



ICAP Products and Discussion

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ICAP Website

<http://www.nrlmry.navy.mil/aerosol/icap.1066.php>

WHERE TO GO

Plan View Maps

ICAP Member Models (native)

ICAP Multi-model (merged stats)

eNAAPS-NAV (meteorology draws)

Regions by Column, Spec by Row

Timeseries at AERONET Sites

Active Participation Currently Required

Remain Private?

NRL Monterey NAAPS Forecast
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PRODUCTS	INDIVIDUAL ICAP MODELS - REGIONS									
	GLOBAL	NIOSSEA	BYZANTIUM	EASTASIA	SUBTROPATL	PACIFIC	CONUS	SATLANTIC	SIOAUS	NPOLAR
ALL MODELS	sulfate	sulfate	sulfate	sulfate	sulfate	sulfate	sulfate	sulfate	sulfate	sulfate
AOT	dust	dust	dust	dust	dust	dust	dust	dust	dust	dust
	smoke	smoke	smoke	smoke	smoke	smoke	smoke	smoke	smoke	smoke
	seasonal	seasonal	seasonal	seasonal	seasonal	seasonal	seasonal	seasonal	seasonal	seasonal
	total	total	total	total	total	total	total	total	total	total
MULTI-MODEL	sulfate	sulfate	sulfate	sulfate	sulfate	sulfate	sulfate	sulfate	sulfate	sulfate
ENSEMBLE	dust	dust	dust	dust	dust	dust	dust	dust	dust	dust
	smoke	smoke	smoke	smoke	smoke	smoke	smoke	smoke	smoke	smoke
	seasonal	seasonal	seasonal	seasonal	seasonal	seasonal	seasonal	seasonal	seasonal	seasonal
	total	total	total	total	total	total	total	total	total	total

Map of Available ICAP Ensemble Points

PRODUCTS	NRL ENSEMBLE MODELS - REGIONS (2012-01-08)									
	GLOBAL	NIOSSEA	BYZANTIUM	EASTASIA	SUBTROPATL	PACIFIC	CONUS	SATLANTIC	SIOAUS	NPOLAR
INFO	sulfate	sulfate	sulfate	sulfate	sulfate	sulfate	sulfate	sulfate	sulfate	sulfate
MET ENSEMBLE	dust	dust	dust	dust	dust	dust	dust	dust	dust	dust
	smoke	smoke	smoke	smoke	smoke	smoke	smoke	smoke	smoke	smoke
	seasonal	seasonal	seasonal	seasonal	seasonal	seasonal	seasonal	seasonal	seasonal	seasonal
	total	total	total	total	total	total	total	total	total	total

