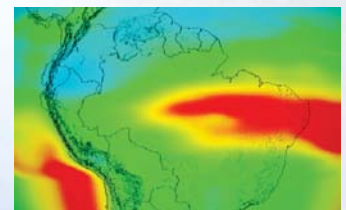
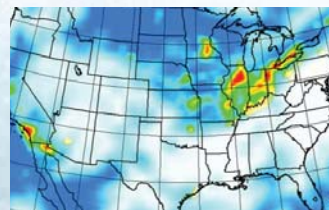
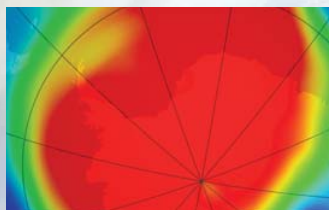
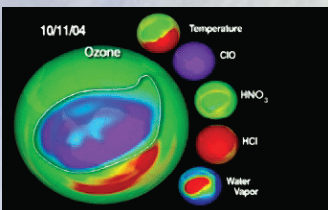


# Aura

*Earth Observing System*



# Aura

## Earth Observing System

### What's good? What's safe? What's harmful?

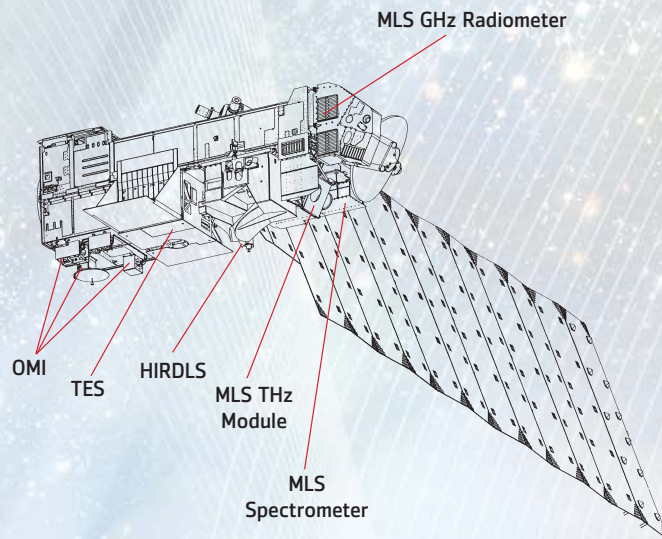
Earth's climate is regulated, in part, by atmospheric chemicals. The complex interactions of these gases, both naturally occurring or human-made, may be contributing to global change. Until we know the long-term effects of industrial emissions and such natural phenomena as volcanic eruptions, we can only guess their impact. We may presume damage where there is none; we may overlook subtle hazards.

The Aura Earth Observing System satellite helps clear the air of guesswork. It hosts a suite of scientific instruments designed to make the most comprehensive measurements ever undertaken of trace gases in the environment that surrounds earth. The satellite's orbit allows measurements to be taken at all latitudes; instruments make continuous scans at altitudes ranging from the stratosphere down through the troposphere.

Data from the satellite's instruments focuses on such timely issues as the effects of increased industrialization in developing nations, large-scale biomass burning, ozone depletion and El Nino conditions. Aura also maps trace gases resulting from organic decay, lightning and volcanic eruptions, and study the chemical dynamics of the atmosphere over all geographic areas and seasonal climates. Their findings give scientists data needed to identify and assess the roots of global change.

Aura is based on Northrop Grumman's T330 bus, the same platform hosting NASA's Aqua mission. The versatile spacecraft is modular with common subsystems and easily adapted to the mission-specific needs of Aura, Aqua and future earth observing missions.

- **Size:**  
 Stowed 8.8 ft h (2.68 m) by 7.6 ft w (2.34 m) by 22.5 ft l (6.85 m)  
 Deployed 15.4 ft h (4.7 m) by 55.9 ft w (17.03 m) by 22.5 ft l (6.85 m)
- **Weight:**  
 Spacecraft 3,896 lbs (1,767 kg)  
 Instruments 3,646 lbs (1,200 kg)
- **Power:** 4,440 W EOL
- **Telemetry:** S-band
- **Orbit:** 438 mi (705 km) polar, sun-synchronous
- **Launch vehicle:** Delta 7920



### Instruments:

MLS	Microwave Limb Sounder	NASA / Jet Propulsion Laboratory
TES	Tropospheric Emission Spectrometer	NASA / Jet Propulsion Laboratory
HIRDLS	High Resolution Dynamics Limb Sounder	NASA, RAL / University of Colorado - Boulder, Oxford University
OMI	Ozone Monitoring Instrument	NIVR, FMI, NASA / Fokker Space, TNO-TPD, Finavitec