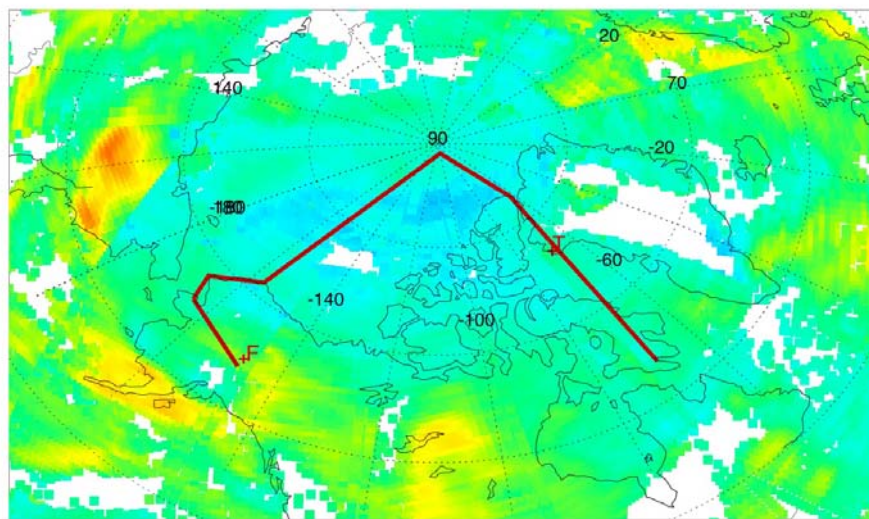


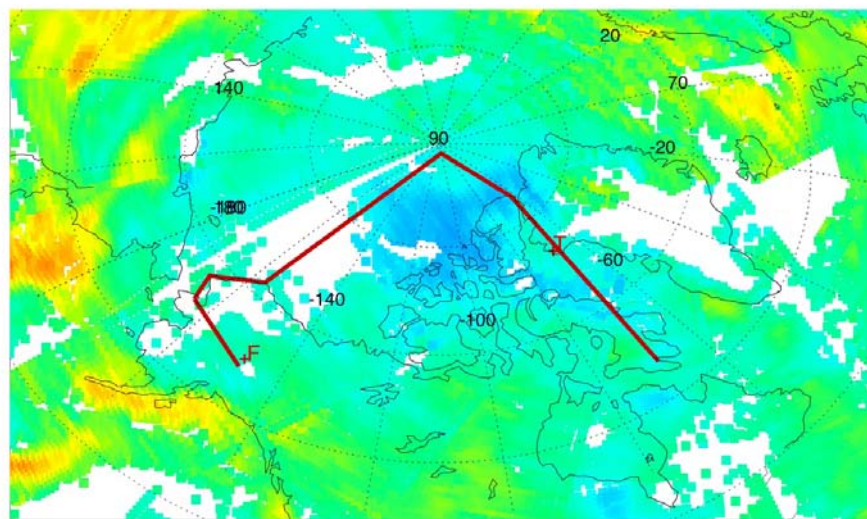
AIRS NRT ARCTAS Support: Latest AIRS CO

AIRS CO VMR (ppbv) at 500mb on 20080409 for ARCTAS



0.0 27.8 55.6 83.3 111.1 138.9 166.7 194.4 222.2 250

AIRS CO VMR (ppbv) at 500mb on 20080410 for ARCTAS



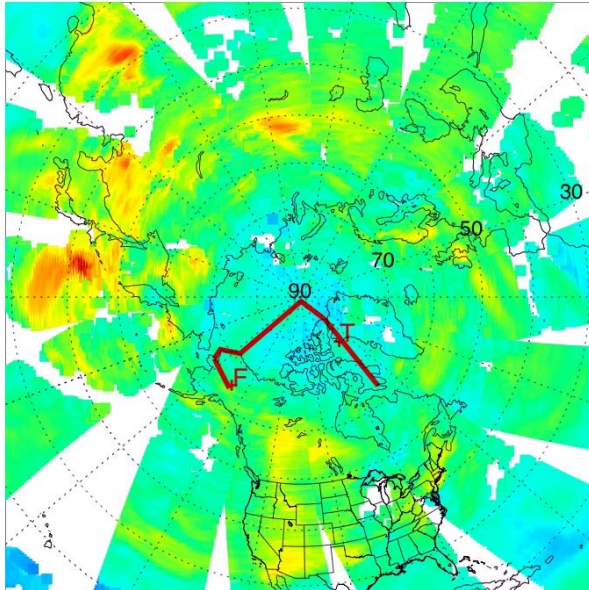
0.0 27.8 55.6 83.3 111.1 138.9 166.7 194.4 222.2 250

CONTACT: Dr. Juying Warner <juying@umbc.edu>; ACKNOWLEDGEMENT: AIRS NRT products by NASA DA. CONTACT: Dr. Juying Warner <juying@umbc.edu>; ACKNOWLEDGEMENT: AIRS NRT products by NASA DA.

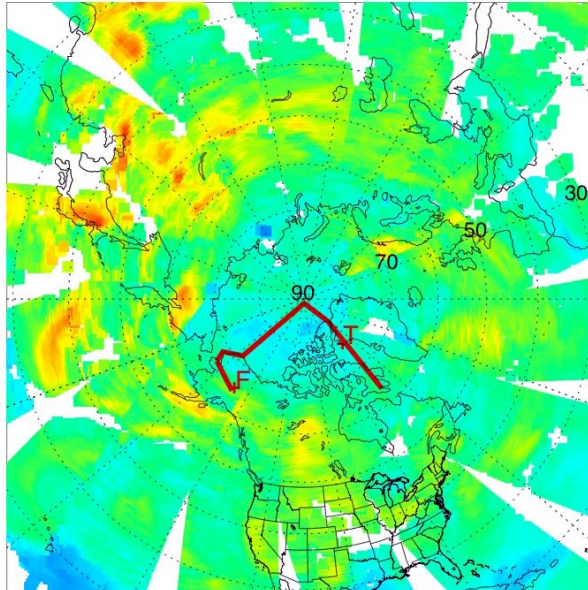
- High CO features going around Arctic region below 70N.

AIRS NRT ARCTAS Support:

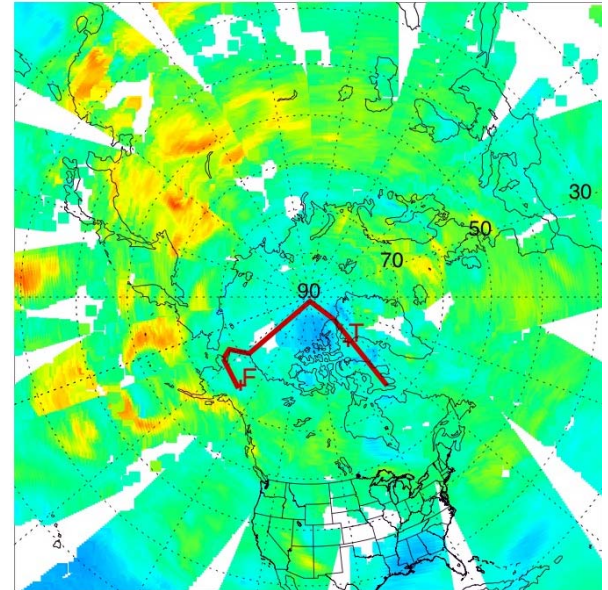
CO 500mb 20080408 day



CO 500mb 20080409 day



CO 500mb 20080410 Full



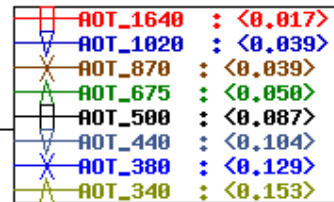
CONTACT: Dr. Juying Warner <juying@umbc.edu>; ACKNOWLEDGEMENT: AIRS NRT products by NASA DAAC

Asian Transport Continues, but doesn't seem to enter the Arctic circle in large amounts

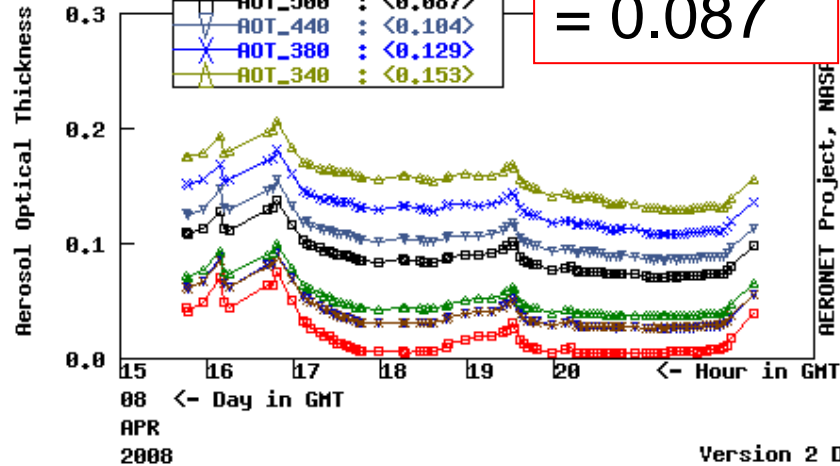
PEARL

Tuesday April 8

PEARL , N 80°03'14", W 86°25'01", Alt 615 m,
PI : Norm O'Neill, norm.oneill@USherbrooke.ca
Level 1.5 AOT; Data from 8 APR 2008



