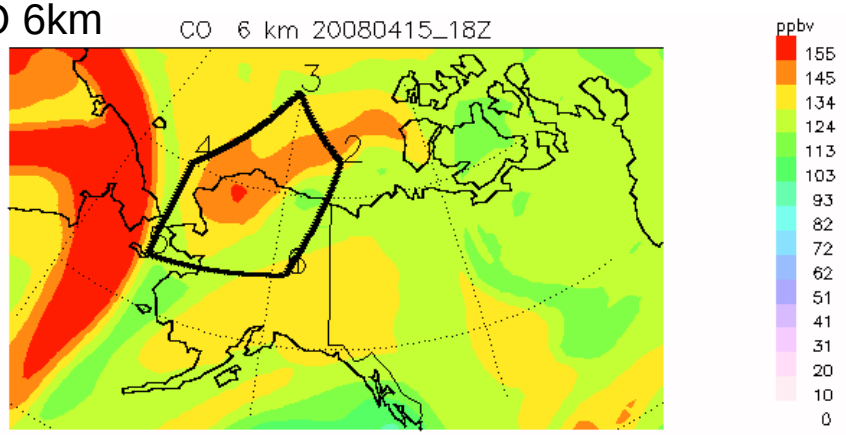
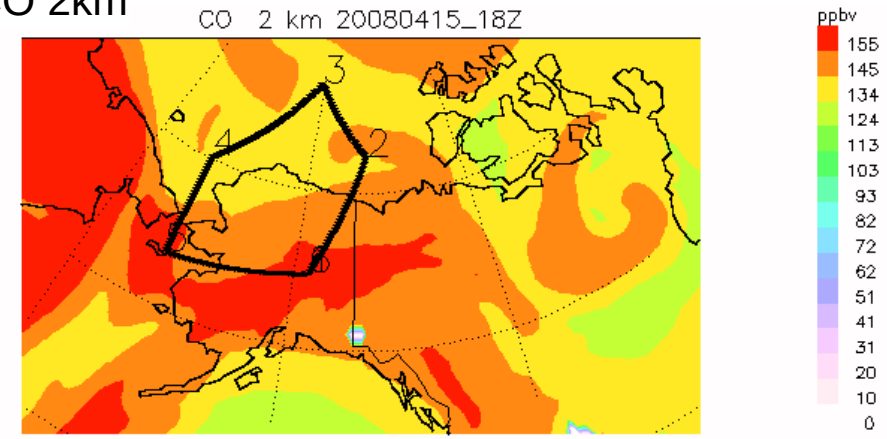
MZ4/GFS Apr 15 18Z
forecast from Apr 14

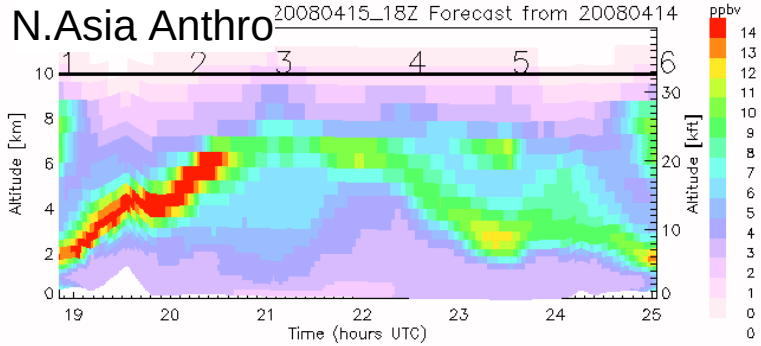
CO 6km



CO 2km



N.Asia Anthro



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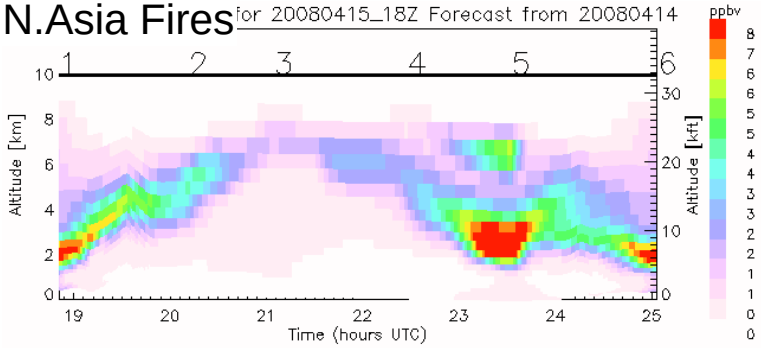

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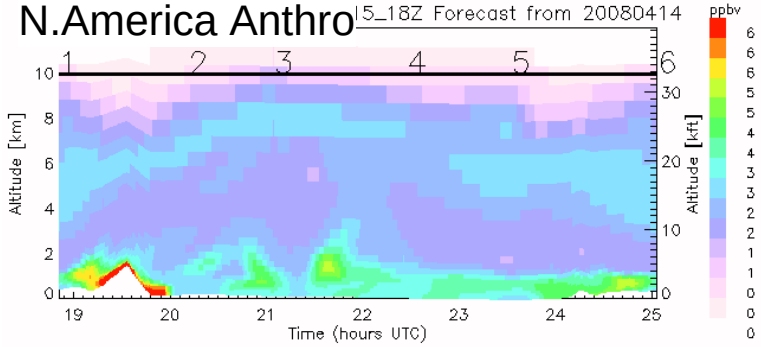
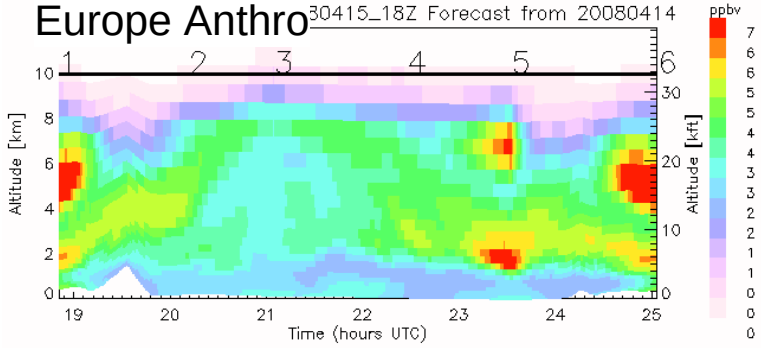
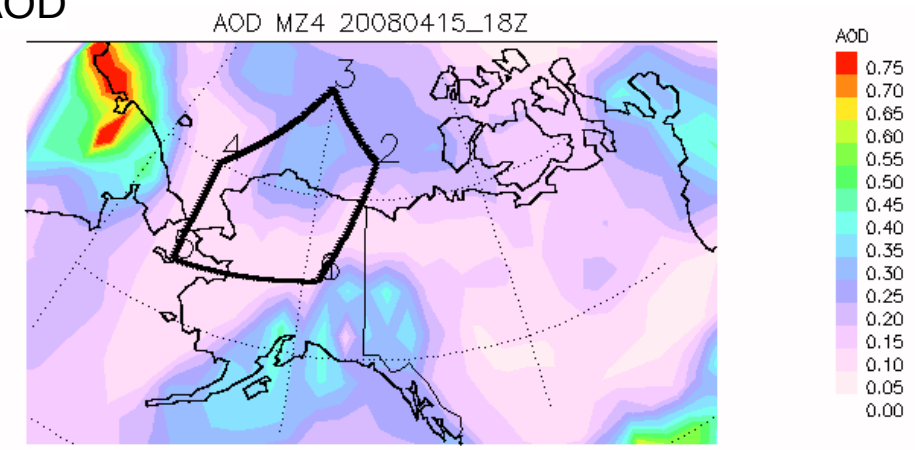


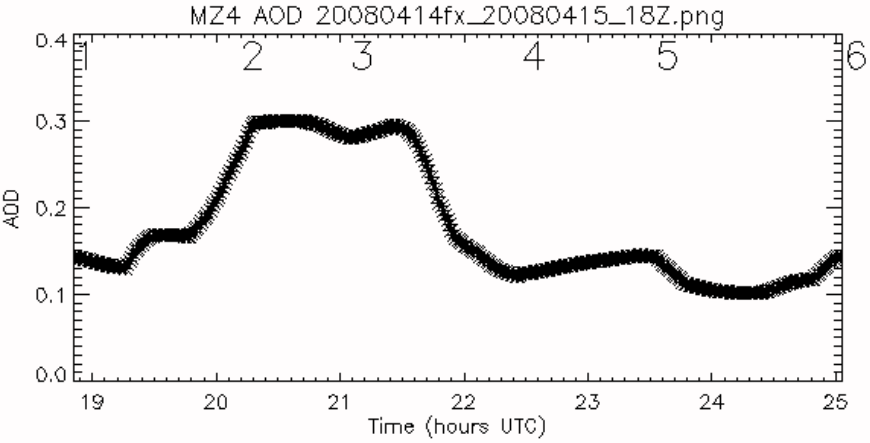
Europe Anthro



MZ4/GFS Apr 15 18Z
forecast from Apr 14

AOD





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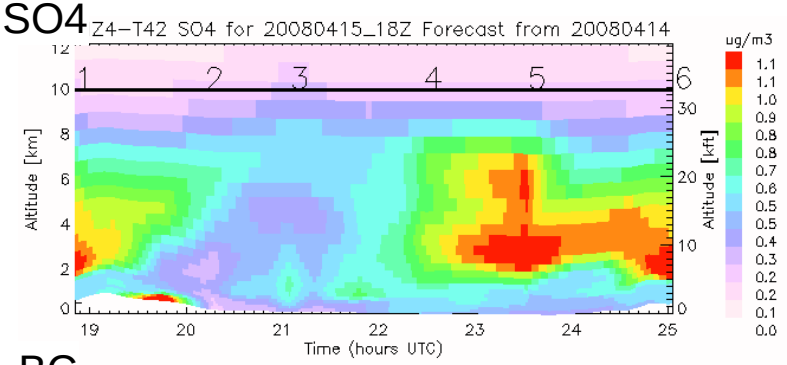

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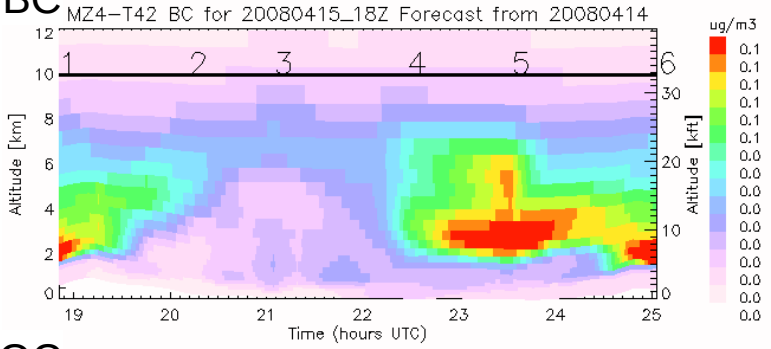

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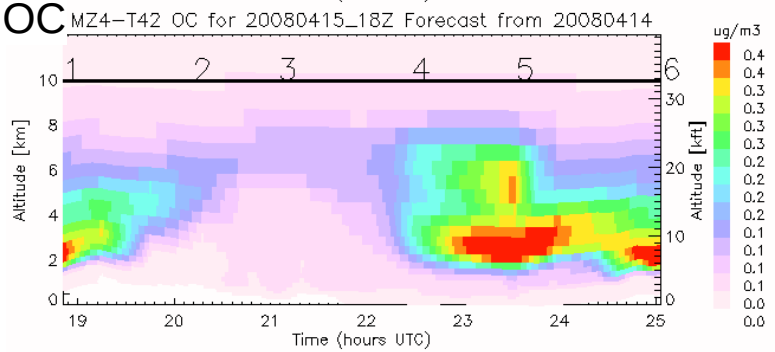
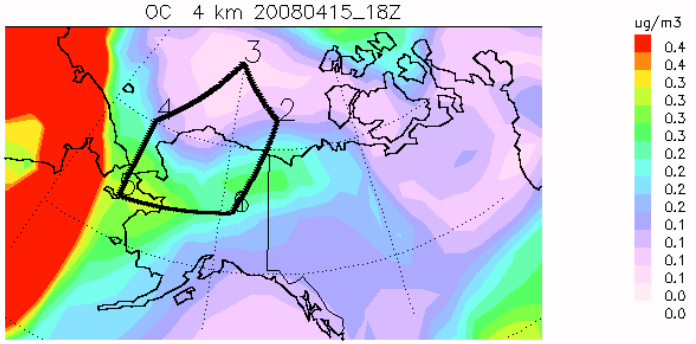
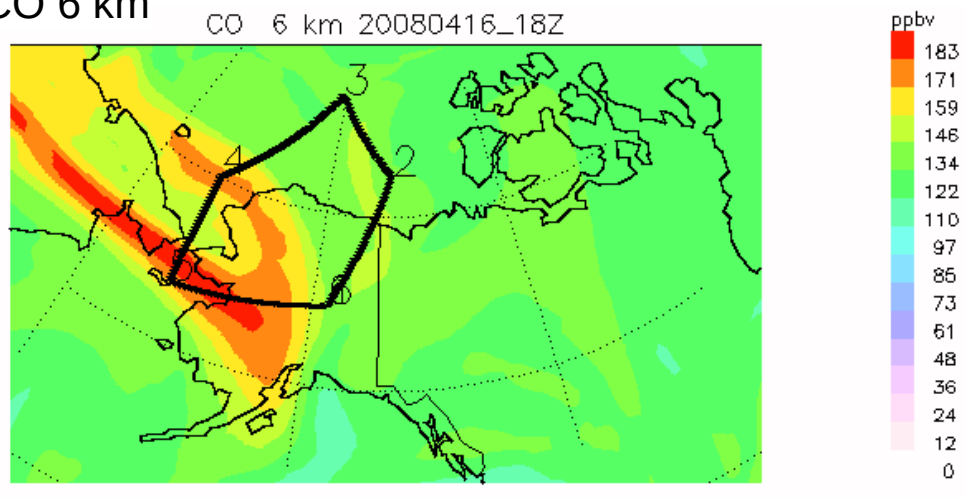




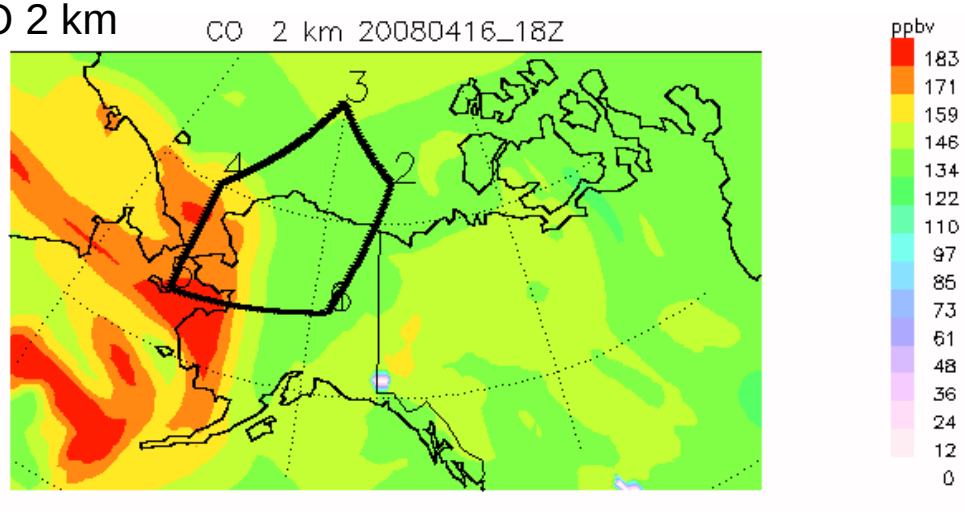
MZ4/GFS Apr 16 18Z

forecast from Apr 14

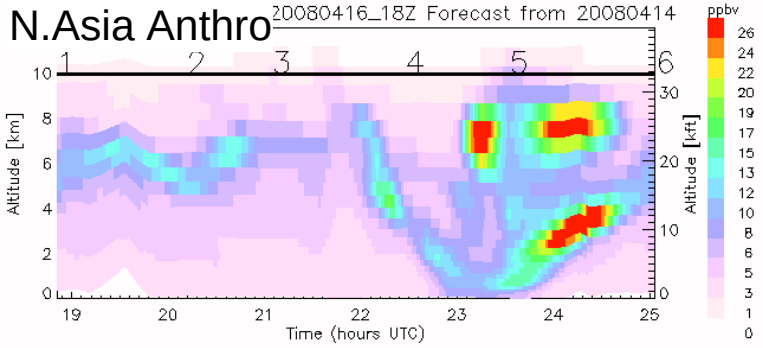
CO 6 km



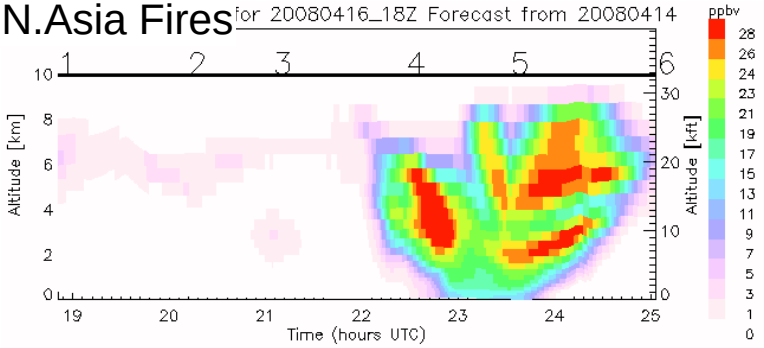
CO 2 km



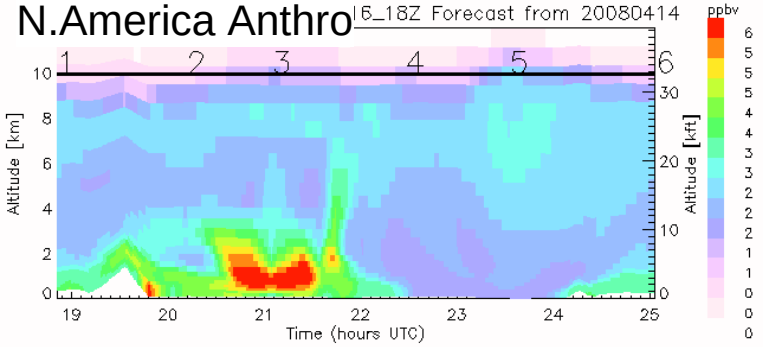
N.Asia Anthro



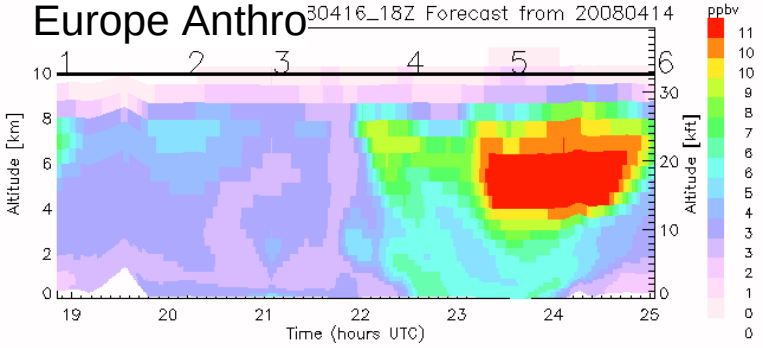
N.Asia Fires



N.America Anthro



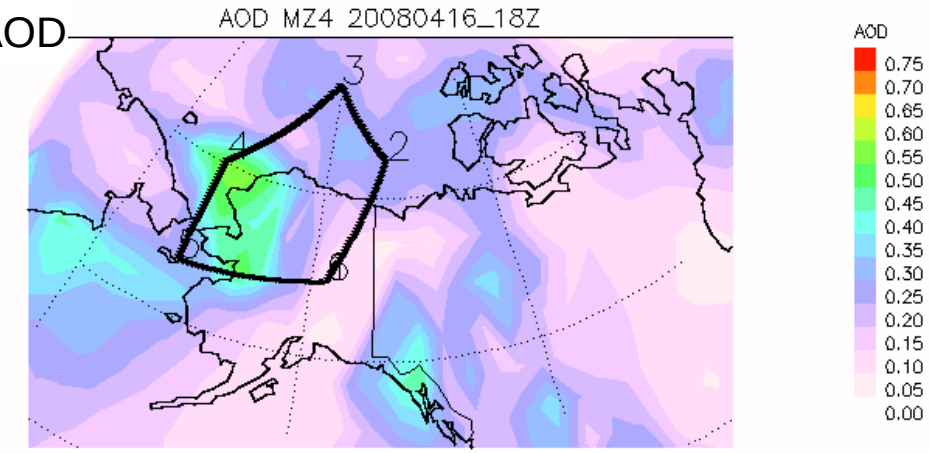
Europe Anthro

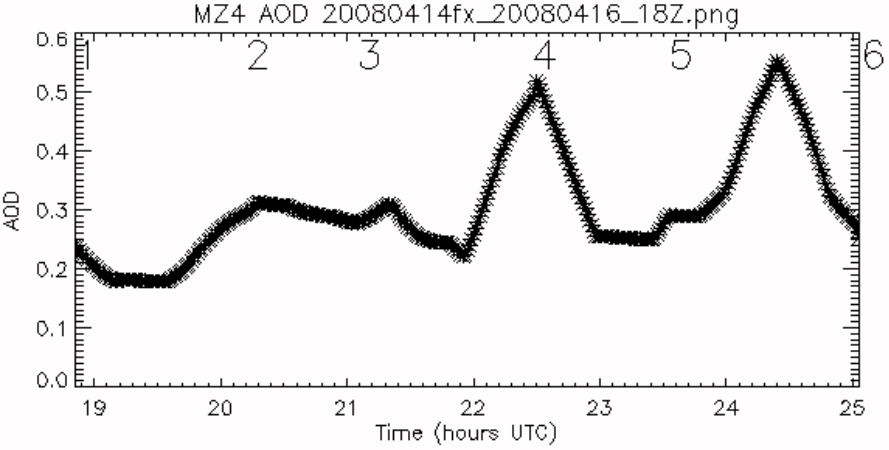


MZ4/GFS Apr 16 18Z

forecast from Apr 14

AOD





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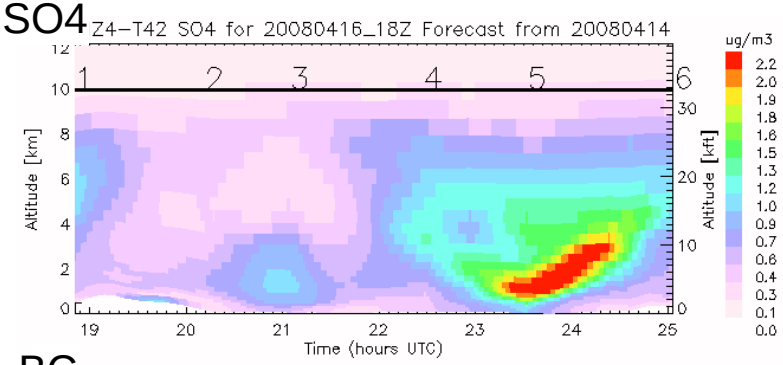

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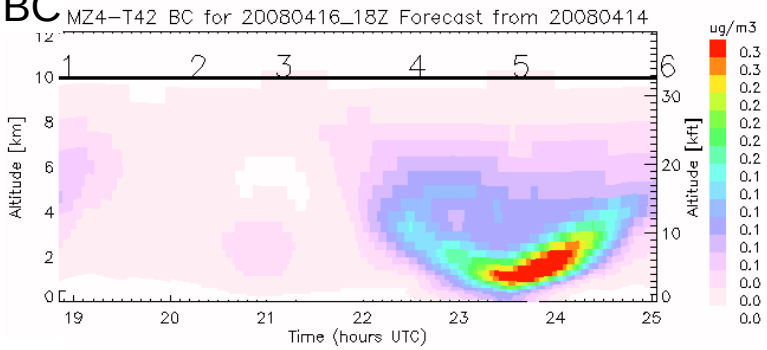

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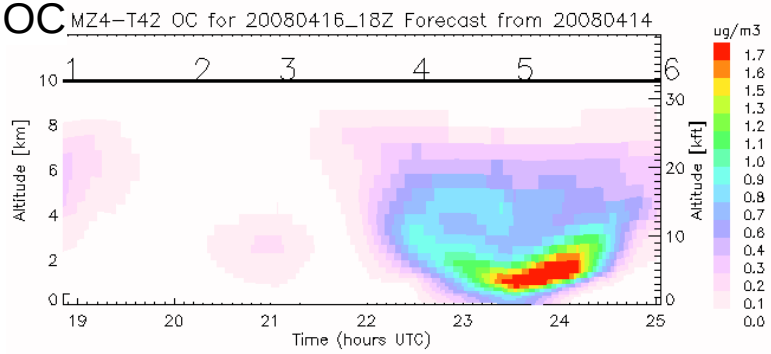
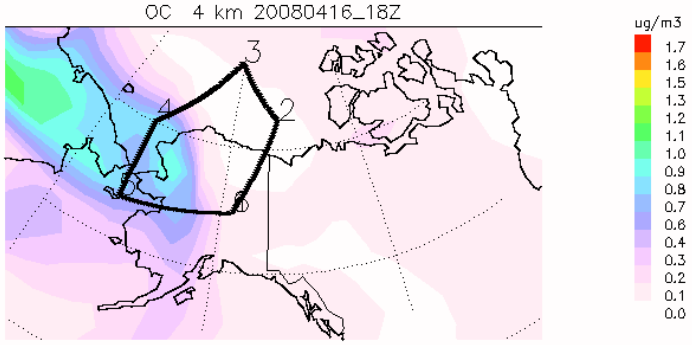
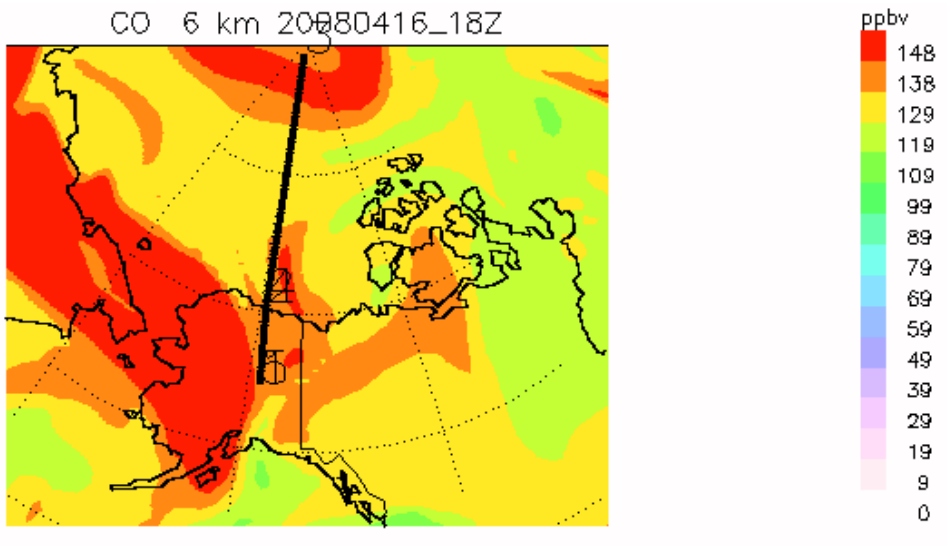
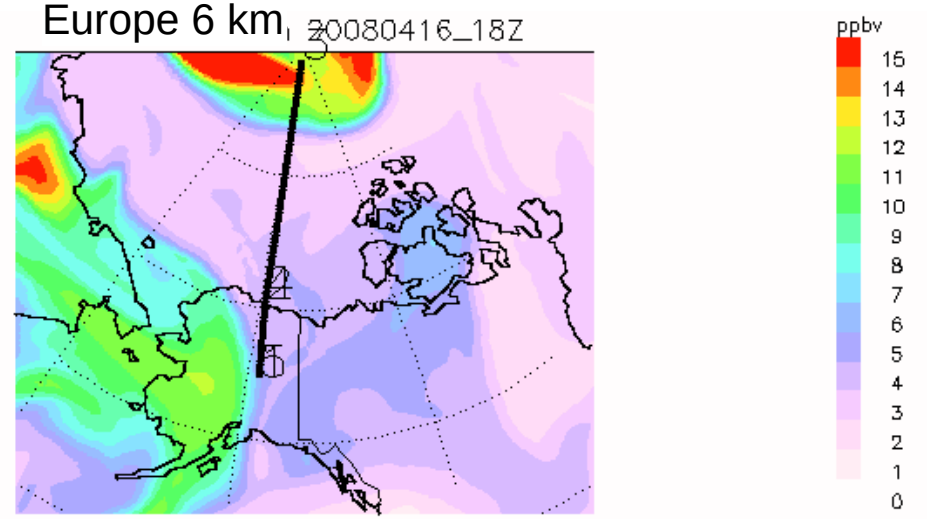


