

Imagine...

Knowing and forecasting
air quality like we know
and forecast the weather



Earth as seen from lunar orbit, Apollo 8, December 24, 1968. NASA.



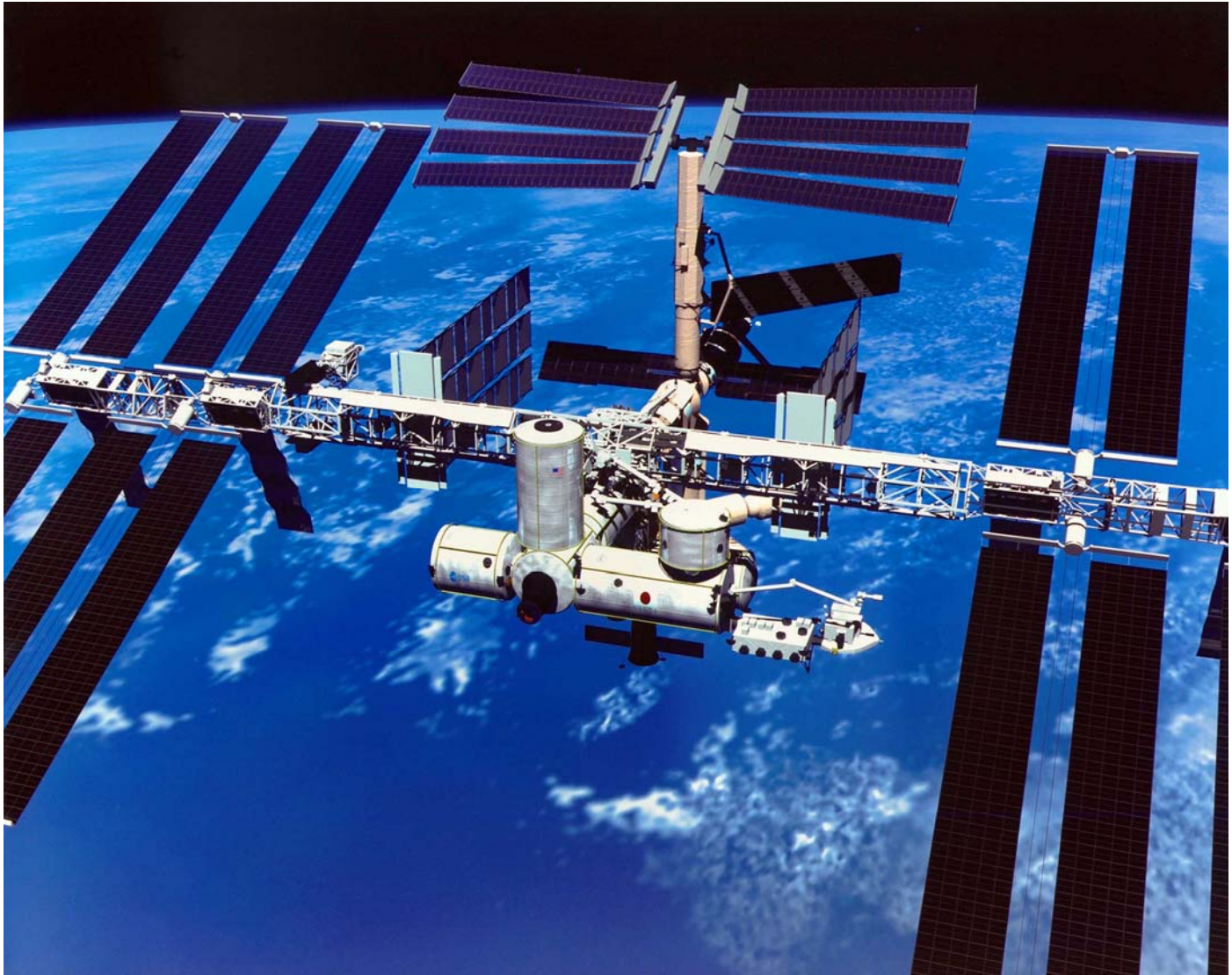
Earth as seen by Apollo 17, December 7, 1972. NASA.

Visions of “Spaceship Earth”

- Adlai Stevenson, Farewell Address to the UN, 1965
- Ken Boulding, essay, 1965
- Buckminster Fuller, “Operating Manual for Spaceship Earth”, 1969
- Paul Ehrlich – popping rivets from a plane, 1981



Biosphere 2, 30 miles north of Tucson, Arizona, initial mission 1991.



