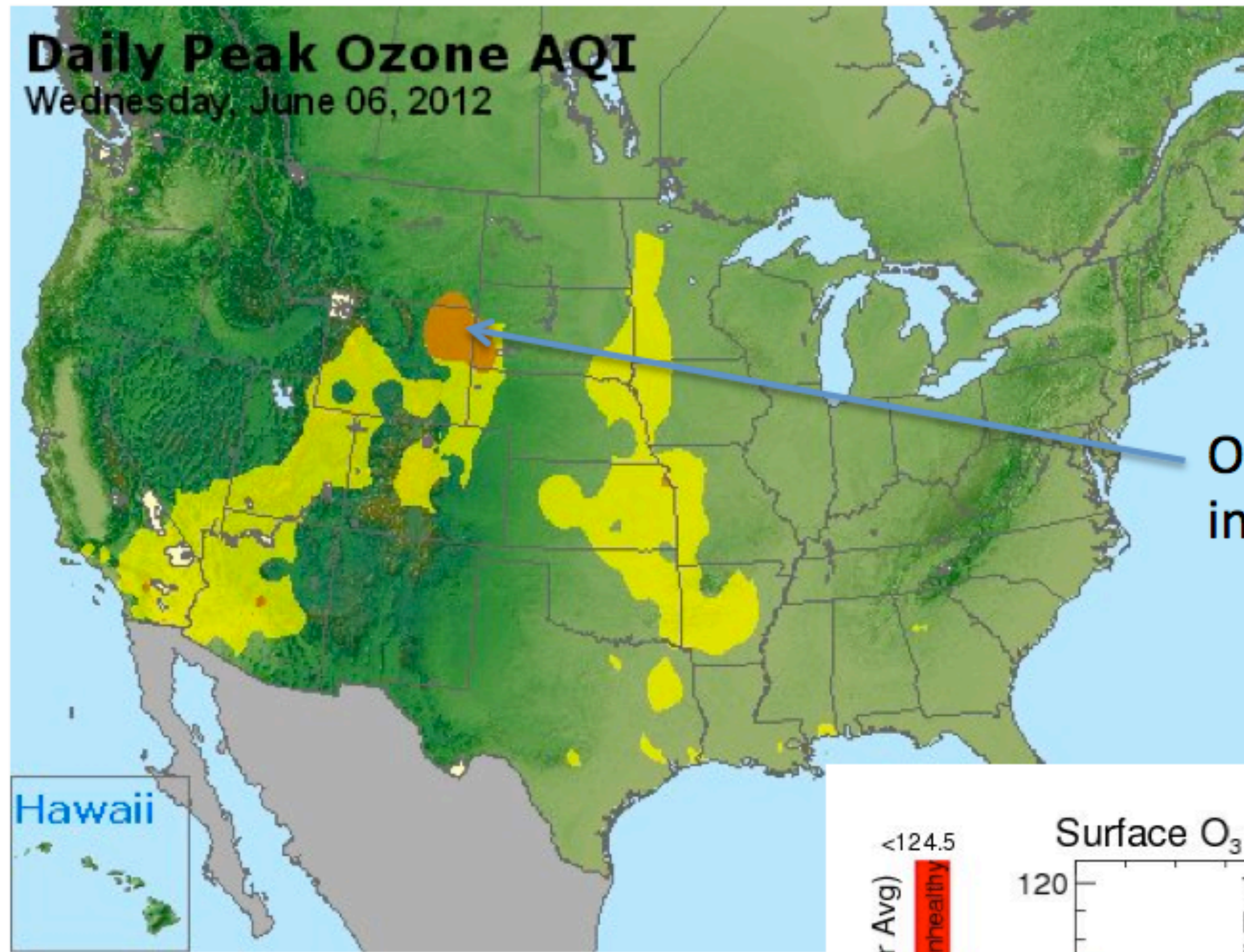


# IDEA-I: A Globally Configurable Software Package in Support of Air Quality Forecasts; High Aerosol Concentrations and Stratospheric Intrusions of Ozone