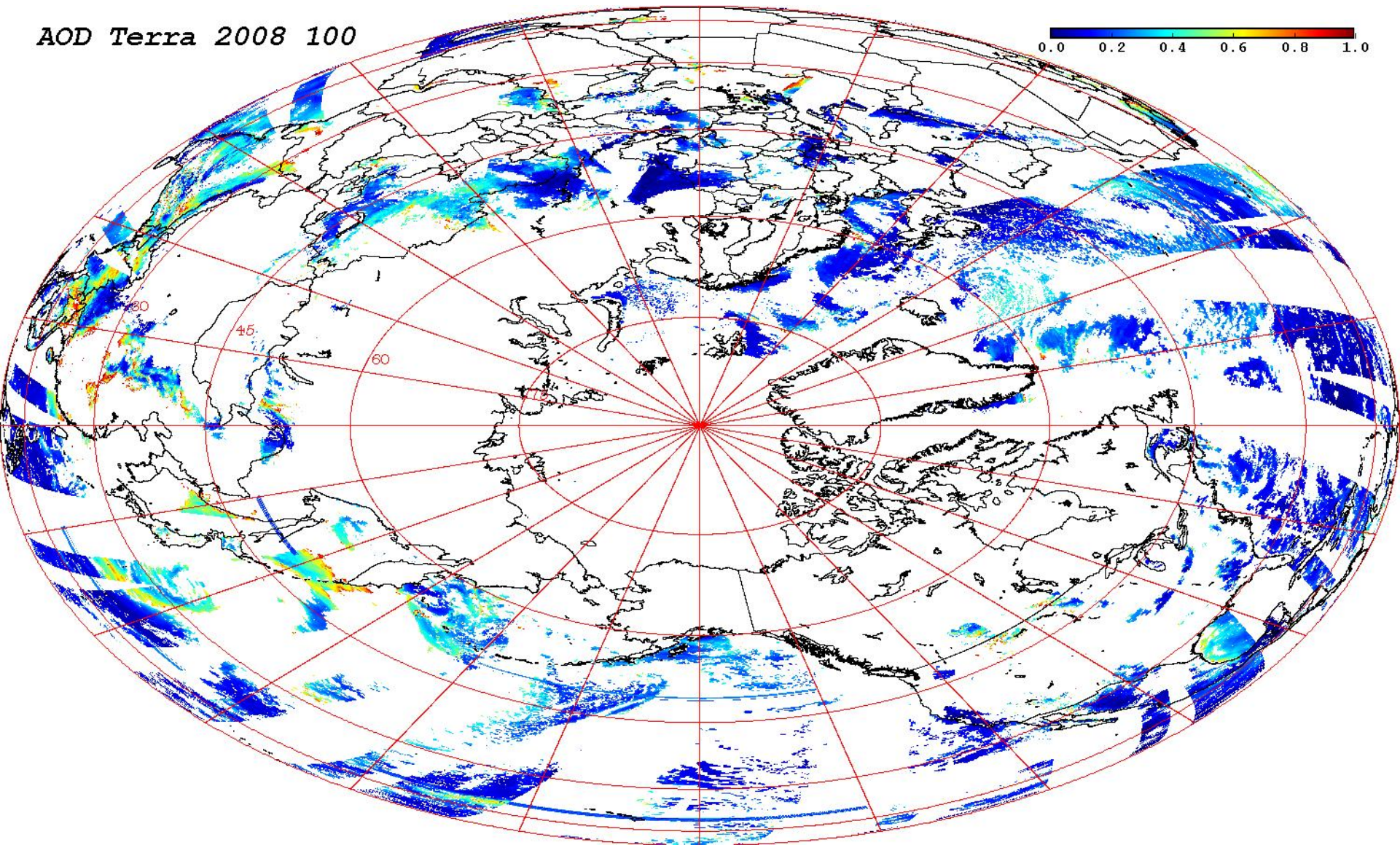
AOD500
= 0.087



Wednesday April 9

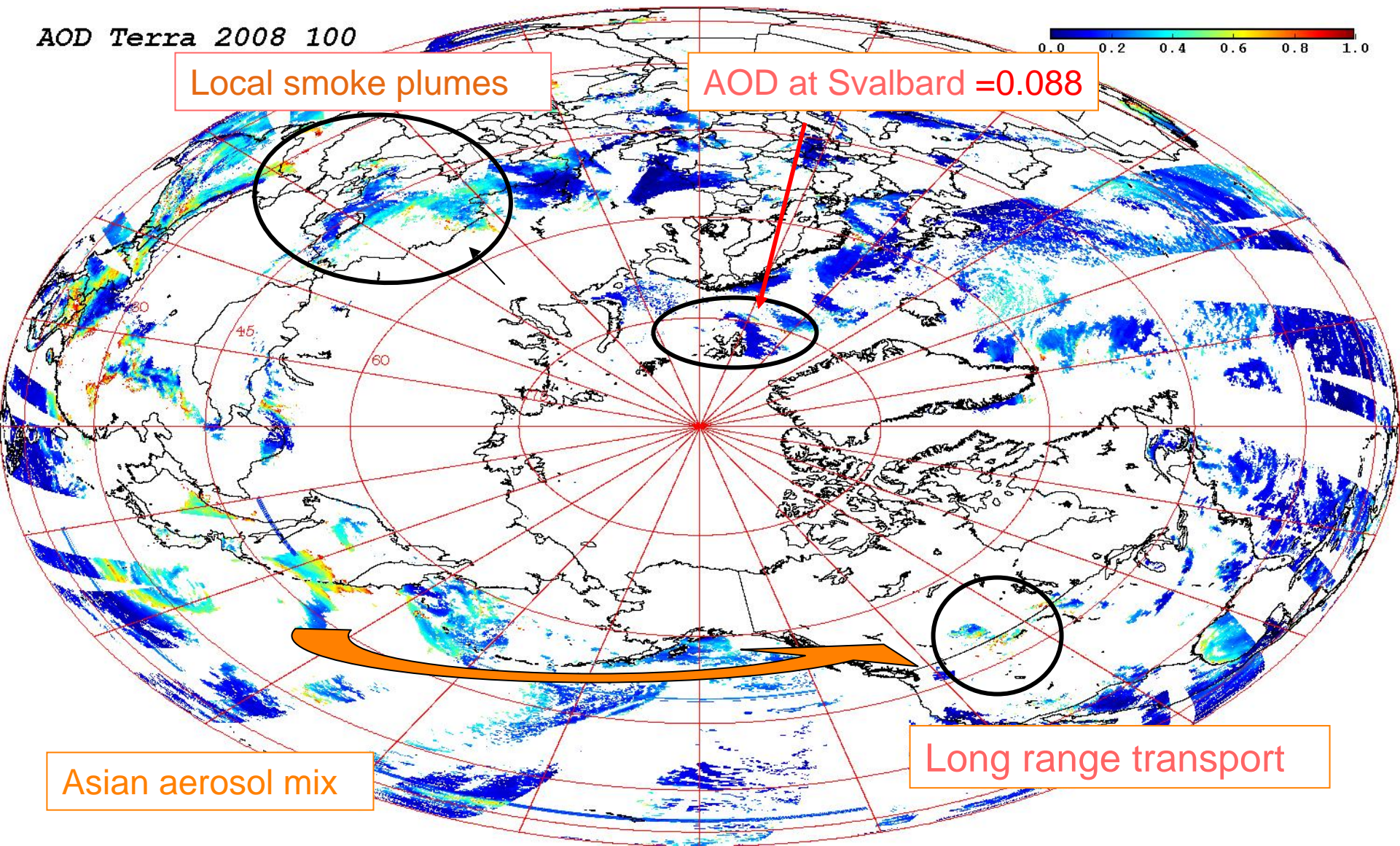
Overall aerosol loading of northern hemisphere is very high

AOD Terra 2008 100



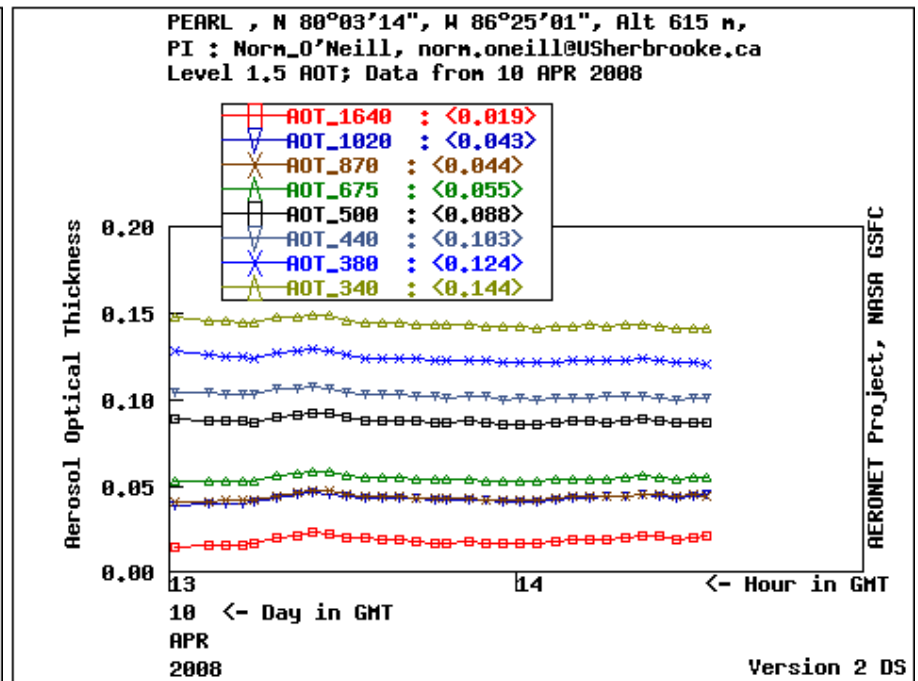
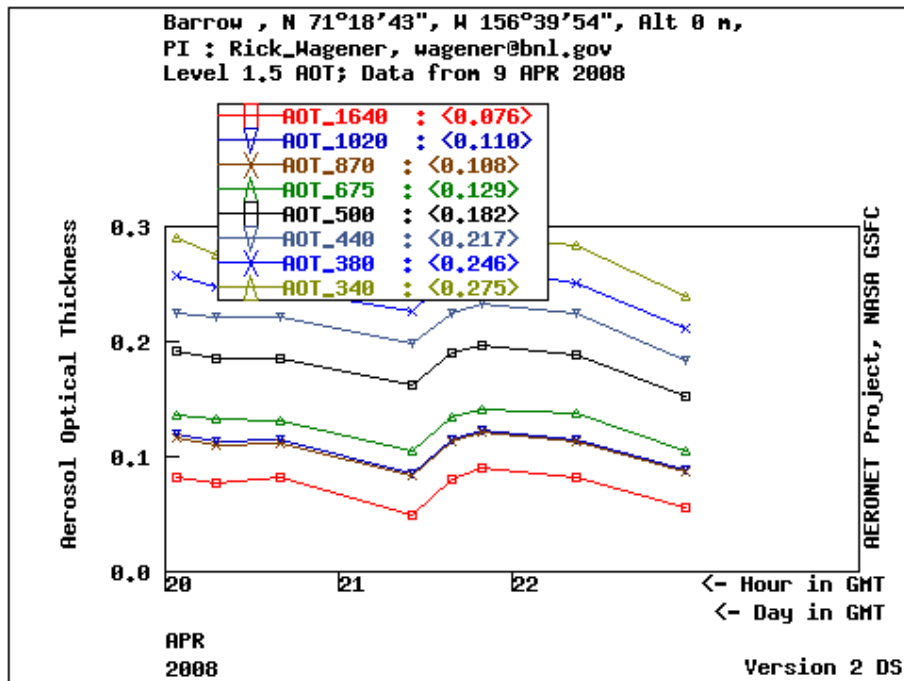
Wednesday April 9

MODIS AOD Hot Spots in Northern Hemisphere (0° - 90°N)



Barrow AOD500 = 0.182

PEARL AOD500 = 0.080



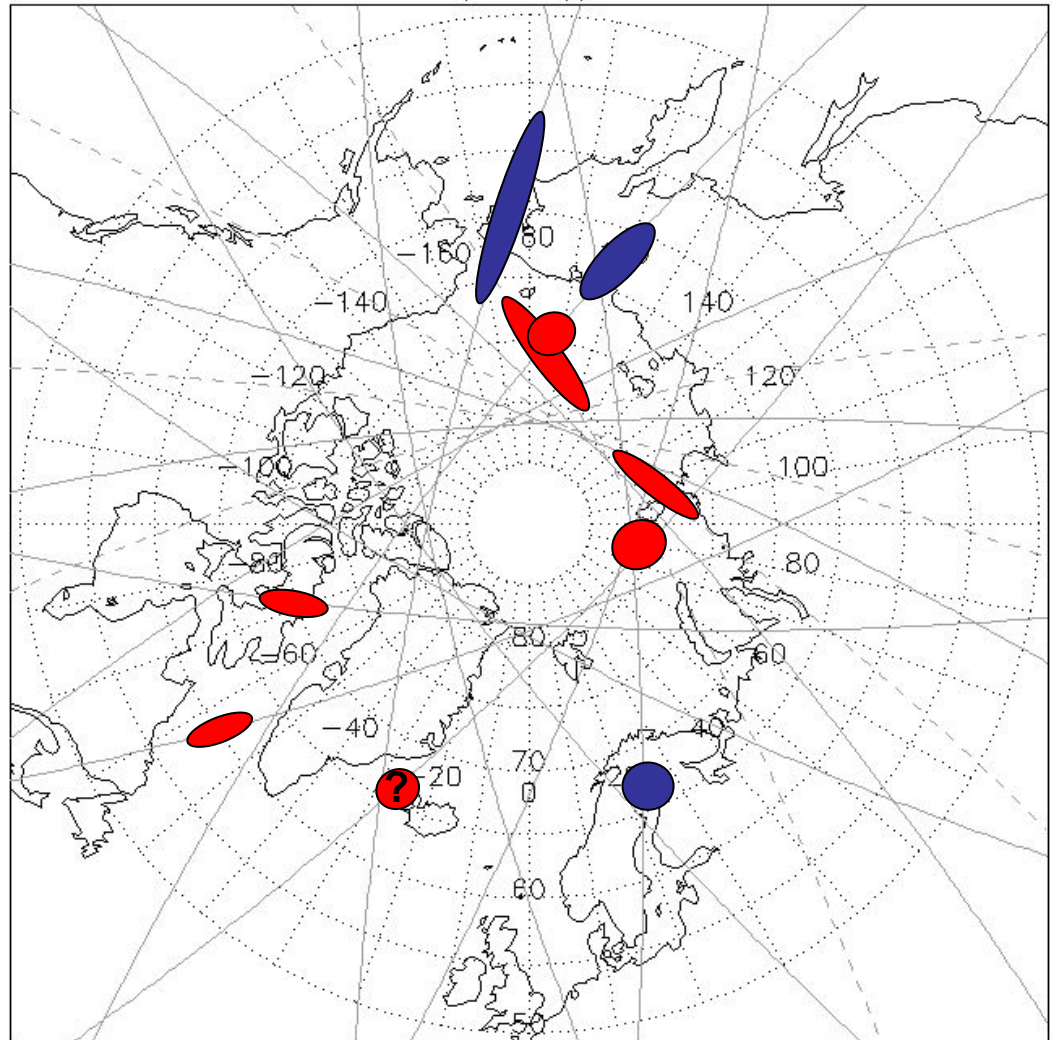
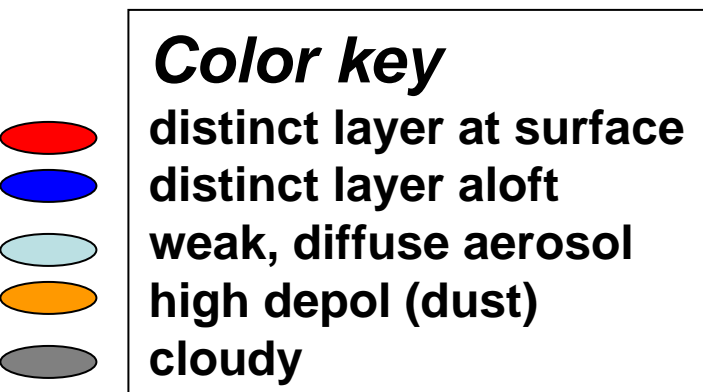
Yesterday's AERONET AOD. Wednesday April 9

