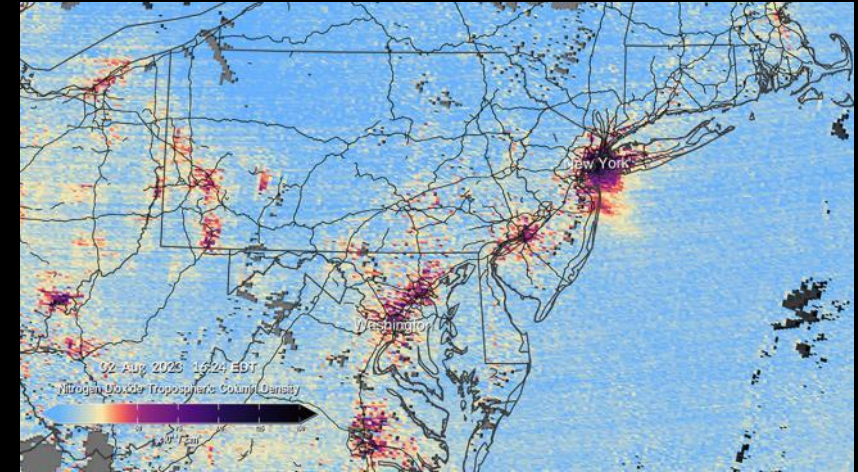
NOAA
National Environmental Satellite,
Data, and Information Service

Pam Sullivan, Director of GEO Observations

On May 1st, NOAA/NASA announced the selection of BAE Systems to develop the GeoXO ACX instrument!

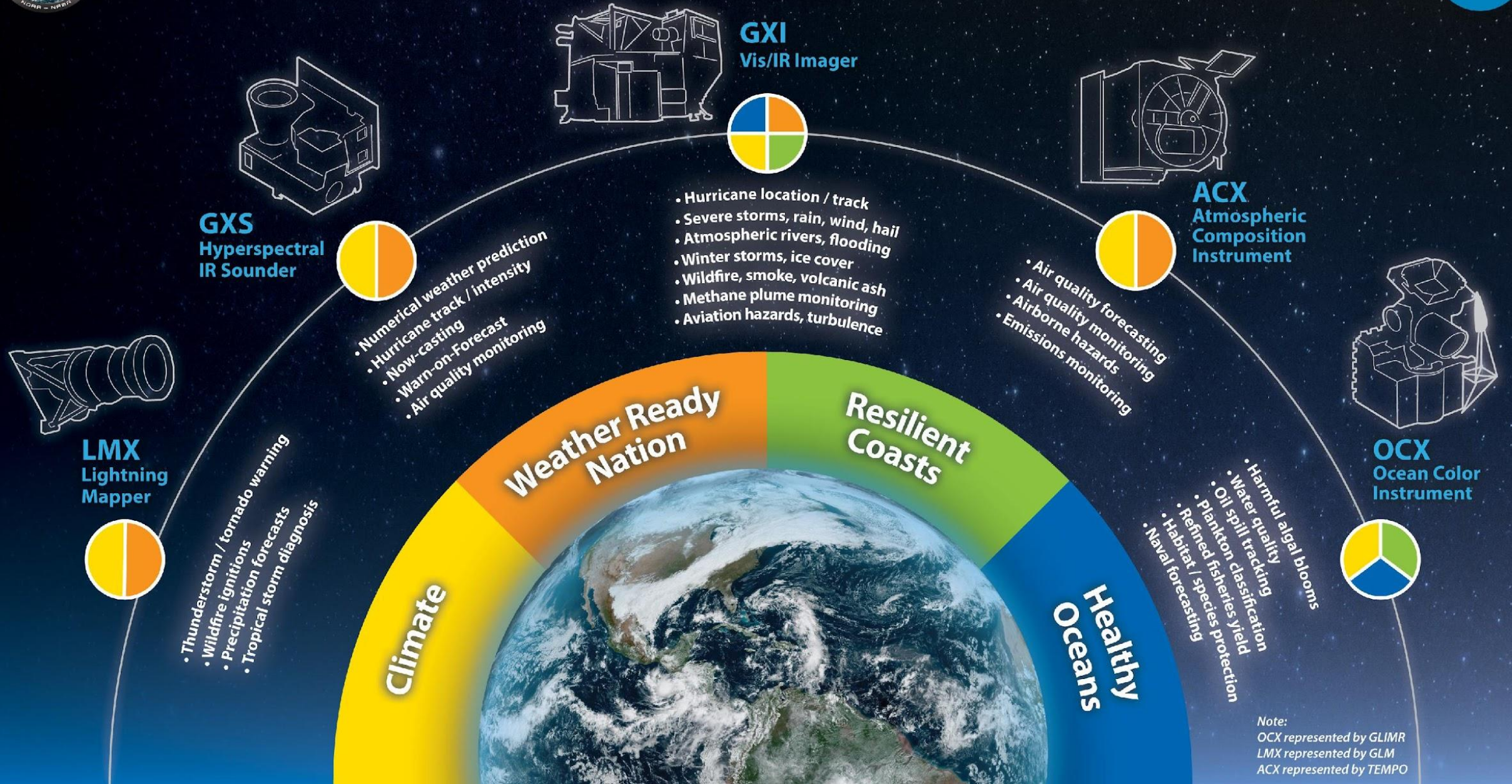
ACX performance will be similar to TEMPO, with design updates made to improve lifetime, reliability, etc. for a 10 year operational mission.

