UPDATES: OCO2 DATA COVERAGE & GEOS-5 FORECAST FIELDS

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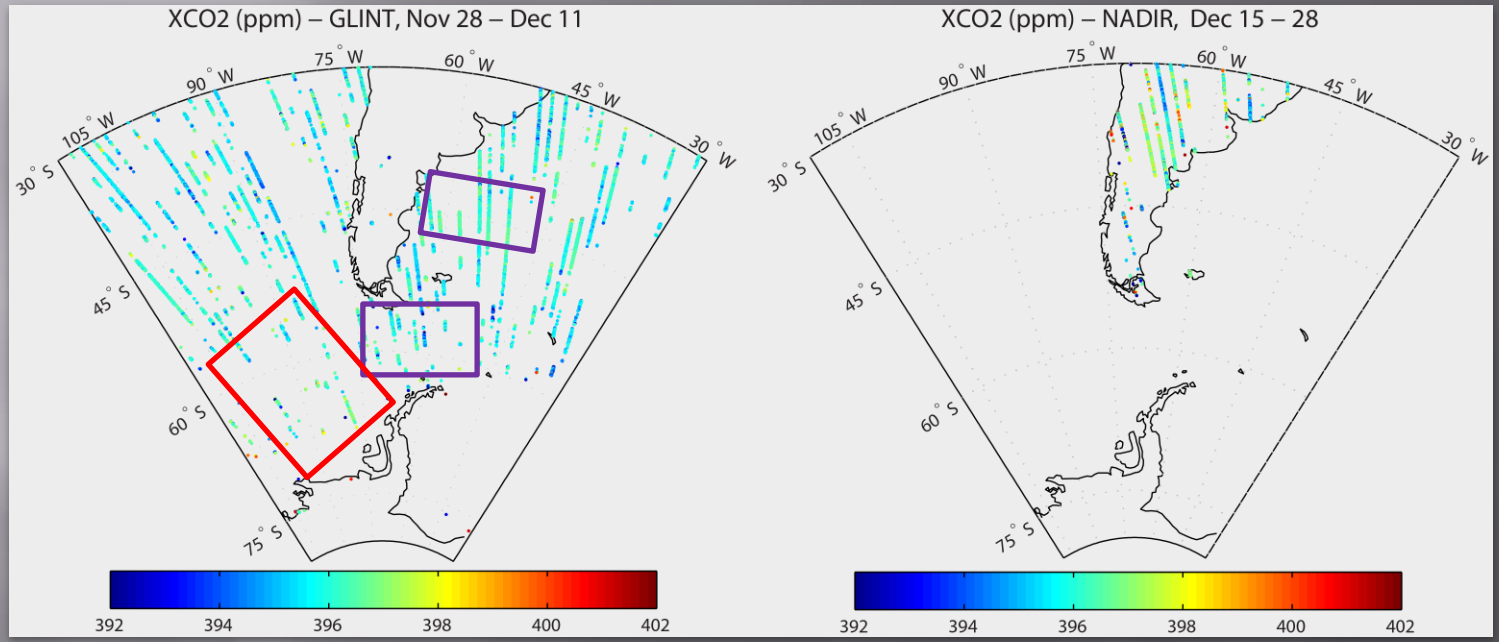
ORCAS STM, March 12-13

OCO2 Coverage over ORCAS Domain



- Snapshot of current L2 data – quality flag set to highest, missing glint data over land
- More importantly, expected change in operational nadir/glint strategy (see next slide)

OCO2 Coverage over ORCAS Domain

- Current Strategy
  - 16-day nadir, followed by 16-day glint
- ‘Proposed’ future strategy
  - Alternate nadir and glint orbits every day, with a few purely water orbits (primarily in the Pacific) always taken in glint
  - Some ocean data every day, more flexibility (?) for field work
- Timeframe
  - Final decision to be made by mid-April
  - Expected implementation in April/May timeframe
  - If implemented, this strategy will overlap the ORCAS period

Source: Annmarie Eldering (JPL)

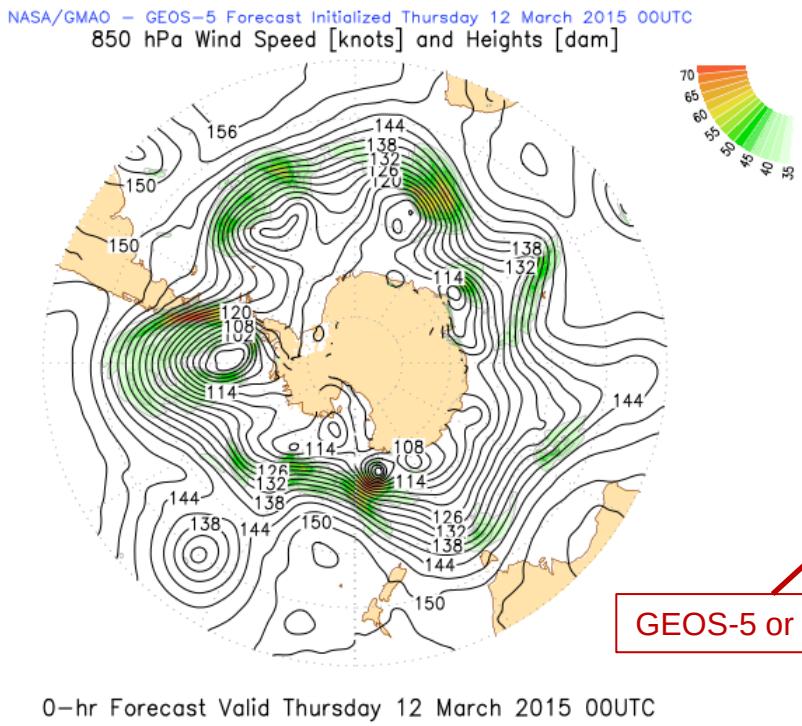
GEOS-5 Forecast

- NRT assimilation – analysis and forecasts available via ftp or OpenDAP
- Used in forecasting for NASA aircraft field campaigns
- Output Specs
  - nominal ~0.25° degree lon-lat horizontal grid
  - 42 pressure levels, or 72 model grid layers
  - 3D fields every 3 hours, 2D fields every hour
  - along with met. fields, capability to track trace gases, aerosols
- Quick visualization – interactive maps available at http://portal.nccs.nasa.gov/cgi-fp/fp_wx.cgi
  - Select ‘S.Polar’ region