CALIPSO Observations

7/8/9 April 2008

CALIPSO Arctic Hot Spots – 7/8

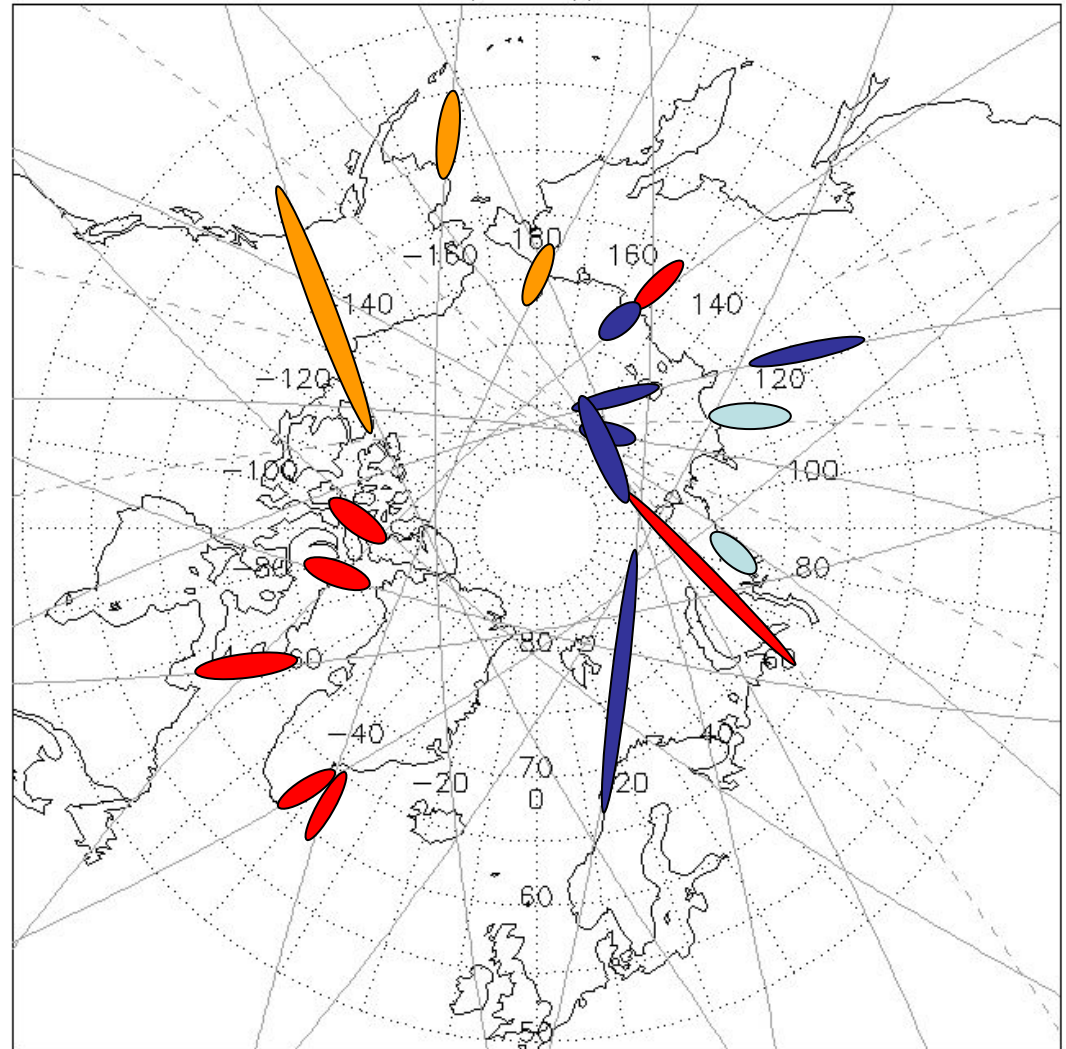
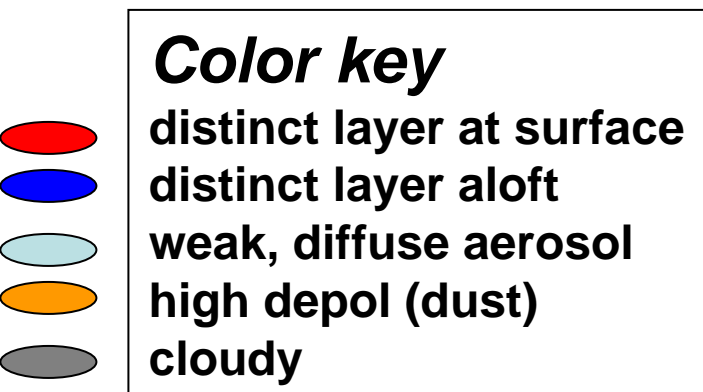
20080407(>18Z)/20080408



CALIPSO Arctic Hot Spots – 8/9

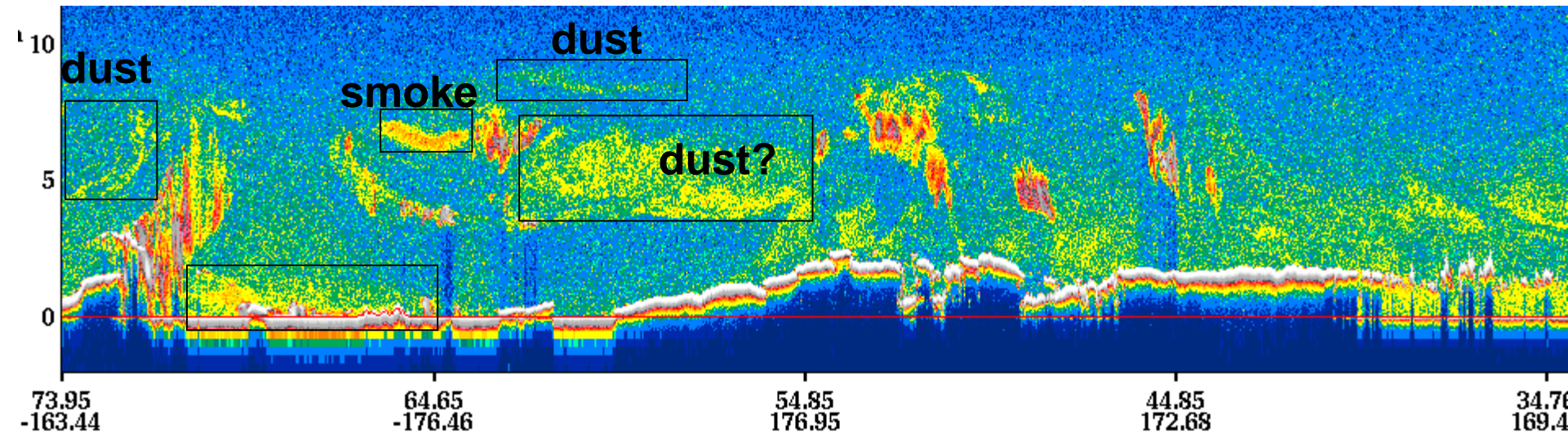
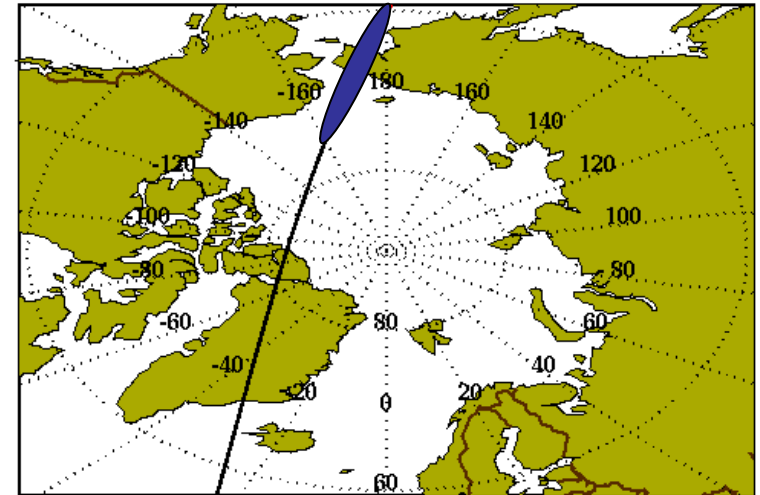
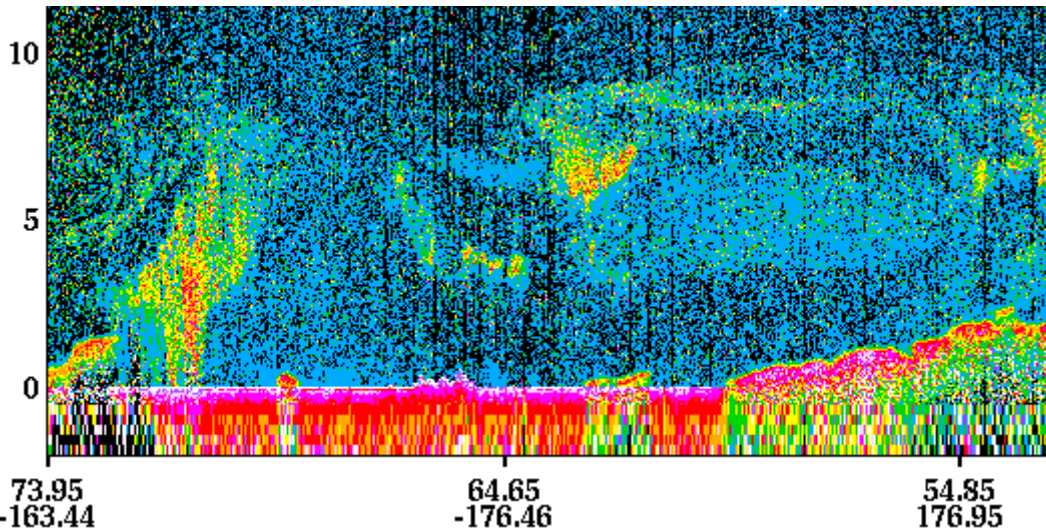
Δ April

20080408(>18Z)/20080409



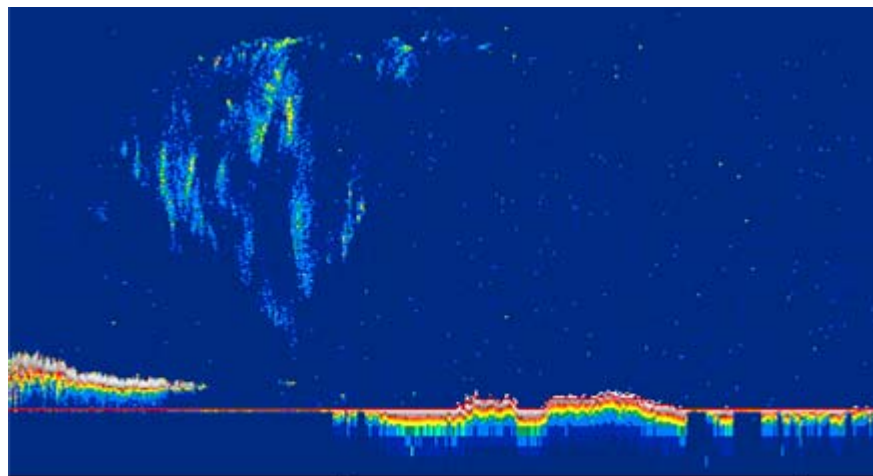
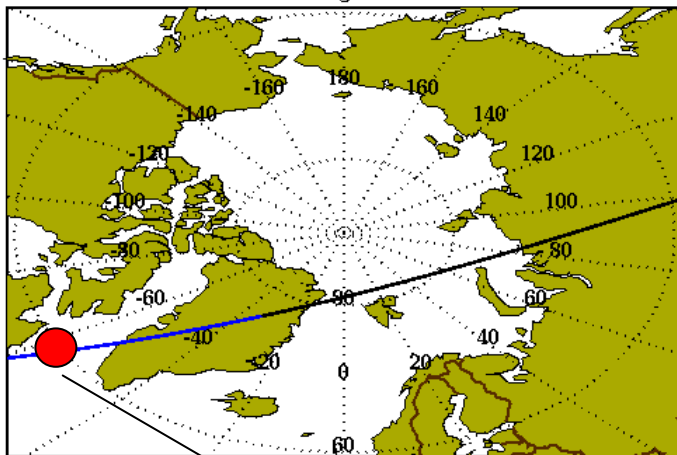
8 April – 1330Z