Contract award celebration May 16!





Geostationary Extended Observations



GXS Hyperspectral IR Sounder



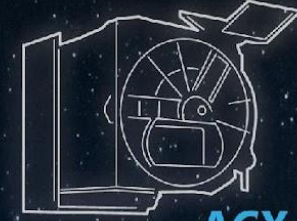
- Numerical weather prediction
- Hurricane track / intensity
- Now-casting
- Warn-on-Forecast
- Air quality monitoring



GXI Vis/IR Imager



- Hurricane location / track
- Severe storms, rain, wind, hail
- Atmospheric rivers, flooding
- Winter storms, ice cover
- Wildfire, smoke, volcanic ash
- Methane plume monitoring
- Aviation hazards, turbulence



ACX Atmospheric Composition Instrument



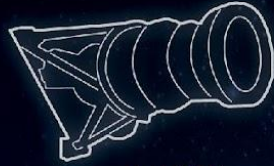
- Air quality forecasting
- Air quality monitoring
- Airborne hazards
- Emissions monitoring



OCX Ocean Color Instrument



- Harmful algal blooms
- Water quality
- Oil spill tracking
- Plankton classification
- Refined fisheries yield
- Habitat / species protection
- Naval forecasting



LMX Lightning Mapper



- Thunderstorm / tornado warning
- Wildfire ignitions
- Precipitation forecasts
- Tropical storm diagnosis

Climate

Weather Ready Nation

Resilient Coasts

Healthy Oceans

Note:
 OCX represented by GLIMR
 LMX represented by GLM
 ACX represented by TEMPO



Geostationary Extended Observations

To be developed by BAE Systems



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Hyperspectral IR Sounder



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Vis/IR Imager



To be developed by L3Harris

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ACX
Atmospheric Composition Instrument



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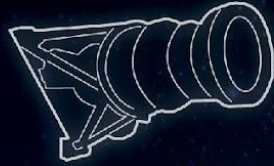
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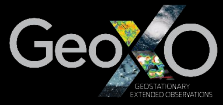
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GeoXO Update

- Program

- Replanning to fit within FY24 enacted budget (\$285M lower than MS2 baseline \$417M)
 - No impact to launch dates expected, but costs will increase due to deferrals
 - Preparing PPBE budget submittal assuming FY25 Presidents Budget level of \$798M
- Continuing program awareness and advocacy efforts with Congress and external user groups
 - Planning GeoXO 'all interested' briefings to Hill this summer
 - Planning outreach to re-engage with users that participated in 2020 GeoXO workshops
- Preparing for Program Mission Definition Review in December 2024 and KDP-B in February 2025

- Flight Project

- GXI planning PDR in November 2024
- GXS kickoff meeting held with BAE Systems in March; planning SRR/SDR in July

- Partnership interactions

- Supporting NESDIS International Affairs Division in briefing and letter to WMO Region 3 & 4 users on GeoXO data distribution plans, including NCCF cloud delivery and RF communication plans