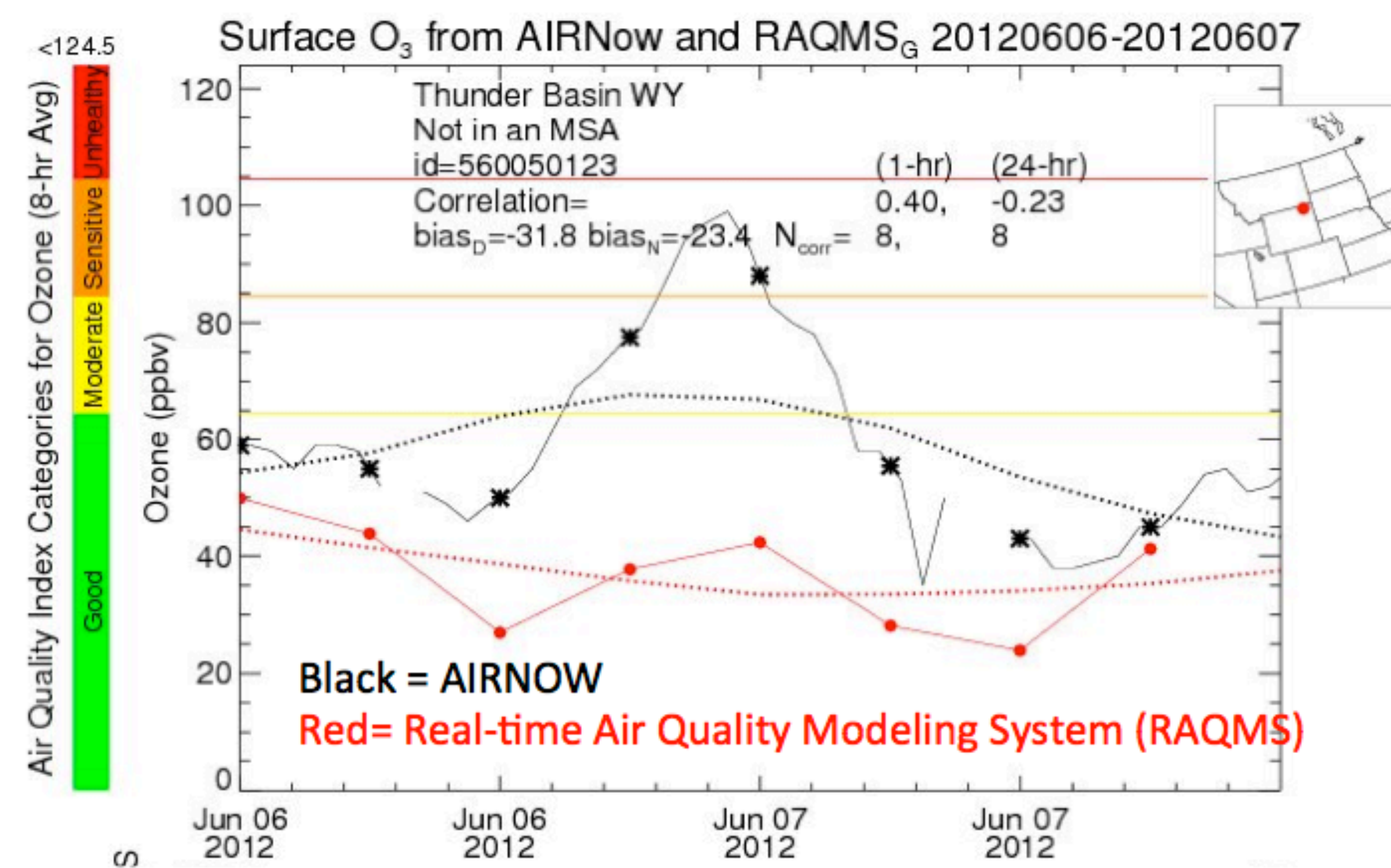
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 Cooperative Institute for Meteorological Satellite Studies (CIMSS), University of Wisconsin-Madison  
 \*NOAA/NESDIS