GEOS-5 Visualization

GEOS-5 WxMap Visualizati ×

portal.nccs.nasa.gov/cgi-fp/fp_wx.cgi?region=sps&dtg=2015031200&prod=4spd&model=fp&level=850&tau=000&&region_old=sps&dtg_old=2015031200&prod_old=



GMAO Experimental Forecast Suite

Site Developers: *Arlindo da Silva / Joon Yoon / Austin Conaty, GSFC 610.1*
Responsible NASA Official: *Steven Pawson, GSFC 610.1*
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Site Updated: *2014-07-09*

Map Regions

Europe
Mid Atlantic
North America
N Polar
Pacific
Southeast Asia
S Polar
Tropical Atlantic

GMAO WxMaps

Forecast Initial Time

2015-Mar-12 00z

Forecast Lead Hour

000

Models	Levels	Variables
GEOS-5	200	Vorticity
GFS	300	Temperature
	500	Vert Velocity
	700	Humidity
	850	Wind Speed
		Precip & SLP

Animate

select forecast lead times

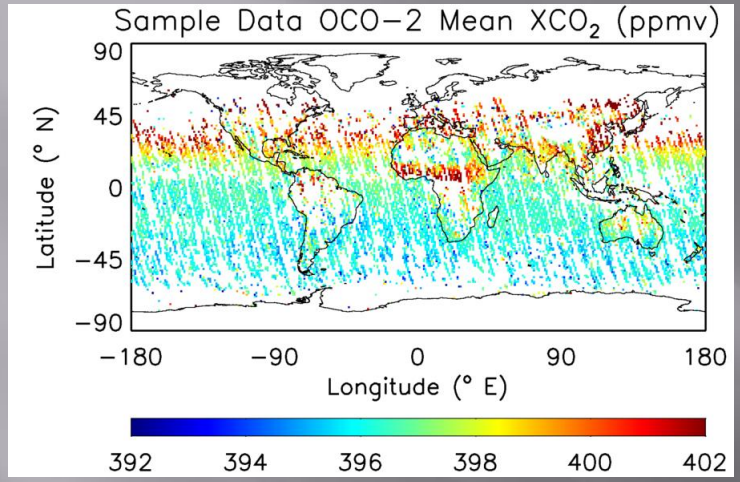
specific variables of interest

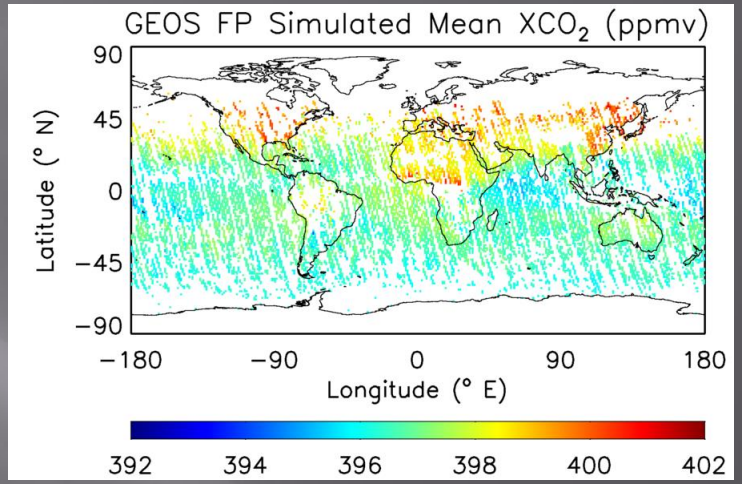
GEOS-5 or GFS

desired pressure levels

Backup: OCO2 L2 product evaluation

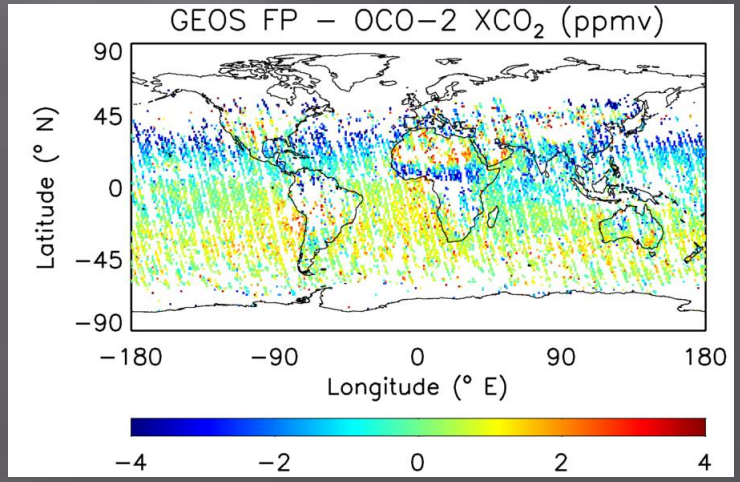
Observed





Simulated

- Model is not truth – but a useful check; obs. show greater spatial variability
- Largest disagreements in the Northern high-latitudes, Sahel region



Source: Lesley Ott (GMAO)