Map of Available MET Ensemble Points

Back to NRL Monterey Homepage

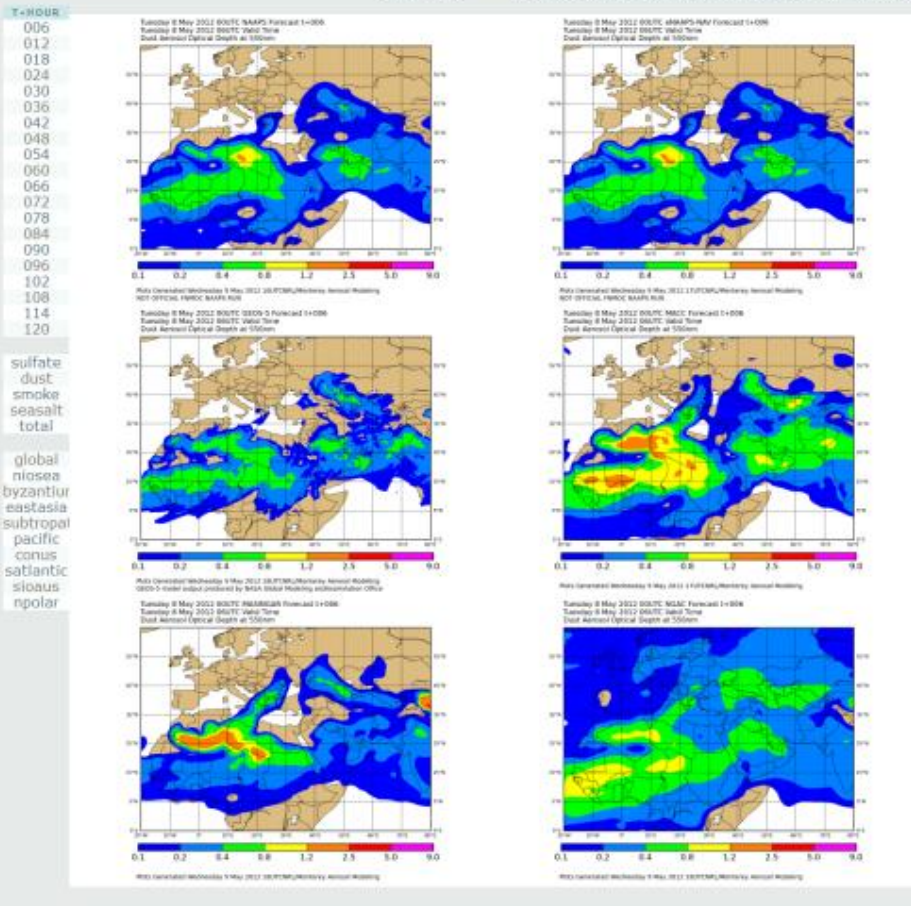
ICAP Website



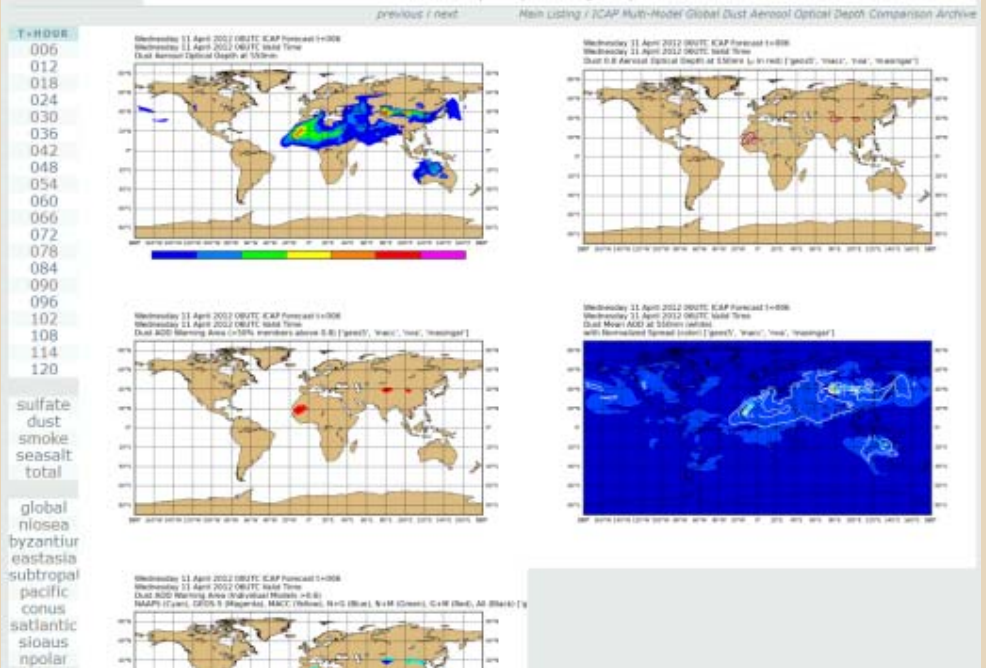
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[previous / next](#) [Main Listing / NAAPS System Dust Aerosol Optical Depth Comparison Archive](#)



Individual Models or ICAP Ens Stats
 Hover over left column for forecast eva
 Click images to isolate
 Archive
 What's new? Region/Species/Date



ICAP Website

If a date isn't listed, it's not plotted

Monthly Statistics will be linked from this page starting in June

CHECK MY WORK (but not right now).
If something in your model looks incorrect, please let me know ASAP.



NRL Monterey NAAPS Forecast

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[Main Listing](#)

NAAPS BYZANTIUM DUST AEROSOL OPTICAL DEPTH COMPARISON

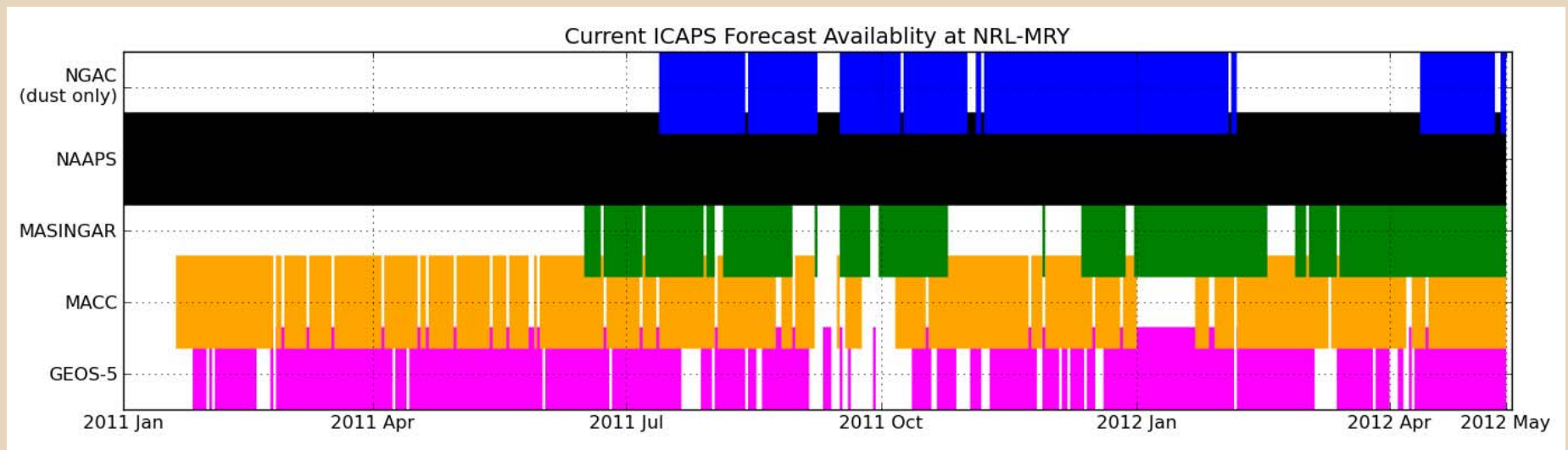
2012 MAY				
2012.05.10	2012.05.09	2012.05.08	2012.05.07	2012.05.06
2012.05.05	2012.05.04	2012.05.03	2012.05.01	
2012 APRIL				
2012.04.30	2012.04.29	2012.04.28	2012.04.27	2012.04.26
2012.04.25	2012.04.24	2012.04.23	2012.04.22	2012.04.21
2012.04.20	2012.04.19	2012.04.18	2012.04.17	2012.04.16
2012.04.15	2012.04.14	2012.04.13	2012.04.12	2012.04.11
2012.04.10	2012.04.09	2012.04.08	2012.04.07	2012.04.06
2012.04.05	2012.04.04	2012.04.03	2012.04.02	2012.04.01
2012 MARCH				
2012.03.31	2012.03.29	2012.03.28	2012.03.27	2012.03.26
2012.03.25	2012.03.24	2012.03.23	2012.03.22	2012.03.21
2012.03.20	2012.03.19	2012.03.18	2012.03.17	2012.03.16
2012.03.15	2012.03.14	2012.03.13	2012.03.12	2012.03.11
2012.03.10	2012.03.09	2012.03.08	2012.03.07	2012.03.06
2012.03.05	2012.03.04	2012.03.03	2012.03.02	2012.03.01
2012 FEBRUARY				
2012.02.29	2012.02.28	2012.02.25	2012.02.24	2012.02.23
2012.02.22	2012.02.21	2012.02.20	2012.02.19	2012.02.18
2012.02.17	2012.02.16	2012.02.15	2012.02.14	2012.02.13
2012.02.12	2012.02.11	2012.02.10	2012.02.09	2012.02.07