<http://airnow.gov>

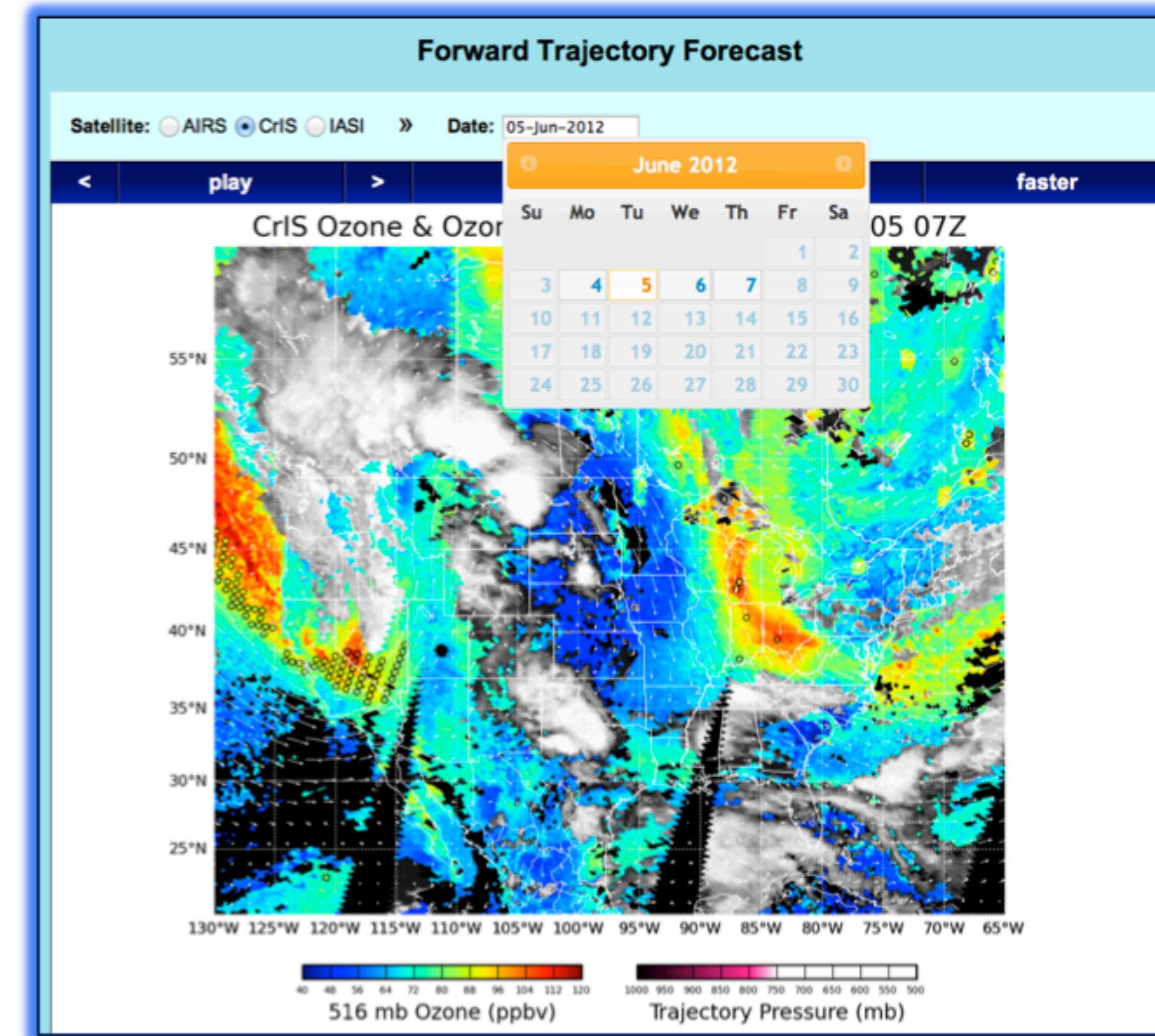
June 6

Ozone in "sensitive" range (85-105 ppbv) in NE corner of Wyoming. Why?