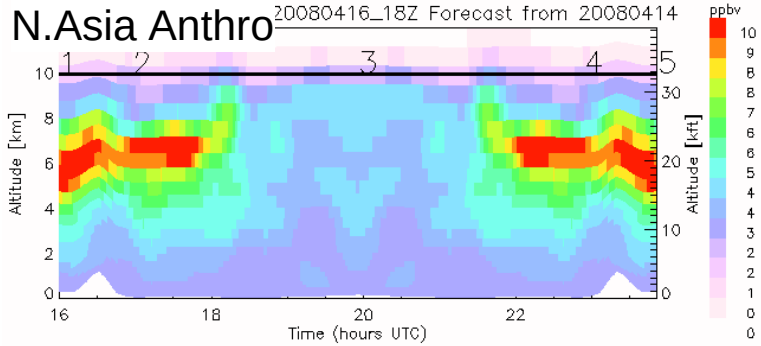


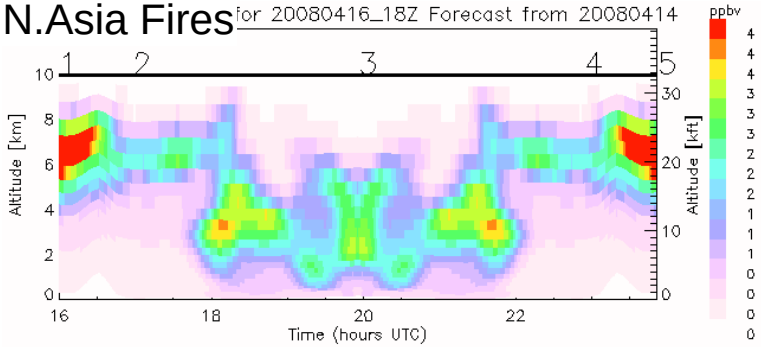
MZ4/GFS Apr 16 18Z

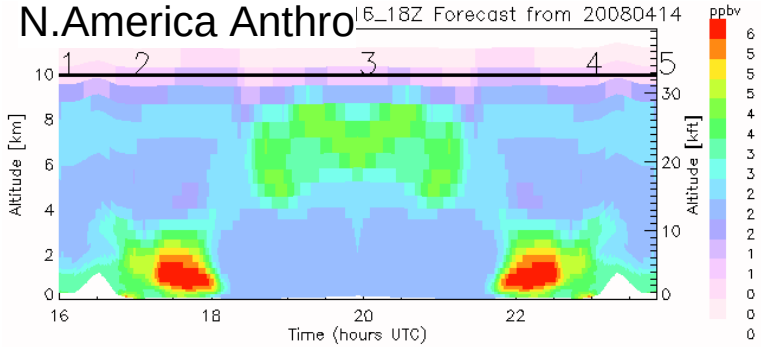
forecast from Apr 14

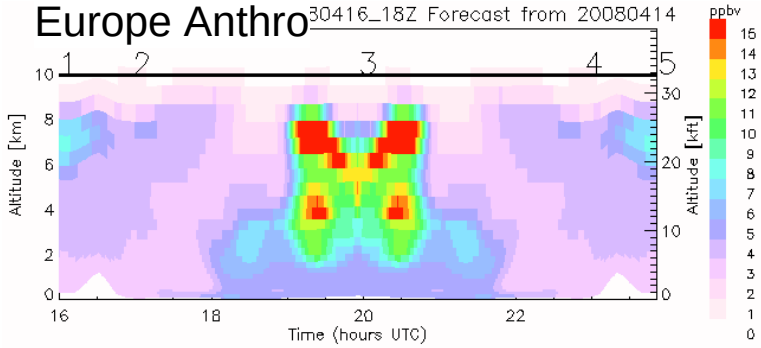








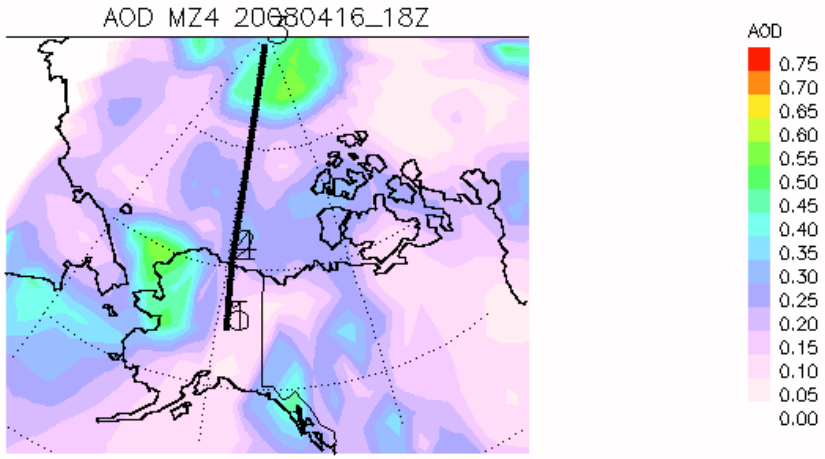


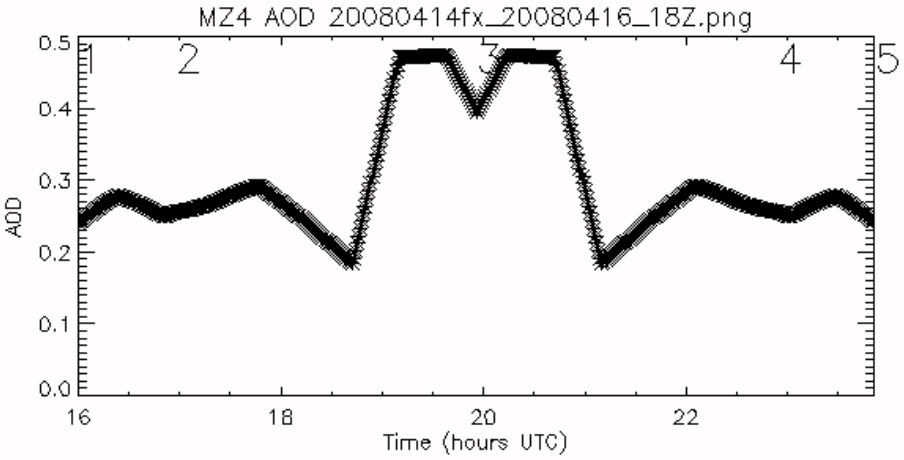


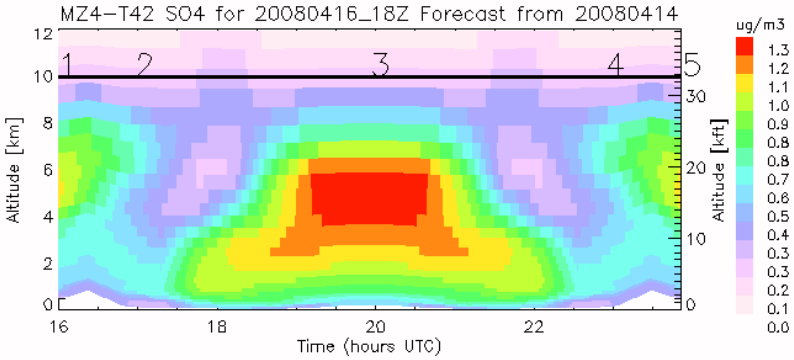
MZ4/GFS Apr 16 18Z

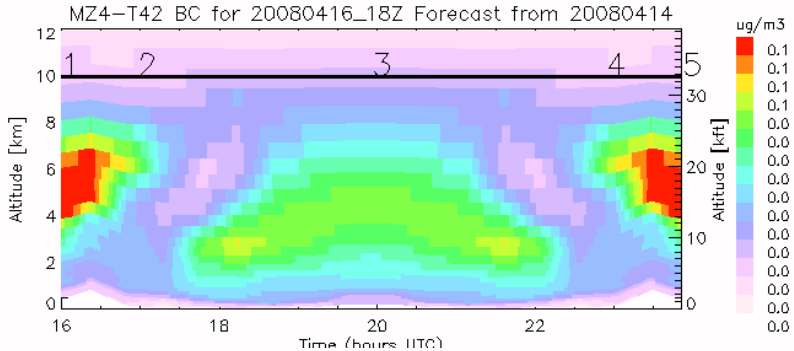
forecast from Apr 14

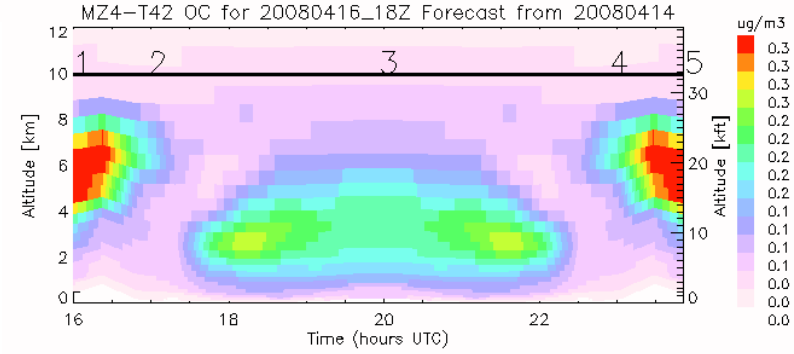
AOD

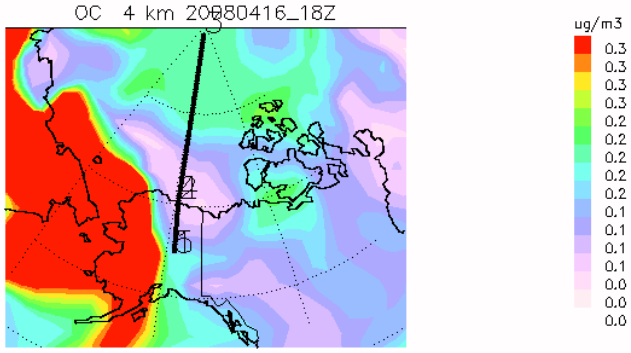








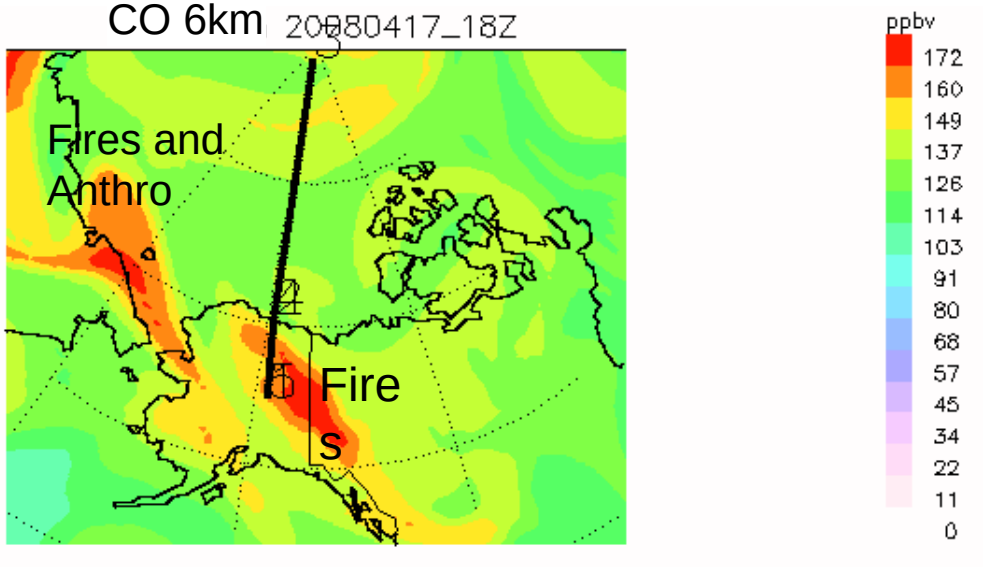




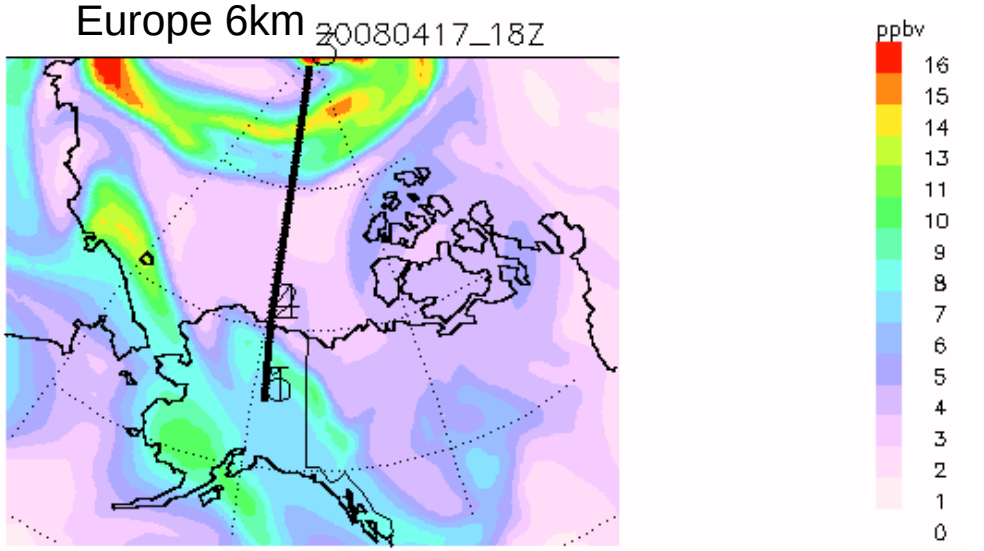
MZ4/GFS Apr 17 18Z

forecast from Apr 14

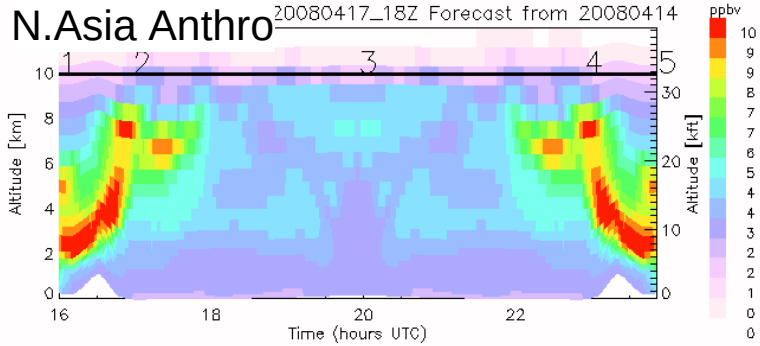
CO 6km



Europe 6km



N.Asia Anthro



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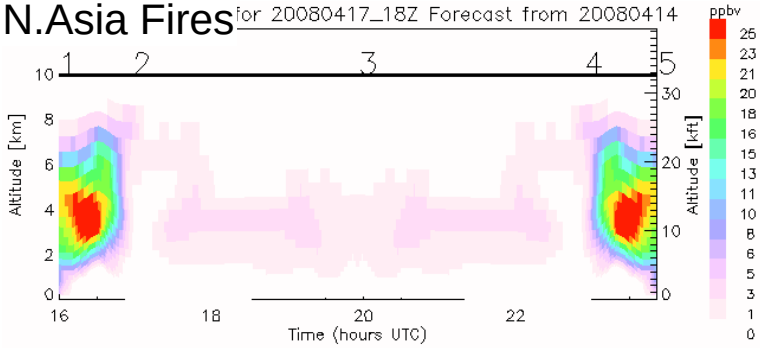

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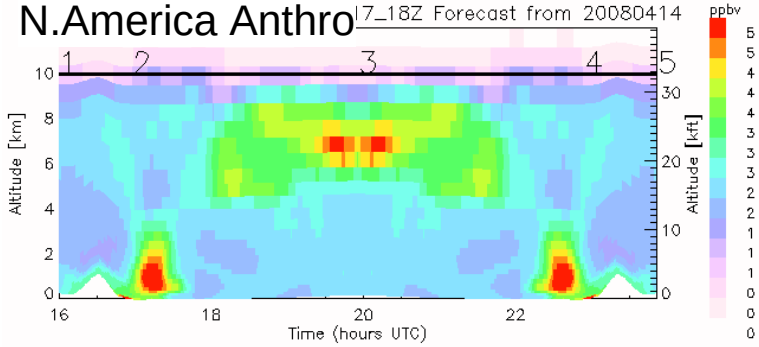

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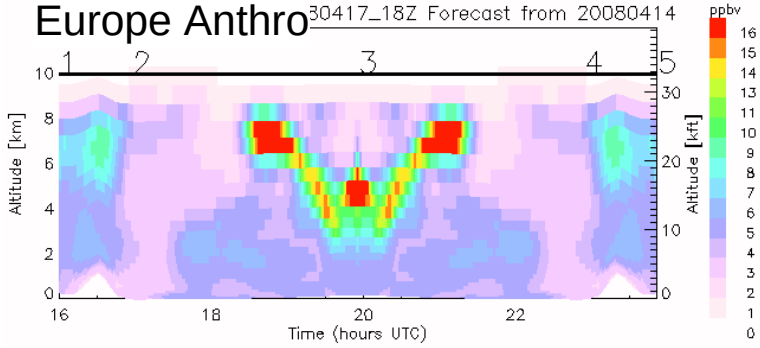
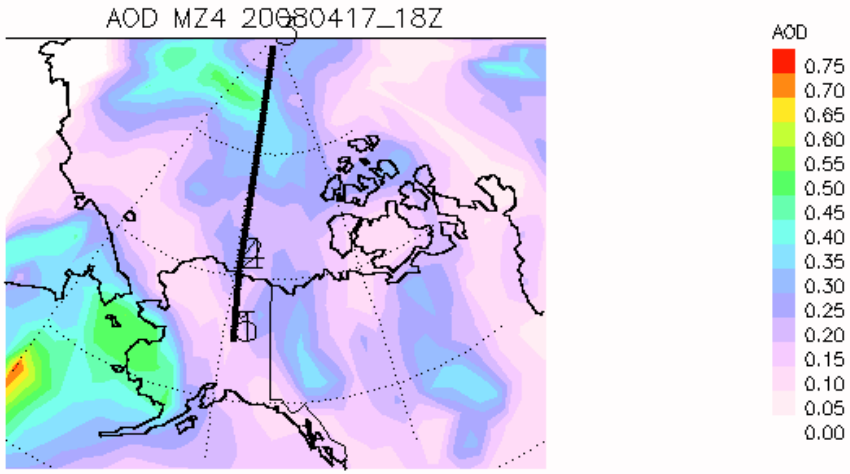
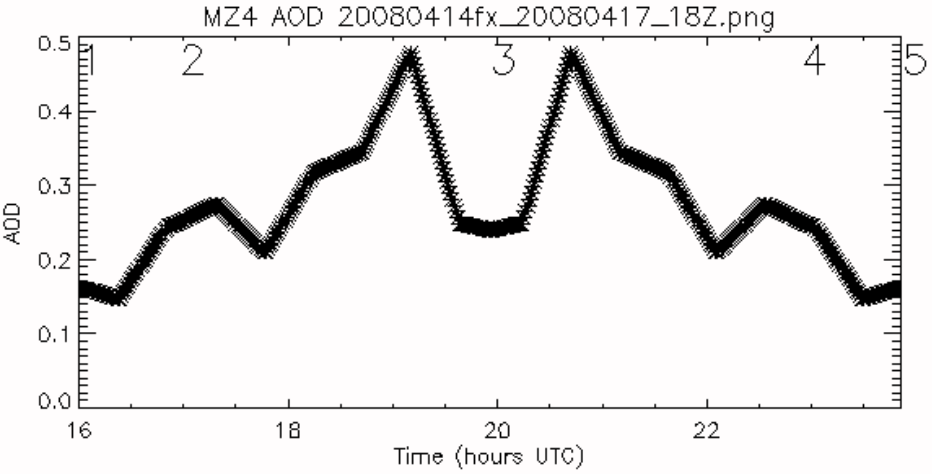


MZ4/GFS Apr 17 18Z

forecast from Apr 14

AOD





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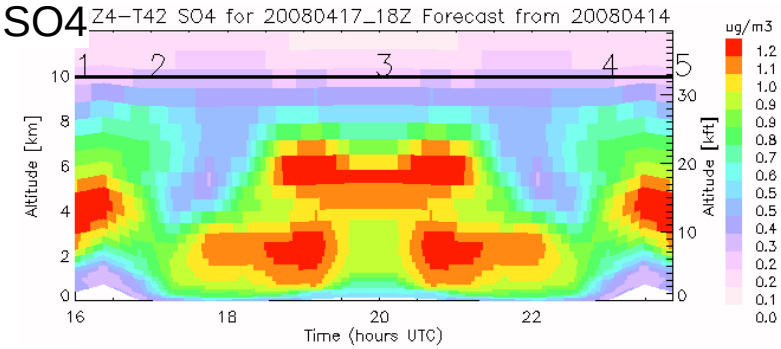

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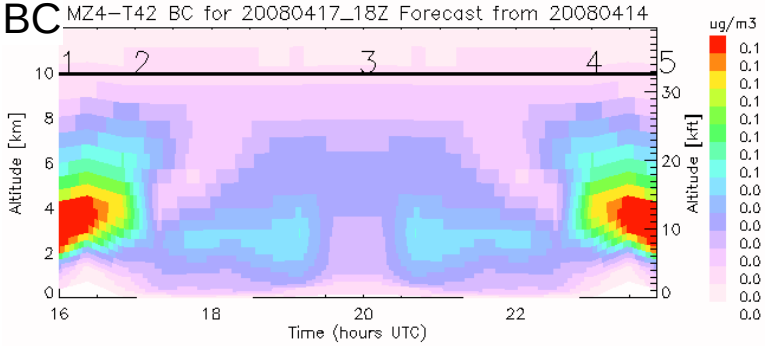
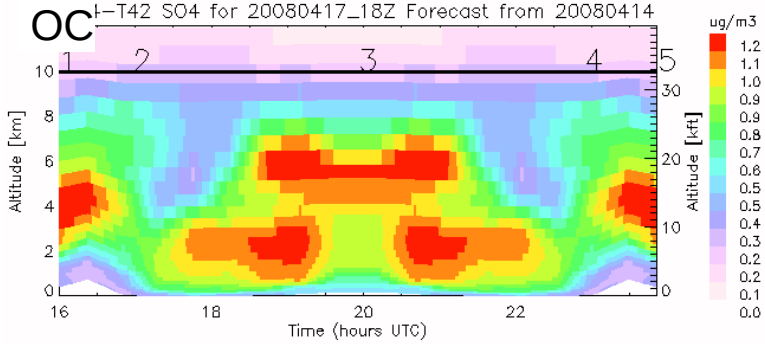
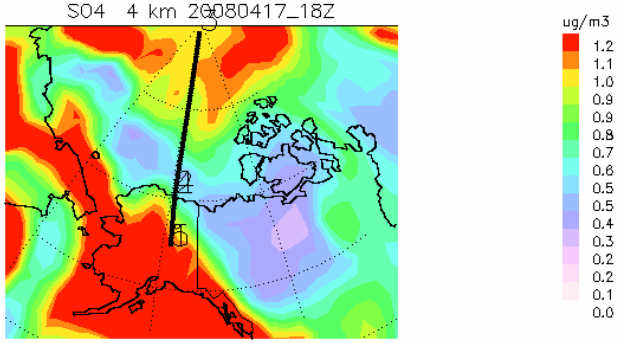


OC



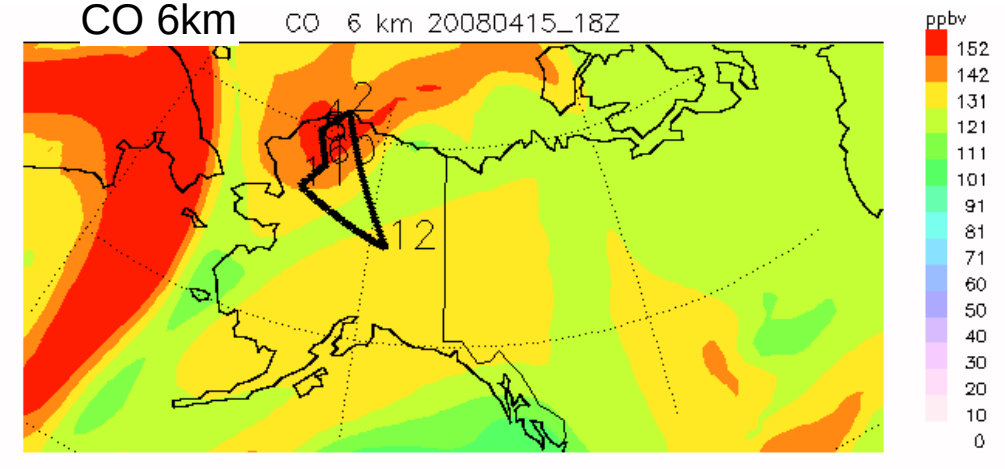


MZ4/GFS Apr 15 18Z

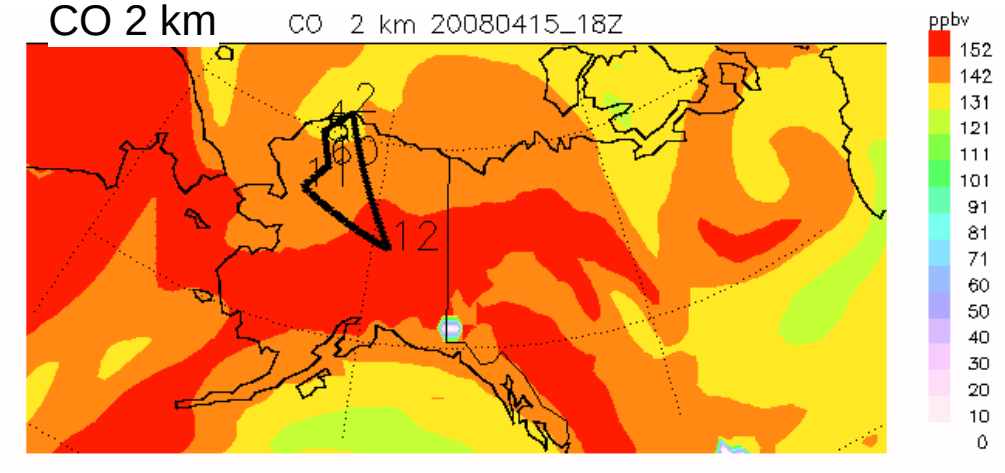
forecast from Apr 14

P3 plan

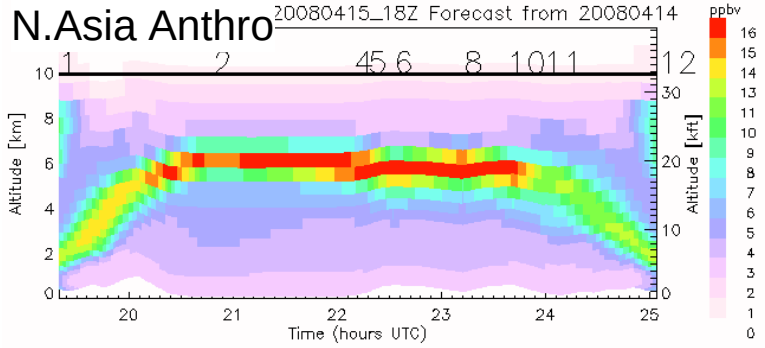
CO 6km



CO 2 km



N.Asia Anthro



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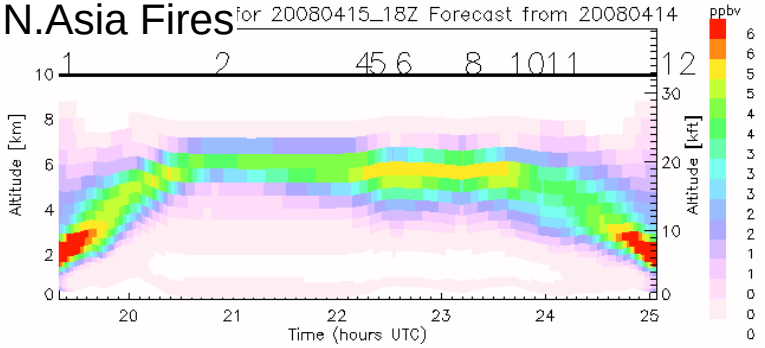

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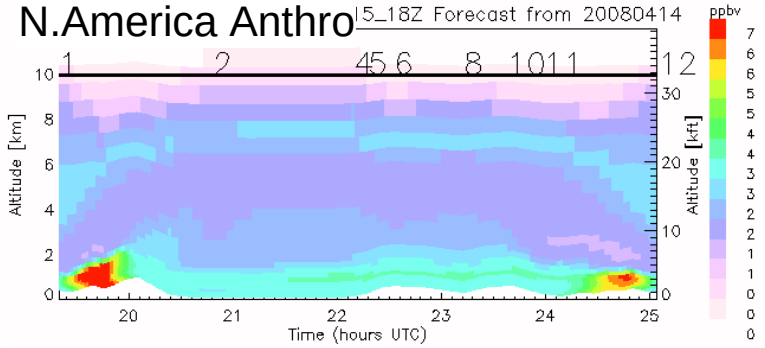
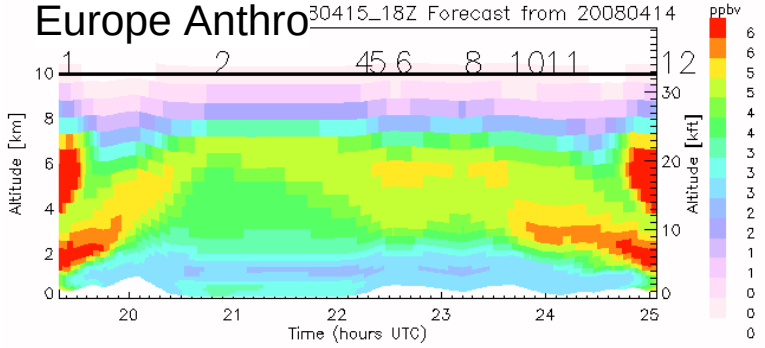