Statistics and Scoring

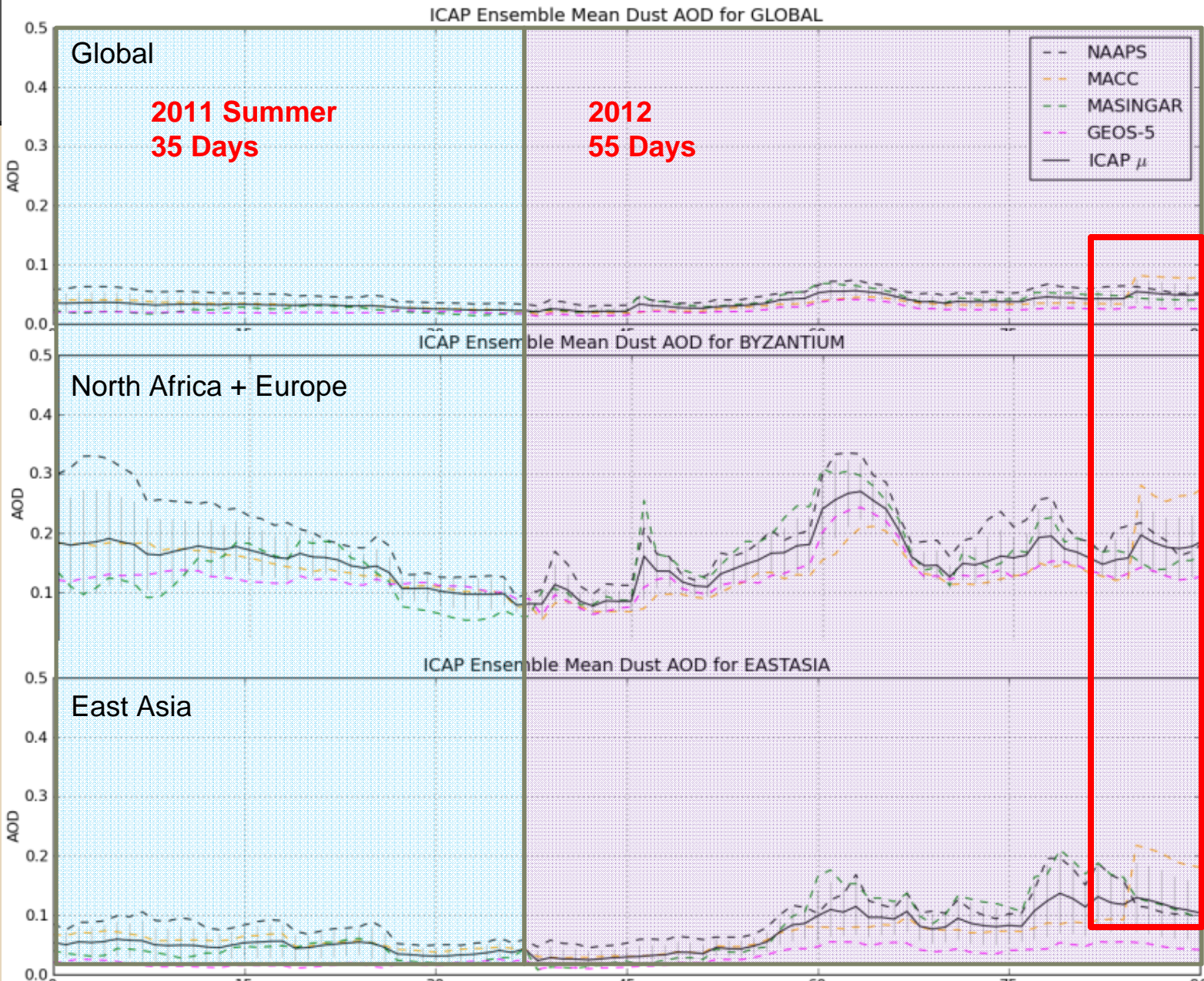
We have only 90 days since January 2011 with four of the five members