## MOTIVATION

## Final Comments



Leveraged the development of IDEA-I for high aerosol event forward trajectories to apply to stratospheric inclusions (SI) of high ozone concentrations.

Ozone profile retrievals are/will be part of IMAPP/CSPP

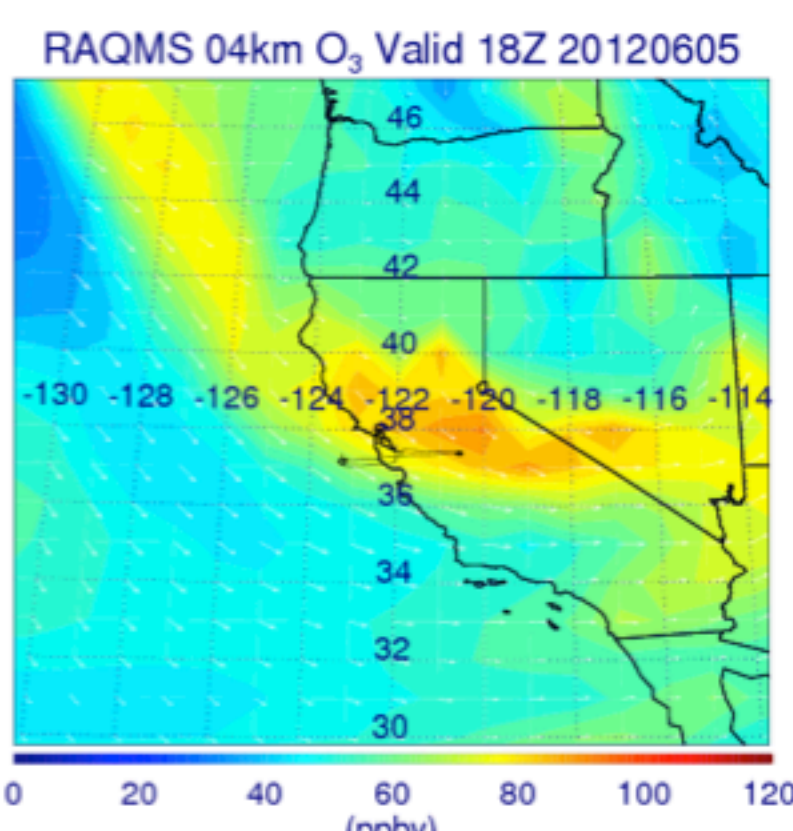
Updated web software for multi-tab display (which means one could configure for night/day, or by sensor, or by product, ...)

Reducing the memory footprint (for this application it climbed to 1.5Gb+ but code refactor got us to ~850 Mb)

For next release (summer 2013): Some validation, global coverage still works, sensor and product in netCDF filenames, add VIIRS EDR aerosol product, add selection criteria rules and image resolution options. Onwards? High CO trajectories.