Europe Anthro

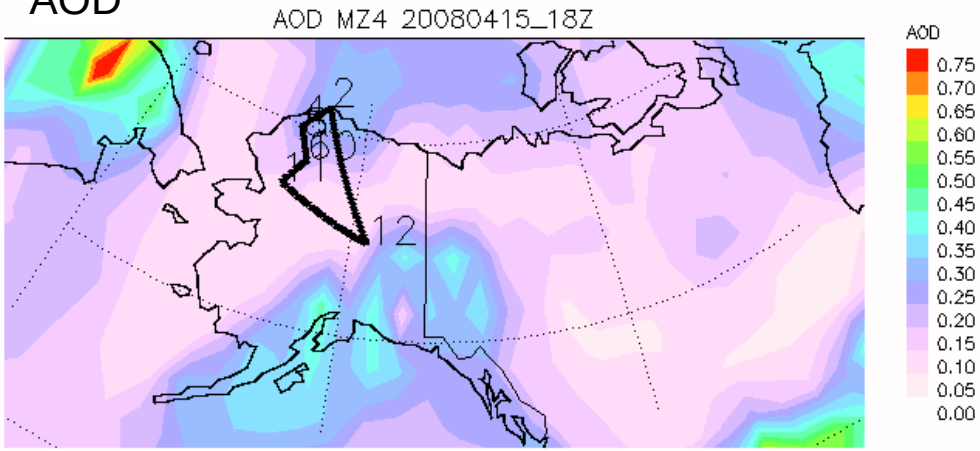


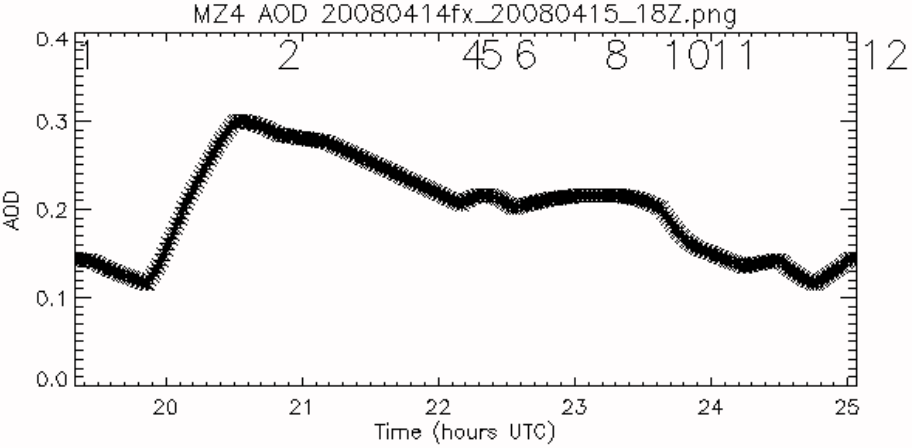
MZ4/GFS Apr 15 18Z

forecast from Apr 14

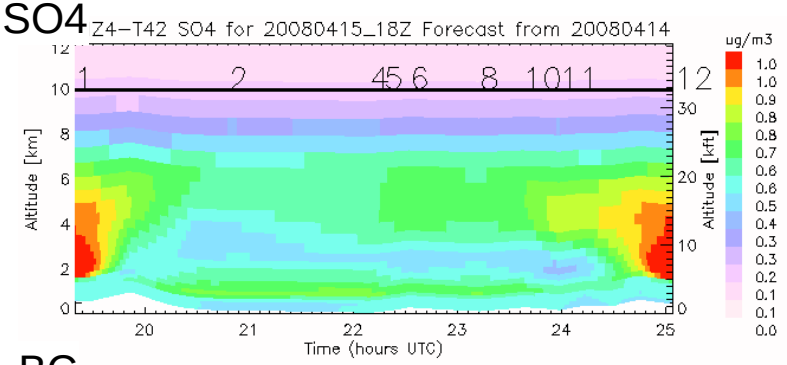
P3 plan

AOD





SO4



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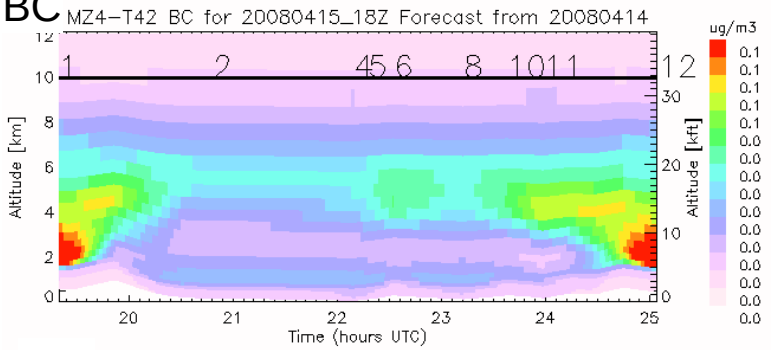

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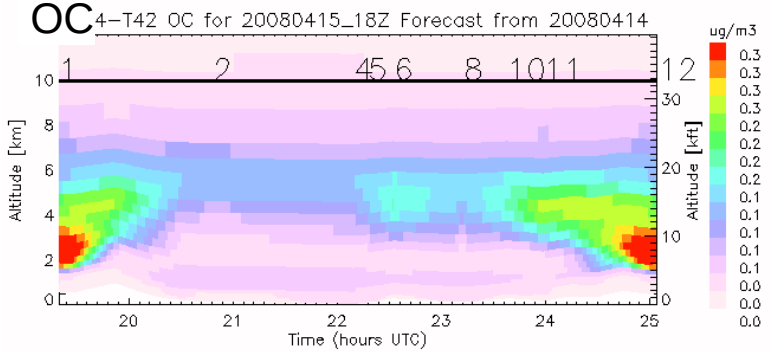
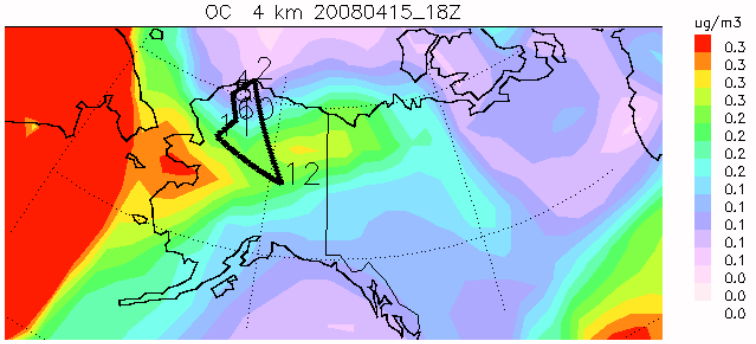
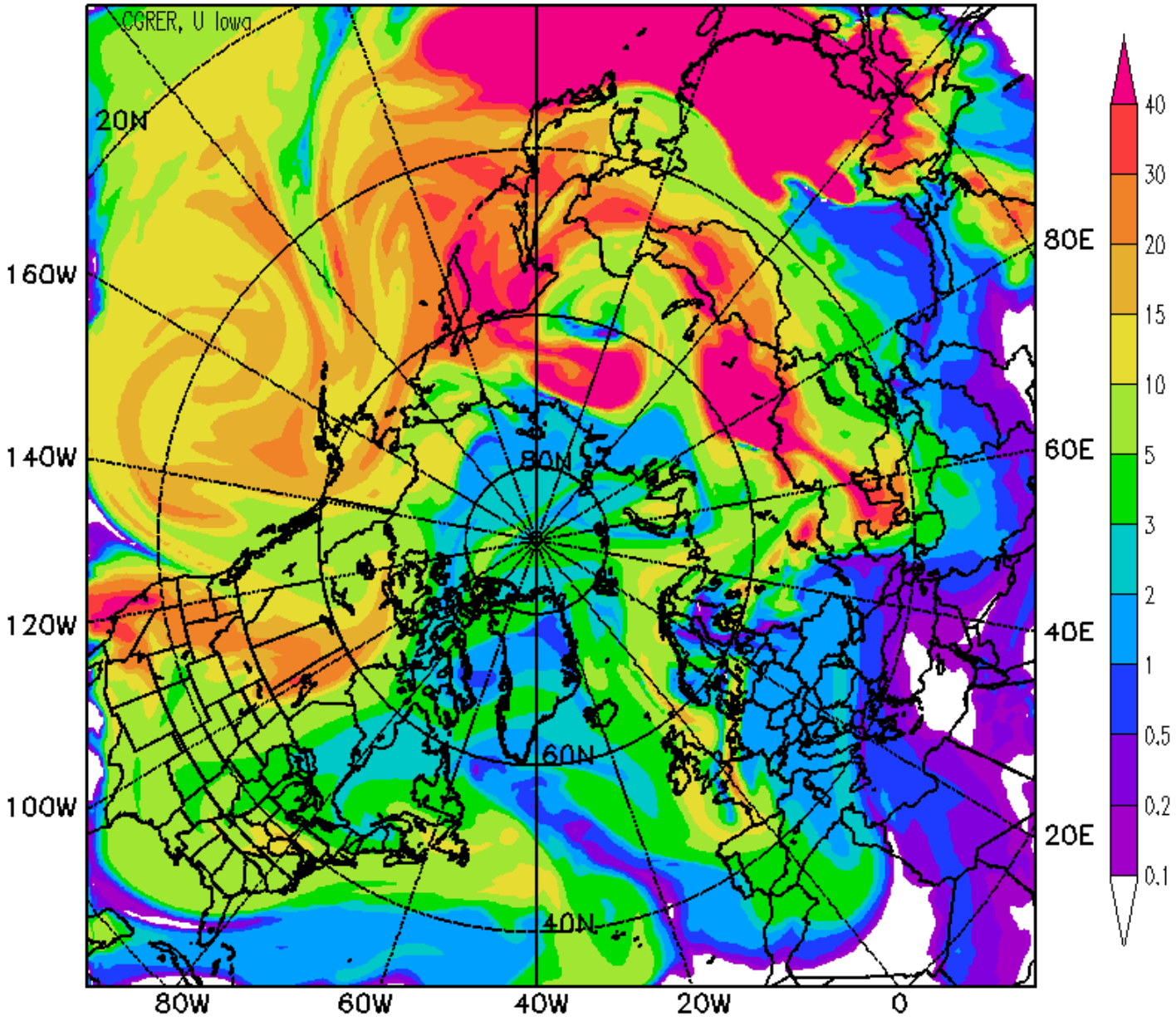
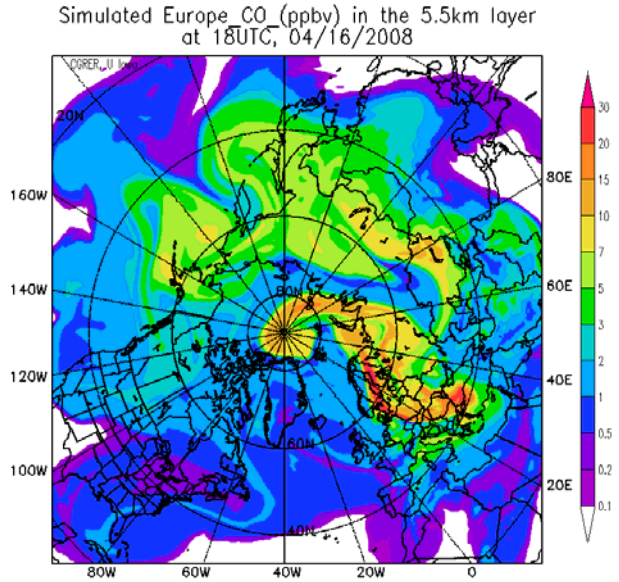


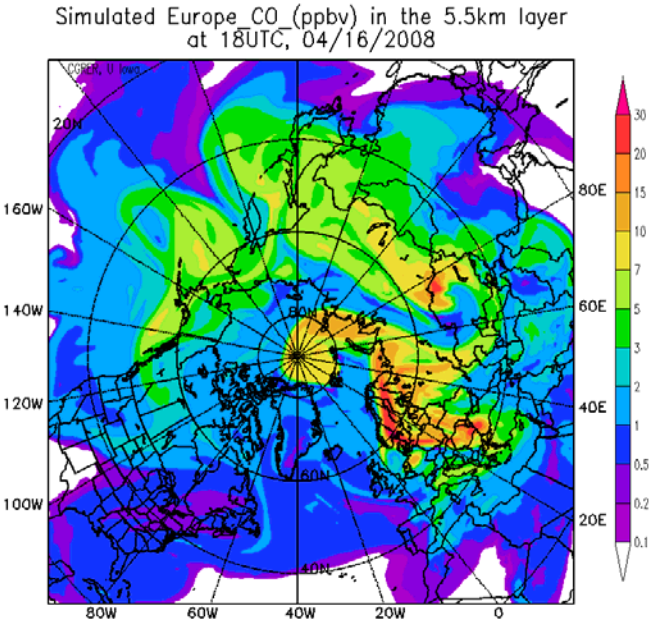


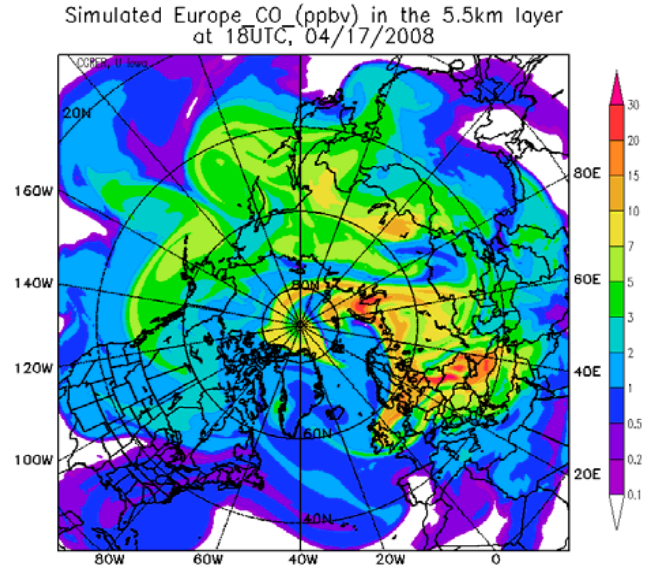
Simulated BB_CO (ppbv) in the 5.5km layer
at 0UTC, 04/14/2008