Need to fill in data gaps to start teasing out seasonal trends

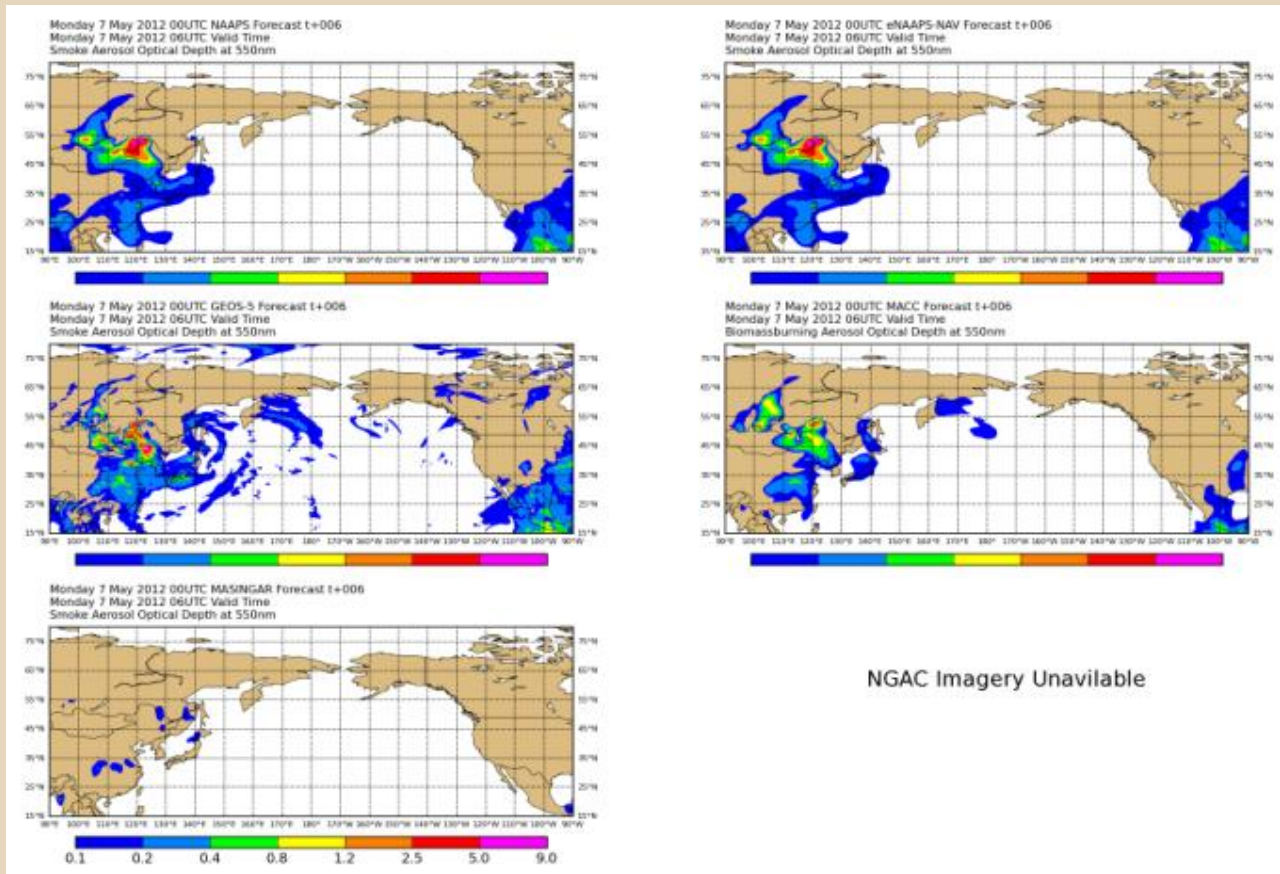
Subsequent statistics largely missing autumn



DISCLAIMER: Going to show some examples of differences between models. Do not take offense; I am not picking on you.

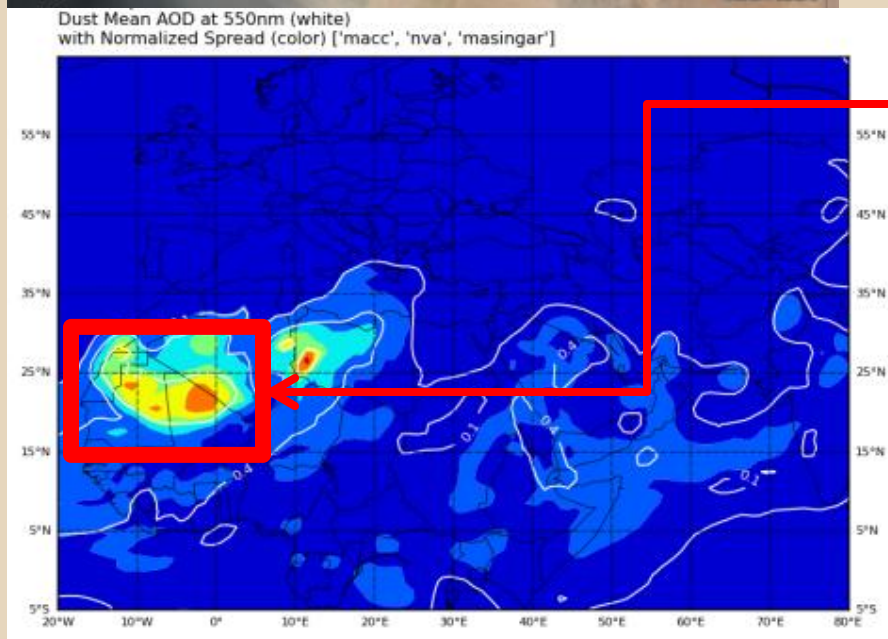


Smoke Emissions

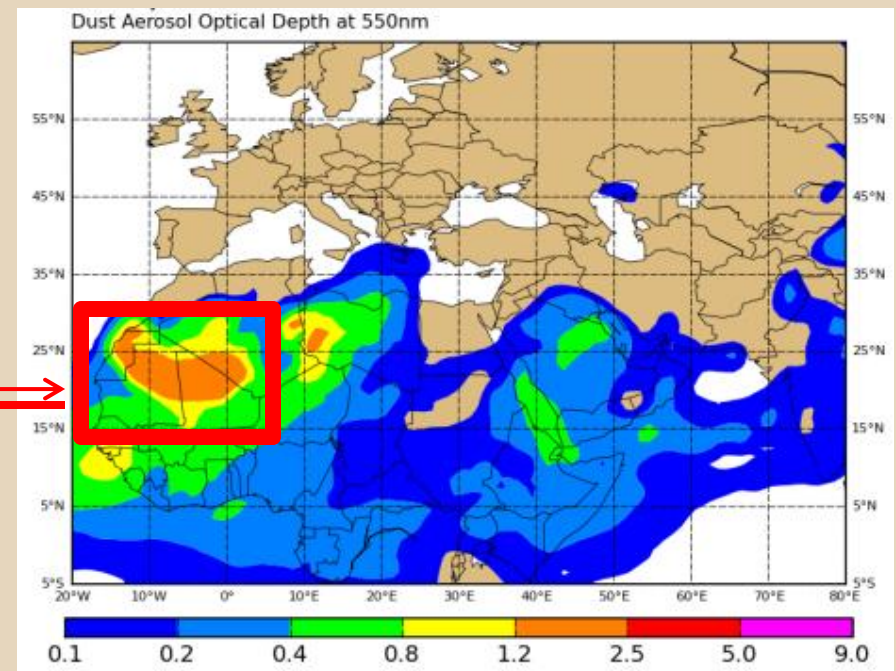


- MACC and NAAPS trending higher than GEOS-5 until September
- Effect of GAAS?
- MASINGAR consistently lower