2008-04-08 13-30-00 UTC Half of Hour Conditions
Version: 2.01 Image Date: 04/09/2008



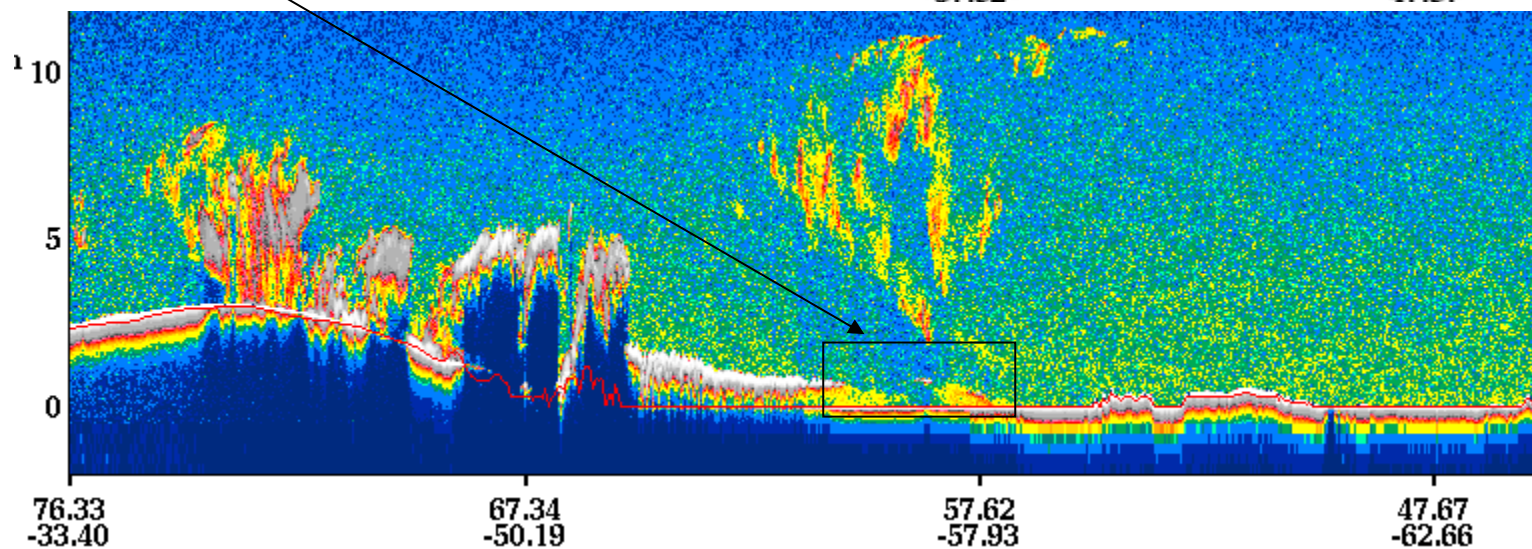
Q Anri 0600Z

2008-04-08 06:00:00 UTC Start of Hour Conditions
Version: 2.01 Image Date: 04/08/2008



57.62

47.67



10

5

0

76.33
-33.40

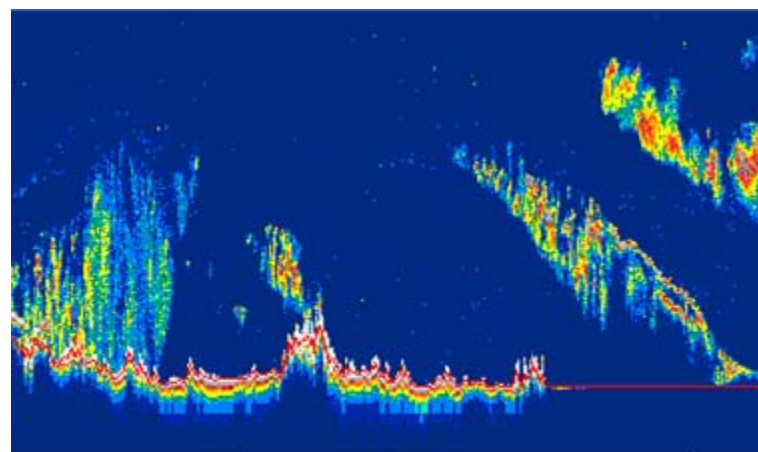
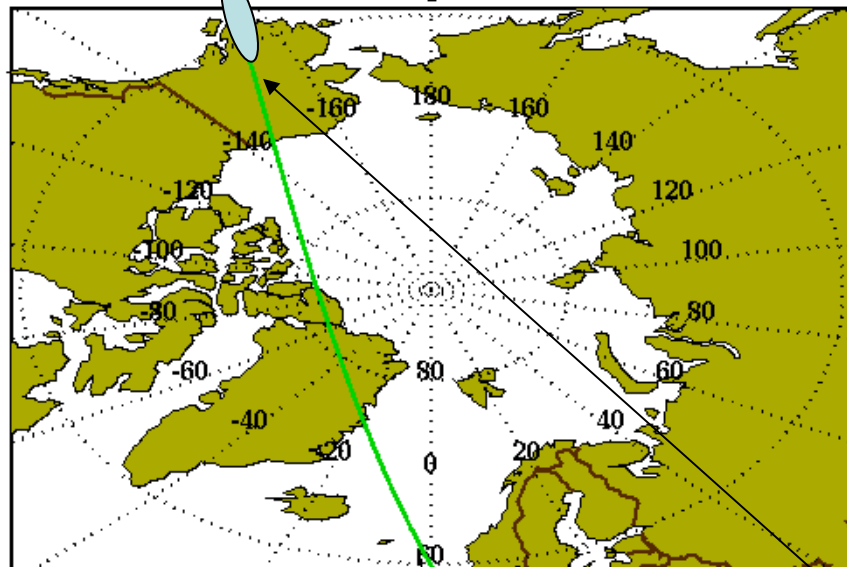
67.34
-50.19

57.62
-57.93

47.67
-62.66

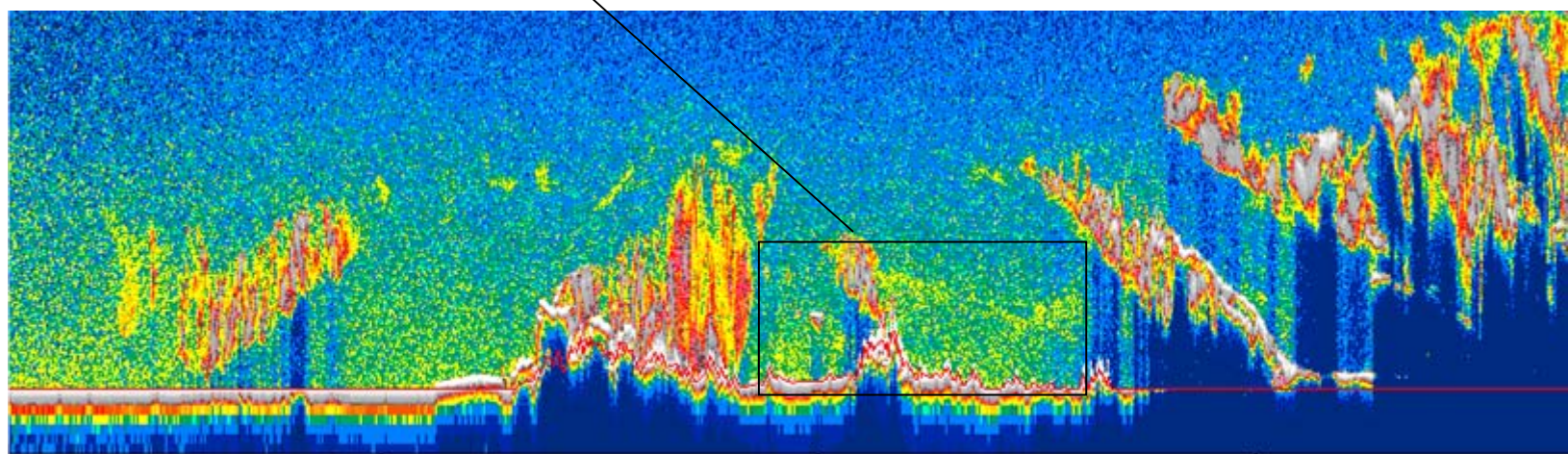
April, 1200Z

2008-04-08 12-00-00 UTC Start of Hour Conditions
Version: 2.01 Image Date: 04/09/2008



63.37
-152.84

53.53
-158.99



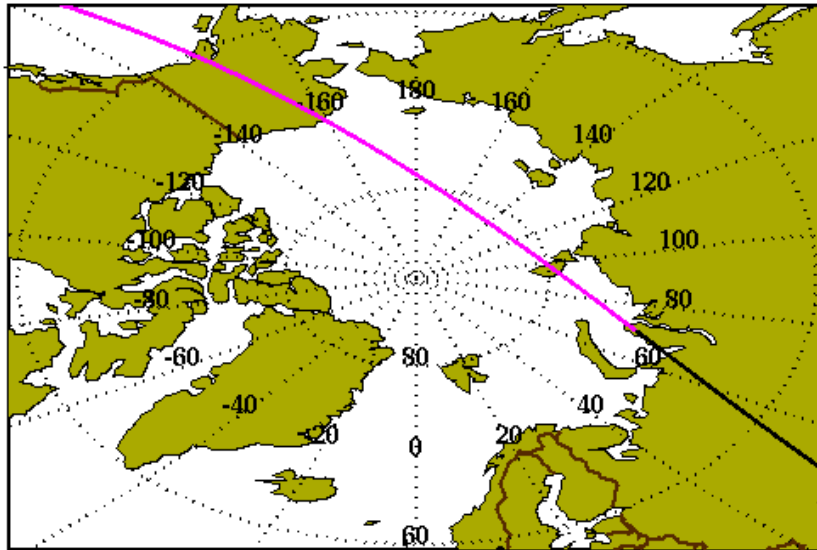
72.77
-141.17

63.37
-152.84

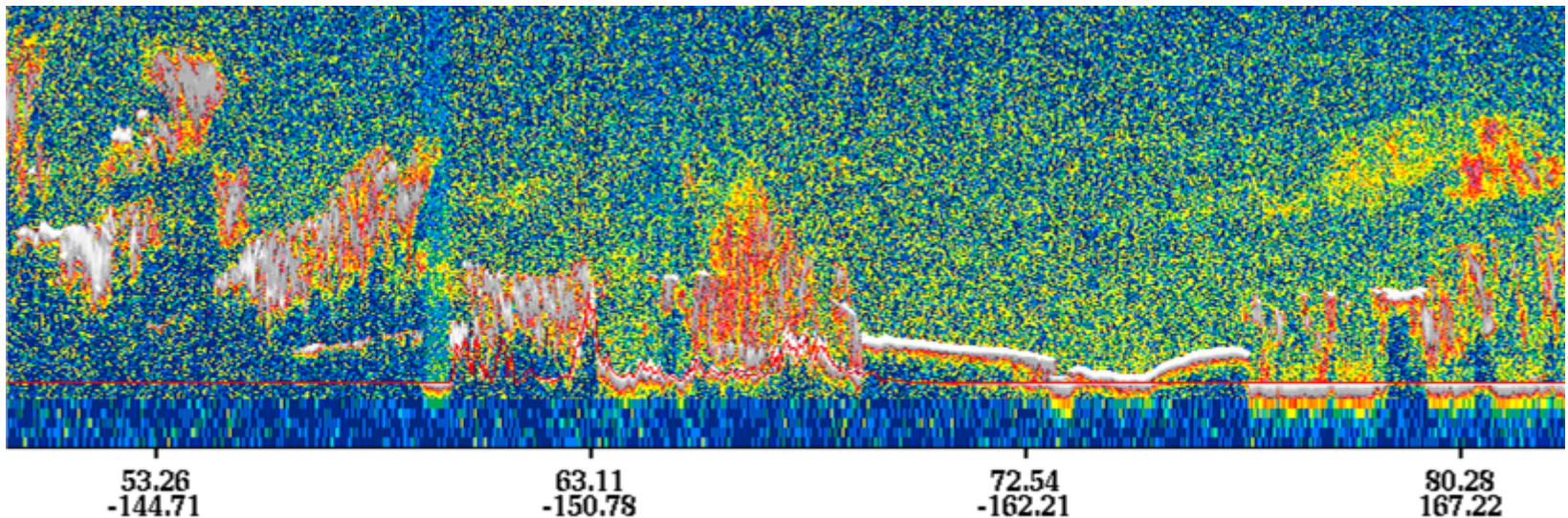
53.53
-158.99

April 2230Z

2008-04-08 22:30:00 UTC Half of Hour Conditions
Version: 2.01 Image Date: 04/10/2008