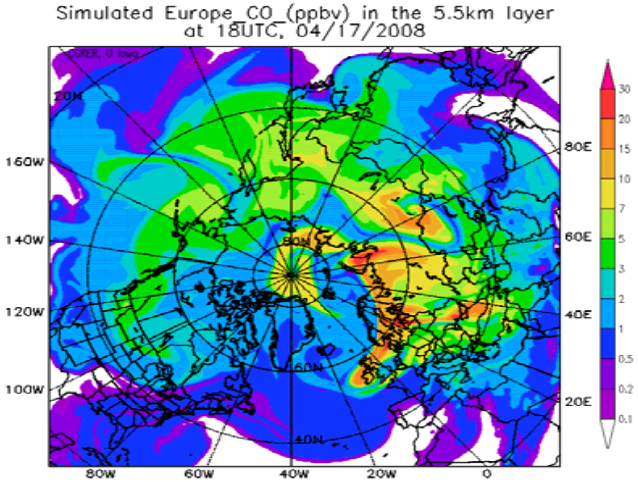
STEM Forecasts – little change







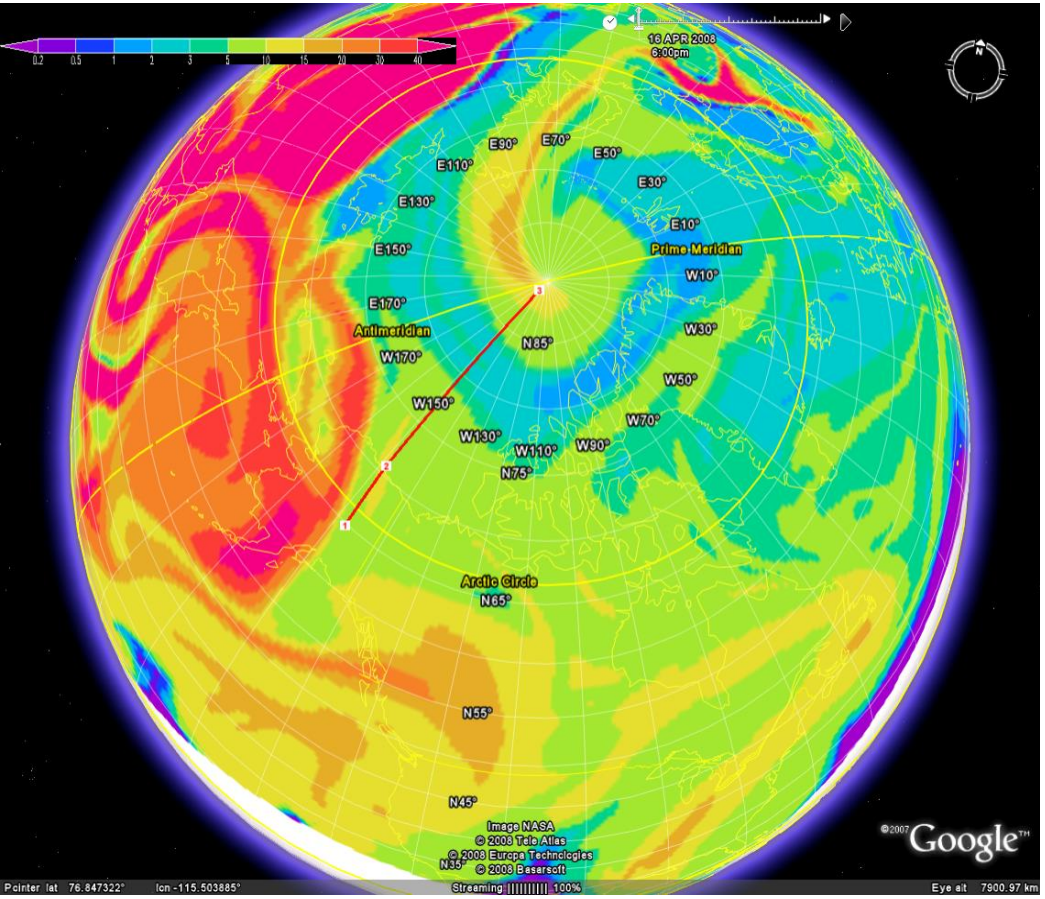
Today's Forecast



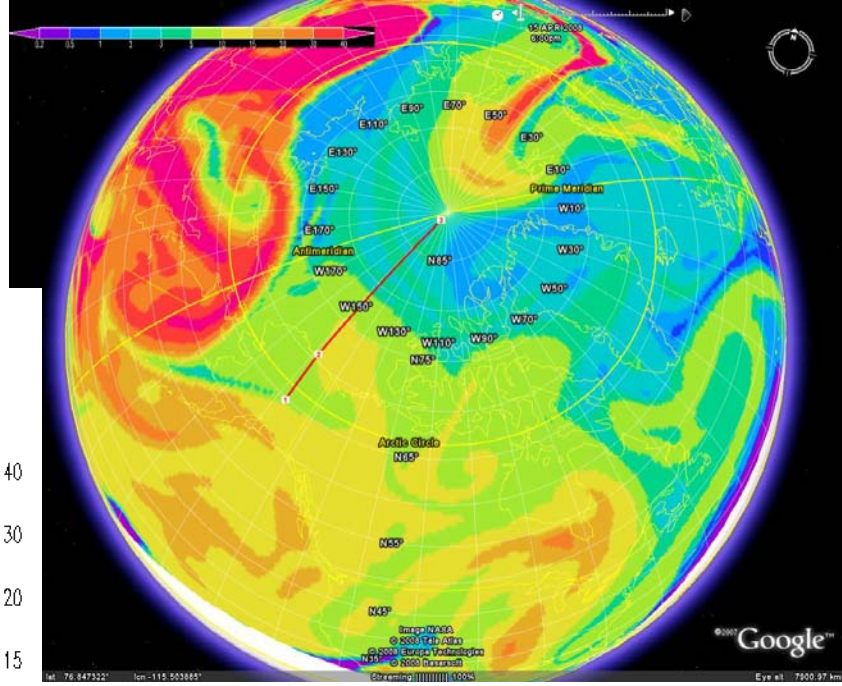
Yesterday's Forecast

Biomass 5.5km, April 15, 18Z

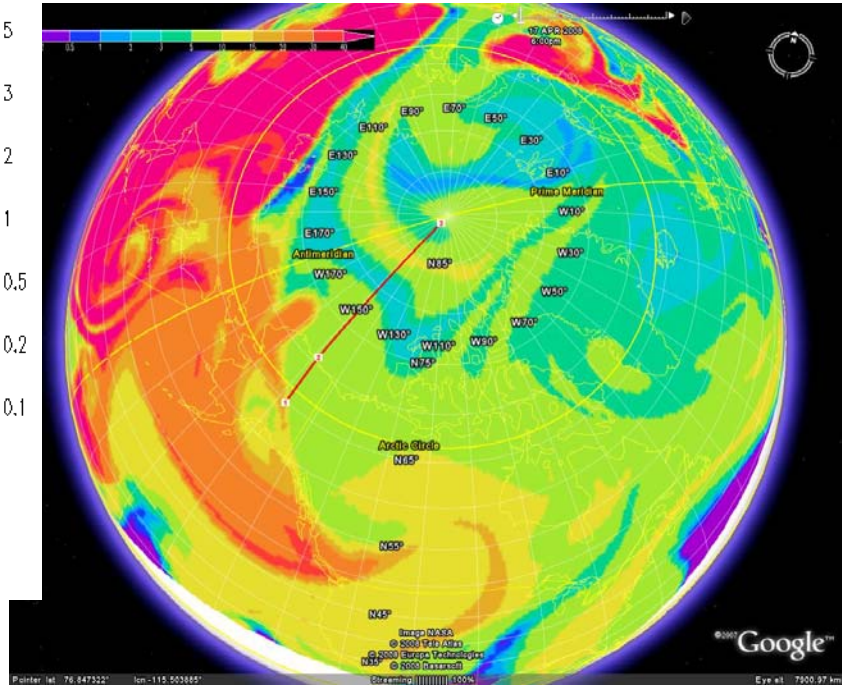
European Pollution



Biomass 5.5km, April 16, 18Z

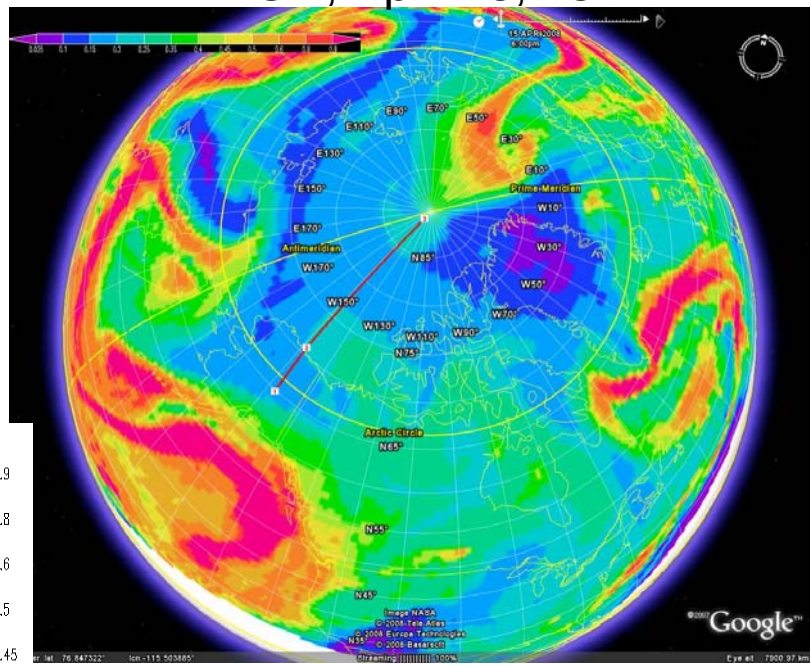


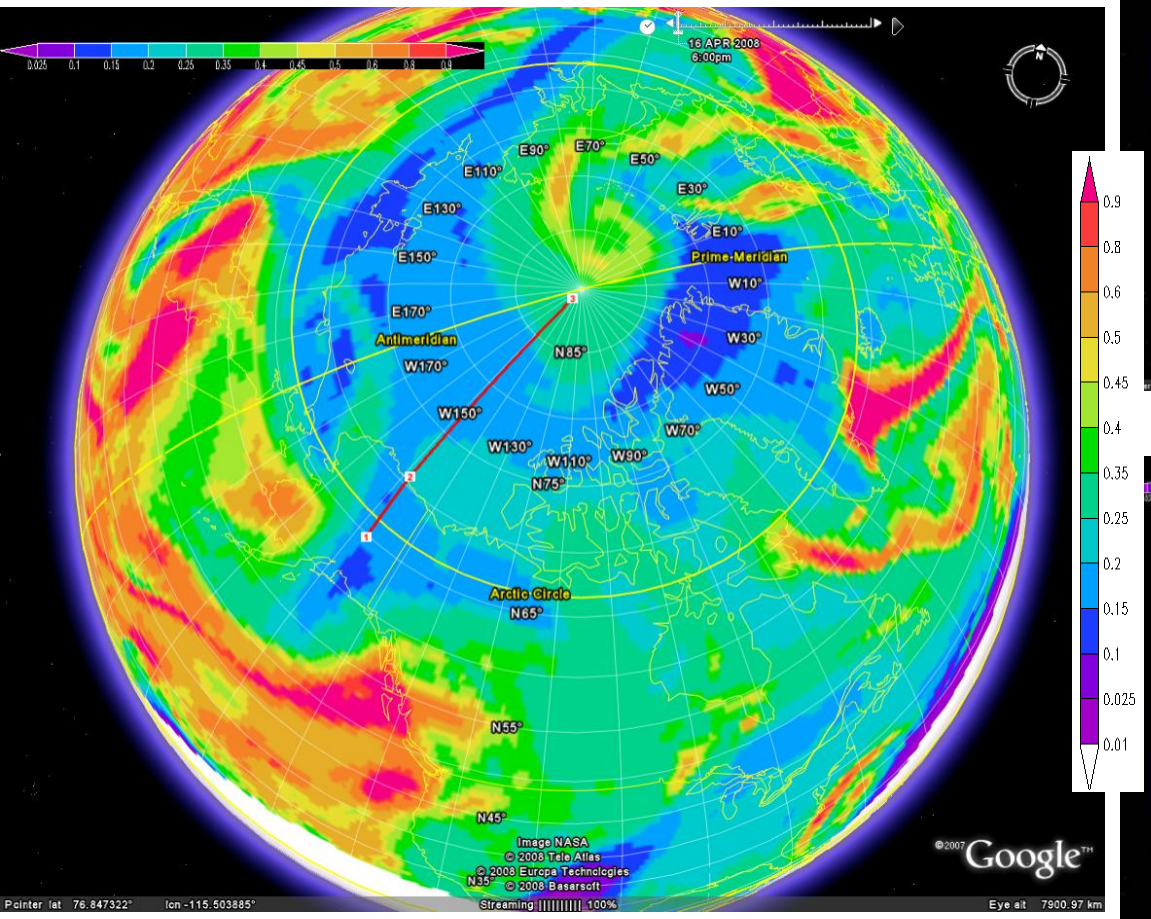
Biomass 5.5km, April 17, 18Z



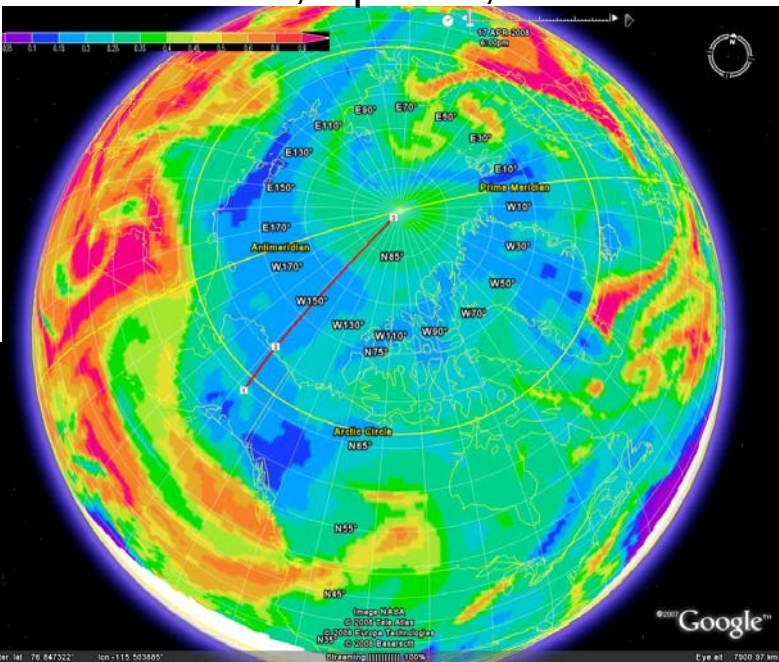
European Pollution, AOD

AOD, April 15, 18Z





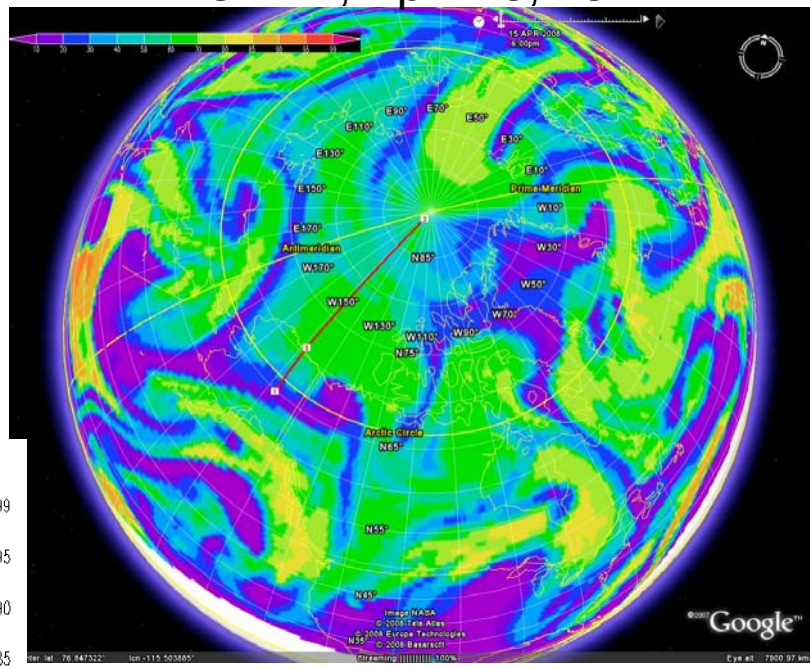
AOD, April 16, 18Z



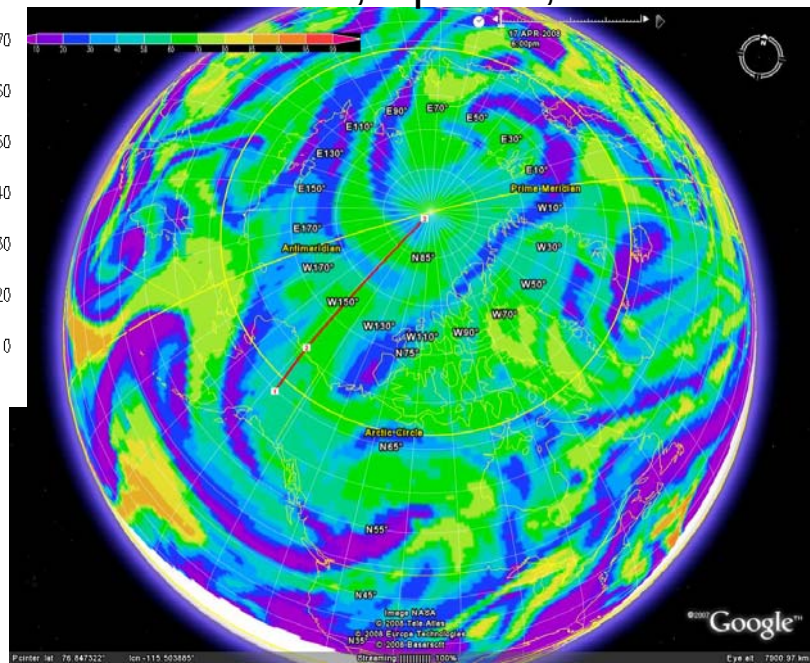
AOD, April 17, 18Z

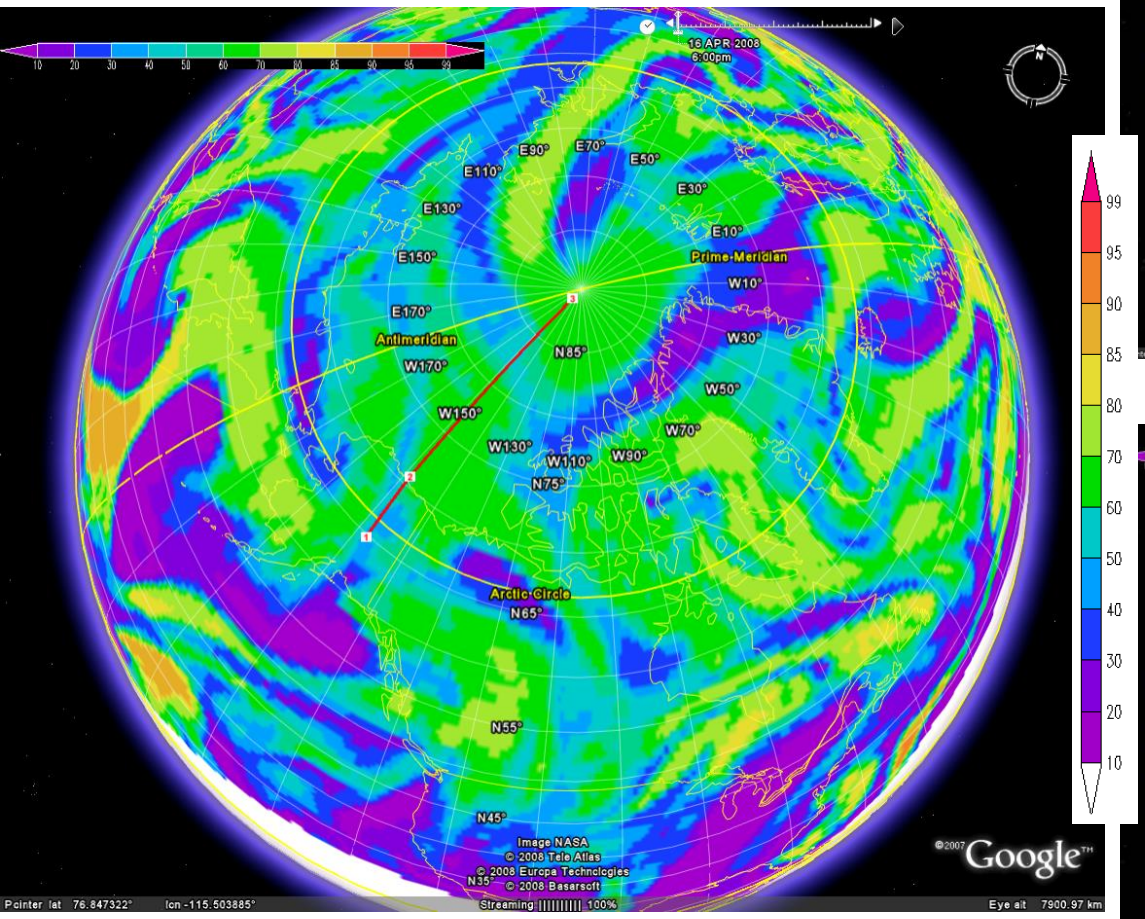
European Pollution, RH

RH 8.4km, April 15, 18Z



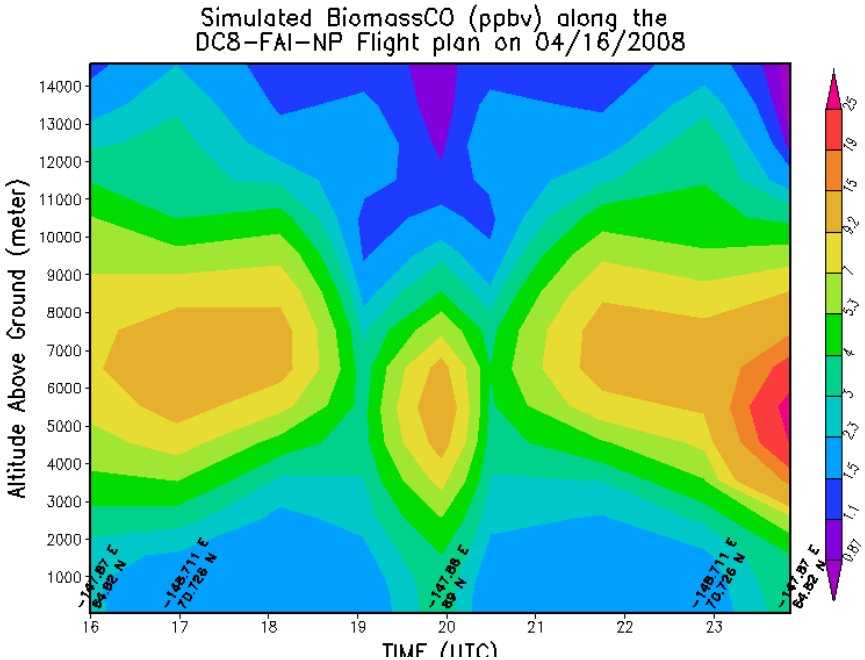
RH 8.4km, April 17, 18Z

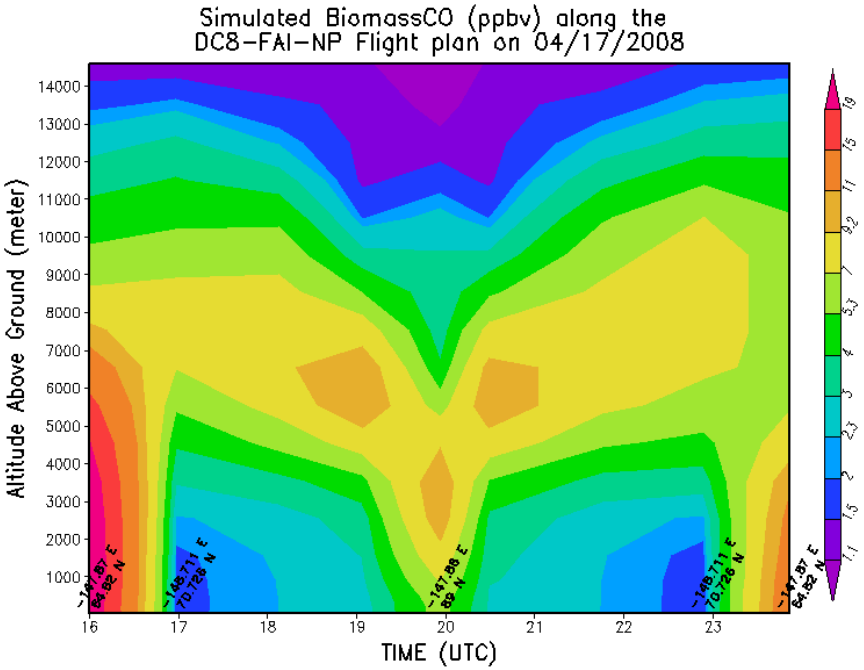


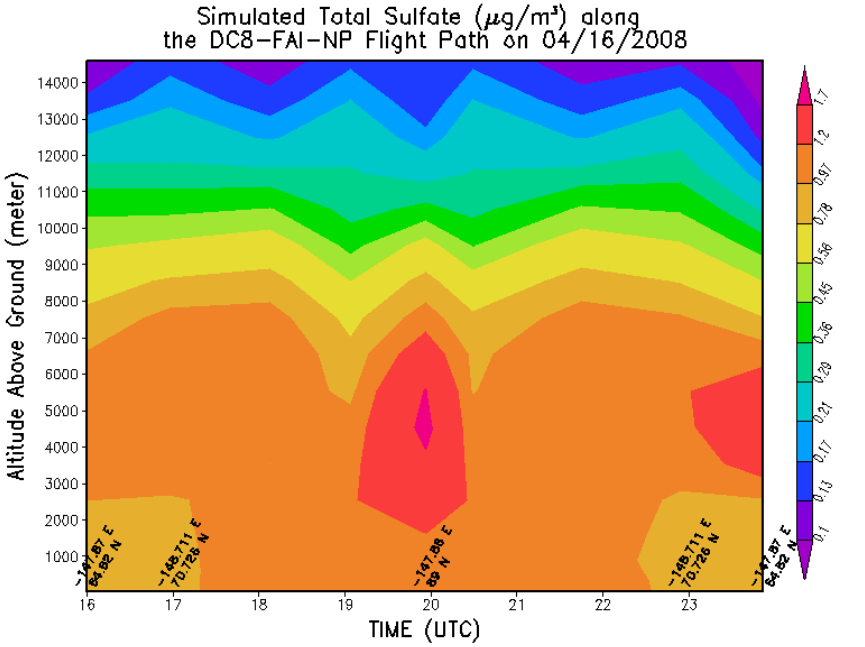


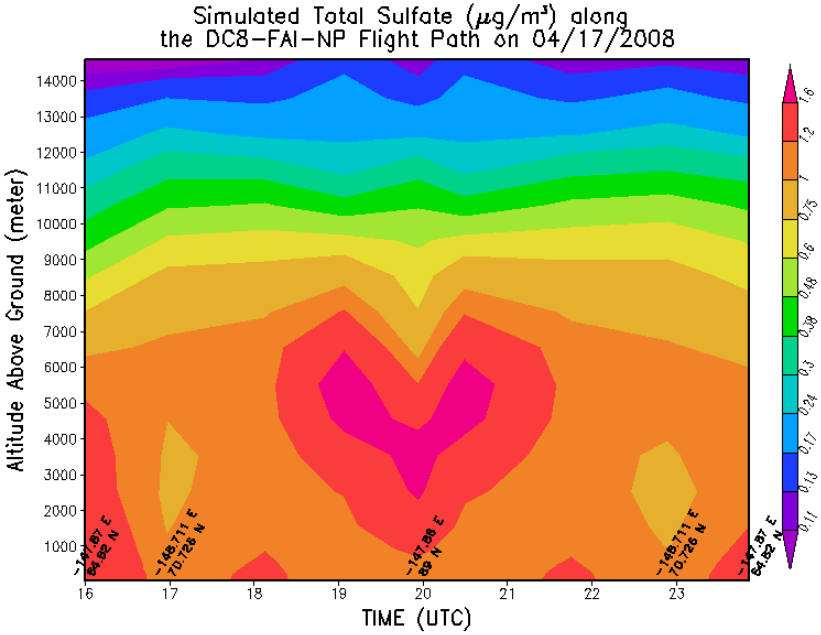
RH 8.4km, April 16, 18Z

Curtains: European Plume





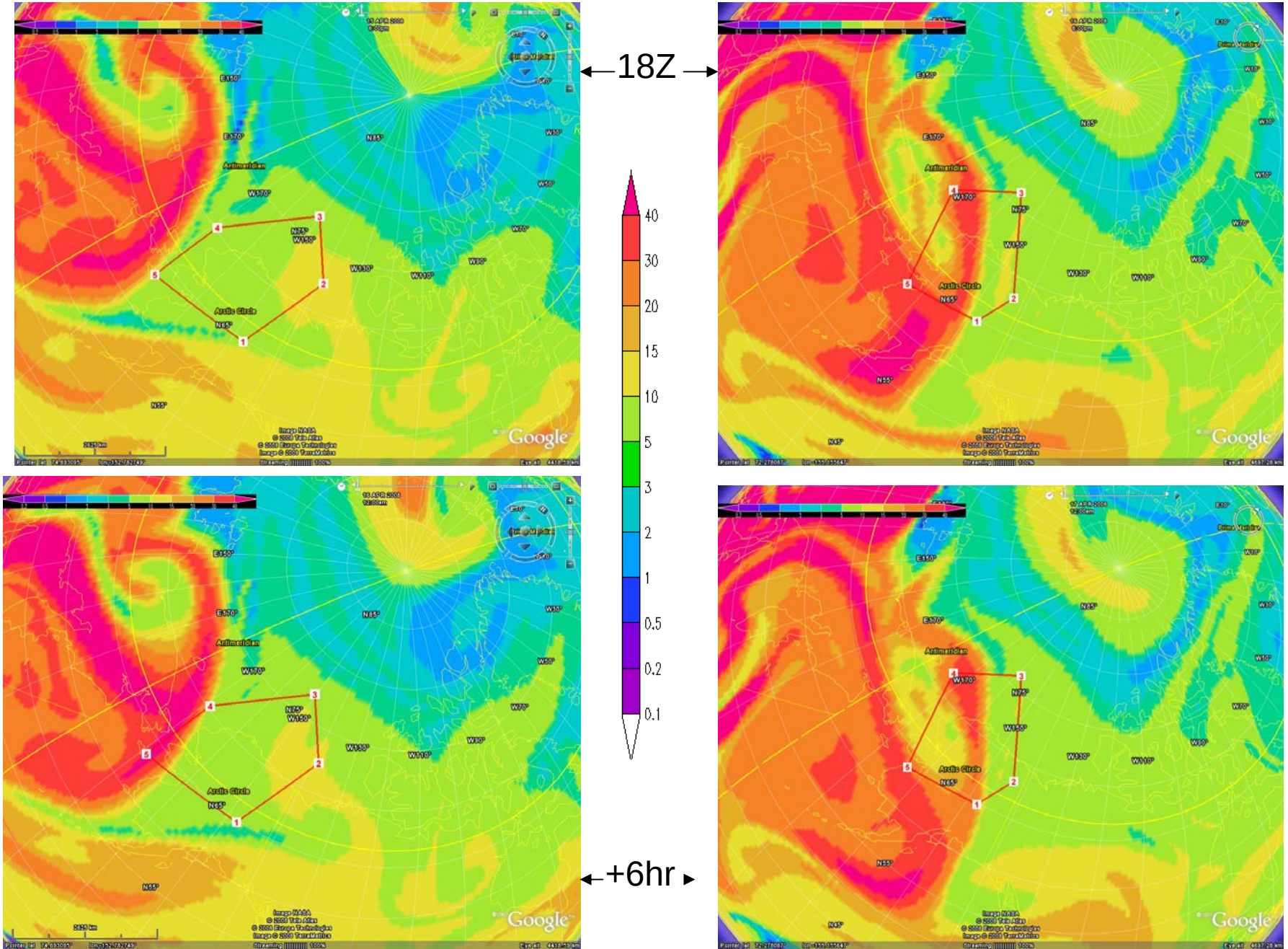




Asian Biomass 5.5 km

April 15th

April 16th

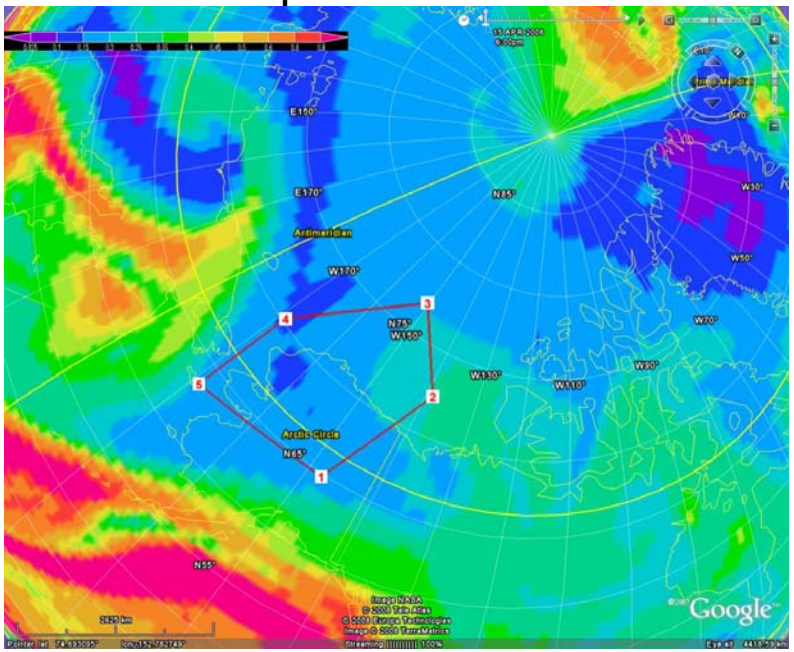


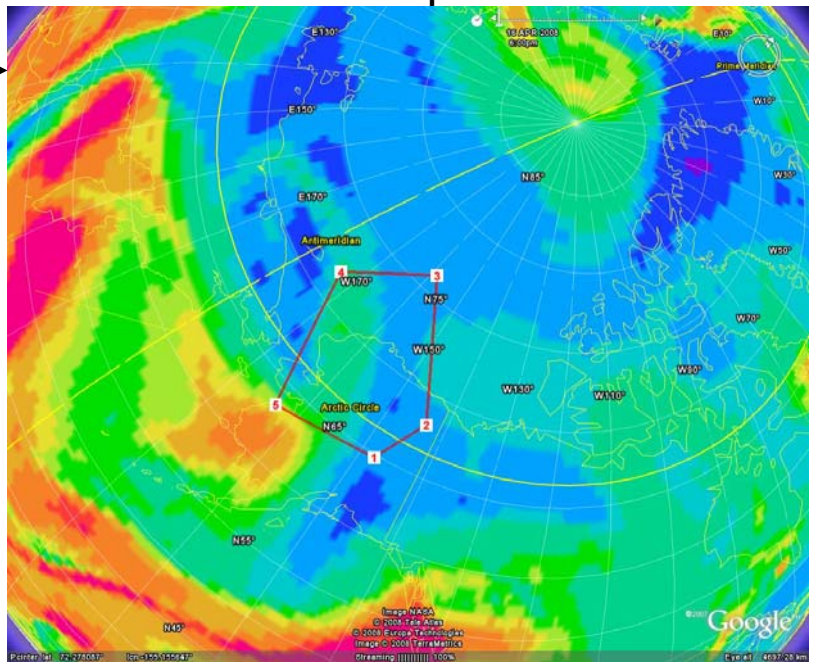
Asian Plume: Column AOD

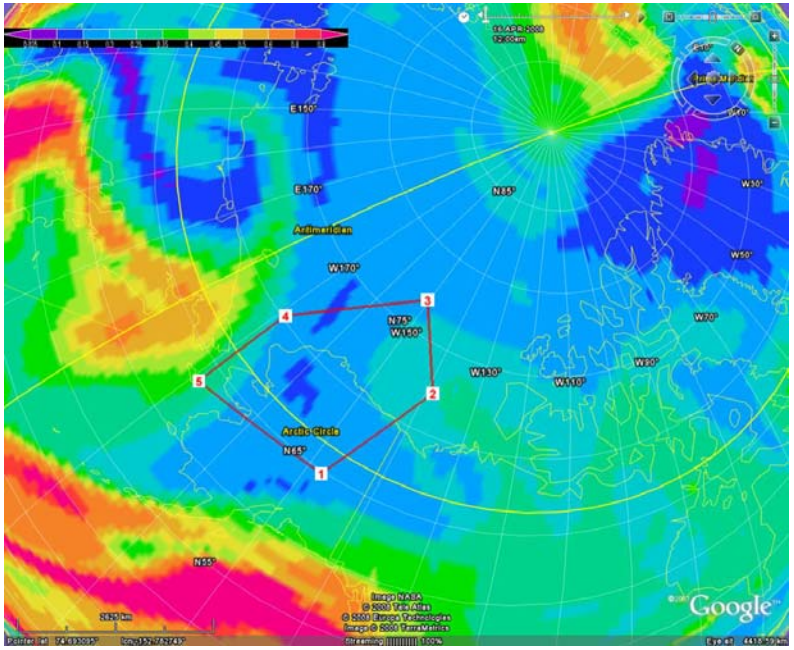
April 15th

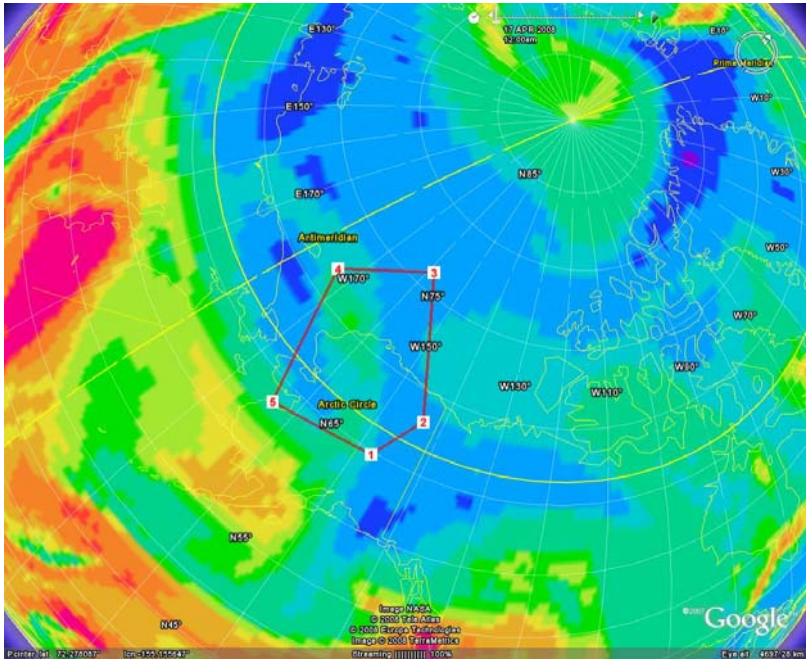
April 16th

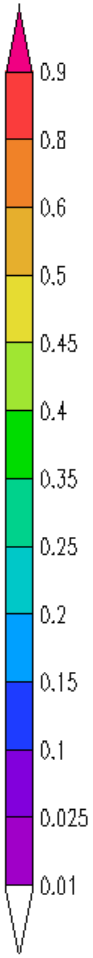
←18Z→









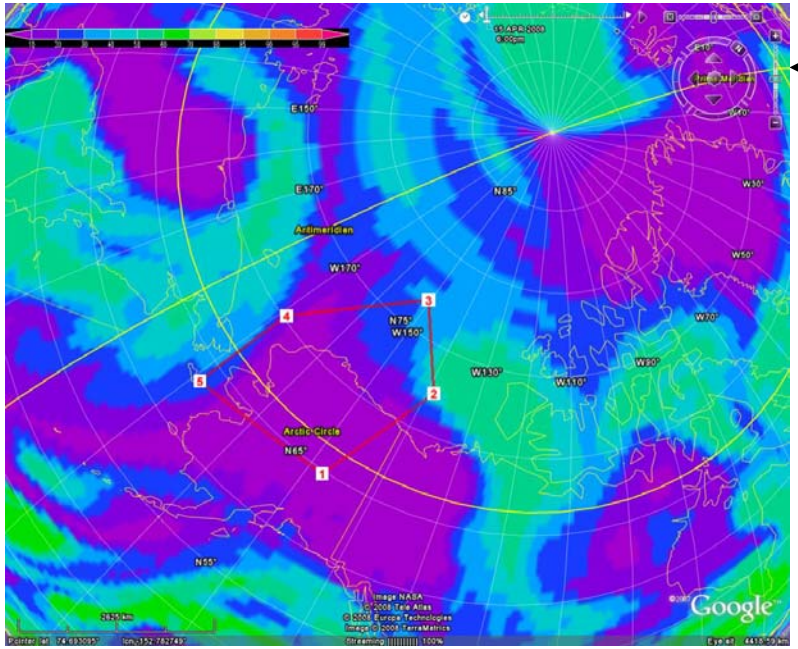


←+6hr→

RH 8.4 km

April 15th

April 16th



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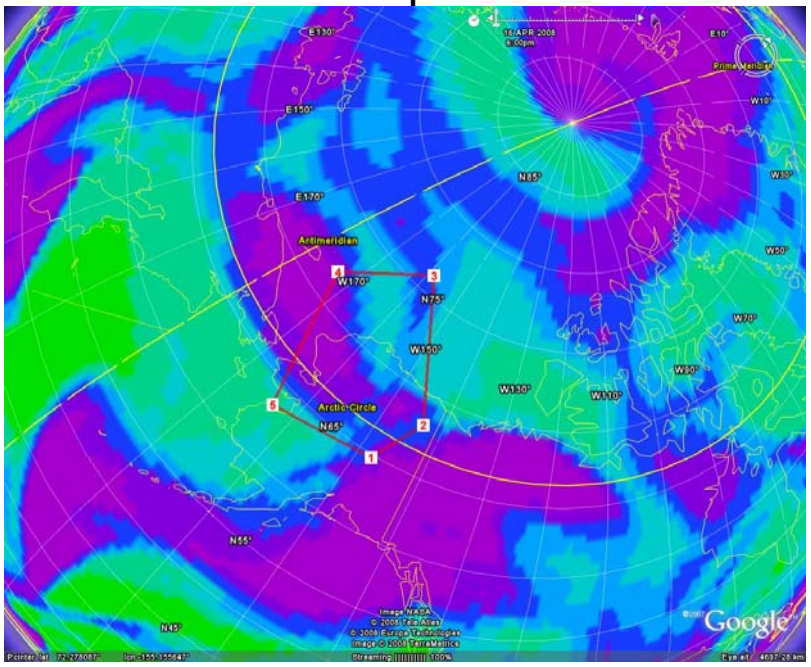