Helping Understand our Models



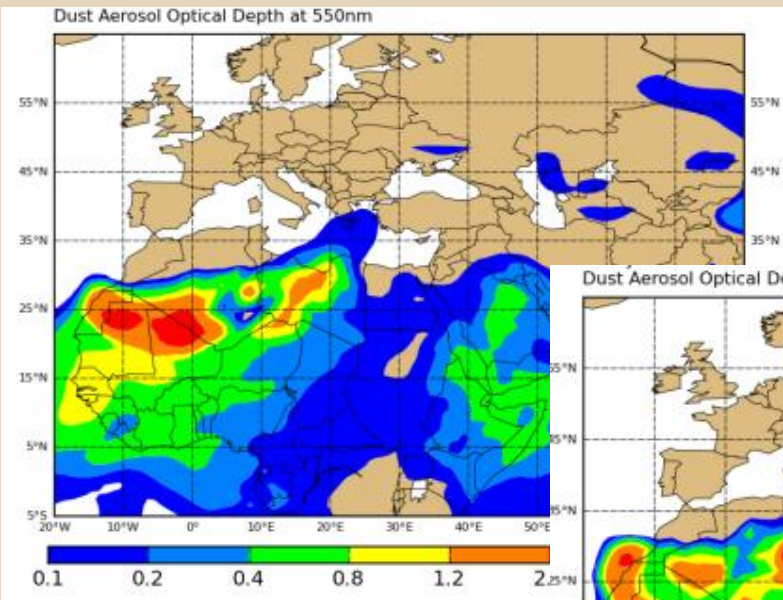
Dust transport over Morocco



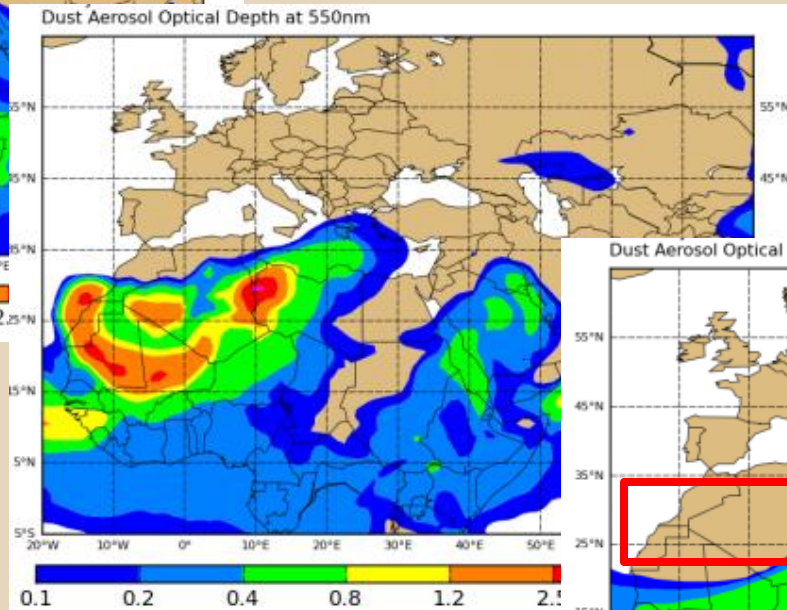
Basic character present, but large spread

'Bullseye' spread often indicates disagreement in amplitude.

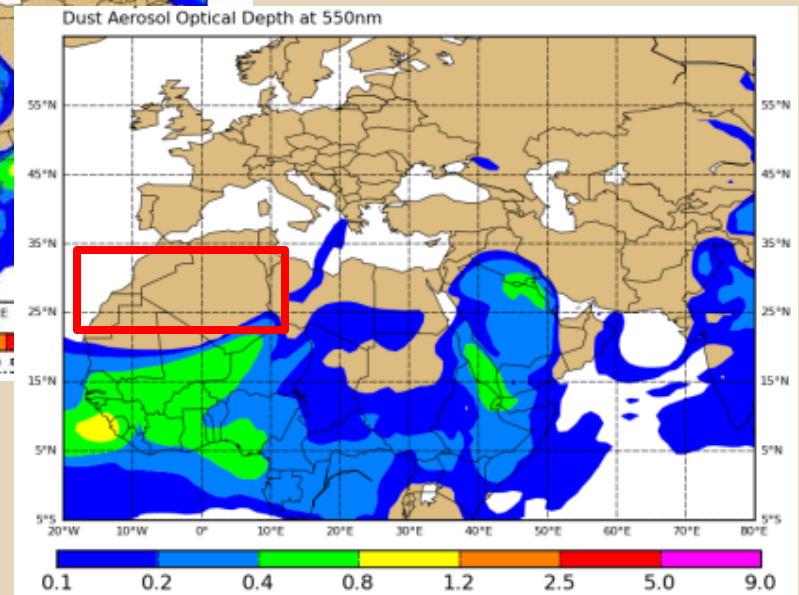
Individual Models



Member 1 (NAAPS)



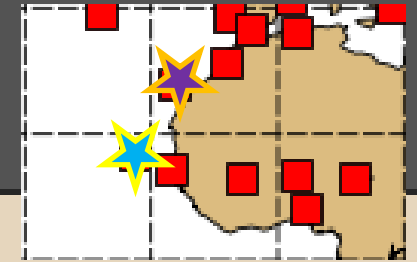
Member 2 (MASINGAR)