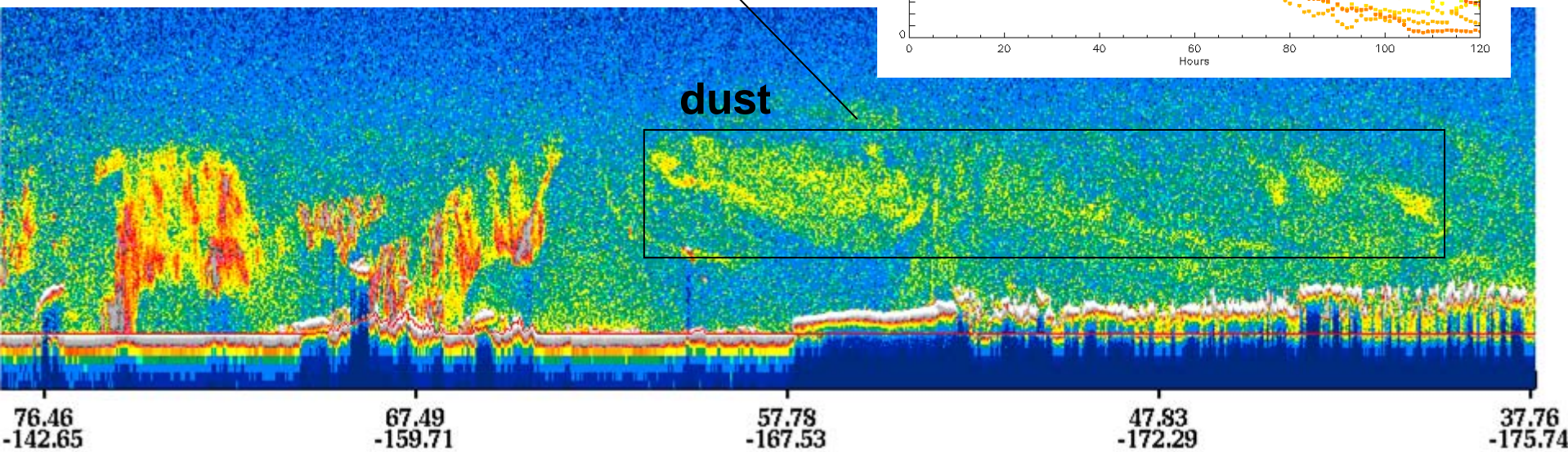
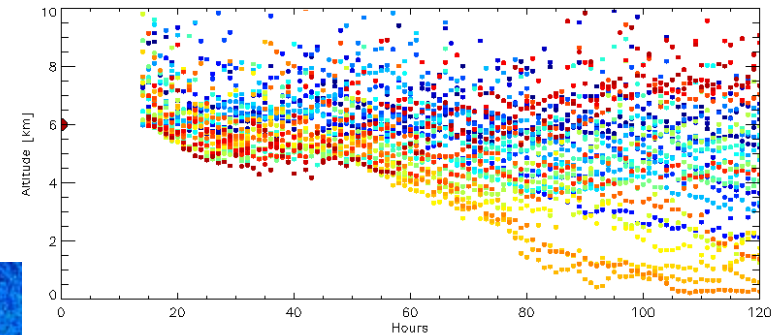
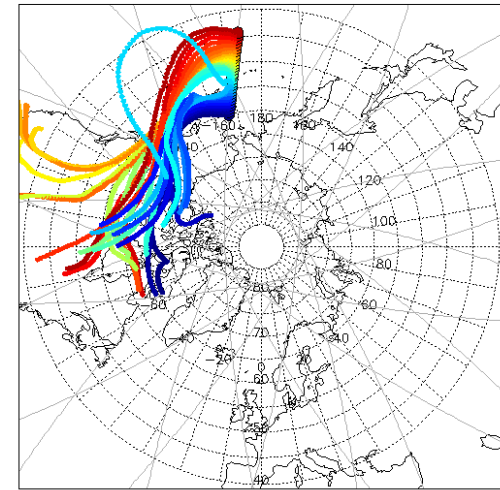
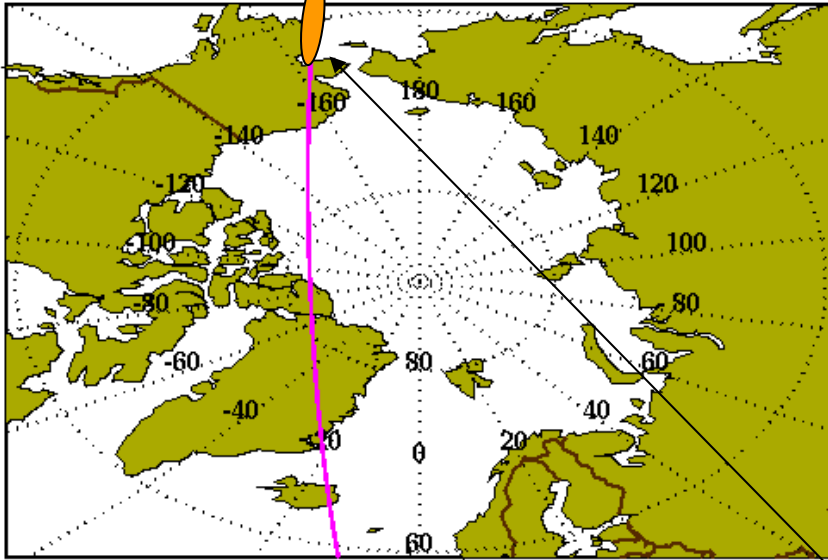
CALIPSO daytime
Barrow overpass: overcast



Initial Altitude: 6000m

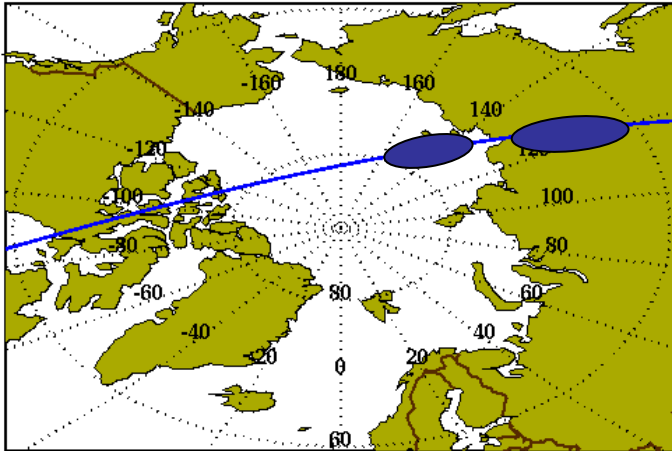
9 April 1330Z

2008-04-09 13-30-00 UTC Half of Hour Conditions
Version: 201 Image Date: 04/10/2008

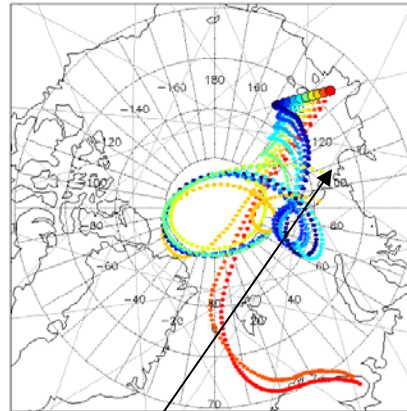


9 April 1800

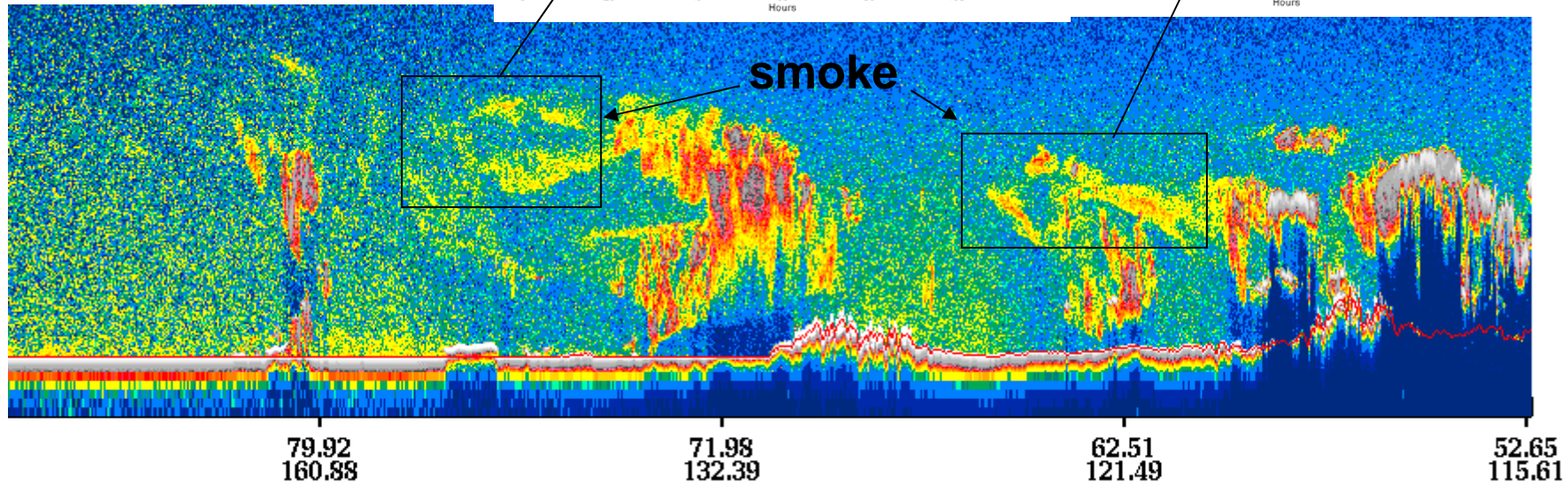
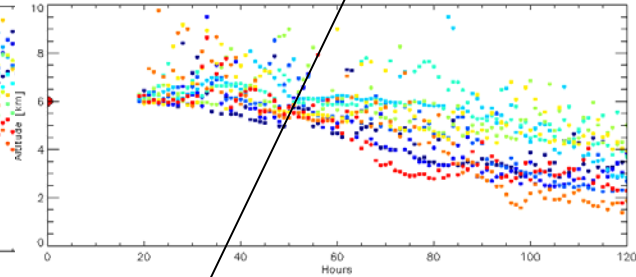
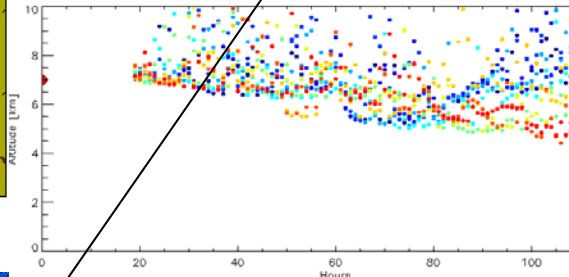
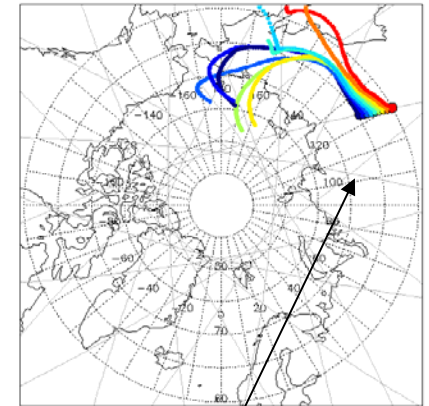
2008-04-09 18-00-00 UTC Start of Hour Conditions
Version: 2.01 Image Date: 04/10/2008