The International Space Station, NASA

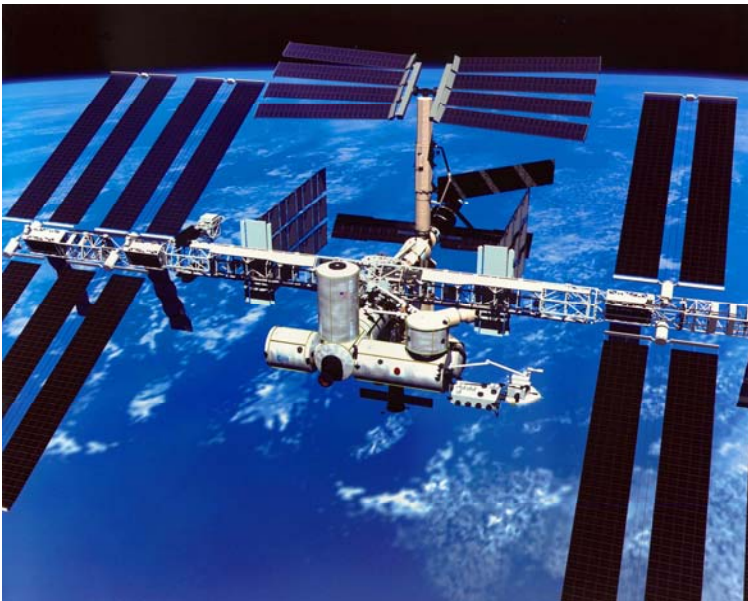
Monitoring – how many sensors?



Biosphere 2 –
over 750



Shuttle Atlantis –
over 1000



ISS –
over 2000

Genes –
Thousands on a chip



National Oceanic and Atmospheric Administration's National Weather Service

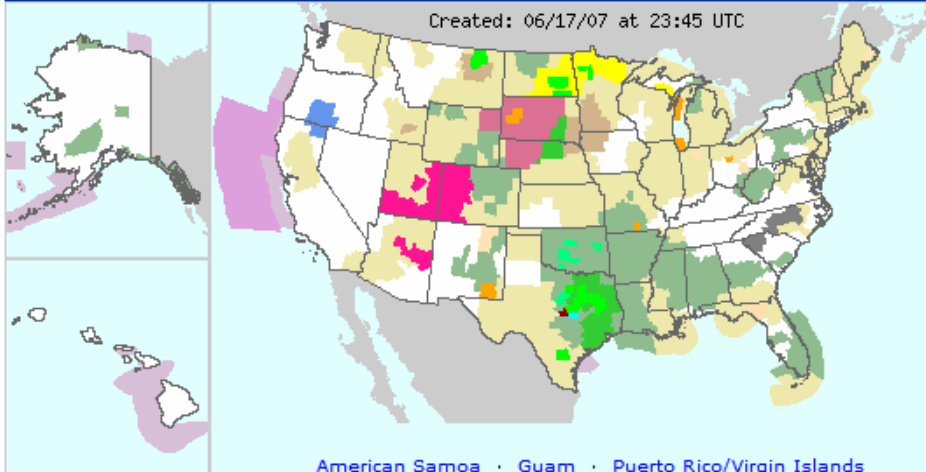
weather.gov



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...NOAA Predicts Above Normal 2007 Atlantic Hurricane Season...
 Experts at the NOAA Climate Prediction Center are projecting a 75 percent chance that the Atlantic Hurricane Season will be above normal this year - showing the ongoing active hurricane era remains strong.
[Details...](#)



- Tornado Warning
- Severe Weather Statement
- Air Stagnation Advisory
- Severe Thunderstorm
- Gale Warning
- Fire Weather Watch

Monitoring air quality like we monitor the weather

- Current observations
 - *In situ*
 - Satellite (OMI NO₂ – Doppler radar for NO₂)
- Forecasts
 - What do the models say?
- Create a portfolio of products analogous to Weather.gov

A cross-agency U.S. Government Web site. [List of AIRNow partner agencies](#) [About AIRNow](#) | [Contact Us](#) | [FAQs](#) | Search:



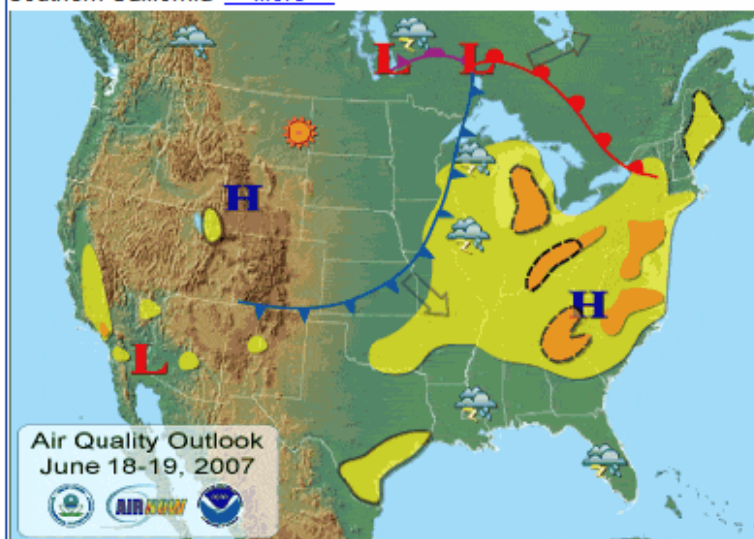
Quality of Air Means Quality of Life

National Overview

June 17th, 2007

National Outlook for June 18-19

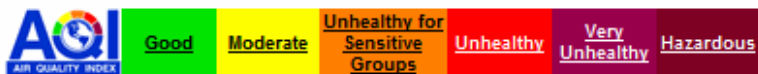
Unhealthy for Sensitive Groups AQI levels in the Eastern U.S. and southern California [— More —](#)



Air Quality Outlook
June 18-19, 2007



[National Forecast](#) | [Ozone Now](#) | [Particles Now](#) | [Map Center](#)



Local Air Quality Conditions and Forecasts

Air Quality News

June 15 - Ozone Health Advisory issued for Sequoia / Kings Canyon National Park, CA

[— More —](#)

[— More News —](#)

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Air Quality Basics

Air Quality Index
Ozone
Particles
UV

The AQI for:

Health Providers
Older Adults
Weathercasters

Key Topics

Your Health
Smoke From Fires
International Air Quality

The Learning Center

Kids (K-10)
Students

E-mail Notification

Sign-up for e-mail, cell phone or pager
EnviroFlash air quality notices

Historical Information

Air Compare
Compare Air Quality of U.S. Cities

Good Up High, Bad Nearby



EnviroFlash product excerpt

Air Quality Forecast: [Washington DC Metro area]

Sunday, June 17

Ozone - Moderate - YELLOW (100 AQI)

Particle Pollution(2.5 microns) - Moderate - YELLOW (60 AQI)

Monday, June 18

Ozone - Unhealthy for Sensitive Groups - ORANGE (120 AQI)

Particle Pollution(2.5 microns) - Moderate - YELLOW (76 AQI)

Tuesday, June 19

Ozone - Unhealthy for Sensitive Groups - ORANGE

Particle Pollution(2.5 microns) - Moderate - YELLOW

Wednesday, June 20

Ozone - Moderate - YELLOW

Particle Pollution(2.5 microns) - Moderate - YELLOW



National Weather Service Radar Image

National Mosaic

weather.gov



Go to: Enhanced Version

Local weather forecast by "City, St"

- Sectors**
- Northern U.S. Loop
 - Pac. Northwest Loop
 - Nrn. Rockies Loop
 - Upper Miss. Vly. Loop
 - Great Lakes Loop
 - Northeast Loop

- Southern U.S.**
- Pac. Southwest Loop
 - Srn. Rockies Loop
 - Southern Plains Loop
 - Srn. Miss. Vly. Loop
 - Southeast Loop

- U.S. Views**
- Reflectivity:**
- National Loop
 - Alaska Loop
 - Hawaii Loop
 - Guam Loop
 - Puerto Rico Loop