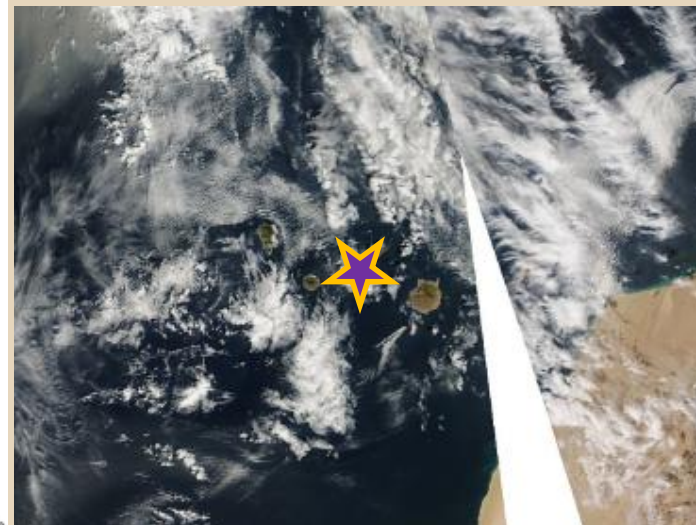
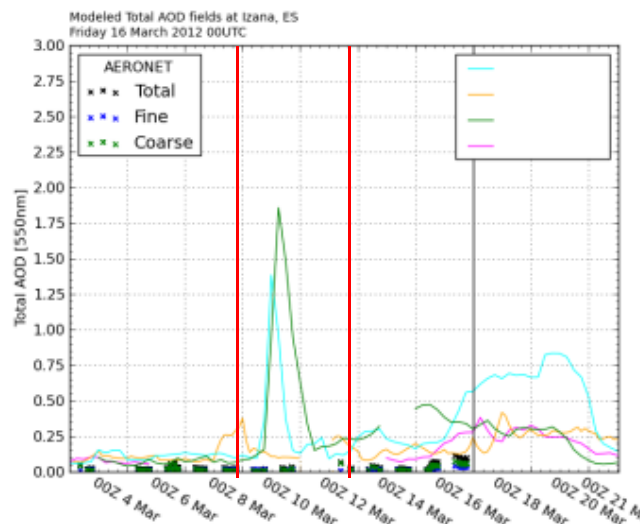
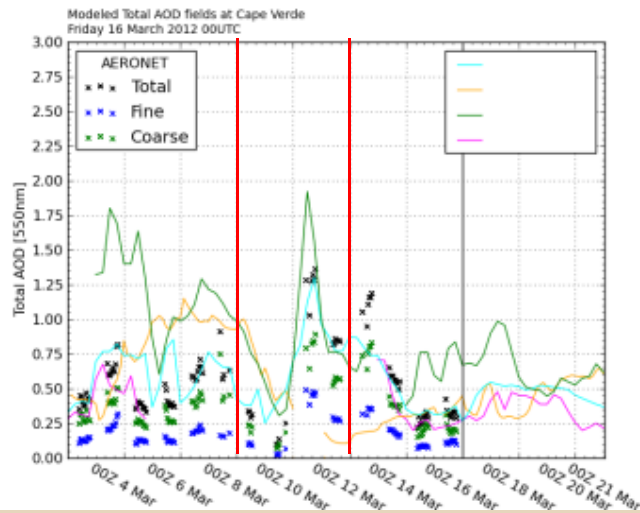
Member 3 (MACC) looks to either be missing sources or surface wind forecast is a bust

(NGAC / GEOS-5 not retrieved)

AERONET



Cape Verde
 MASINGAR/NAAPS
 roughly captured the
 event. MACC did not.



Izana, ES
 Looking at original
 aeronet site, MACC
 actually scored
 better...

Response: Problem
 in MACC source
 function identified.
 Sources modified

Running in Pseudo-Ops

NAAPS-Deterministic (120h)

eNAAPS-NAV (met draws, 120h)

eNAAPS-NAV (aerosol draws, 120h)

eNAAPS-DART (120 h)

NAAPS-DART (120 h)

NAAPS-NAV+AVHRR (72 h)

Model Evaluation Tools (MET)

grid_stat, ensemble_stat

Plotting

- Day of
- T+24
- T+168

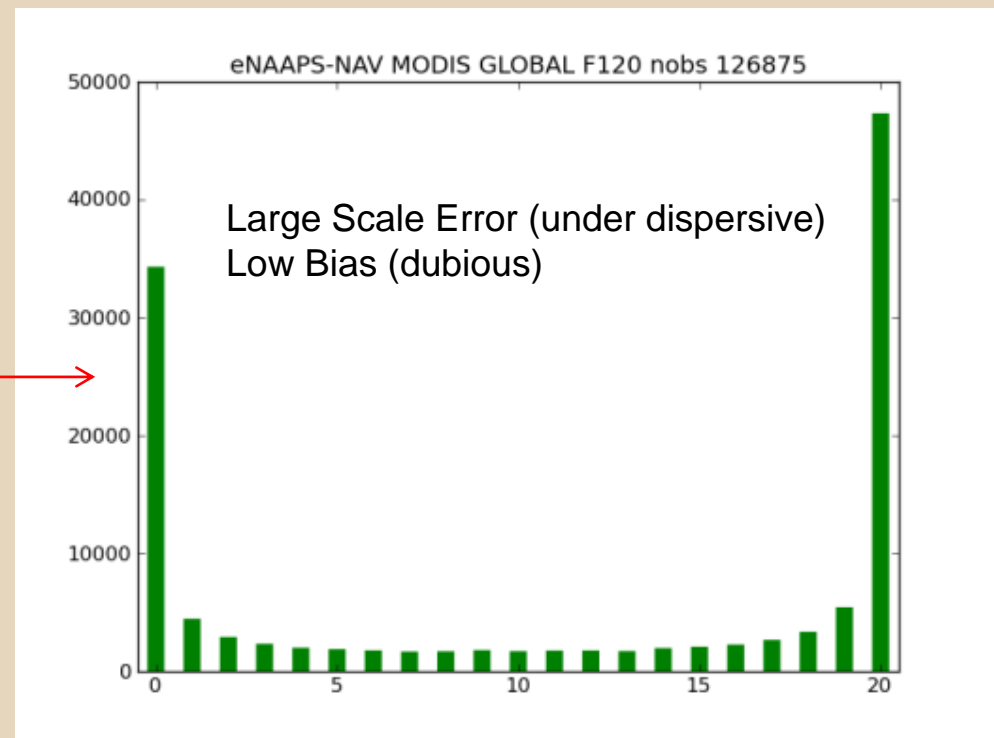
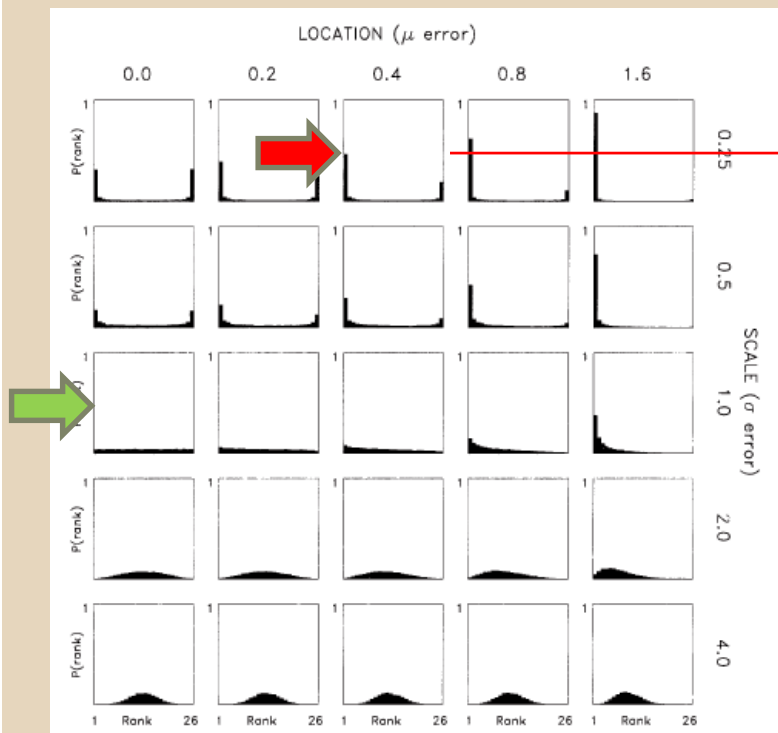
Data FTP