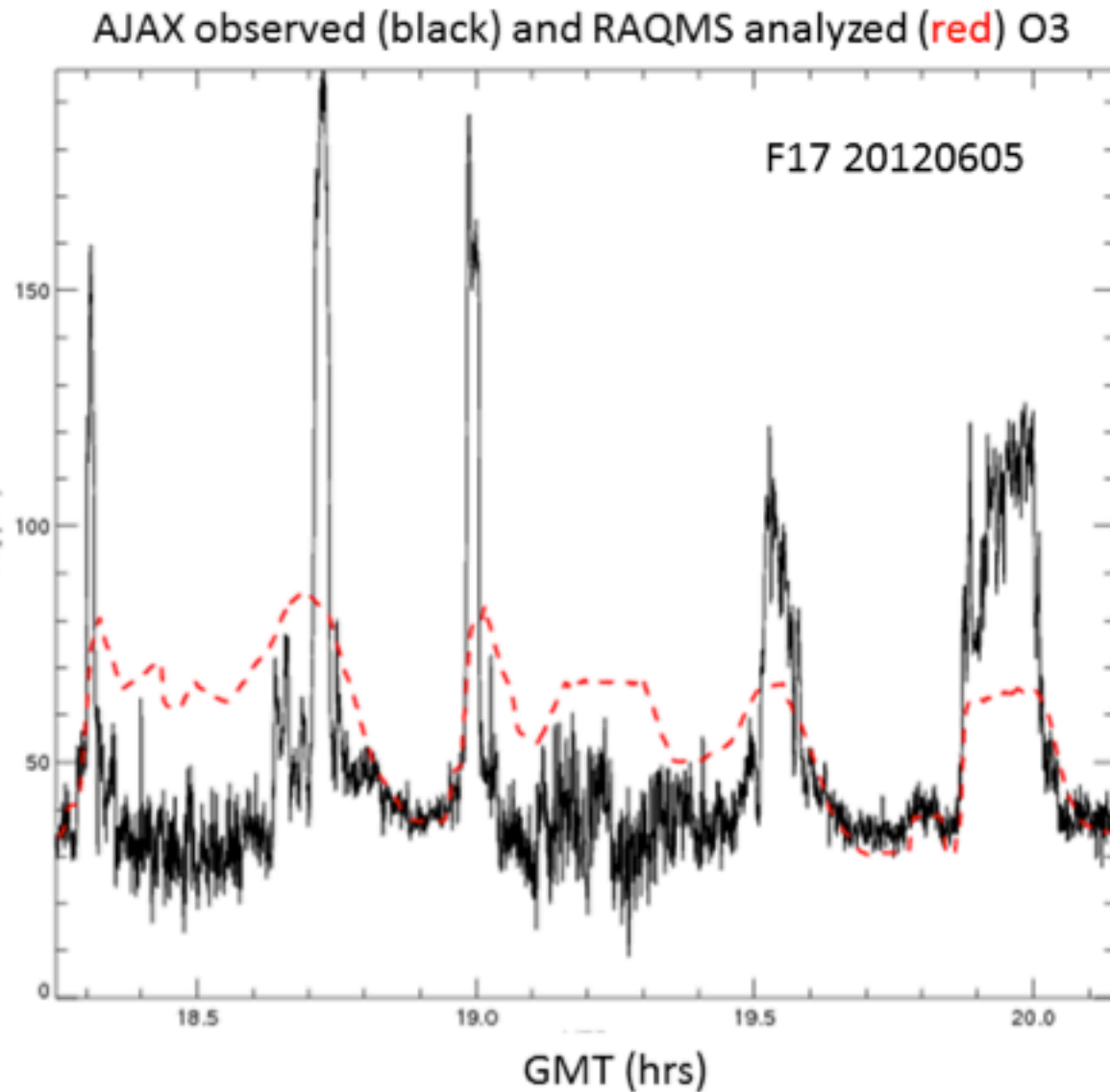
<http://raqms.ssec.wisc.edu/>



June 5 (day before)