National Map

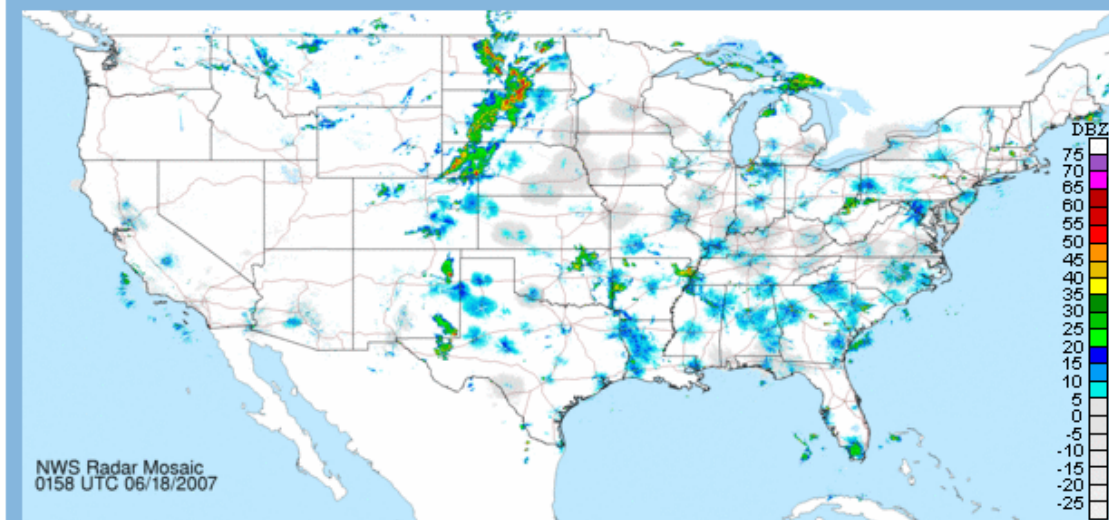
Go!

Additional Info:

Base Reflectivity

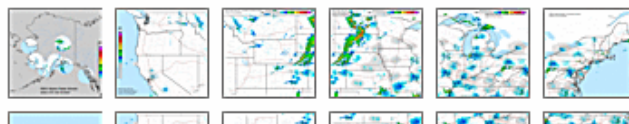
[Full resolution version](#) (3400x1700 pixels - 220k)