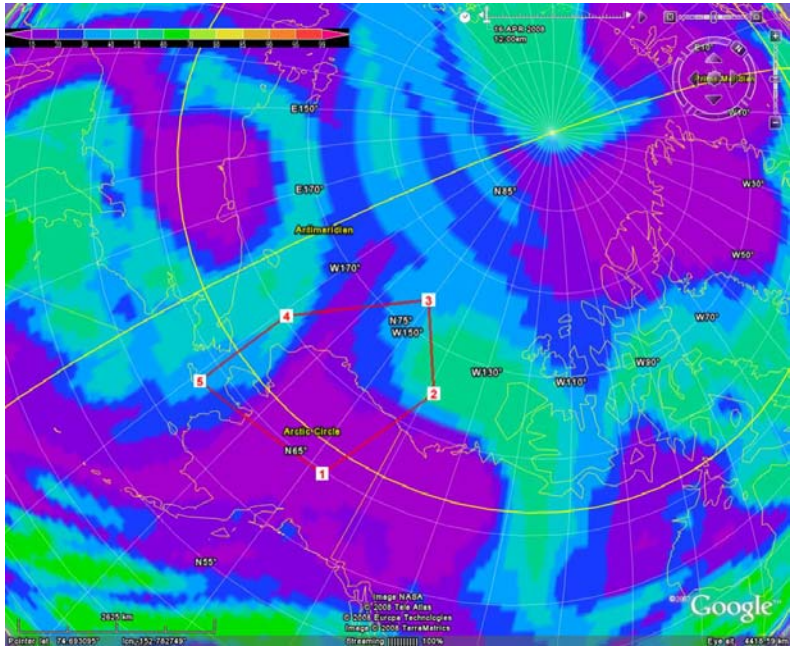

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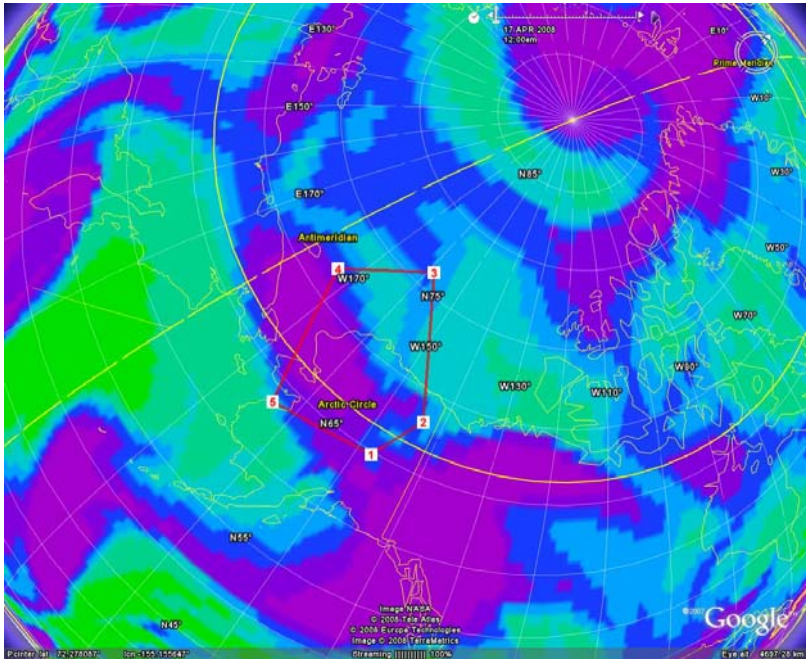
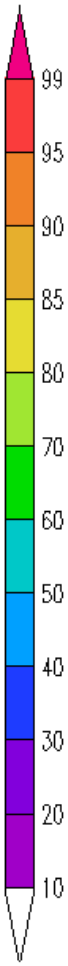
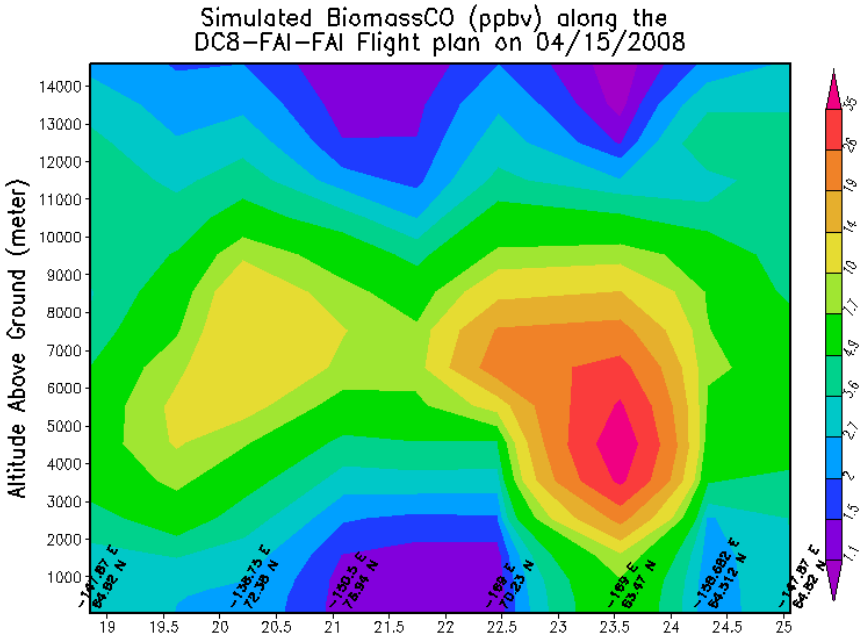
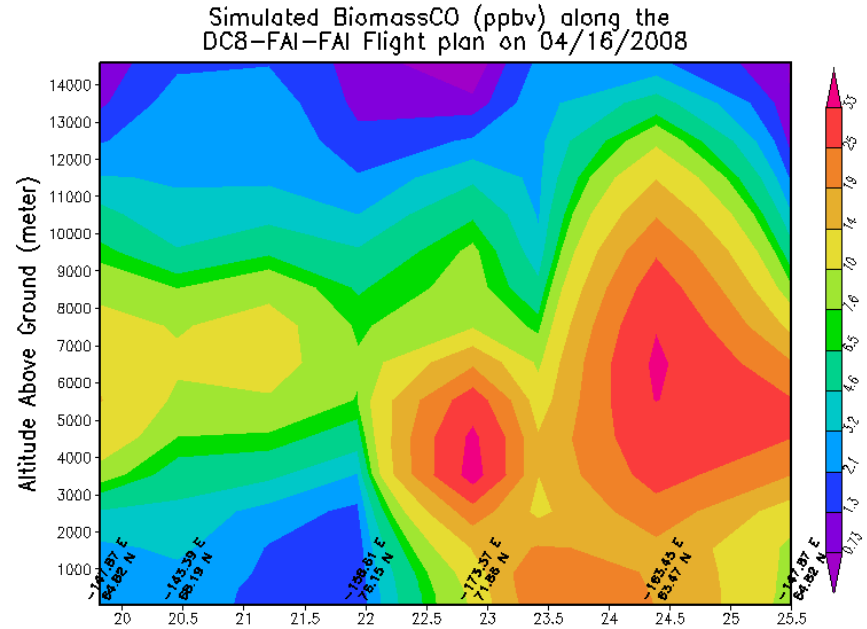
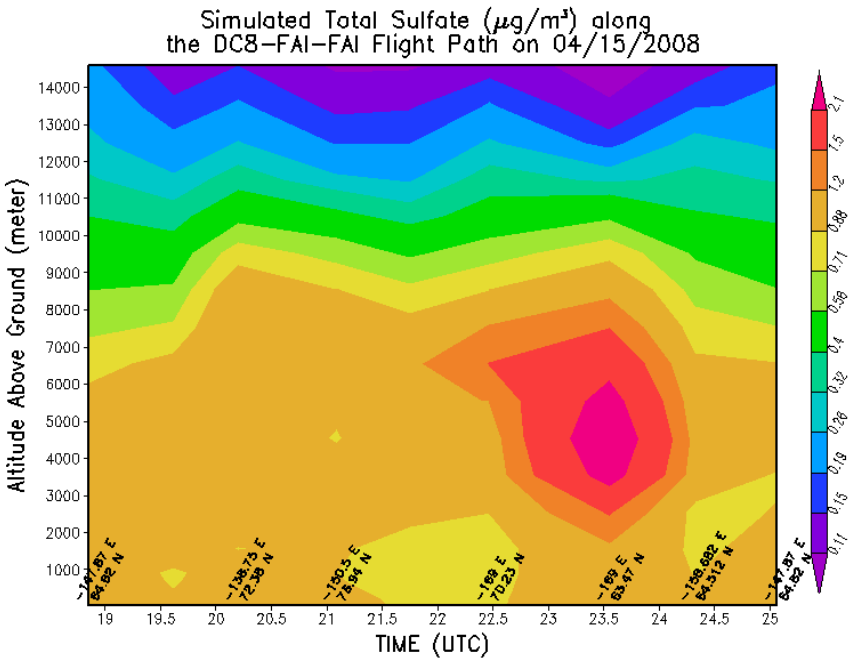


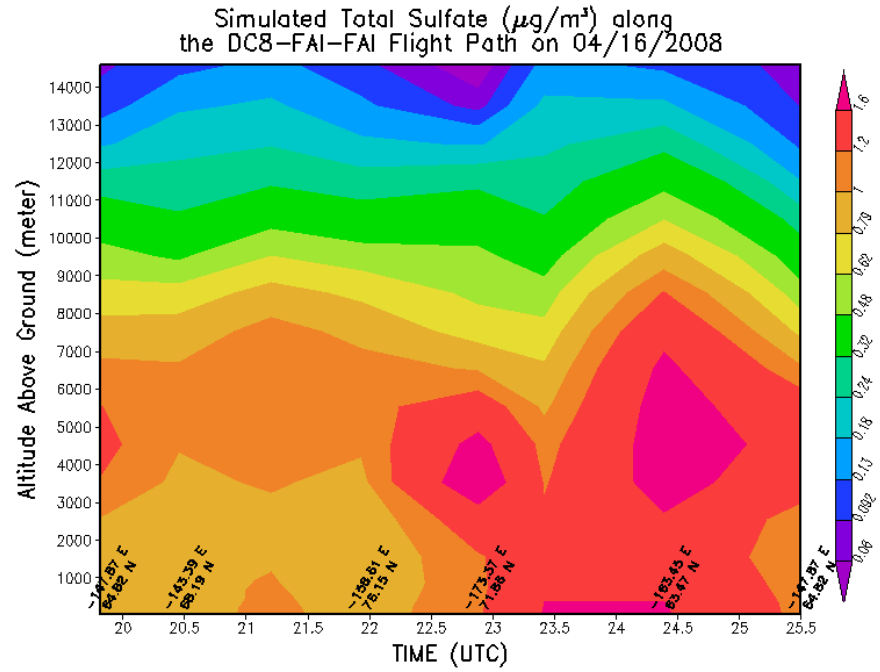


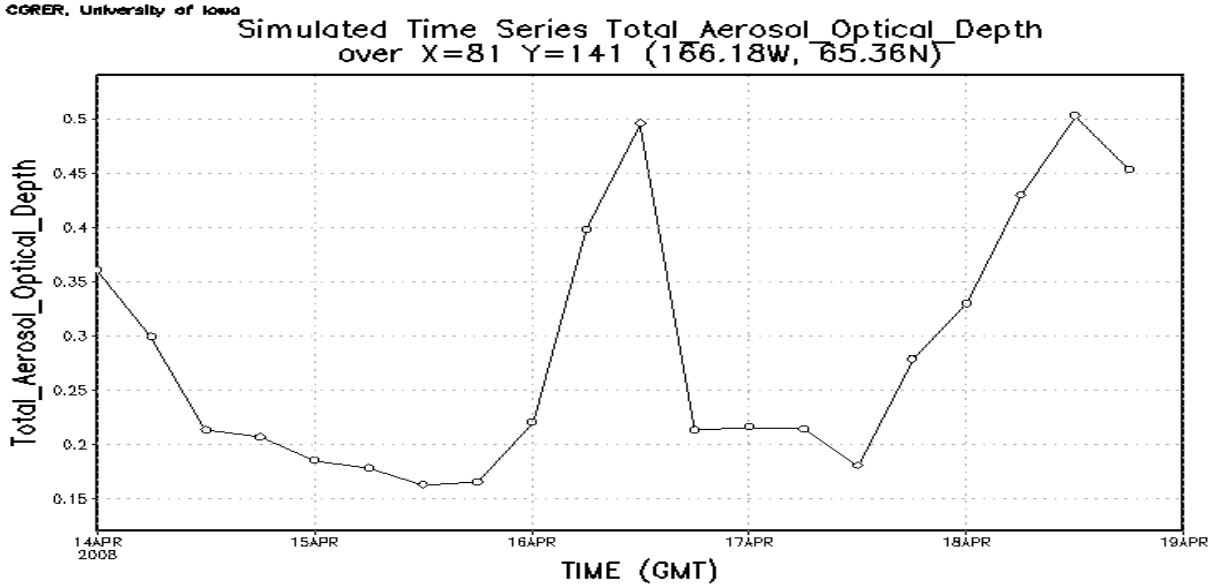
Asian Pollution

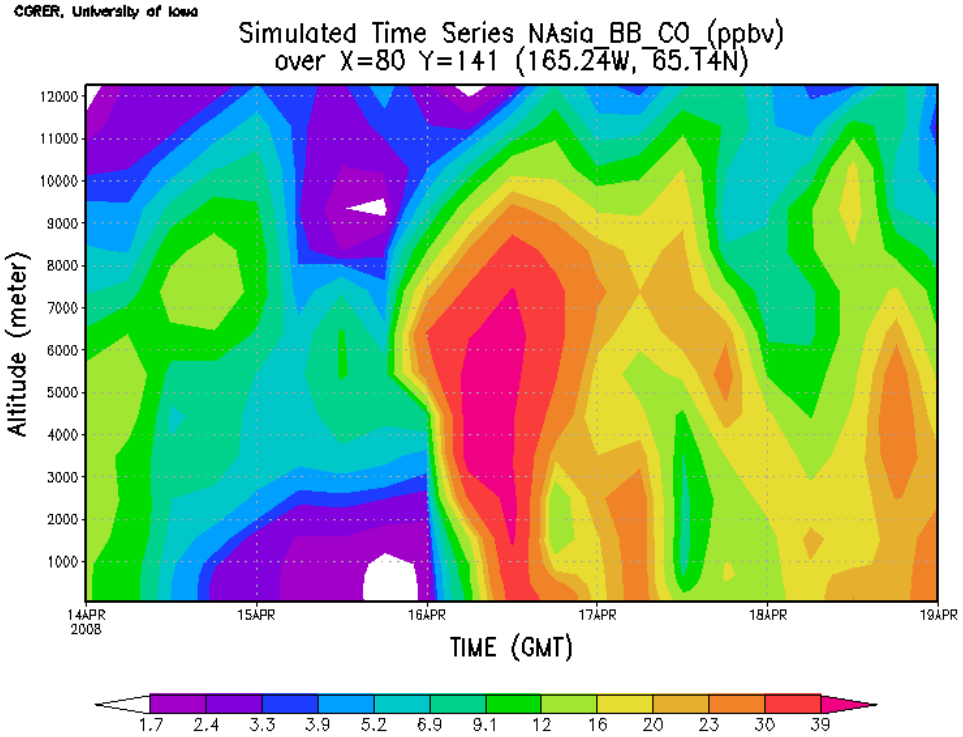


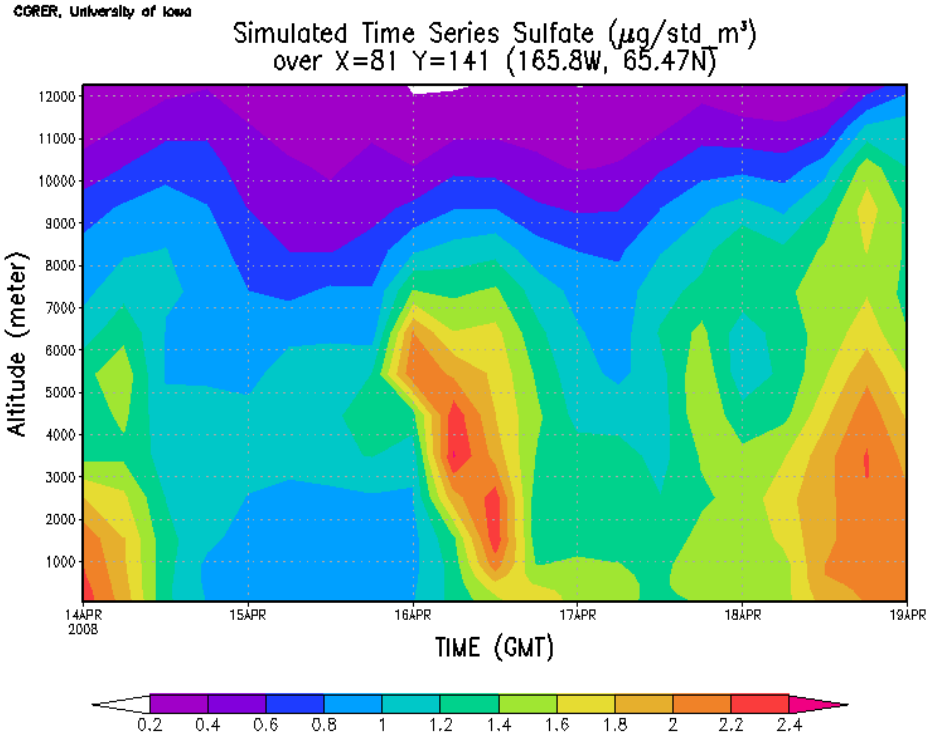




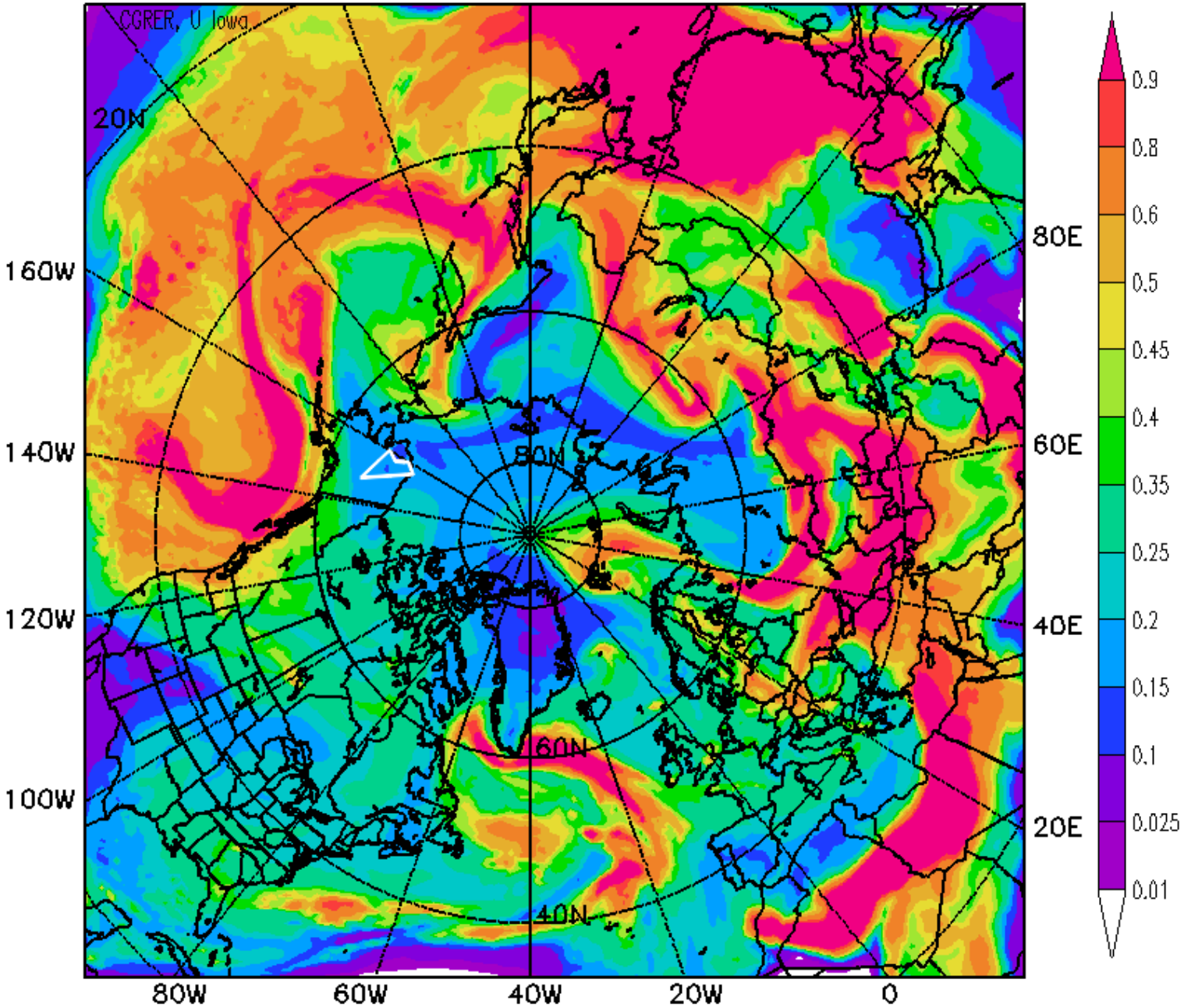


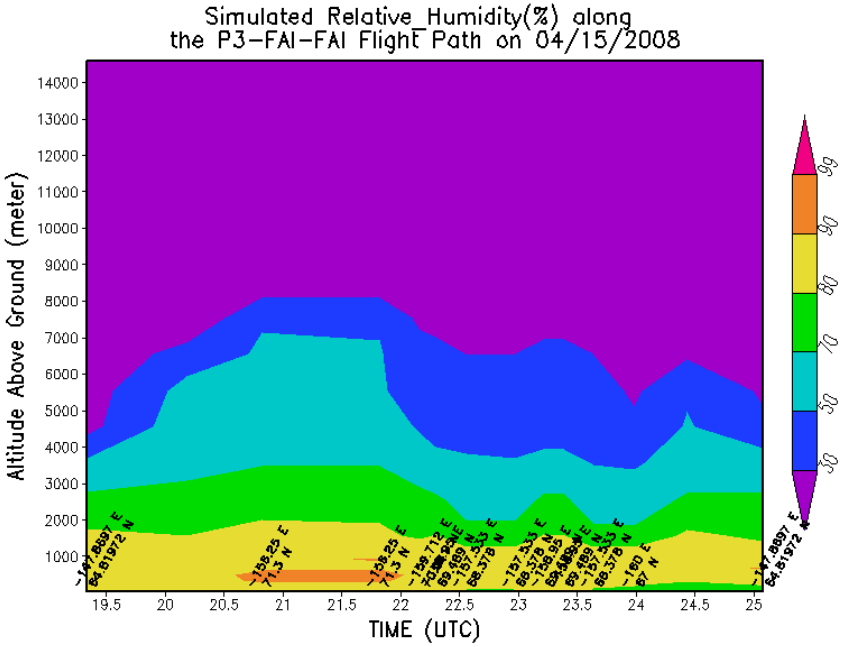

CGRER, University of Iowa
Simulated Time Series Total_Aerosol_Optical_Depth
over X=81 Y=141 (166.18W, 65.36N)
Total_Aerosol_Optical_Depth
0.5
0.45
0.4
0.35
0.3
0.25
0.2
0.15
14APR 2008
15APR
16APR
17APR
18APR
19APR
TIME (GMT)

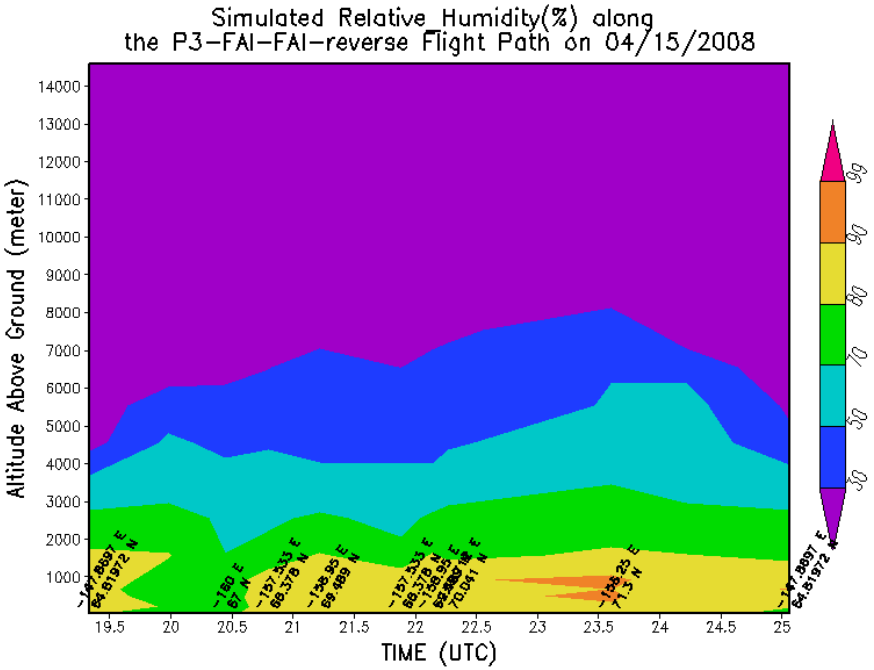

CGRER, University of Iowa
Simulated Time Series NAsia_BB_CO (ppbv)
over X=80 Y=141 (165.24W, 65.74N)
Altitude (meter)
12000
11000
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
14APR 2008
15APR
16APR
17APR
18APR
19APR
TIME (GMT)
1.7
2.4
3.3
3.9
5.2
6.9
9.1
12
16
20
23
30
39

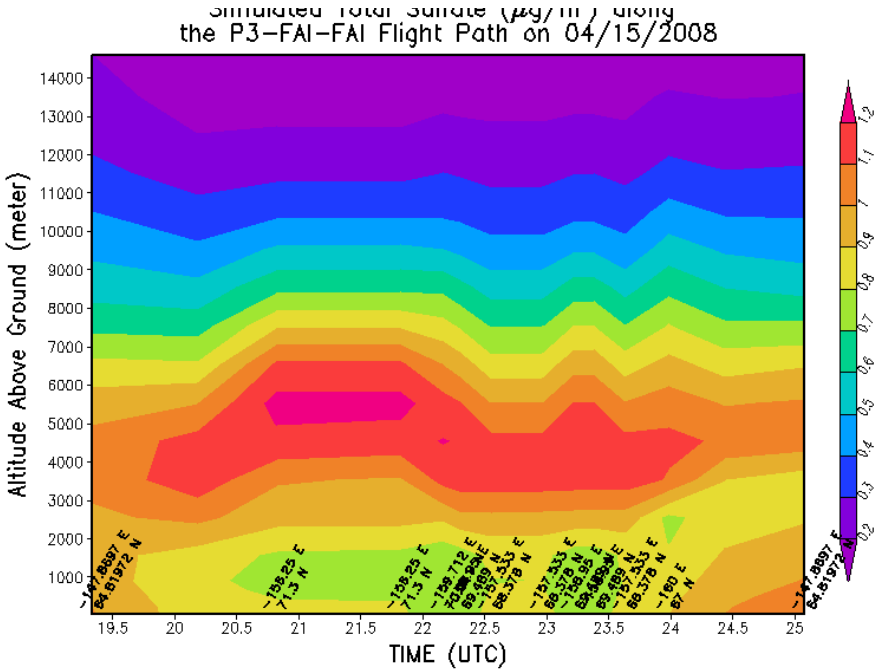

CGRER, University of Iowa
Simulated Time Series Sulfate (μg/std_m³)
over X=81 Y=141 (165.8W, 65.47N)
Altitude (meter)
12000
11000
10000
9000
8000
7000
6000
5000
4000
3000
2000
1000
14APR 2008
15APR
16APR
17APR
18APR
19APR
TIME (GMT)
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
1.8
2
2.2
2.4

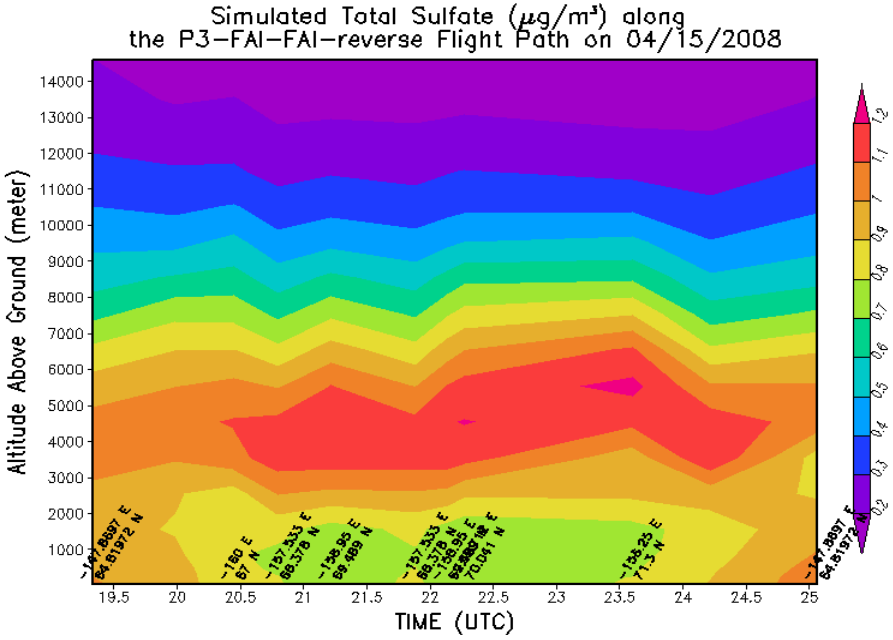
Simulated Column TOTAL_Aerosol_Optical_Depth at 18UTC, 04/15/2008