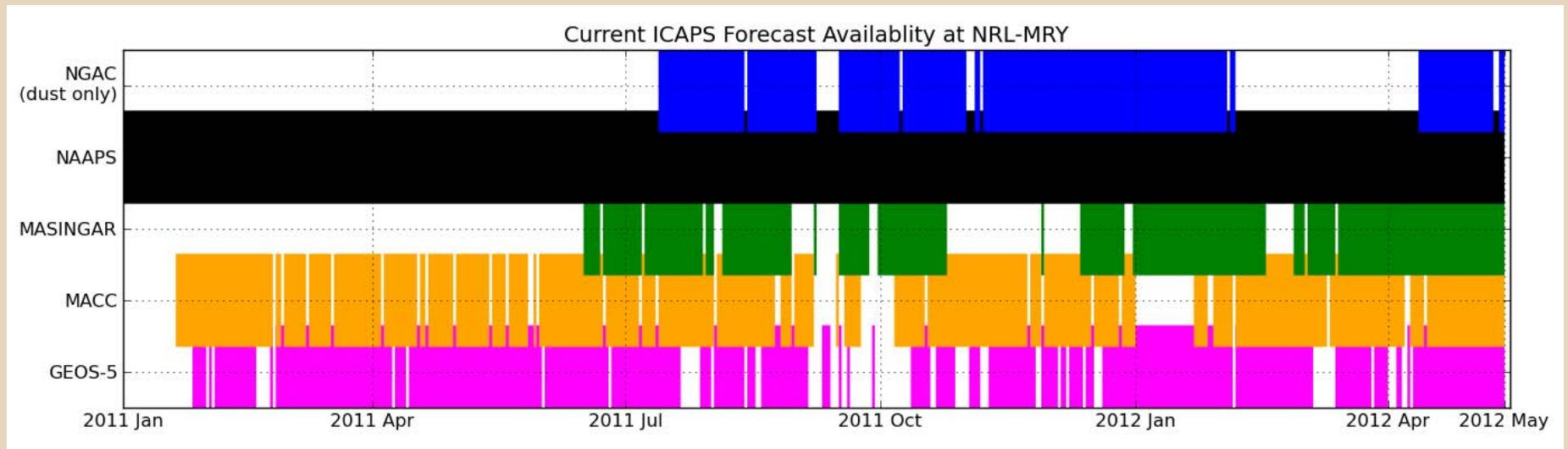
- NAAPS forecast
- Consolidated ICAP Models

In the Pipe (on the web in June)

Model Evaluation Tools (MET)

