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## NOAA's Contribution to the Geo-Ring: The New Geostationary Extended Observations (GeoXO) Atmospheric Composition Capability

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NOAA's Geostationary Extended Observations (GeoXO) satellite system is the ground-breaking mission that will advance Earth observations from geostationary orbit. GeoXO will supply vital information to address major environmental challenges of the future in support of U.S. weather, ocean and climate operations. The GeoXO mission will continue and significantly expand observations provided by the GOES-R Series. GeoXO will bring new capabilities demonstrated by NASA, ESA, and KARI into an operational environment to address emerging environmental issues and challenges that threaten human health and the economy.

The recommended observations on GeoXO include hyperspectral observations in the ultraviolet, visible, and infrared, visible/infrared imaging during day and night time, and lightning mapping. The combination of these observing systems will provide an exciting new ability to continuously measure trace gases and aerosols over much of North America. Potential GeoXO atmospheric composition products offer new opportunities for understanding and predicting air quality, weather, climate, and their linkages.

This presentation will highlight GeoXO's recommended atmospheric composition capabilities and describe NOAA's efforts to engage the user community in planning for the applications of these future datasets.