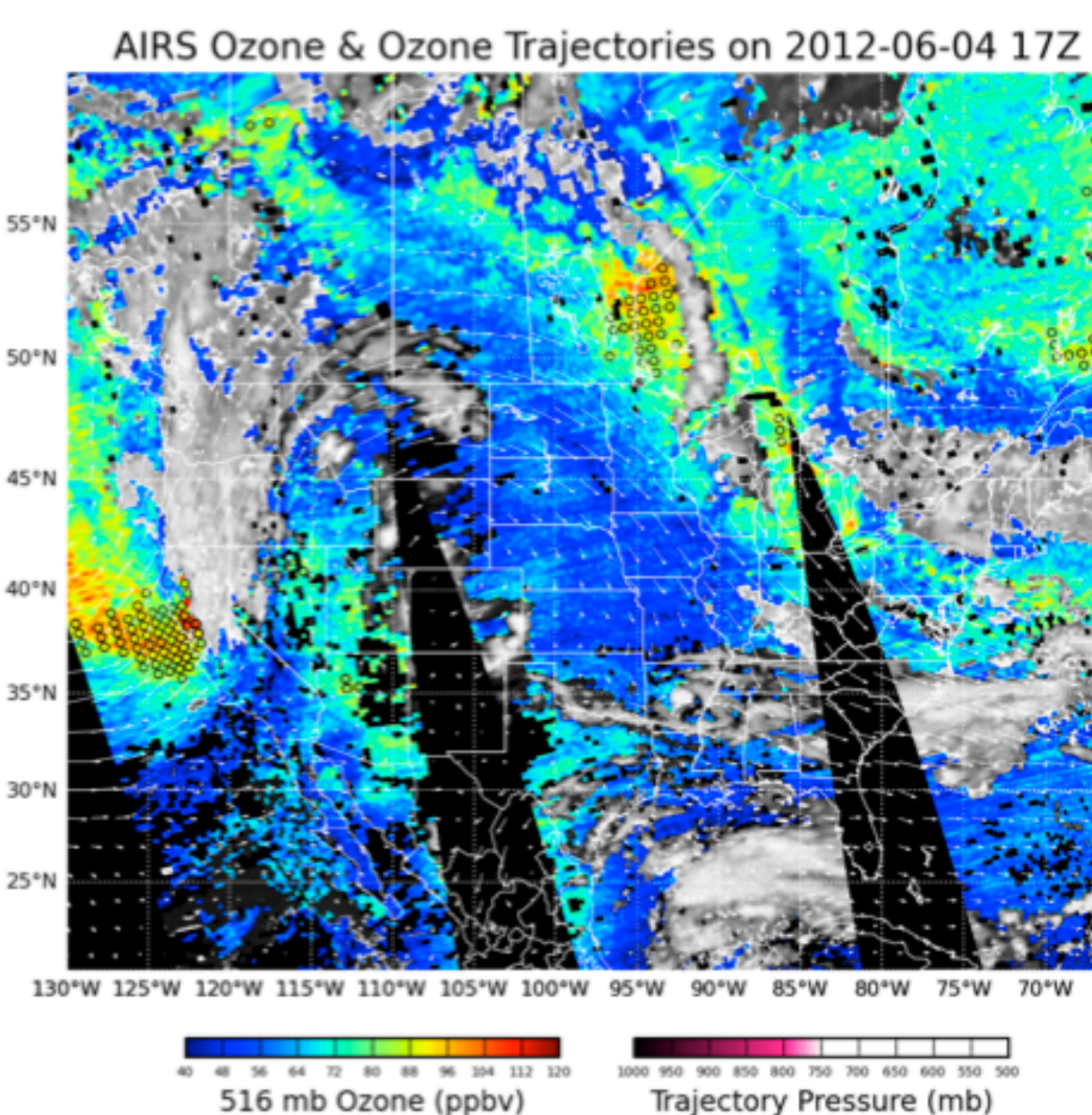