Key Near Term Milestones

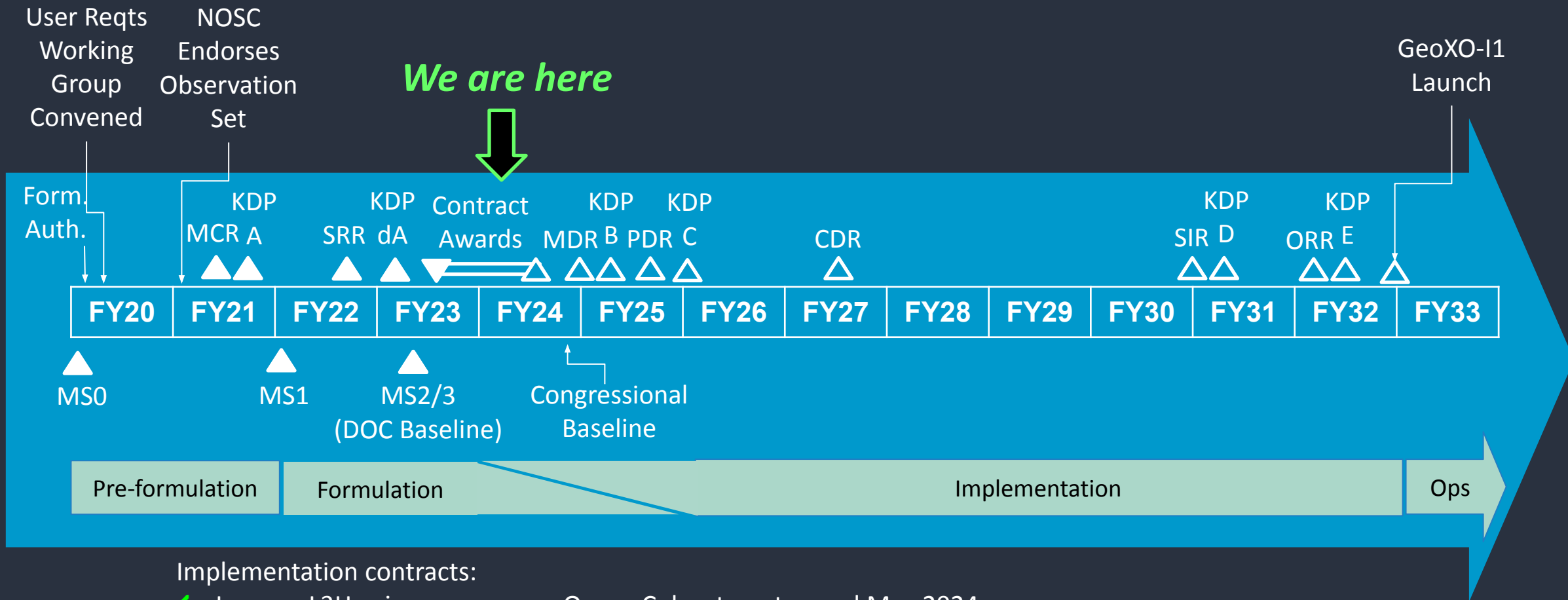
(Kickoff and SRR dates assume no further protests)

Element	Actual/Target Announcement	Actual/Target Kickoff	Actual/Target SRR/SDR
GXI	✓ Mar 2023	✓ Apr 2023	✓ Aug 2023
GXS	✓ Sep 2023	✓ Mar 2024	Jul 2024
LMX	Aug 2024	Oct 2024	Mar 2025
OCX	May 2024	Jul 2024	Nov/Dec 2024
ACX	✓ May 2024	Jul 2024	Sep 2024
Spacecraft	June 2024	Jul 2024	Oct 2024

MDR/KDP-B Event	Target Date
MDR Dry Run	Oct 29-30
MDR Review Readiness	Nov 8
MDR Dress Rehearsal	Nov 12-14
MDR Review	Dec 10-12
KDP-B APMC	Feb 19



GeoXO Timeline



Implementation contracts:

- ✓ Imager: L3Harris - Ocean Color: target award May 2024
- ✓ Sounder: BAE Systems - Spacecraft: target award June 2024
- ✓ Atmo. Comp.: BAE Systems - Lightning Mapper: target award August 2024