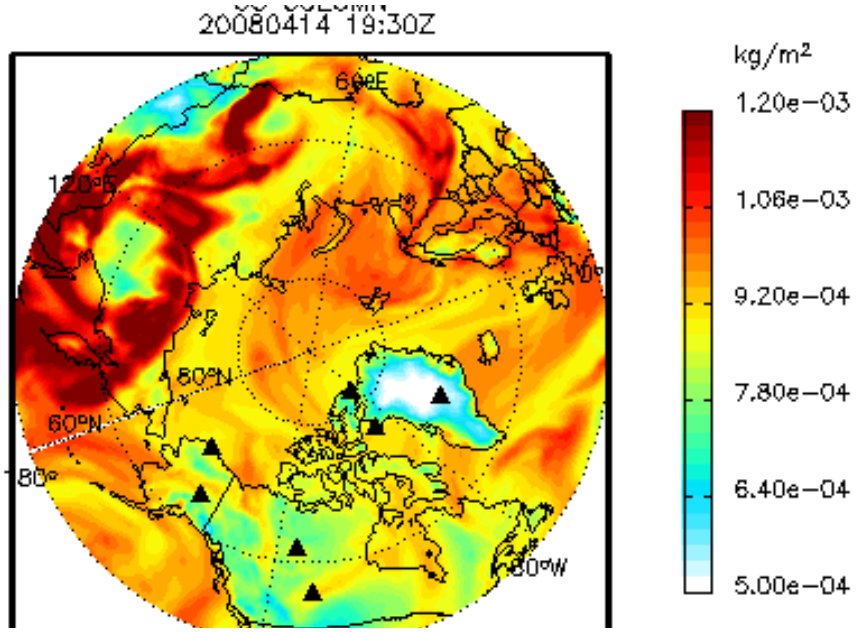

Simulated Relative Humidity(%) along
the P3-FAI-FAI Flight Path on 04/15/2008
Altitude Above Ground (meter)
TIME (UTC)


Simulated Relative Humidity(%) along
the P3-FAI-FAI-reverse Flight Path on 04/15/2008
Altitude Above Ground (meter)
TIME (UTC)

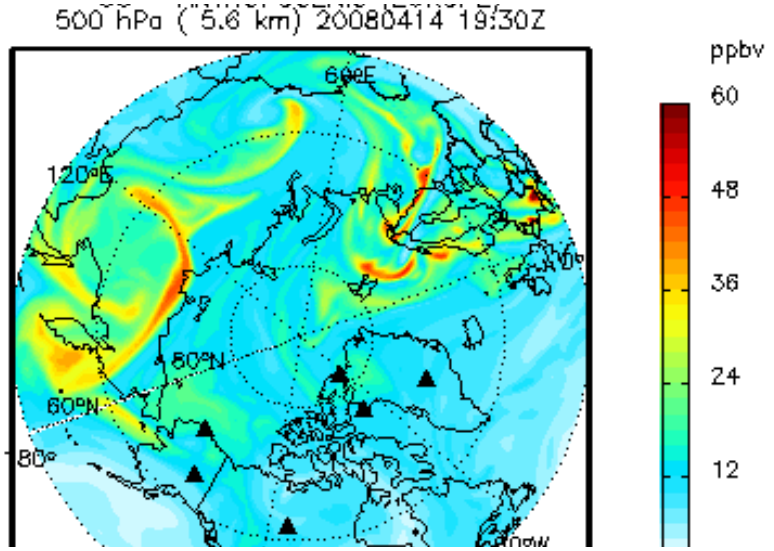

the P3-FAI-FAI Flight Path on 04/15/2008
Altitude Above Ground (meter)
TIME (UTC)


Simulated Total Sulfate (μg/m³) along
the P3-FAI-FAI-reverse Flight Path on 04/15/2008
Altitude Above Ground (meter)
TIME (UTC)

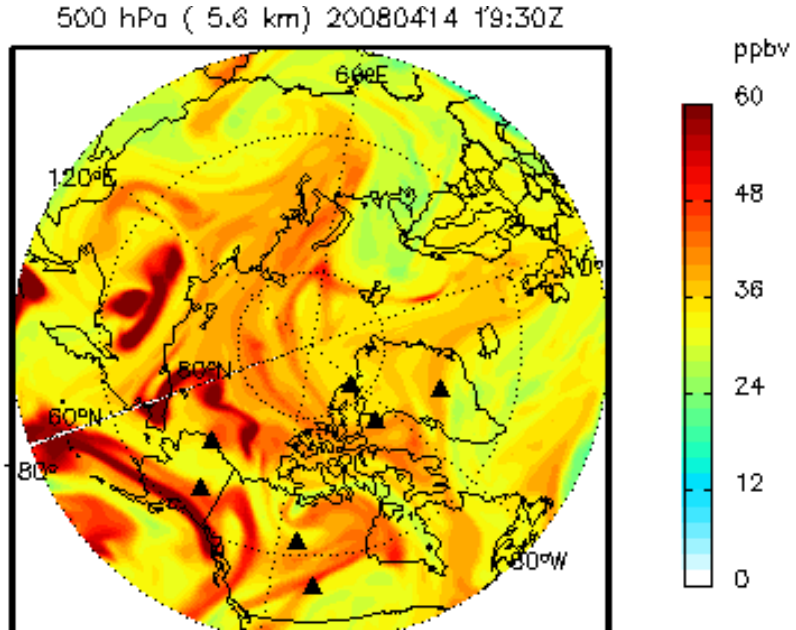
Total CO Column



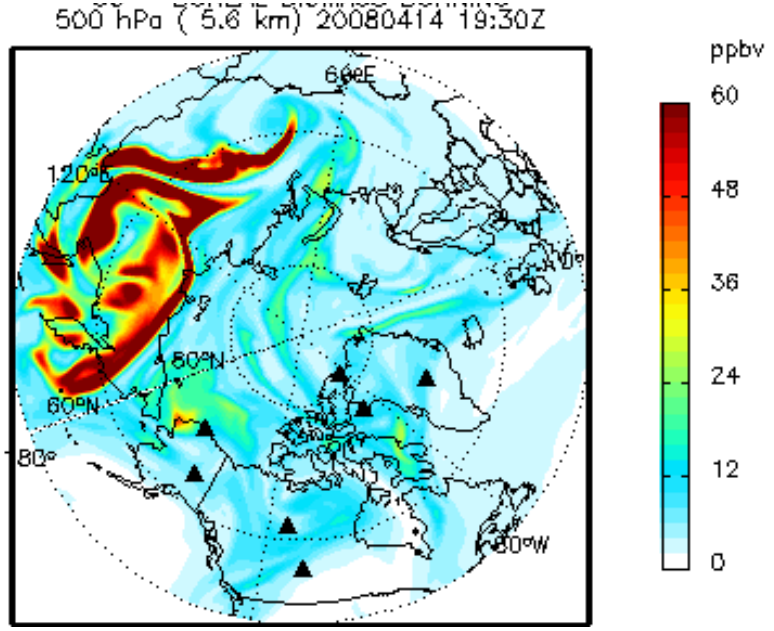
European Anthro. CO (ppbv) 500 mb



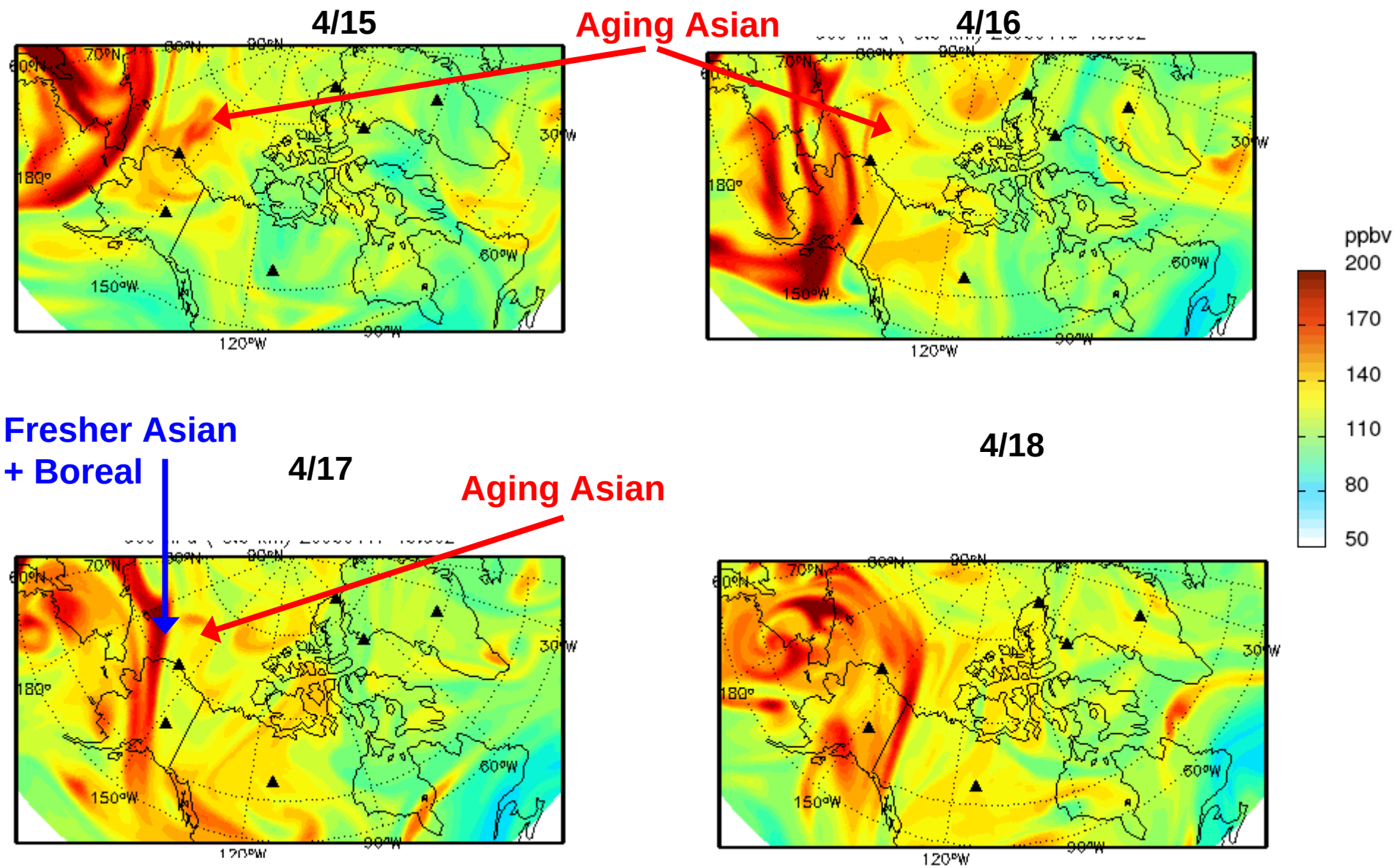
Asian Anthro. CO (ppbv) 500 mb



Boreal Burning CO (ppbv) 500 mb



Total CO 500 hPa



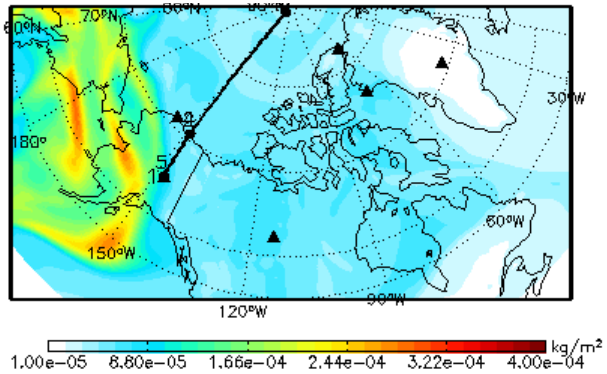
Using 4/14 6z forecast

DC-8 : FAI to North Pole

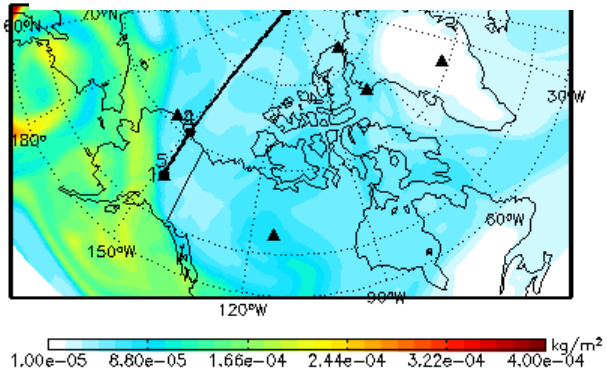
April 16th – 17th

Boreal CO Column

16th

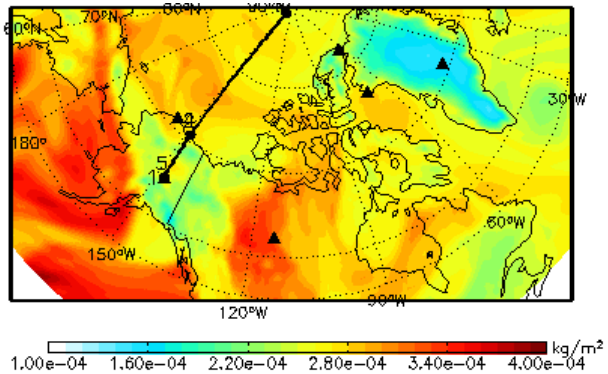


17th

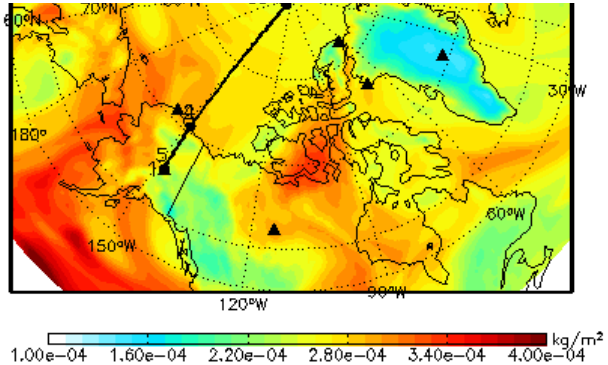


Asian Anthro. CO Column

16th

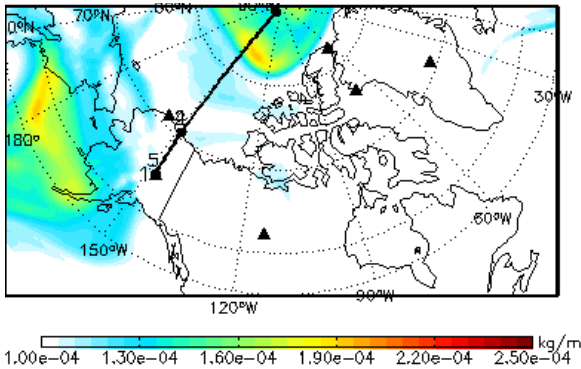


17th

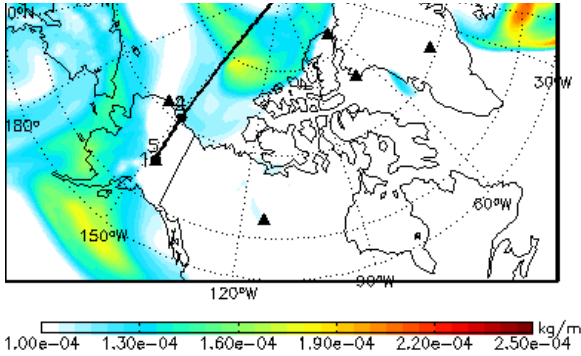


Euro. Anthro. CO Column

16th



17th

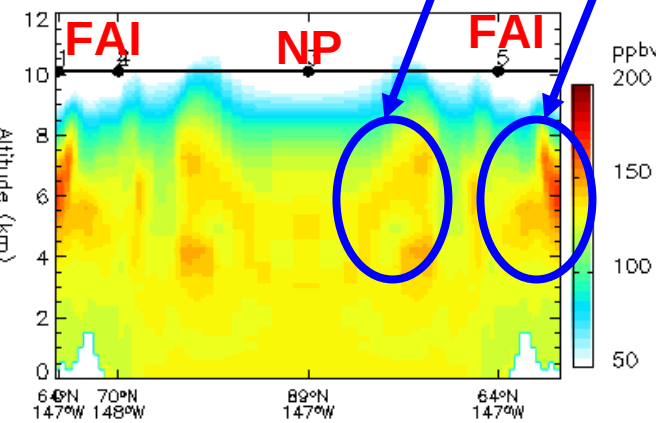


European Anthropogenic CO

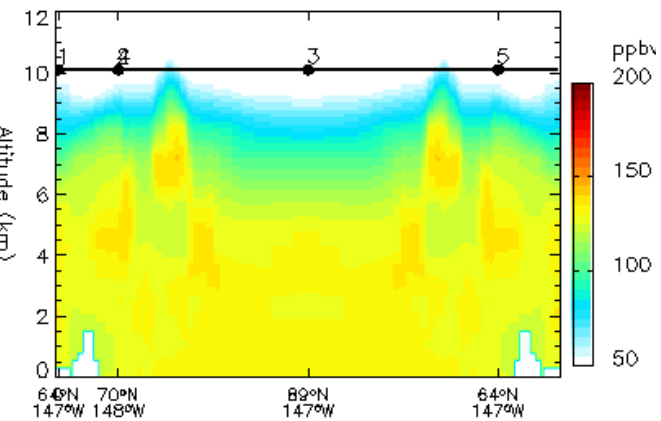
Asian Anthropogenic+Boreal CO

Total CO

16th

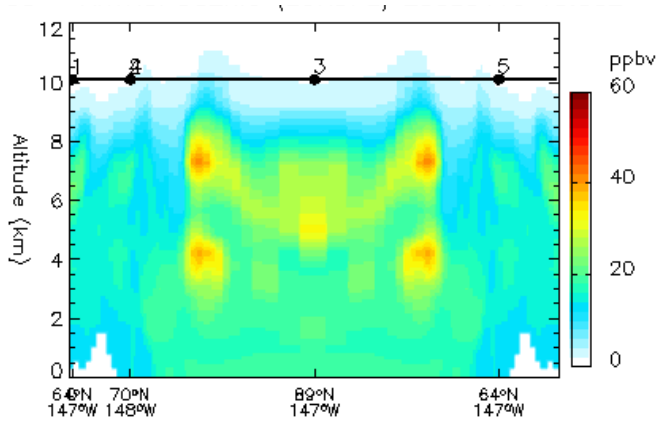


17th

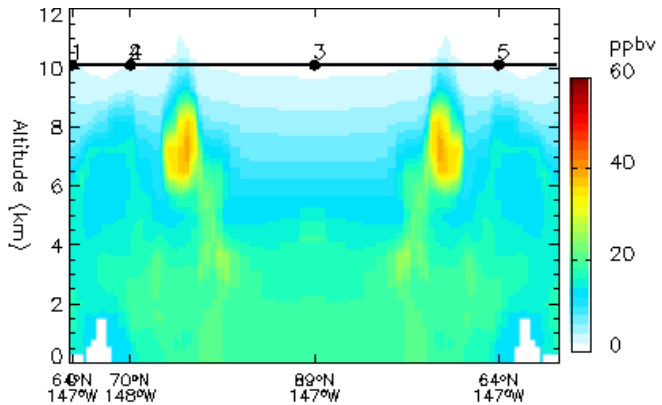


Euro. Anthro. CO

16th

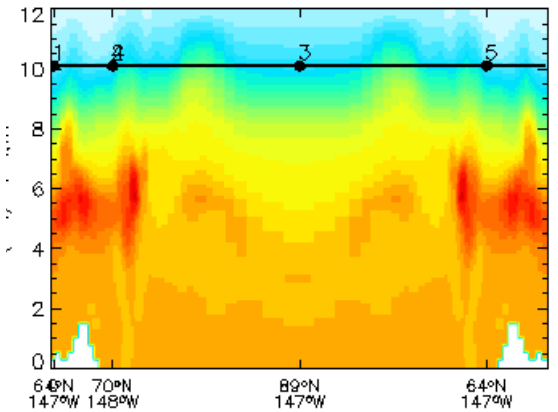


17th

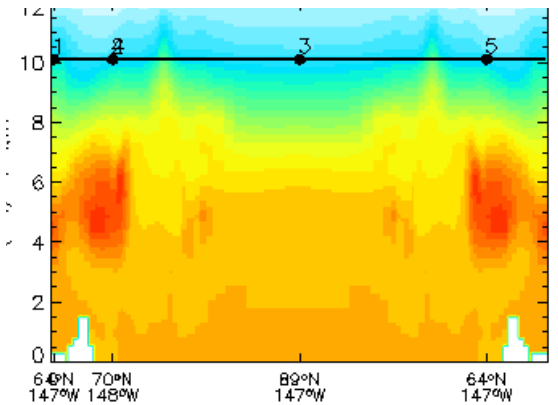


Asian Anthro. CO

16th



17th

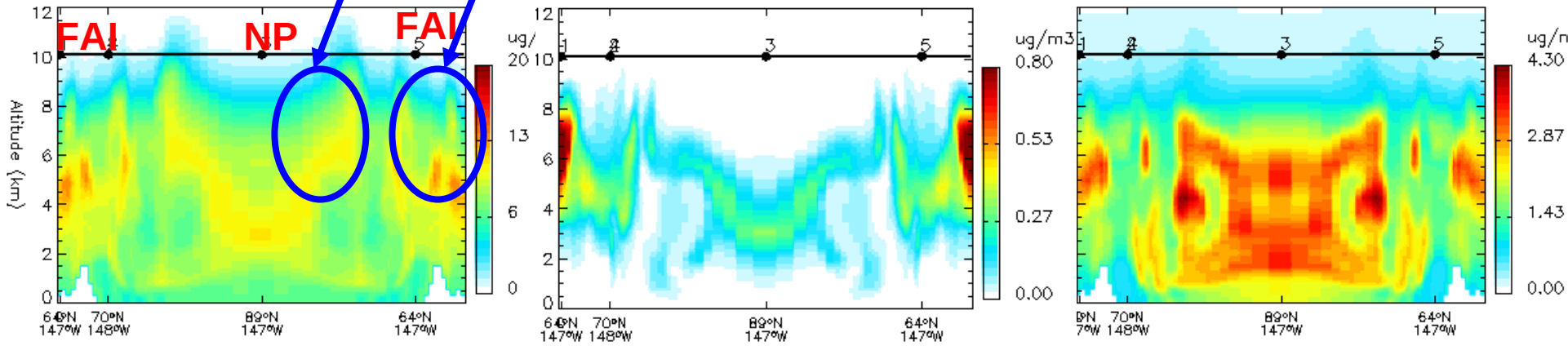


European Anthropogenic CO

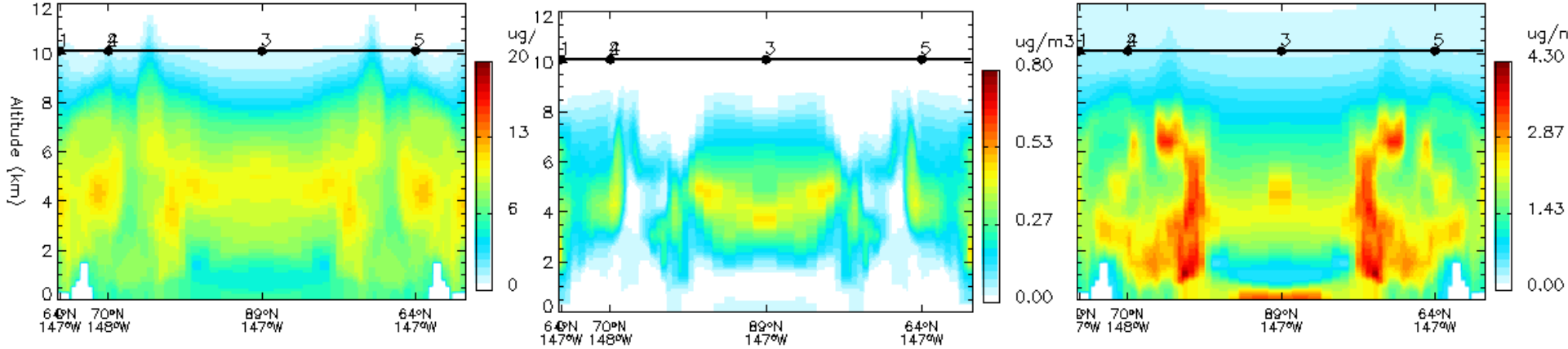
Asian Anthropogenic+Boreal CO

Dust (ug/m³) | Biomass OC (ug/m³) | Sulfate (ug/m³)

16th | 16th | 16th

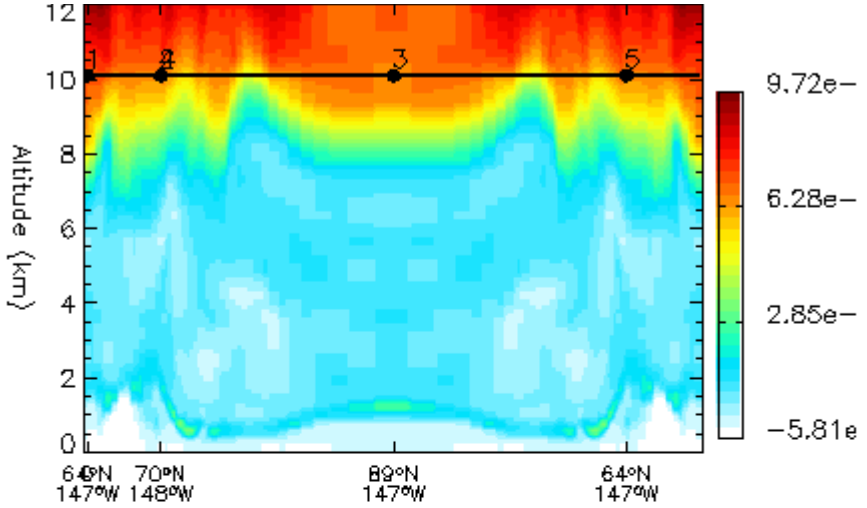


17th | 17th | 17th

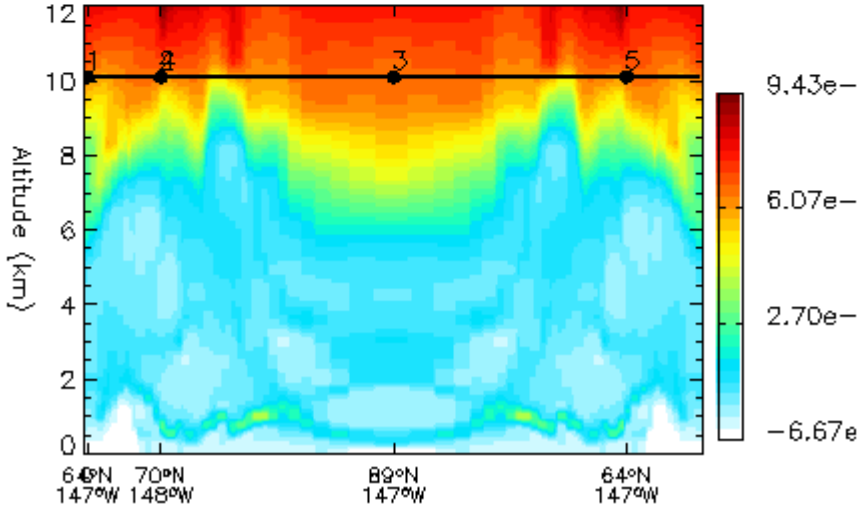


EPV

16th



17th

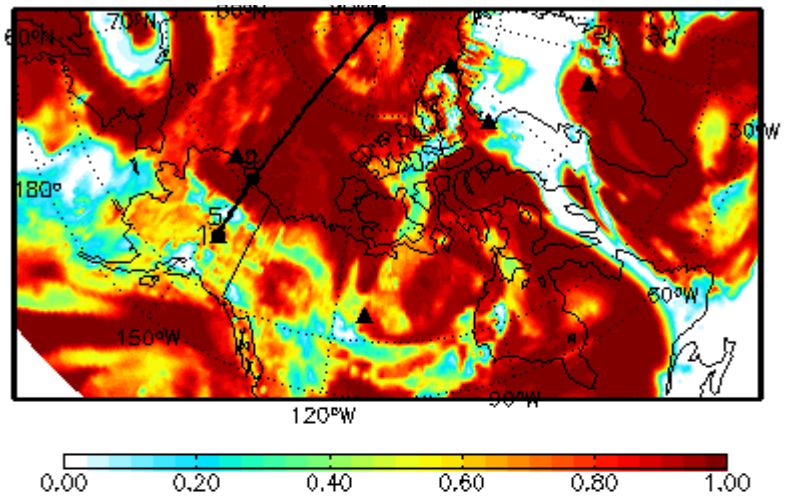


Cloud Fraction : 4/15

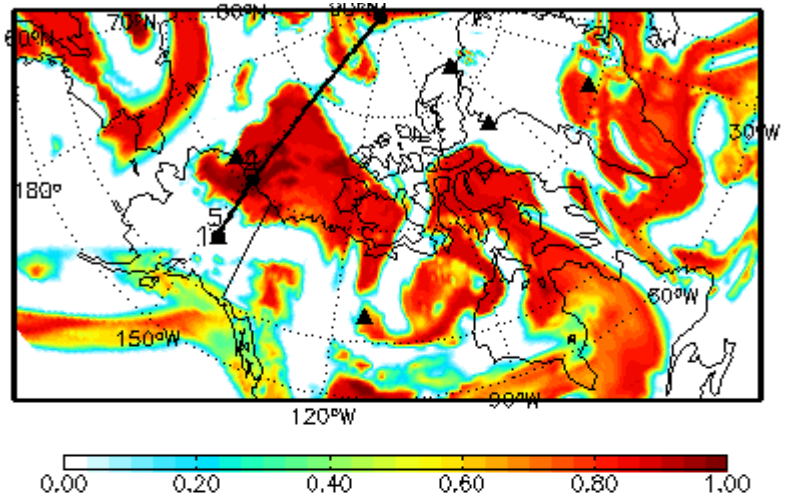
GEOS–5 forecast: 20080414_06z

GEOS–5 forecast: 20080414_06z

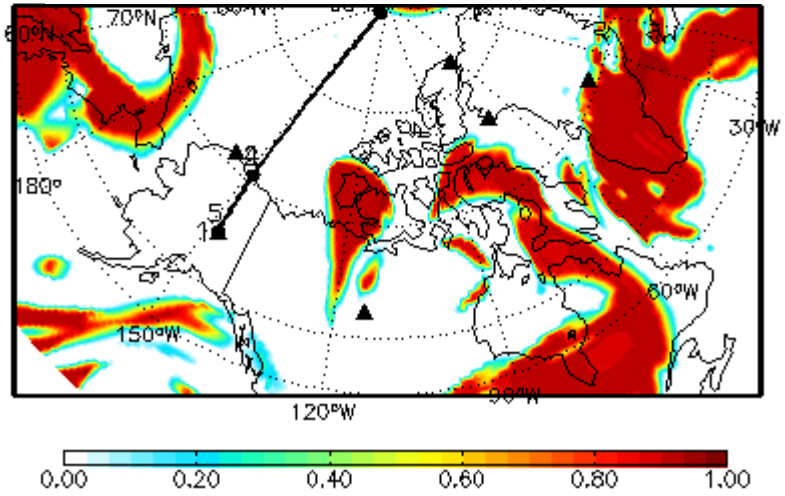
Total



Middle (400-700 mb)