- ensemble_stat
 - Ensemble Diagnostics / Rank Histograms / BSS

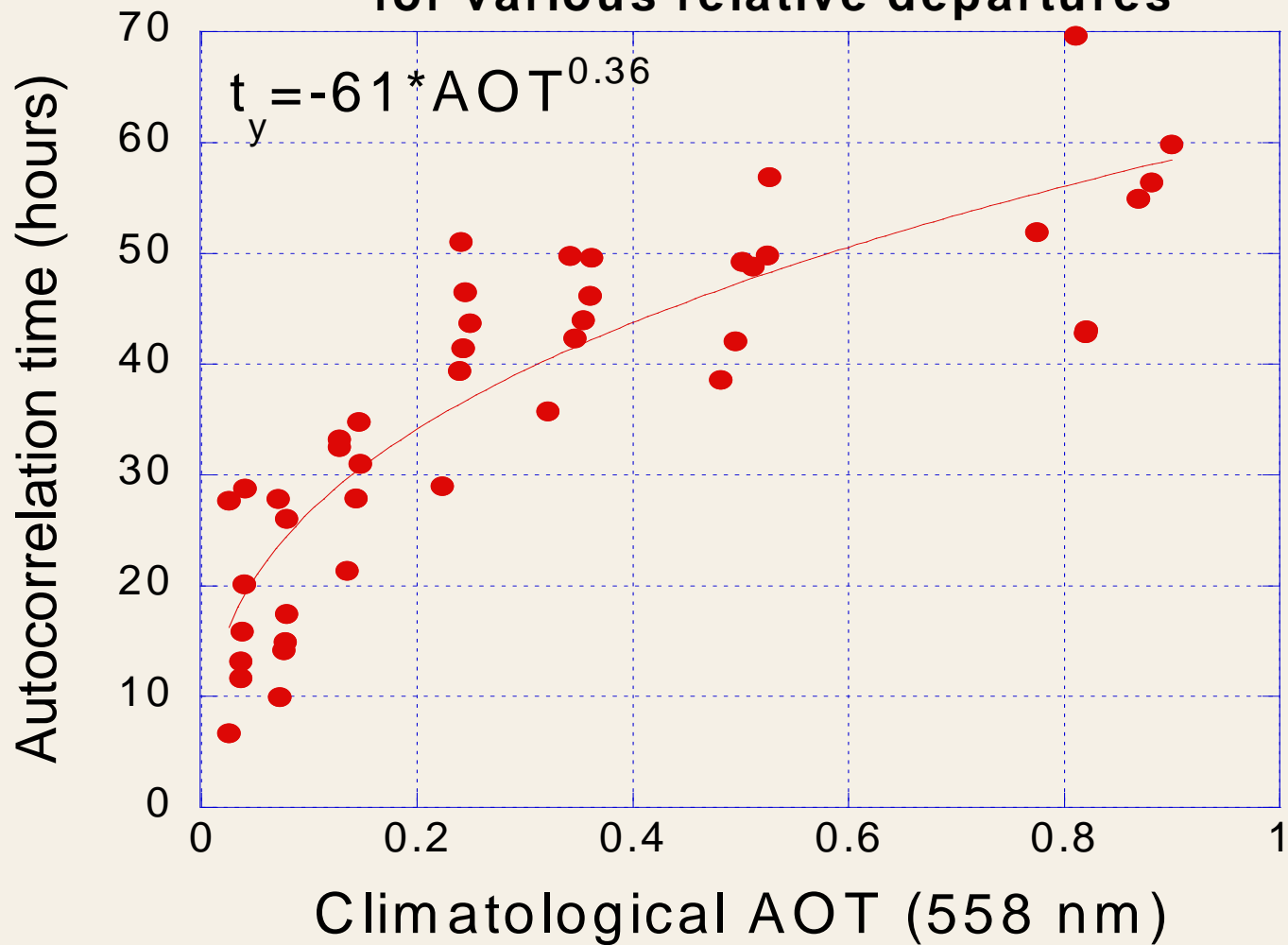




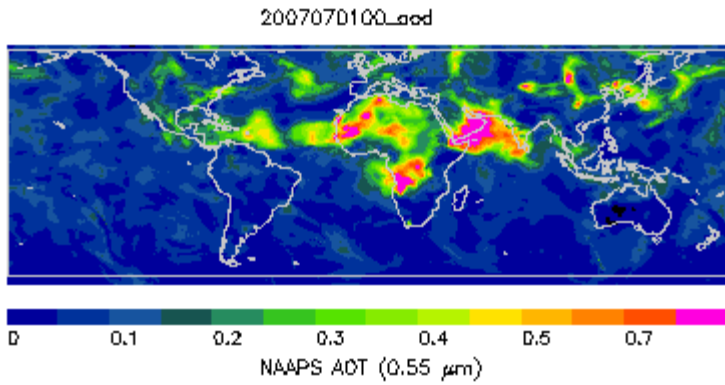
Questions / Comments

CLIPER Forecasting Examples

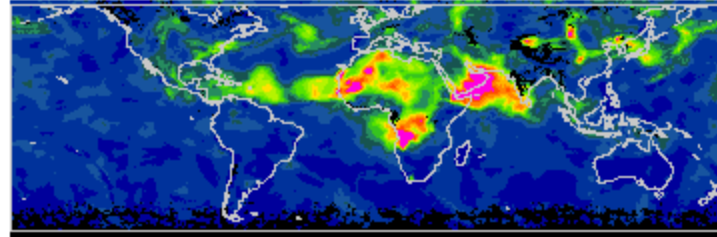
Global Average Autocorrelation Versus AOT for various relative departures



0h analysis

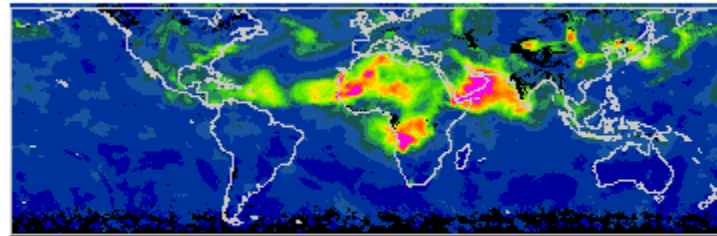


2007070100_lead.6h



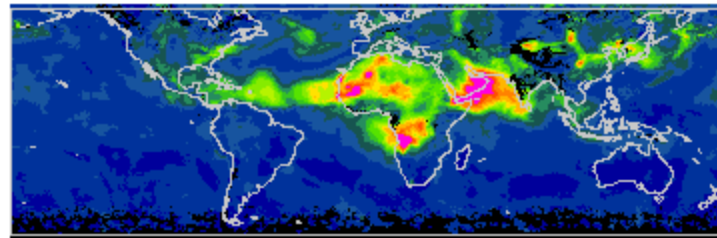
06h forecast

2007070100_lead.12h



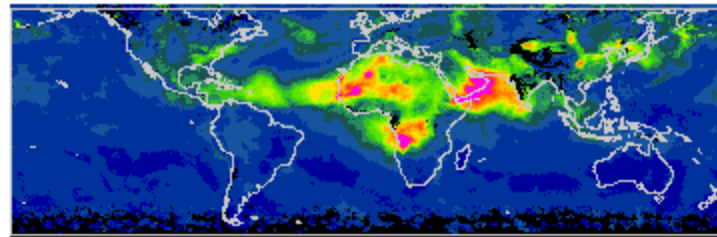
12h forecast

2007070100_lead.18h



18h forecast

2007070100_lead.24h



24h forecast





Baseline satellite climatology almost finished. Still some hotspots and fusion issues to work out.