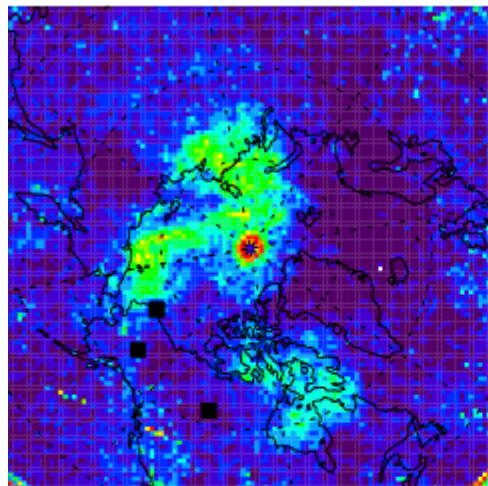
120hr CALIPSO Trajectories Initialized 2008040900 Valid 200804
Initial Altitude: 7000m



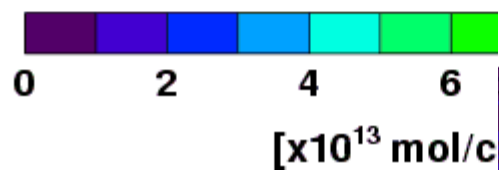
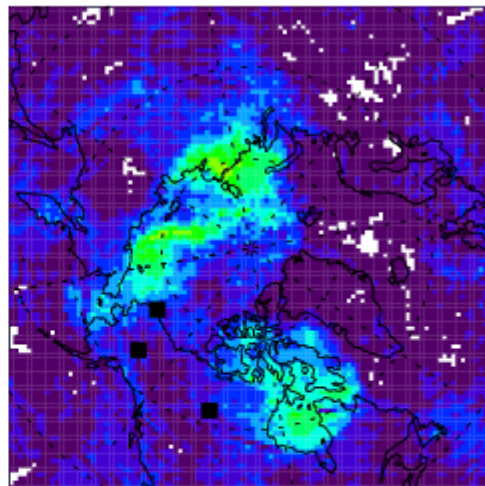
120hr CALIPSO Trajectories Initialized 2008040900 Valid 2008041400
Initial Altitude: 6000m



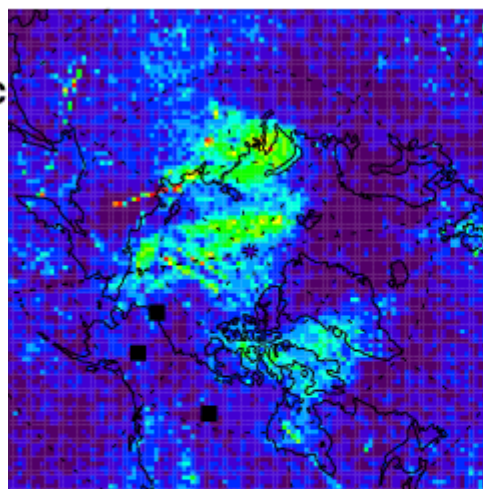
OMI_04-08



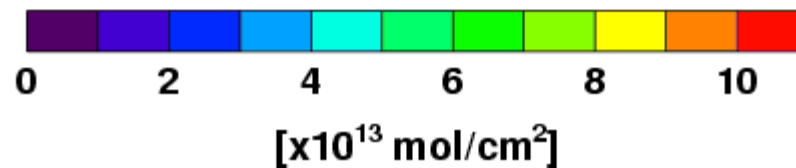
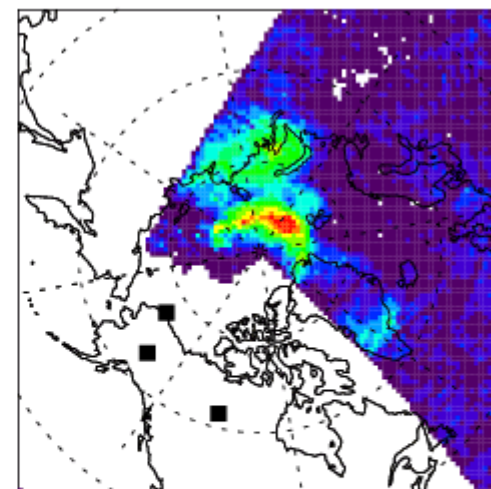
GOME2_04-08



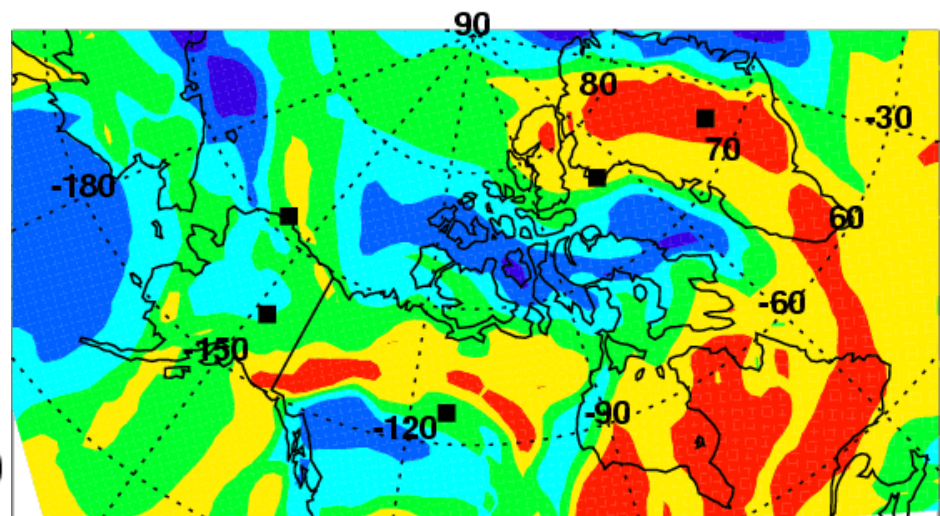
OMI_04-09



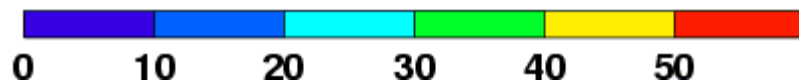
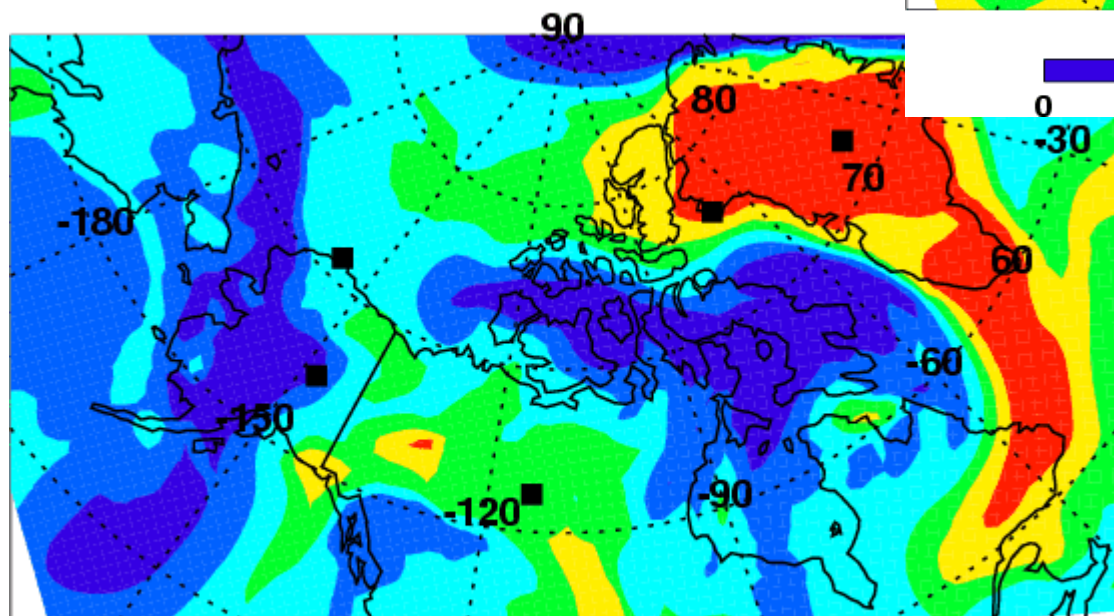
GOME2_04-09