High (<400 mb)



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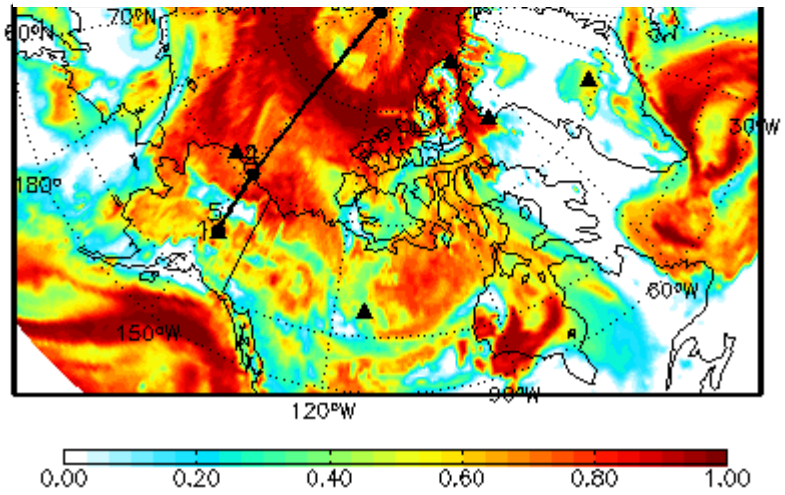
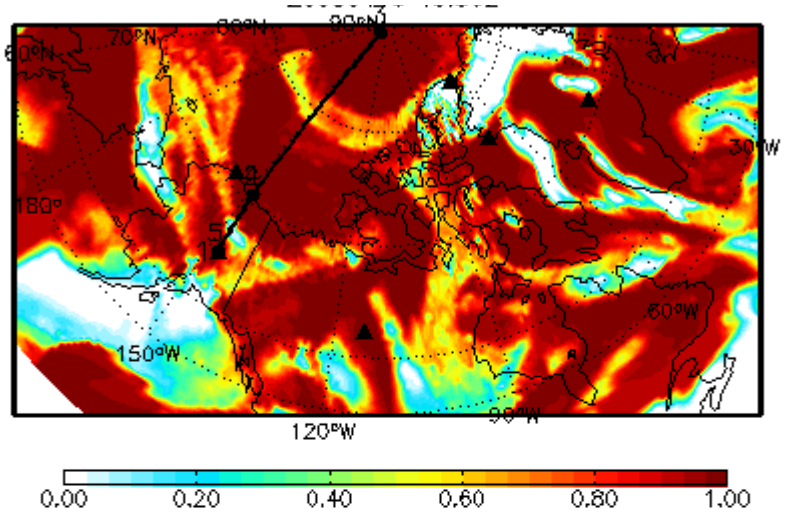


Cloud Fraction : 4/16

GEOS–5 forecast: 20080414_06z

GEOS–5 forecast: 20080414_06z

Total



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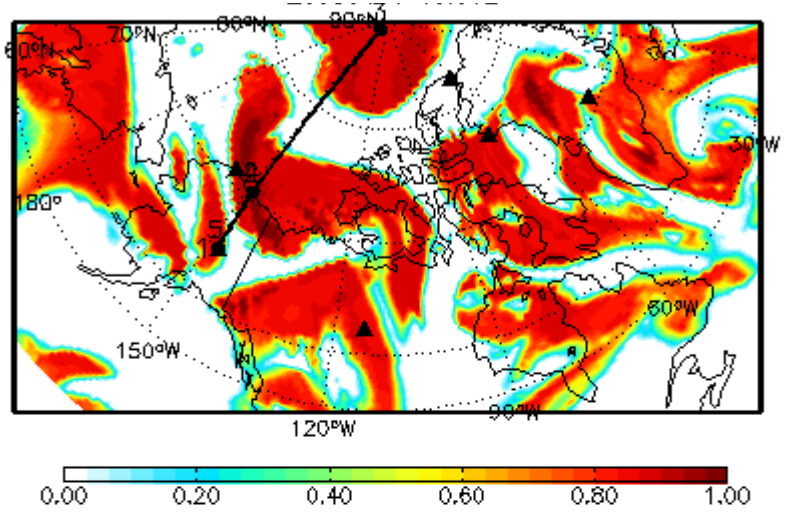

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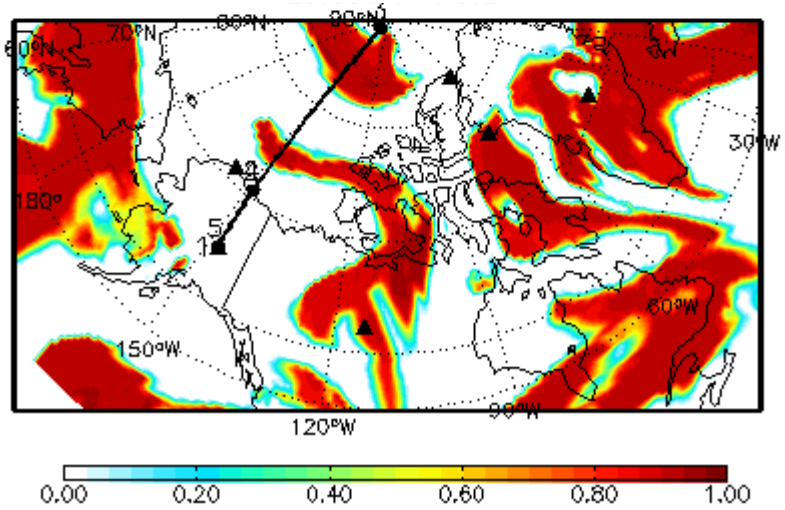
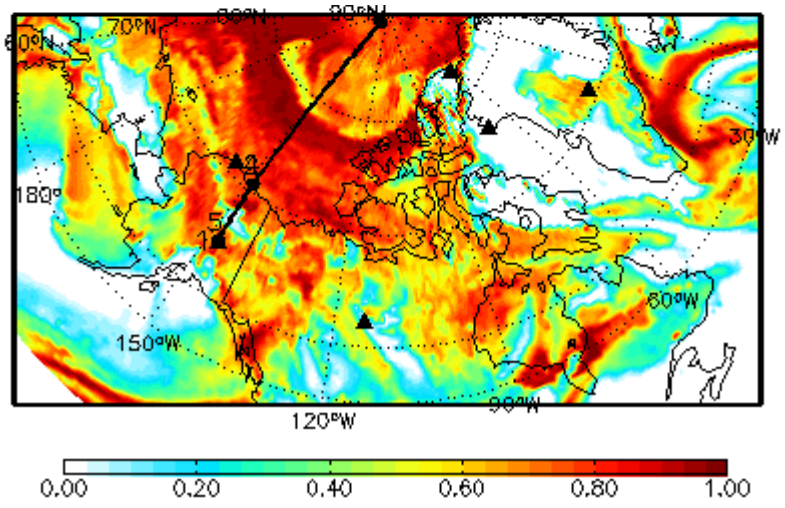


Low (700-1000 mb)

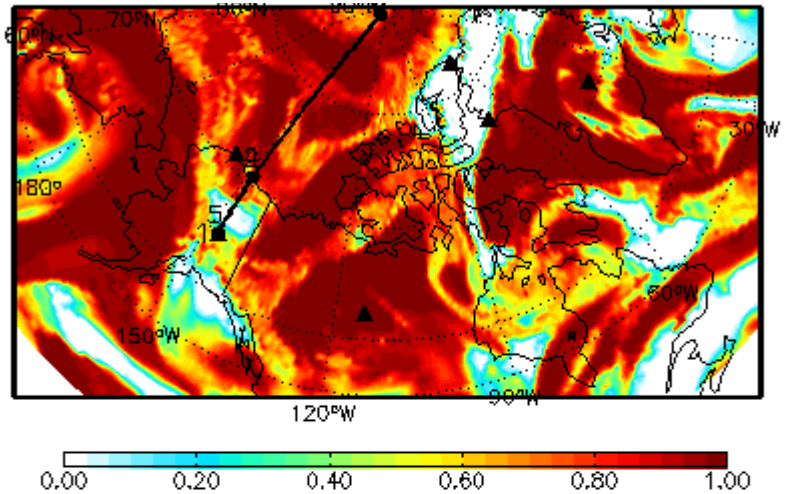


Cloud Fraction : 4/17

GEOS–5 forecast: 20080414_06z

GEOS–5 forecast: 20080414_06z

Total



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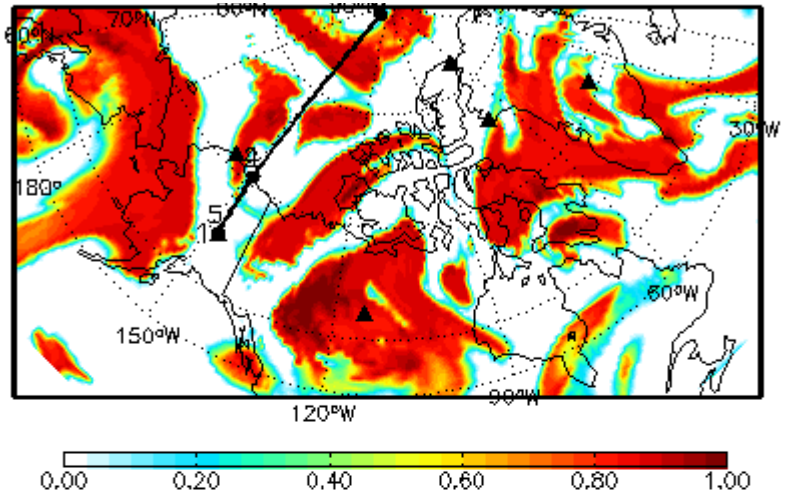

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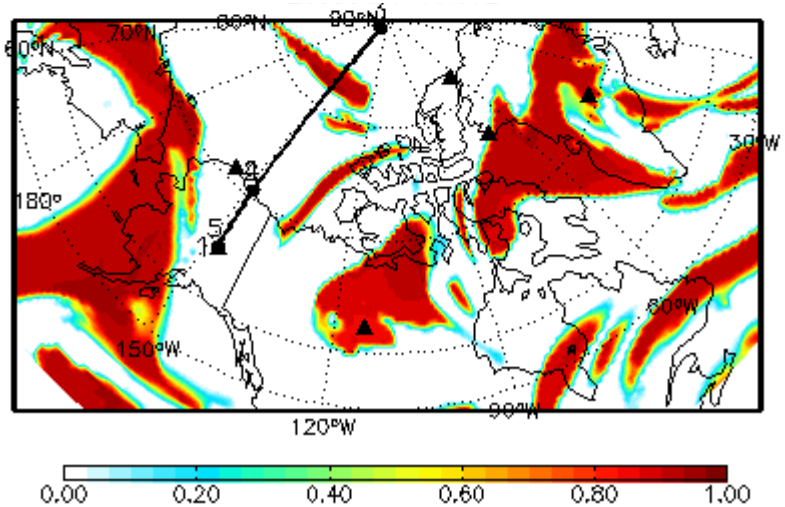

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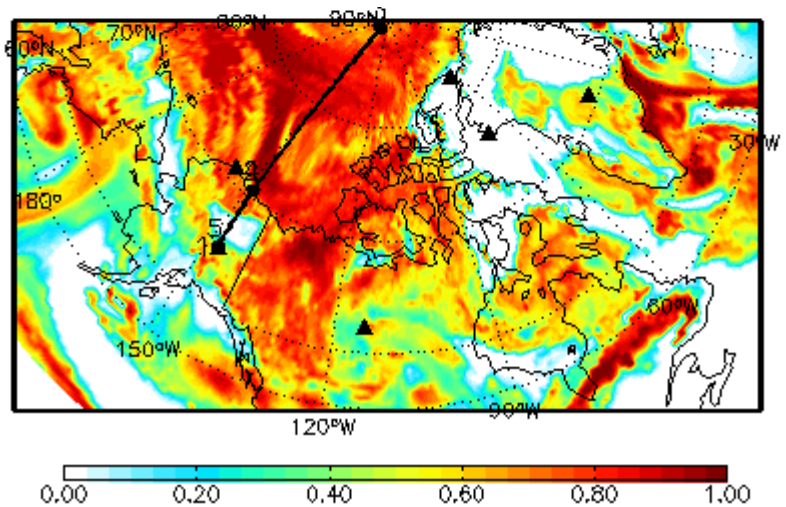
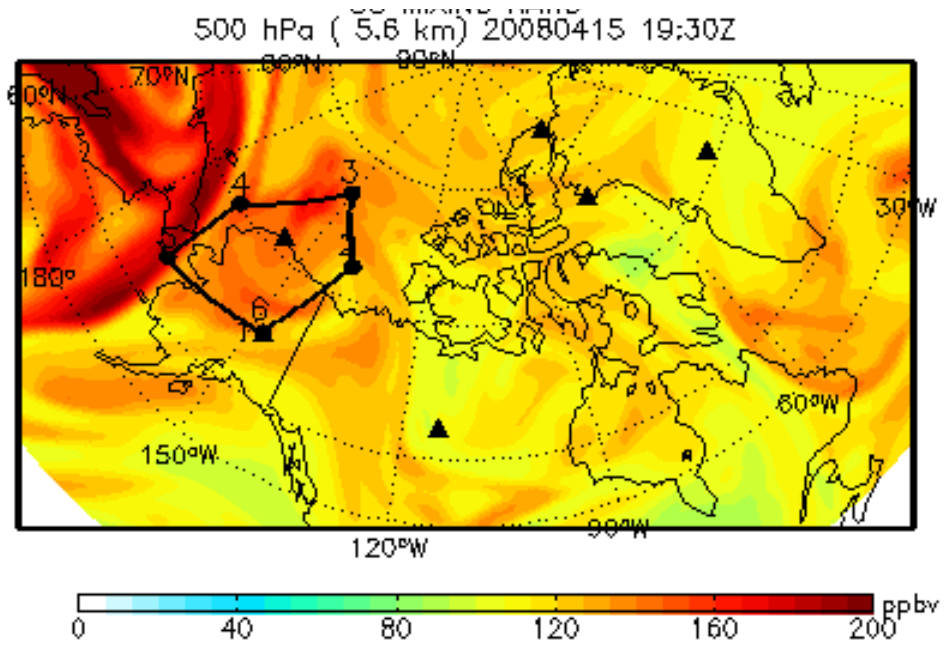
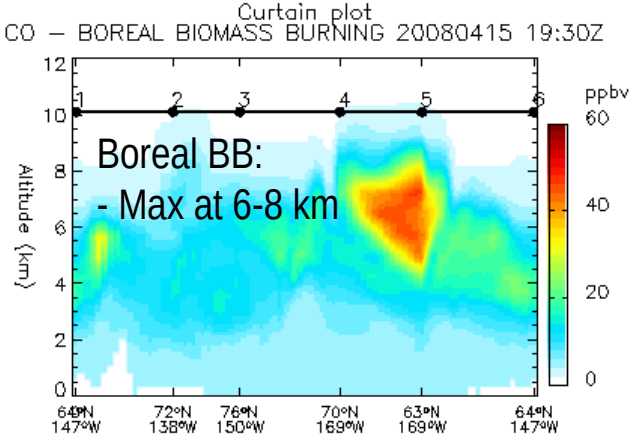