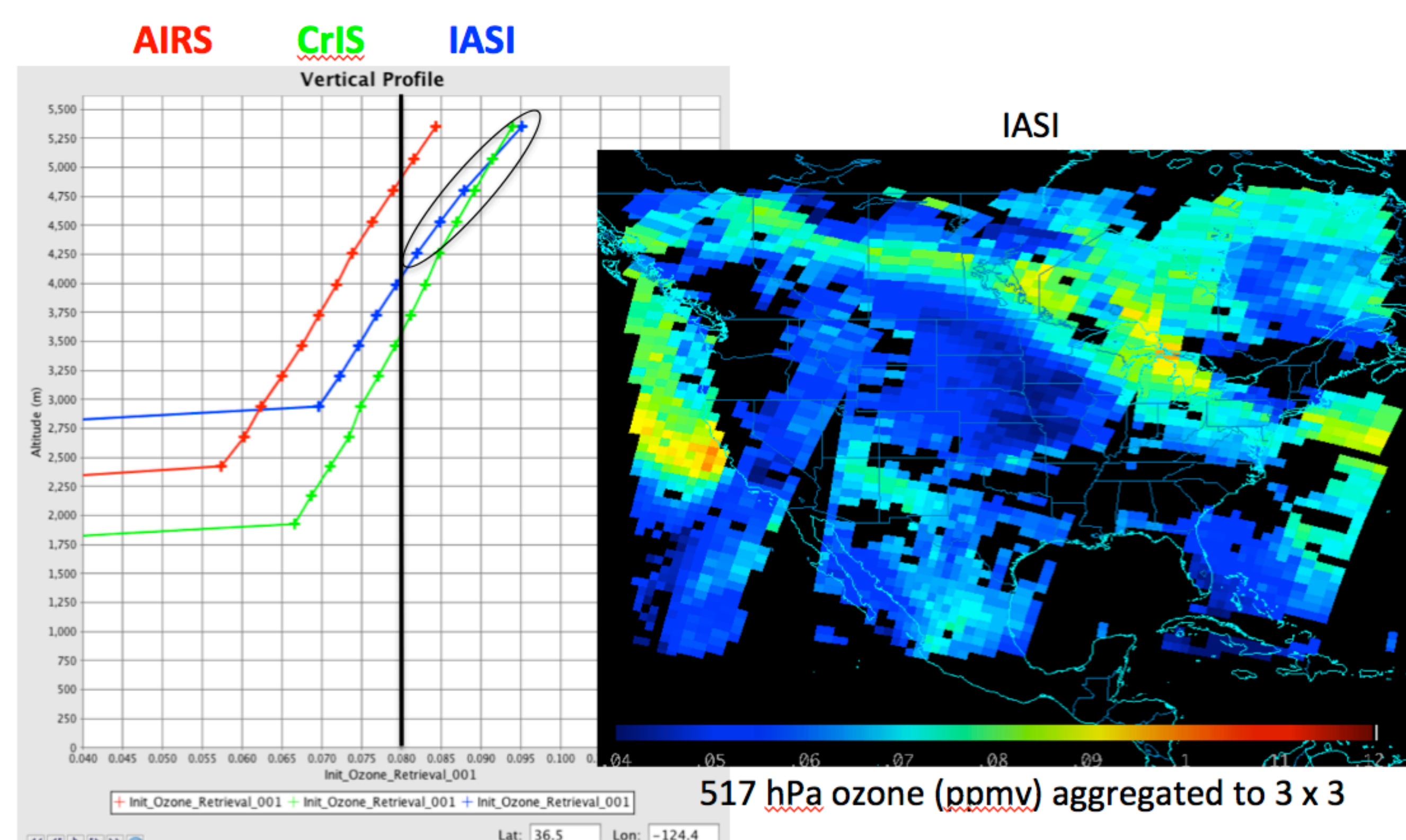