Time of image: 0208 UTC 06/18/2007



Go to: Loop of this Image

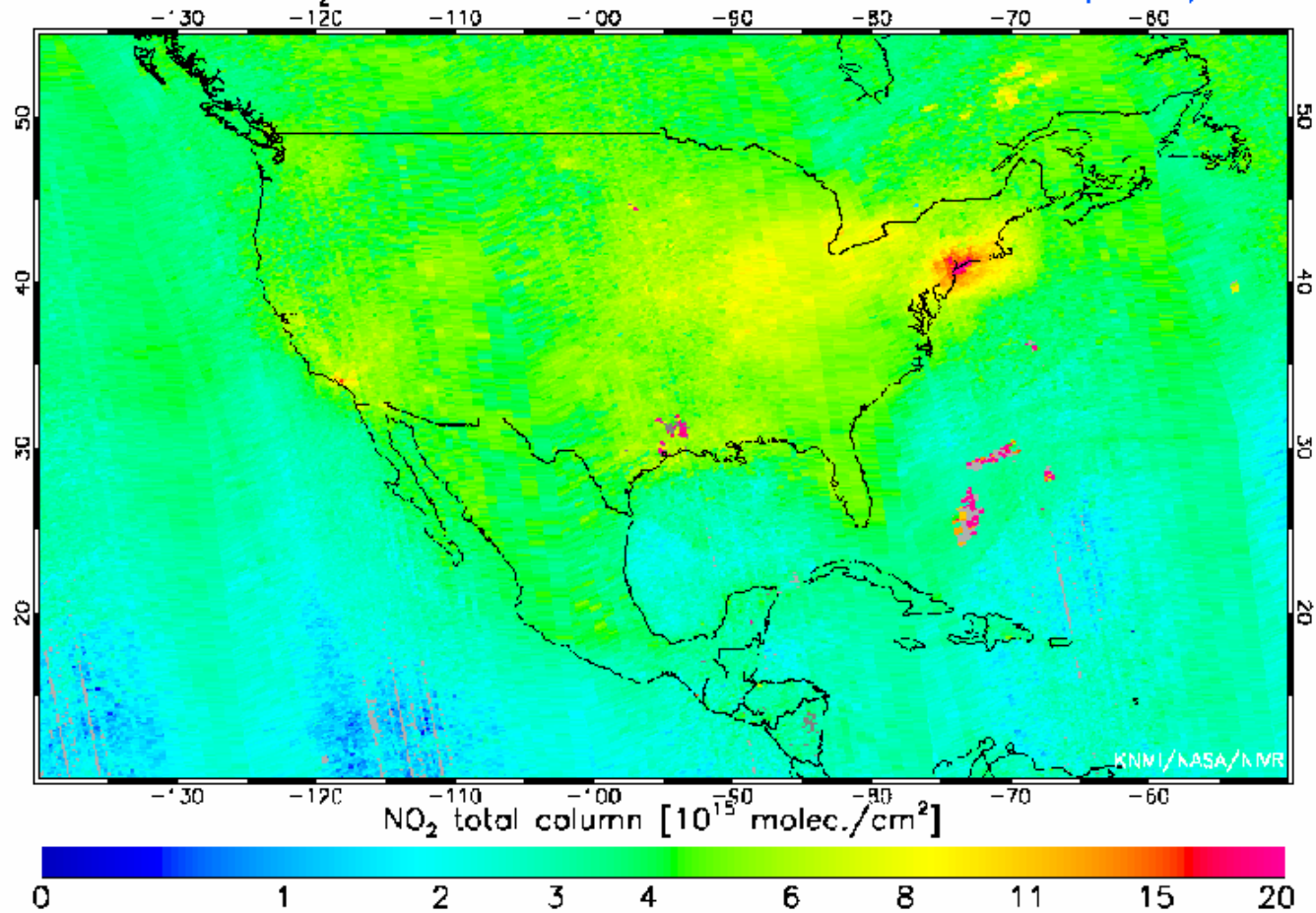
National Radar Mosaic Sectors



National Weather Service

OMI mean total NO₂ 16 Jun 2007

KNMI/NASA/NIVR





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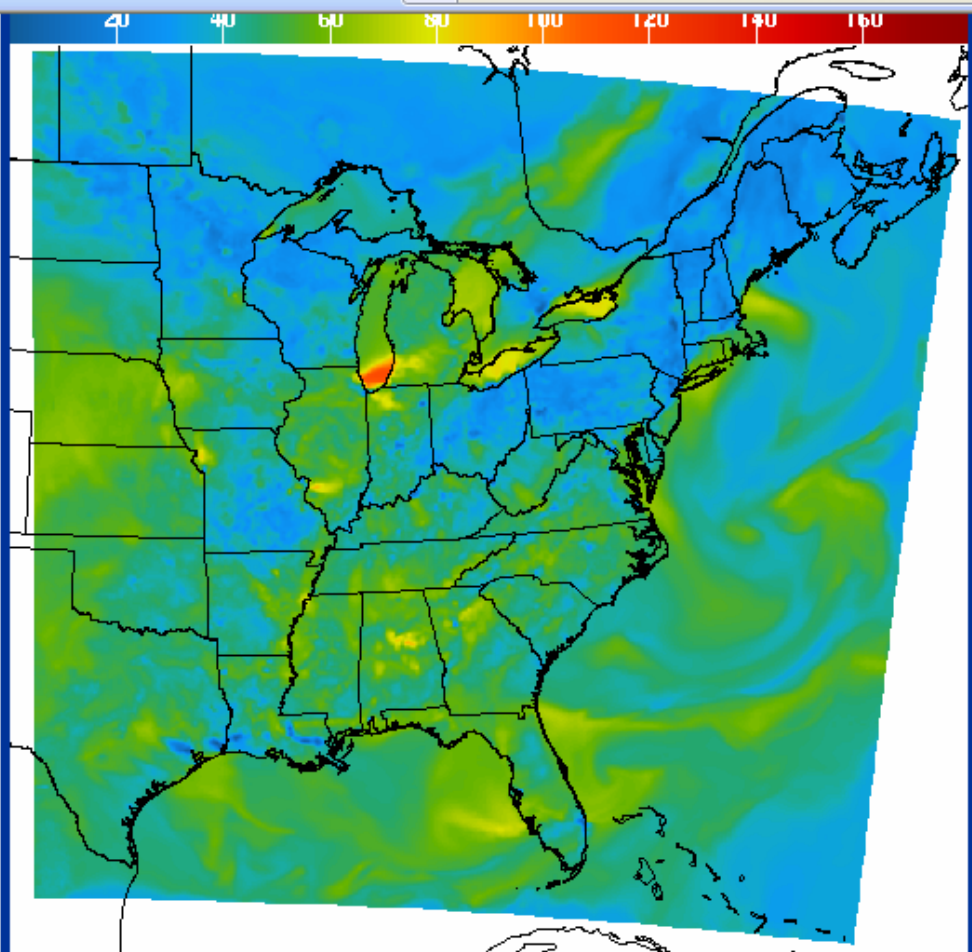
knmi omi



NOAA's National Weather Service/Environmental Prot...

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1Hr Avg Ozone Concentration(PPB) Ending Sat Jun 16 2007 9PM EDT
(Sun Jun 17 2007 01Z)



National Digital Guidance Database