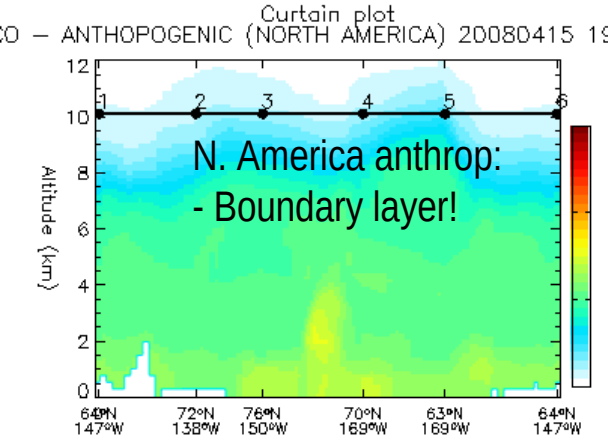
DC-8 : “Pentagon” Flights

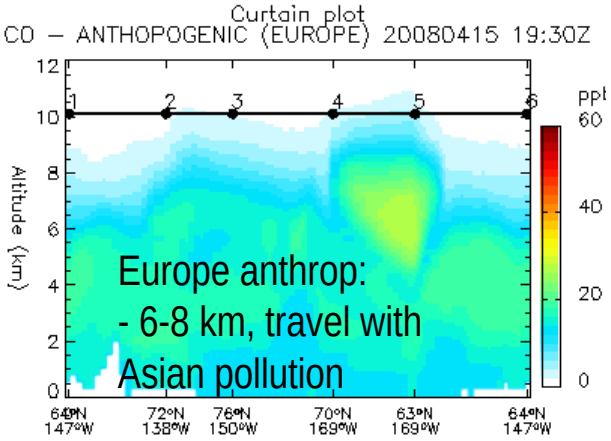
April 15th – 16th

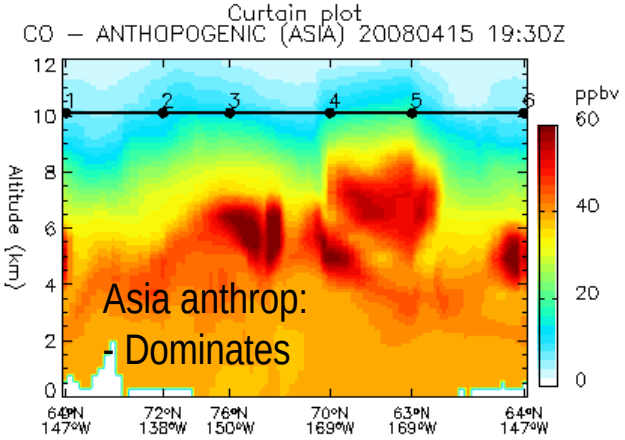
4/15/08 GEOS-5 CO



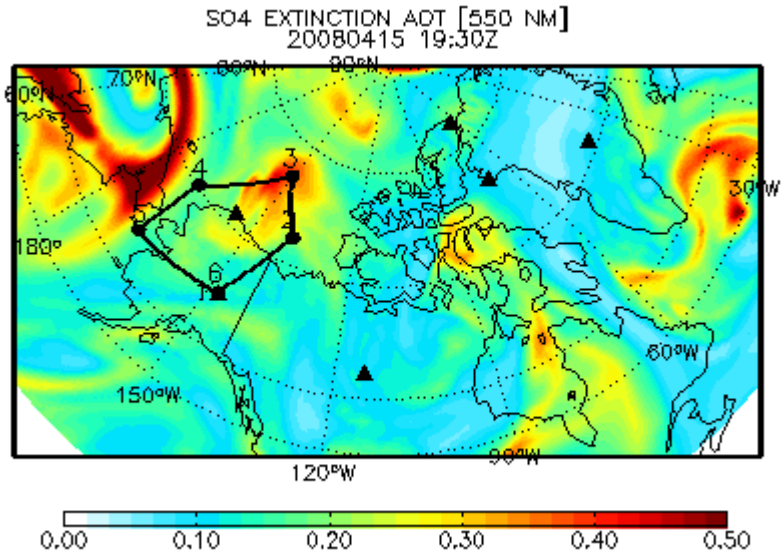


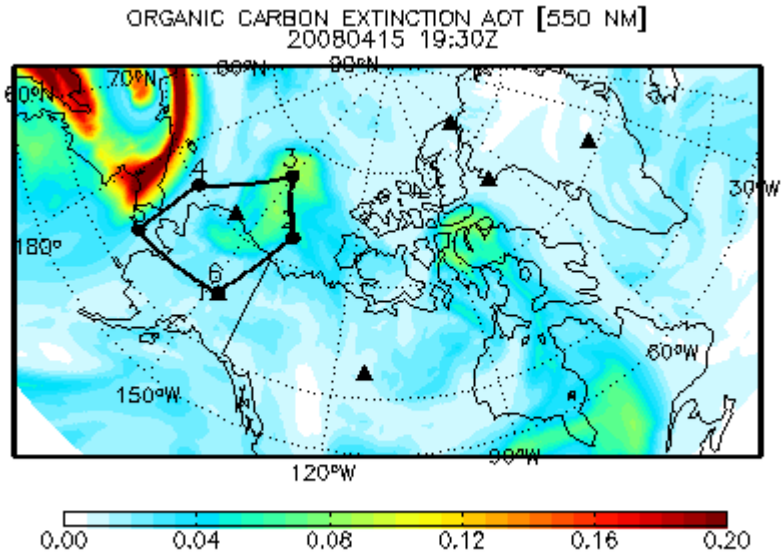


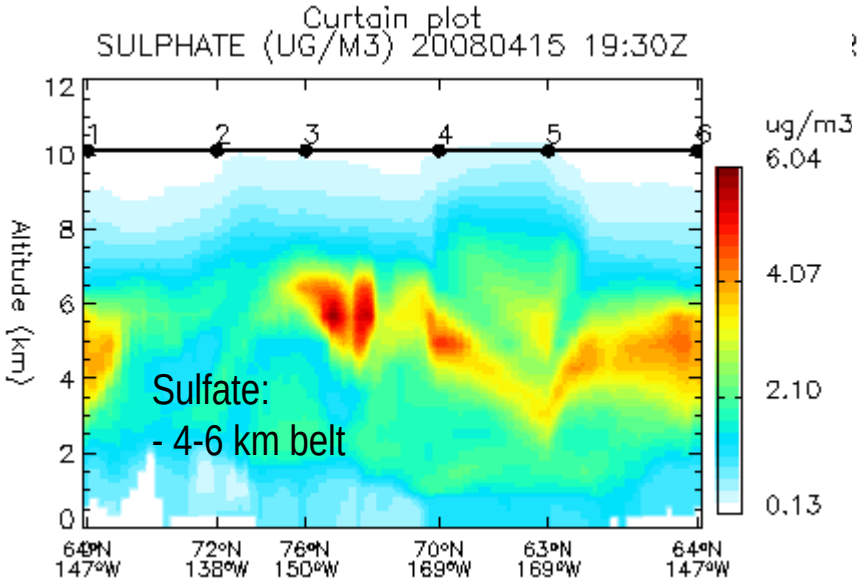


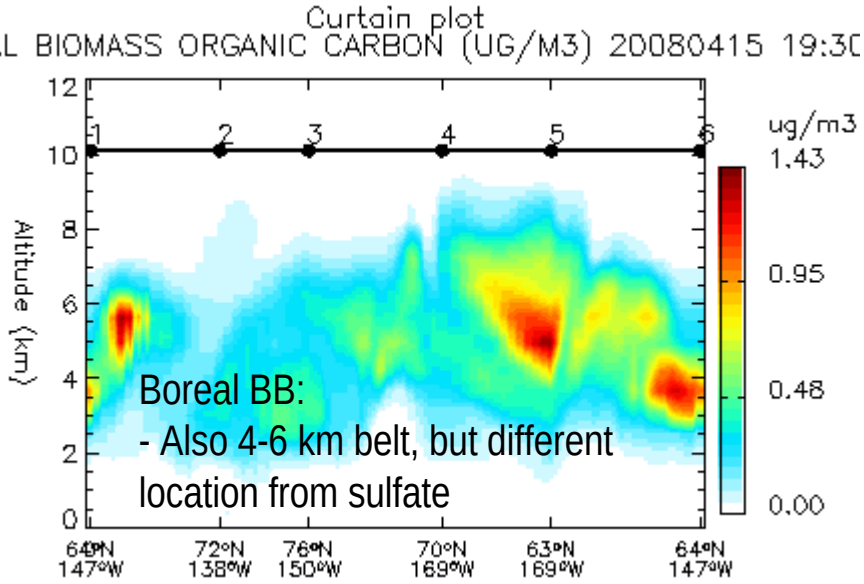


4/15/08 GEOS-5 Aerosols

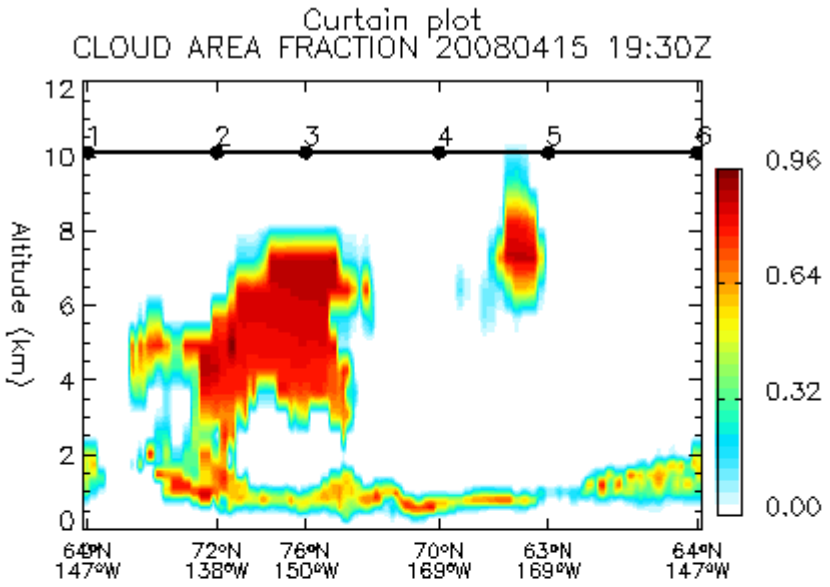


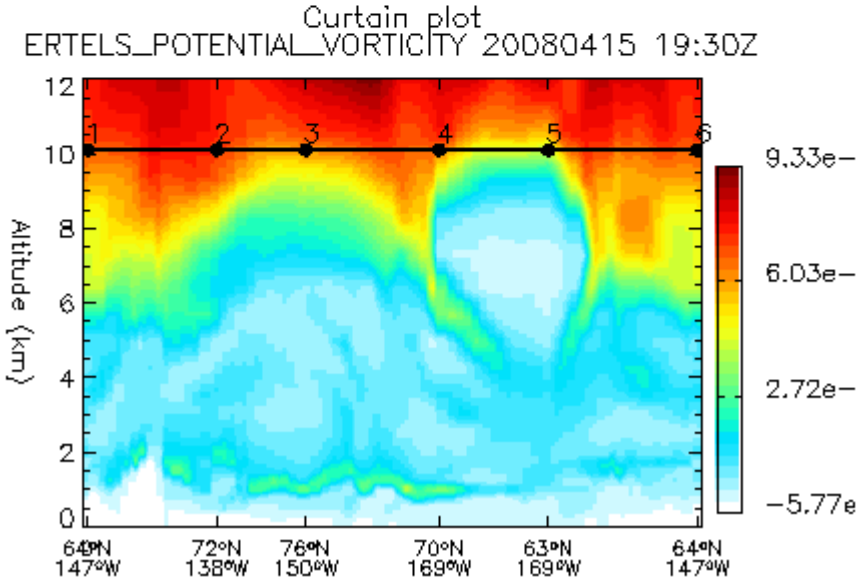




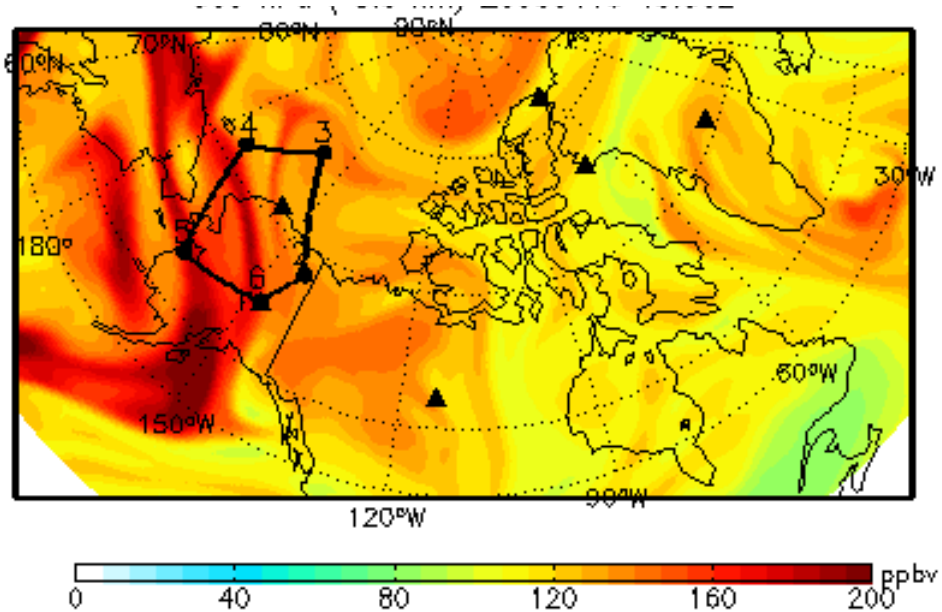


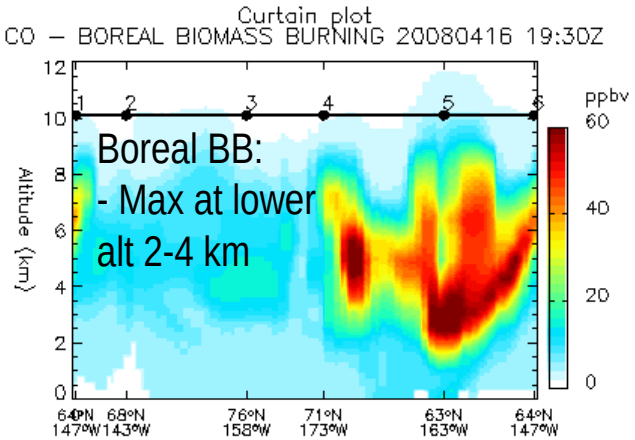
4/15/08 GEOS-5 Cloud fraction and EPV

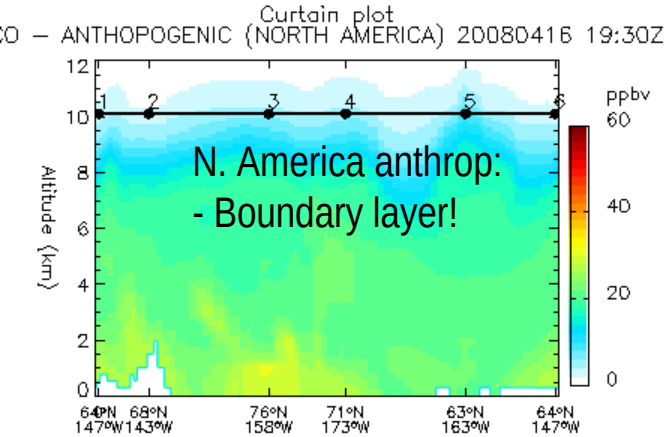


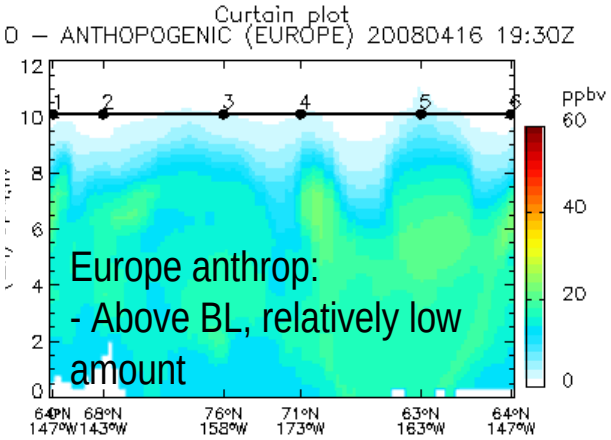


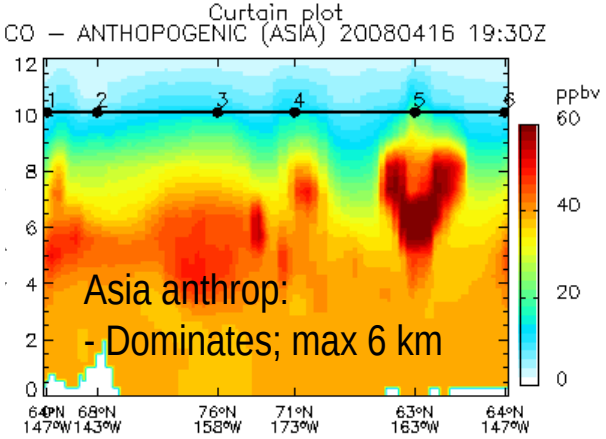
4/16/08 GEOS-5 CO



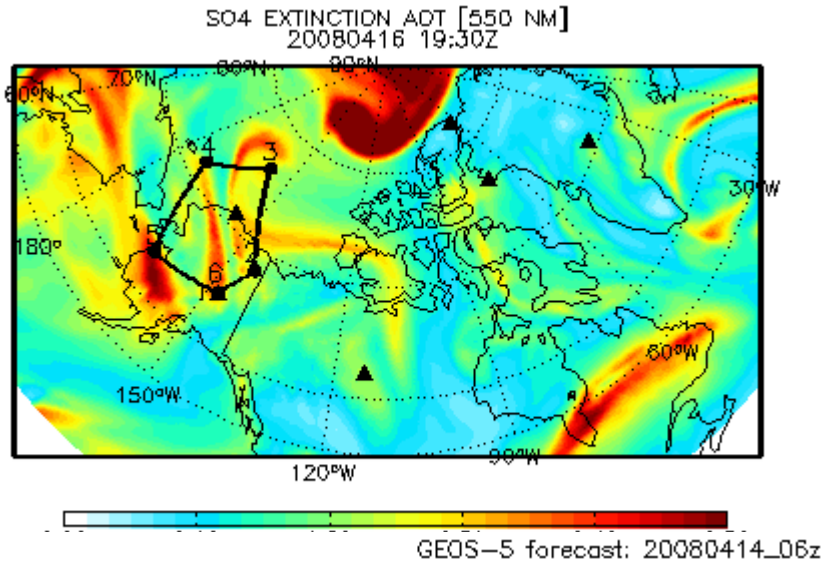


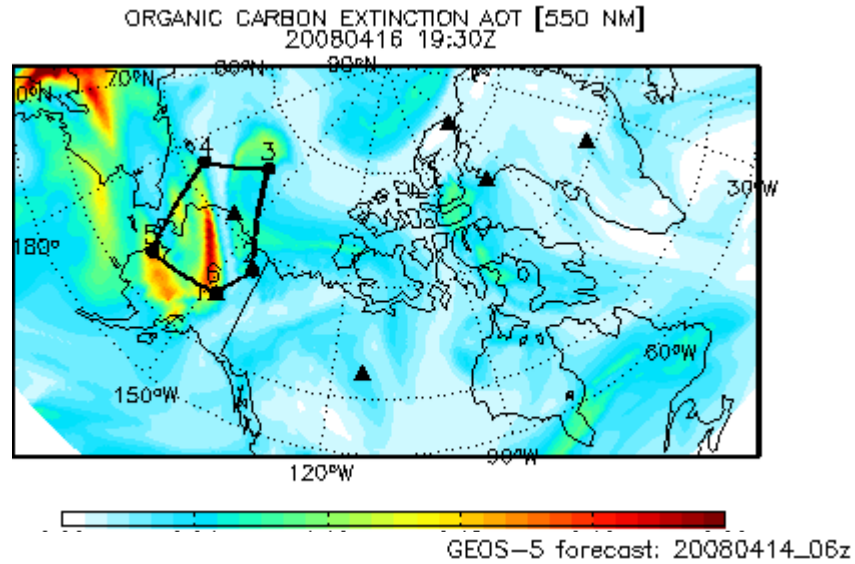


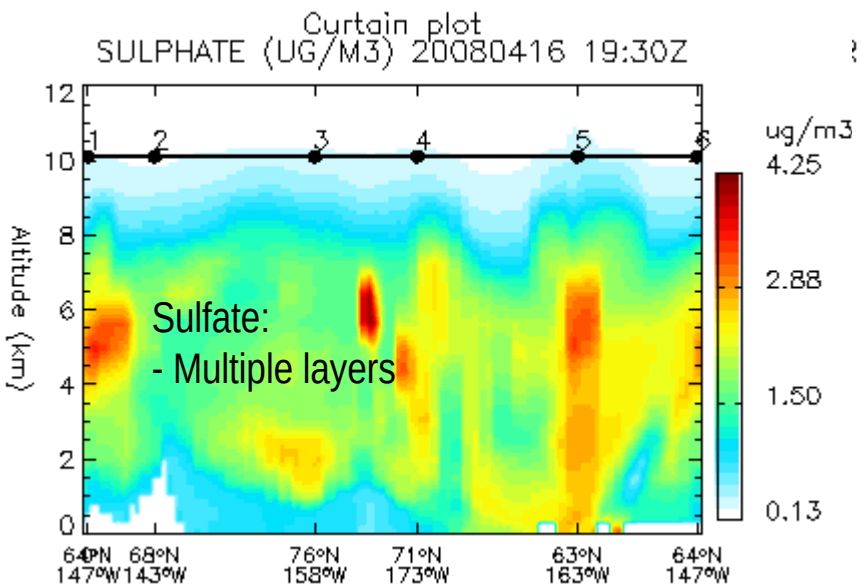


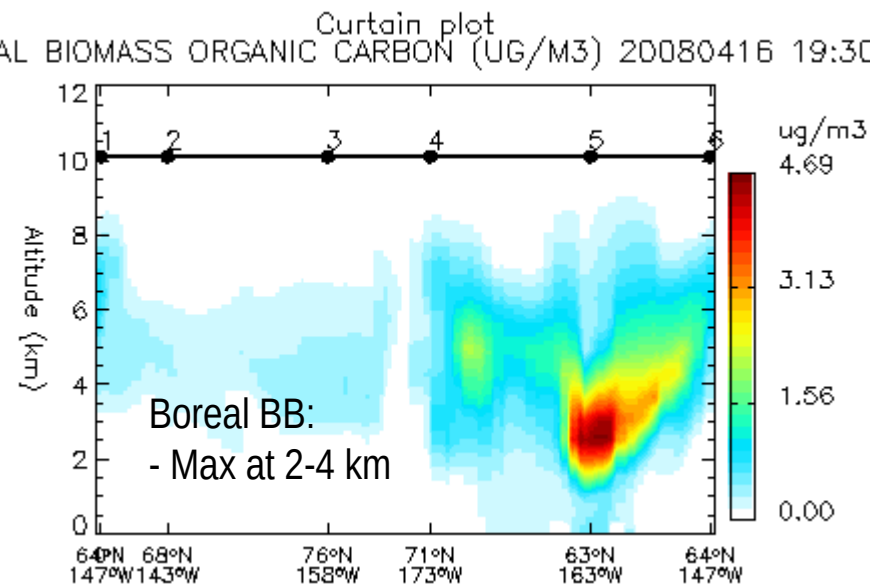


4/16/08 GEOS-5 Aerosols

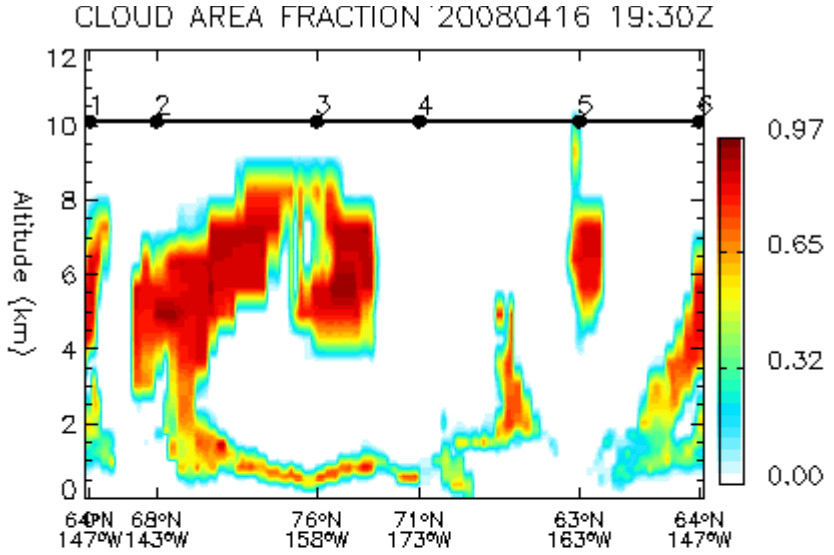


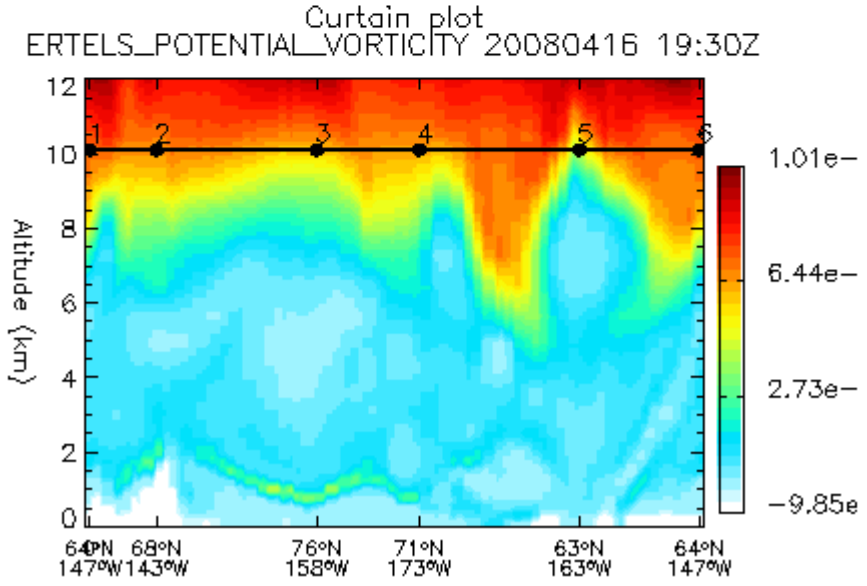






4/16/08 GEOS-5 Cloud fraction and EPV

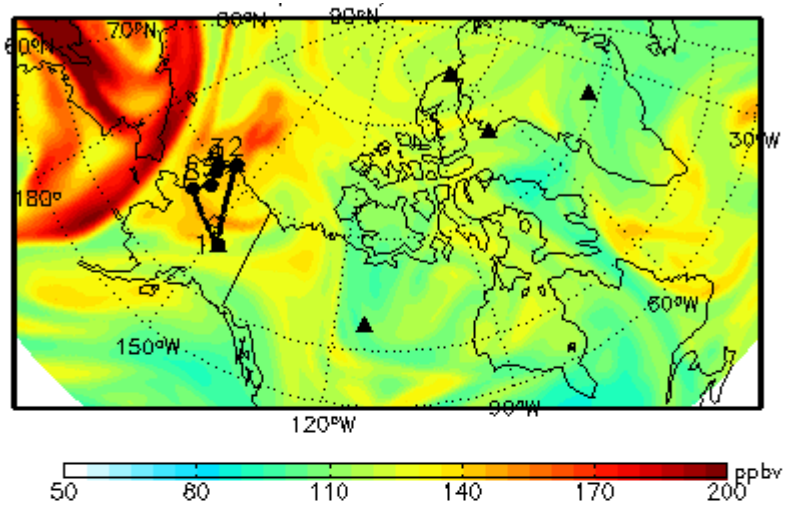




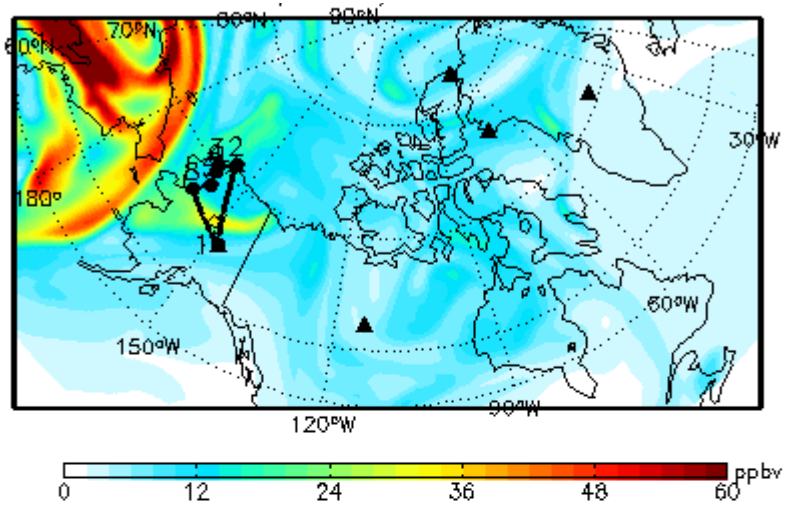
P3B Flight 09 : April 15th

CO @ 500 mb : 4/15

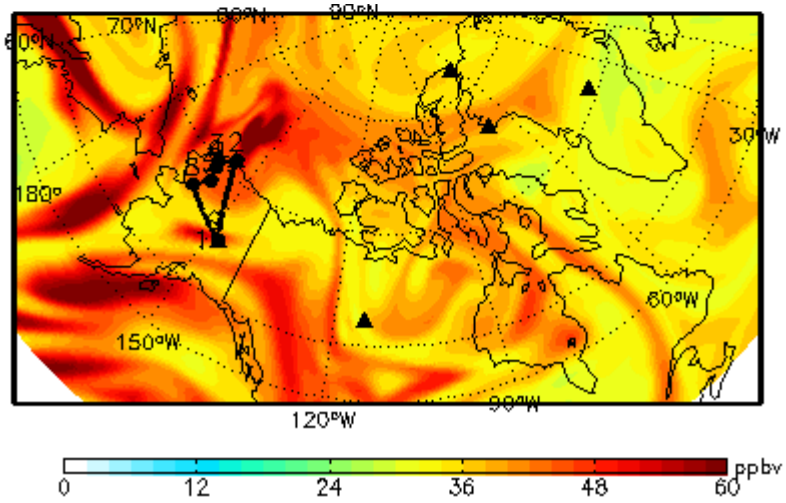
Total CO



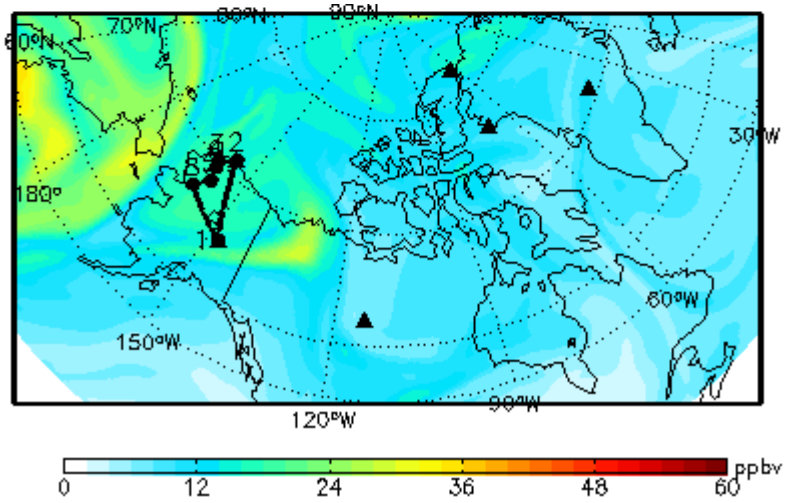
Boreal Burning CO



Asian Anthro. CO

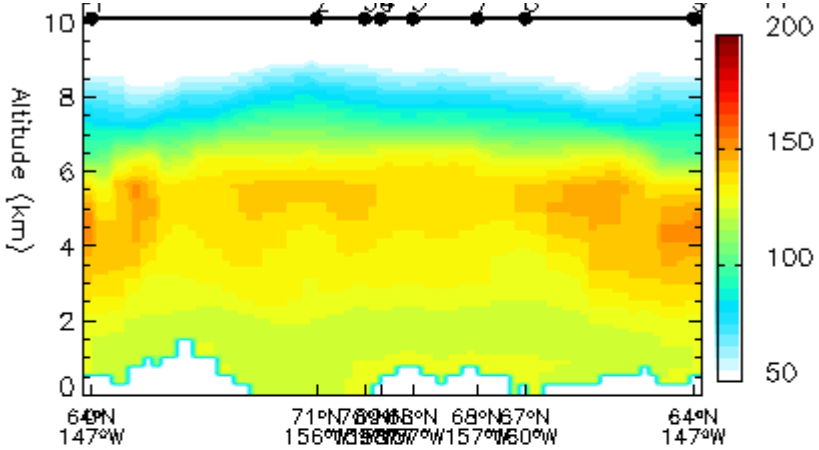


European Anthro. CO

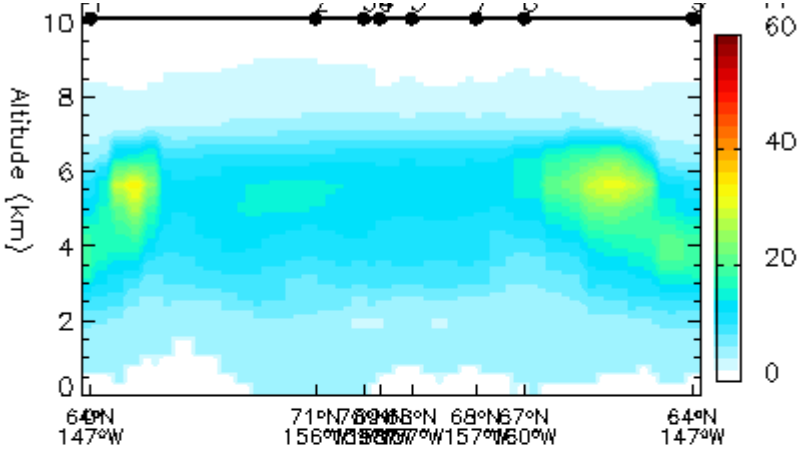


CO Curtain Plots : 4/15

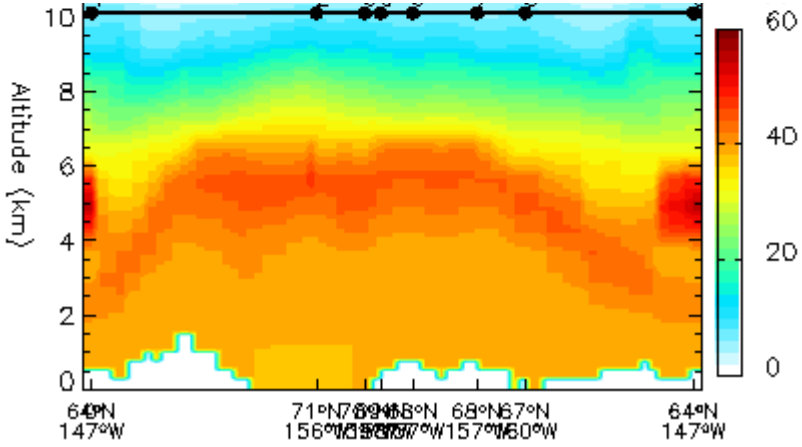
Total CO



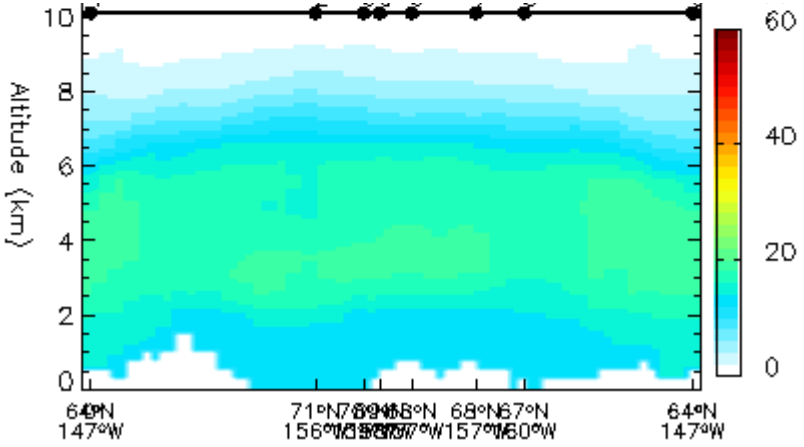
Boreal Burning CO



Asian Anthro. CO

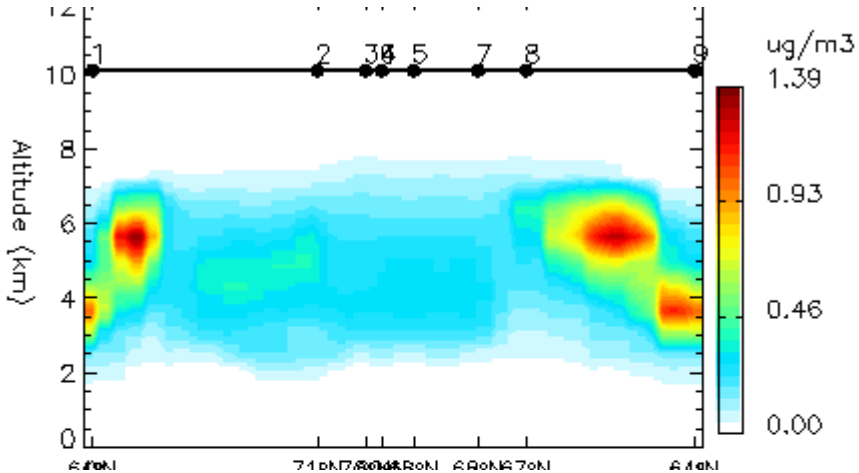


European Anthro. CO

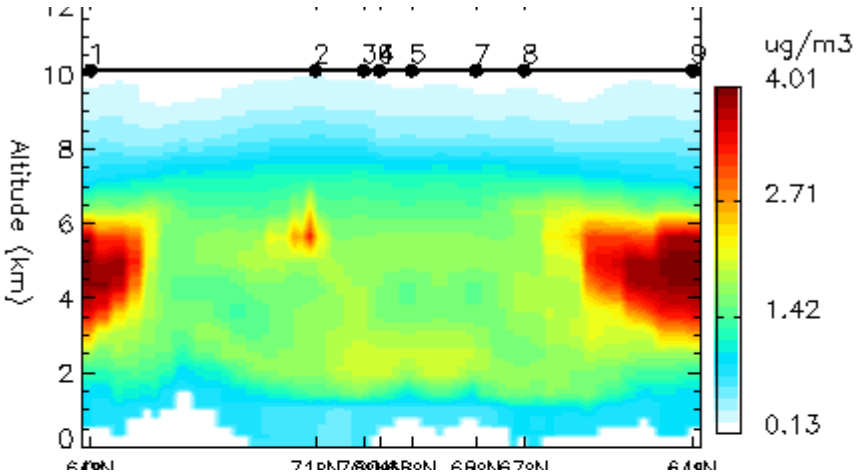


Curtain Plots : 4/15

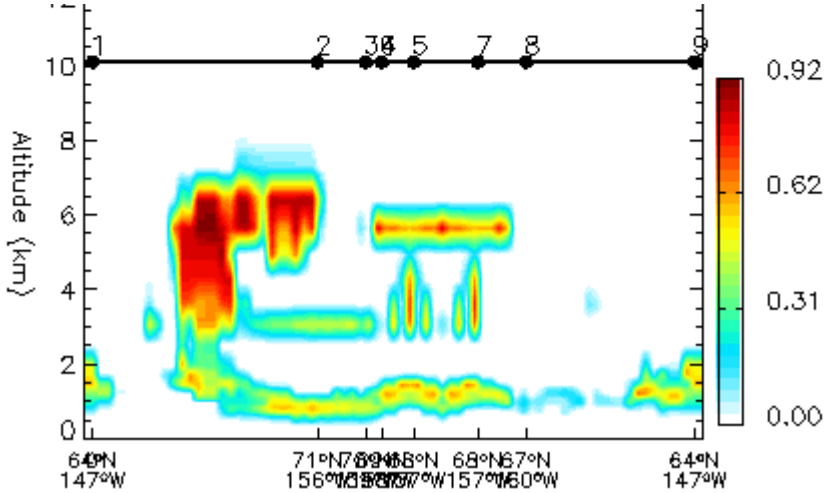
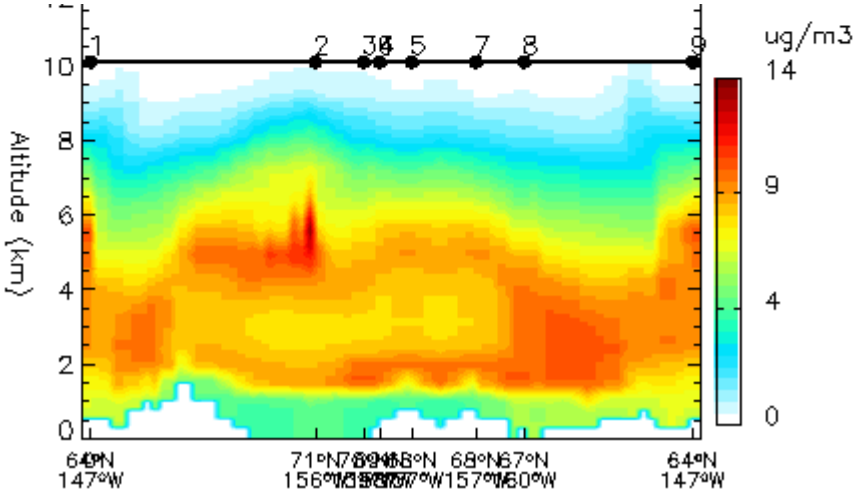
Boreal Burning OC



Sulfate



Cloud Area Fraction



Dust