[http://geo.arc.nasa.gov/ajax/ajax\\_index.html](http://geo.arc.nasa.gov/ajax/ajax_index.html)



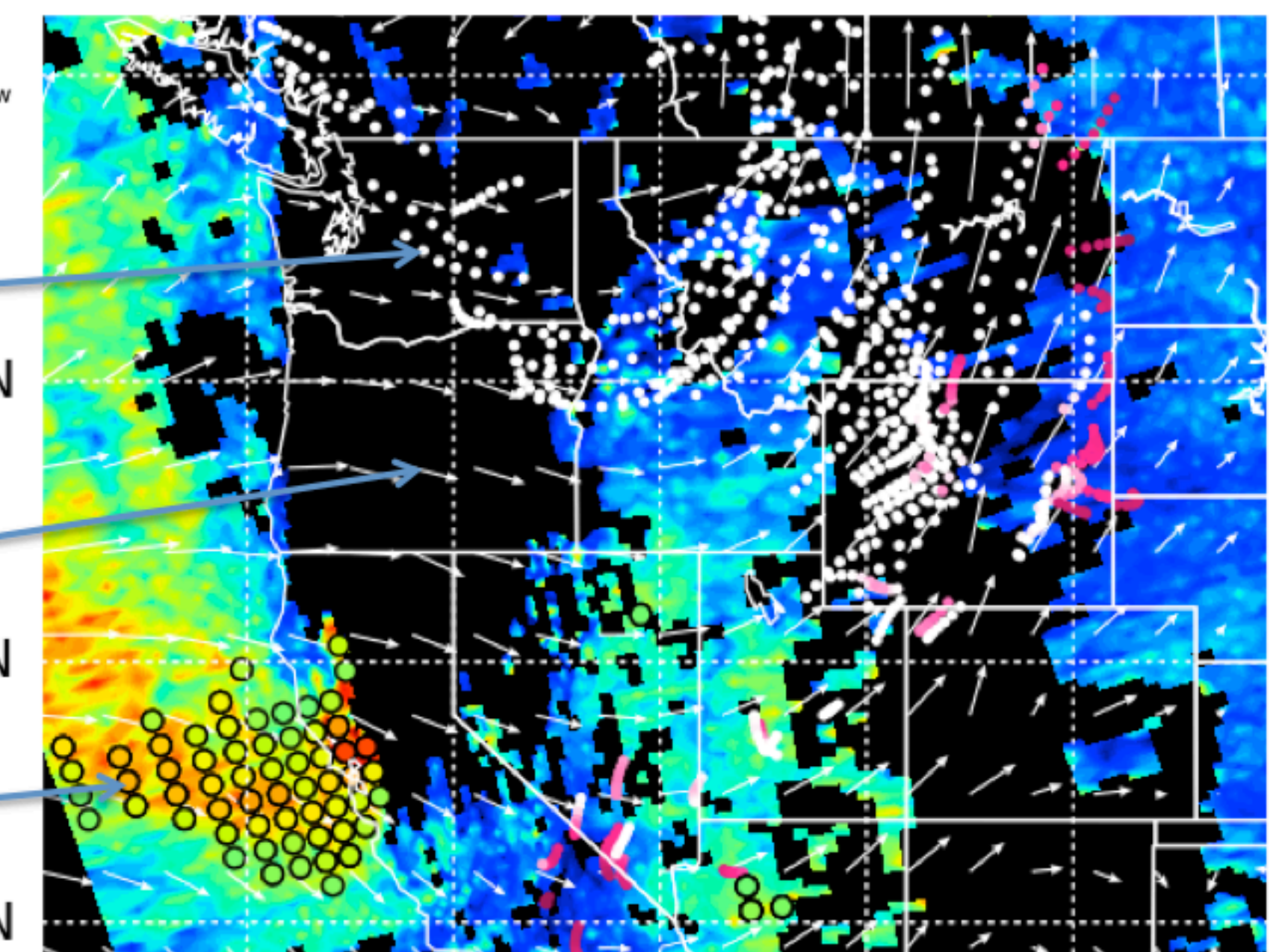
RAQMS 4km O3 (ppbv, upper left panel) map and 122°W cross section (ppbv, lower left panel) on 5 June 2012 at 1800 UTC. The aircraft flight track is shown in black. Note the tropopause fold indicated by the tongue of high ozone extending from the lower stratosphere into the mid-troposphere.

Initialization points from application of thresholds to aggregates



AIRS trajectory forecast showing descent into WY

Last frame of web animation @ 2012-06-07 00Z



Each "worm" is 6 hours of air parcel history

500 hPa GFS winds

Initialization points

45°N

40°N

35°N