O_3 (ppbv) at 300m, Apr-12_2000 UTC

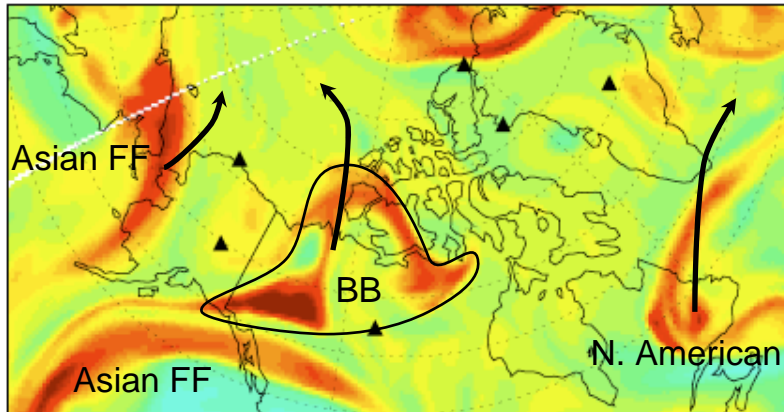


O_3 (ppbv) at surface, Apr-12_2000

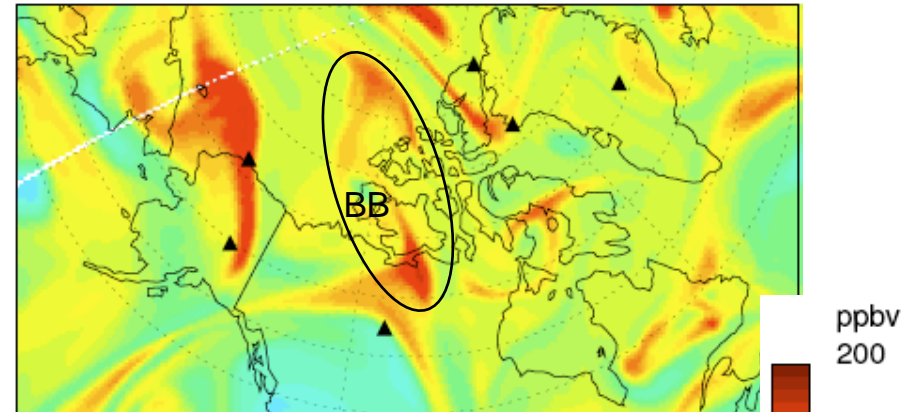


GEOS Total CO 500 hPa

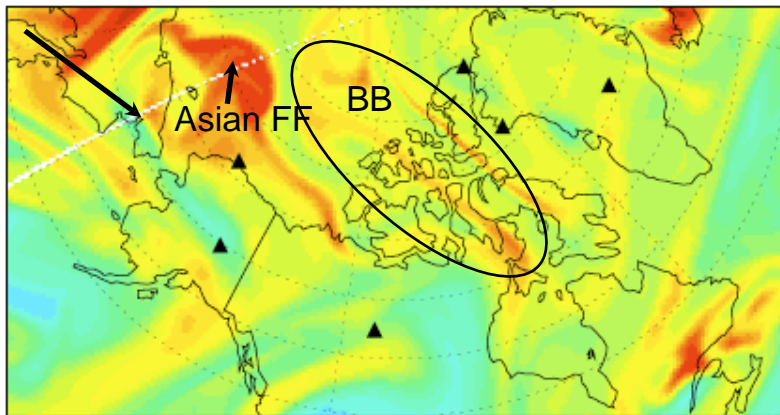
4/11 FF BB mix



4/12

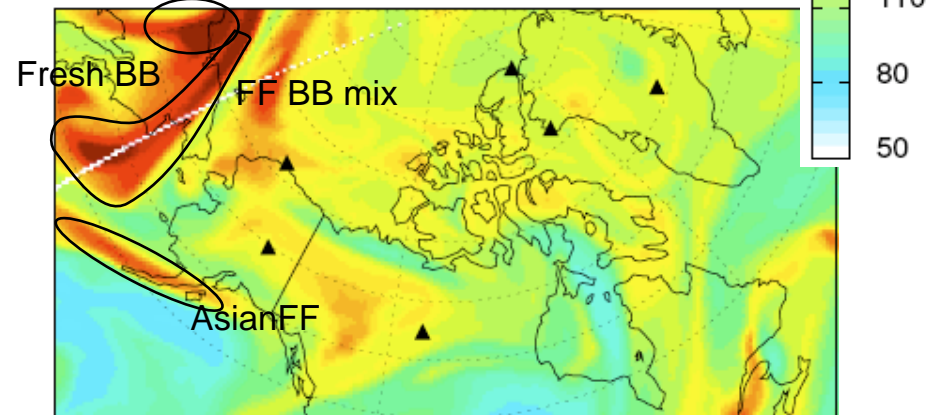


4/13



Fresh FF

4/14



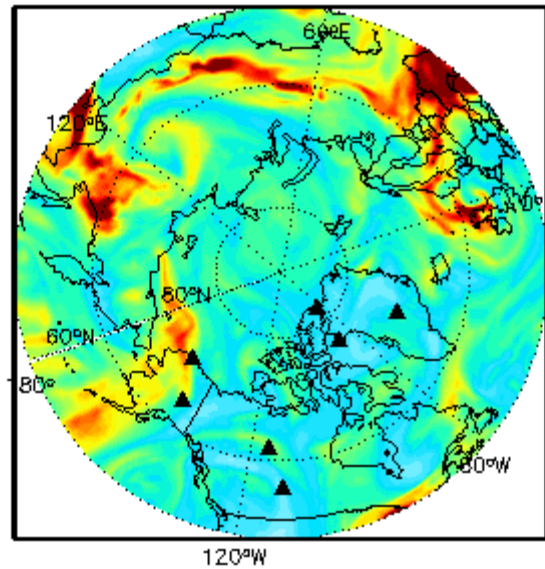
ppbv
200
170
140
110
80
50

Original flight path

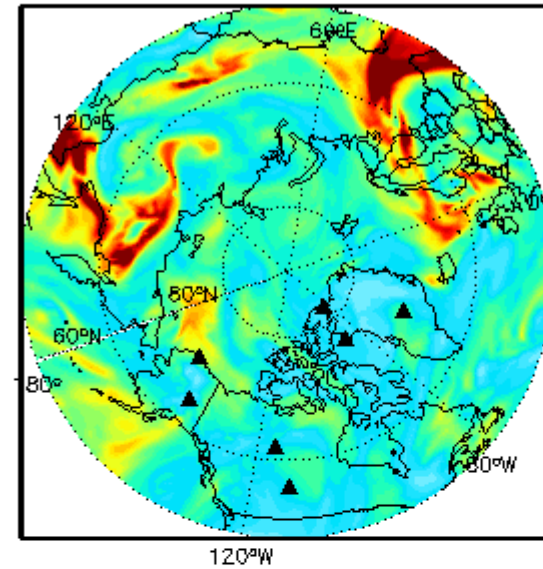
GEOS-5 forecast: 20080410_06z

GEOS-5 forecast: 20080410_06z

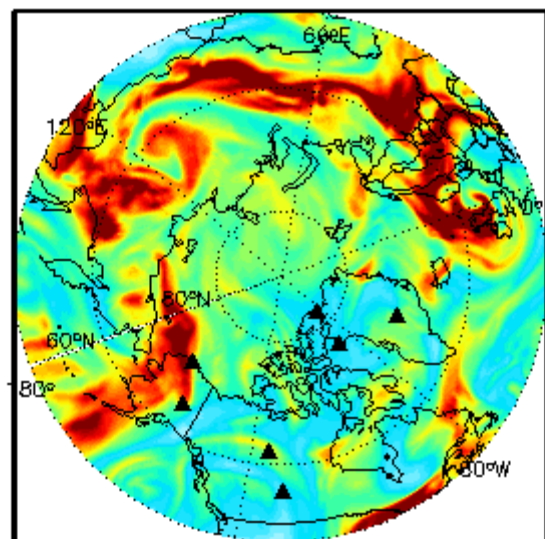
TOTAL AEROSOL EXTINCTION AOT [550 NM]
20080412 19:30Z



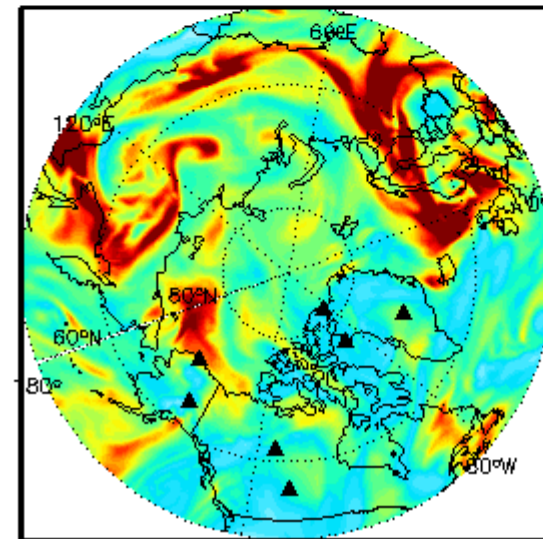
TOTAL AEROSOL EXTINCTION AOT [550 NM]
20080413 19:30Z



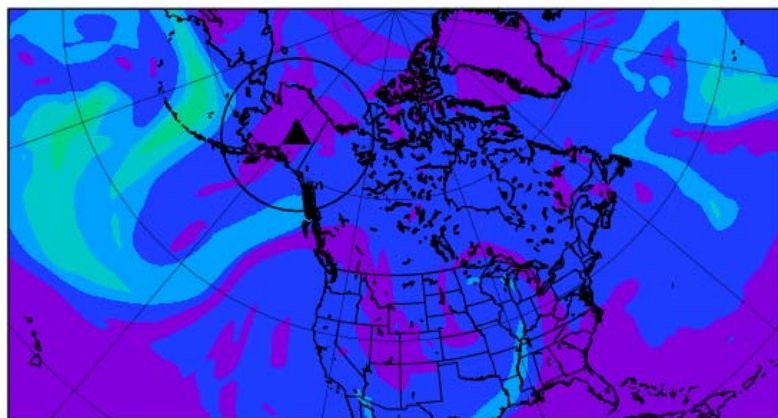
SO4 EXTINCTION AOT [550 NM]
20080412 19:30Z



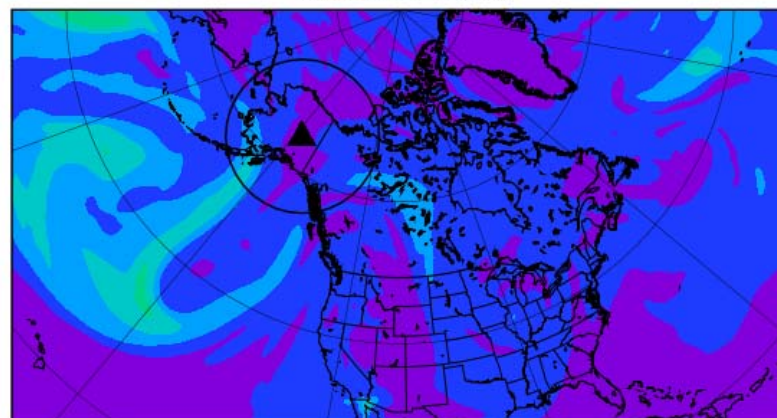
SO4 EXTINCTION AOT [550 NM]
20080413 19:30Z



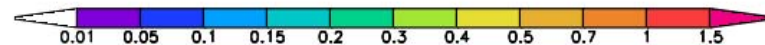
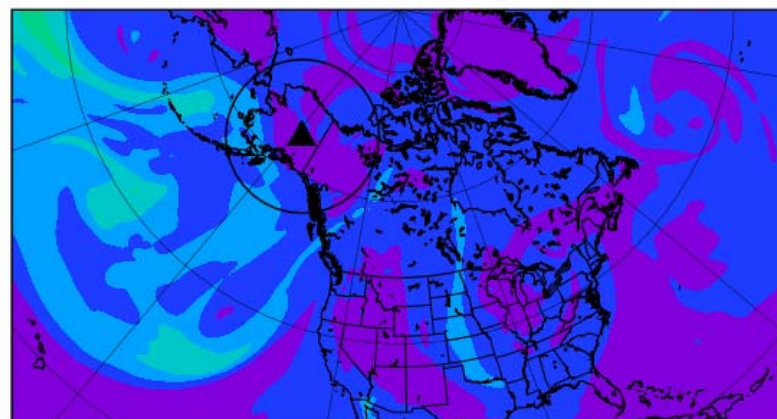
Dust AOD [550 nm]
16:30Z 11 APR 2008



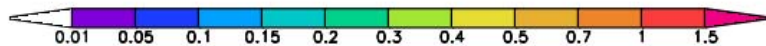
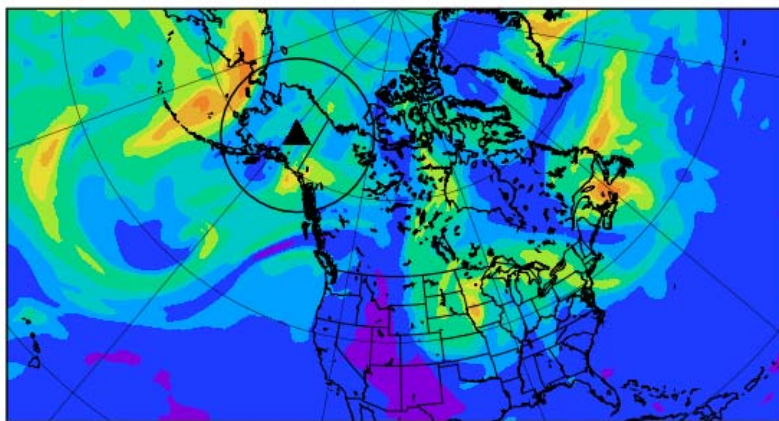
Dust AOD [550 nm]
16:30Z 12 APR 2008



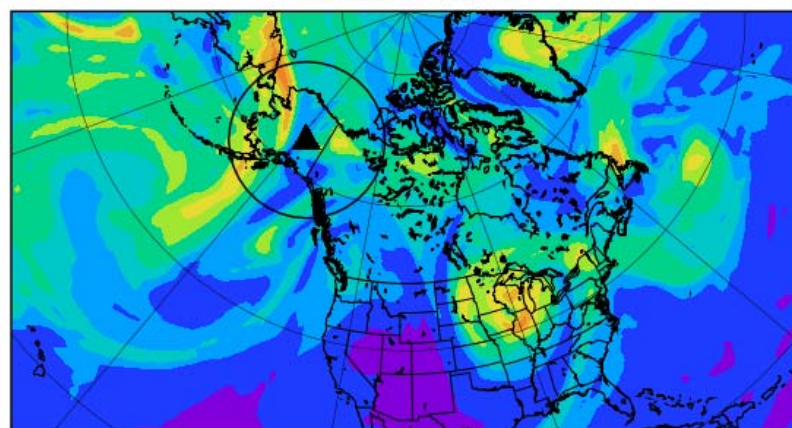
Dust AOD [550 nm]
16:30Z 13 APR 2008



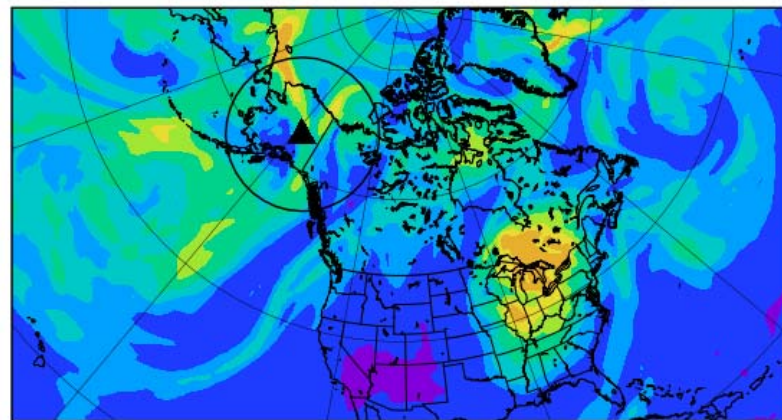
Sulfates AOD [550 nm]
16:30Z11APR2008



Sulfates AOD [550 nm]
16:30Z12APR2008

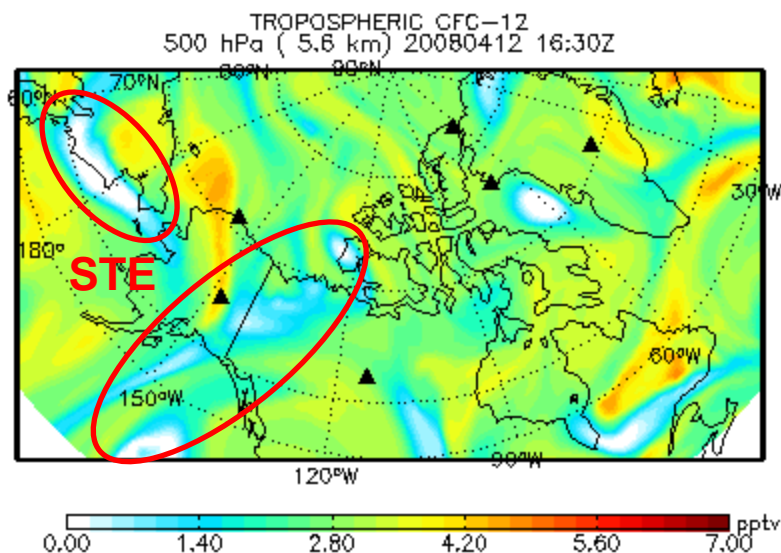


Sulfates AOD [550 nm]
16:30Z13APR2008

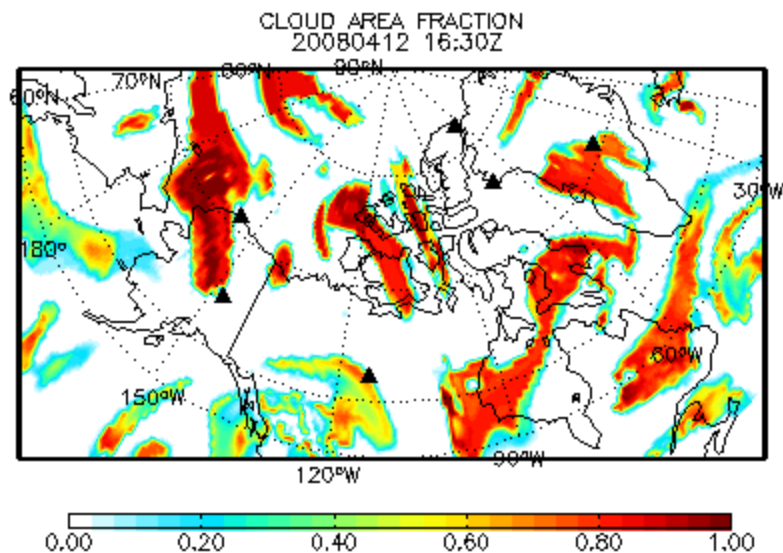


Tropospheric CFC-12

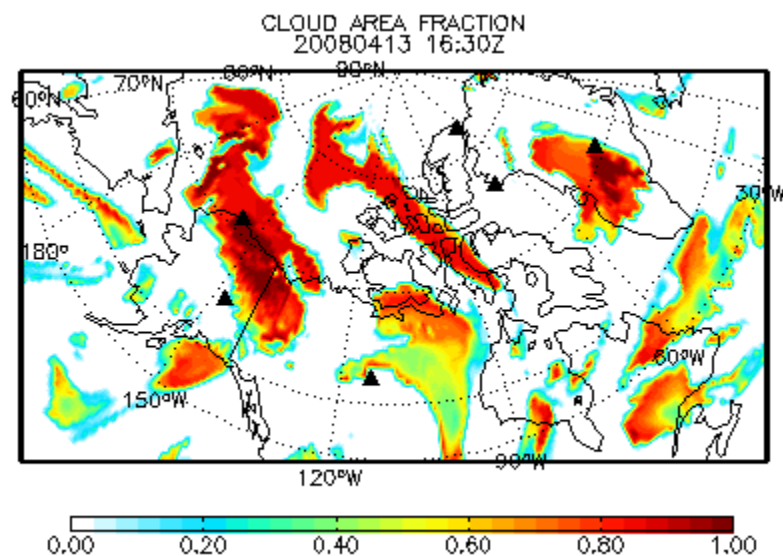
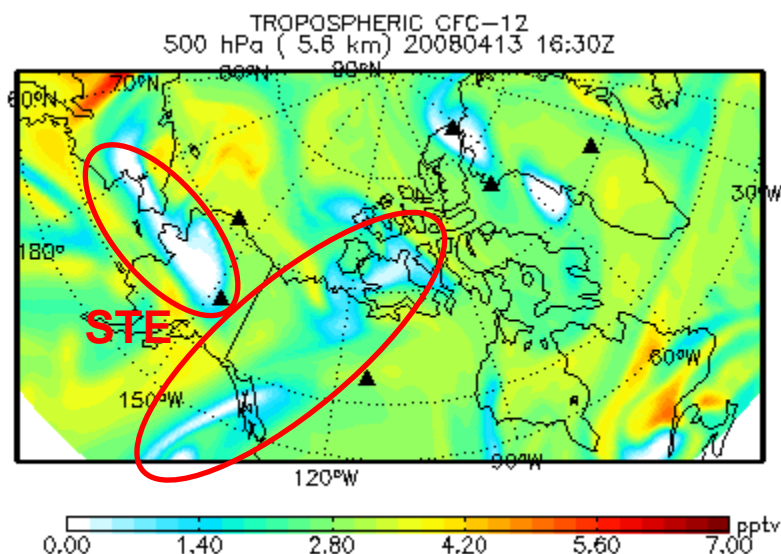
04/12



Cloud Area Fraction



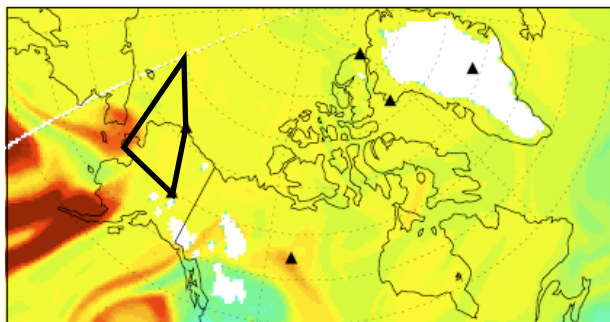
04/13



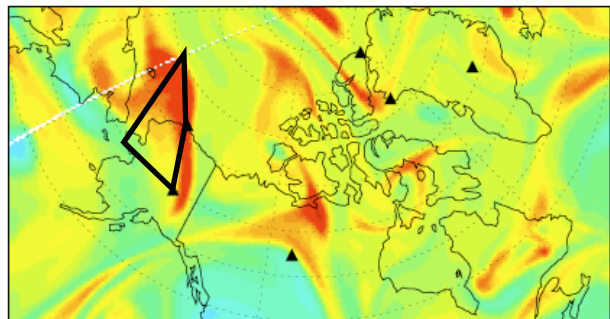
Which day is better?

4/12

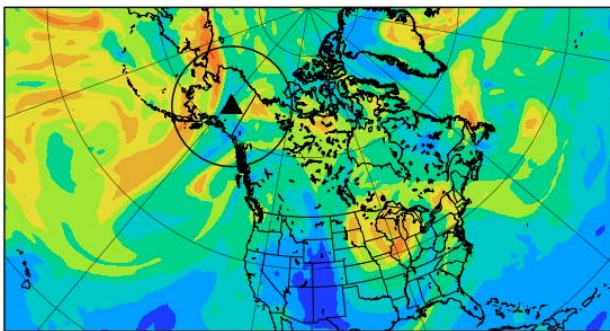
CO 850mb



CO 500mb

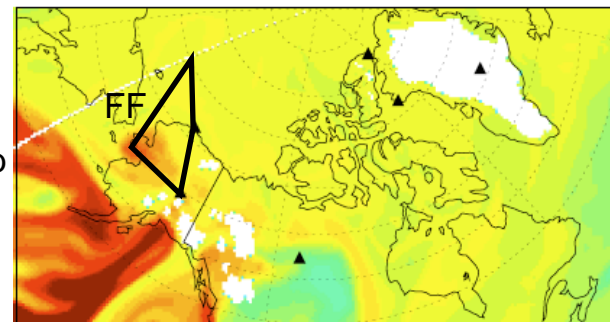


Total AOD [550 nm]
16:30Z 12 APR 2008

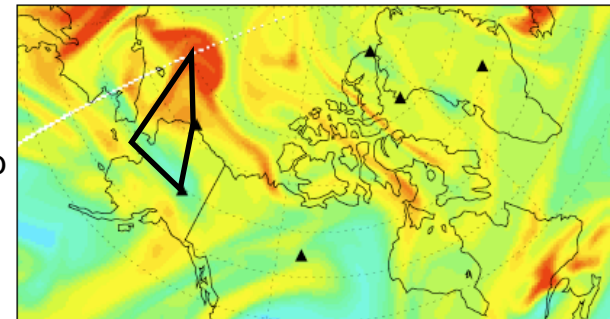


4/13

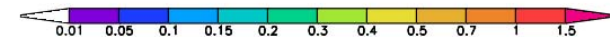
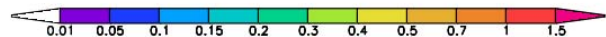
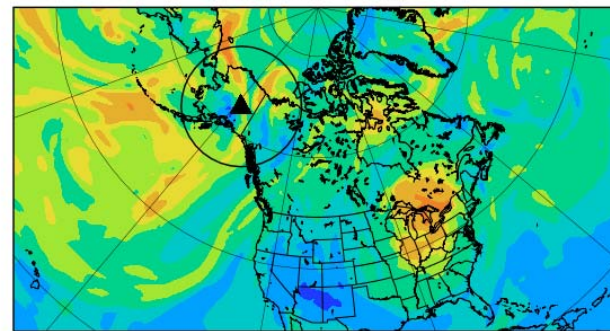
CO 850mb



CO 500mb



Total AOD [550 nm]
16:30Z 13 APR 2008



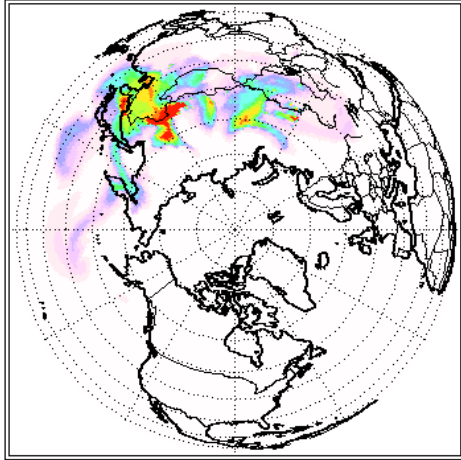
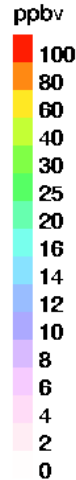
Initialized CO: 04/10/2008 – 06z; AOD: 04/09/2008 – 06z

Fires in Southern Russia

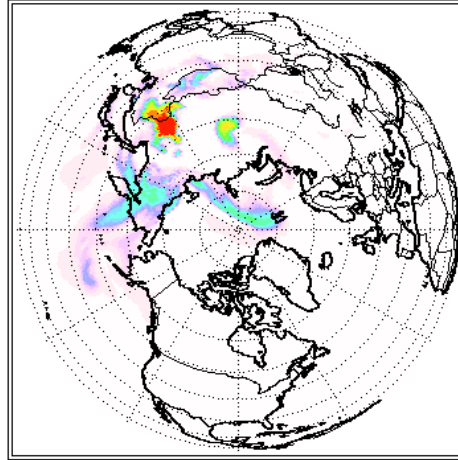
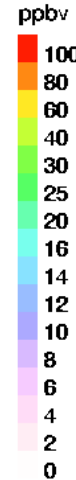
MOZART shows greater lofting above fires
CAM has more transport within boundary layer

MZ4/GFS for Apr 10/18Z

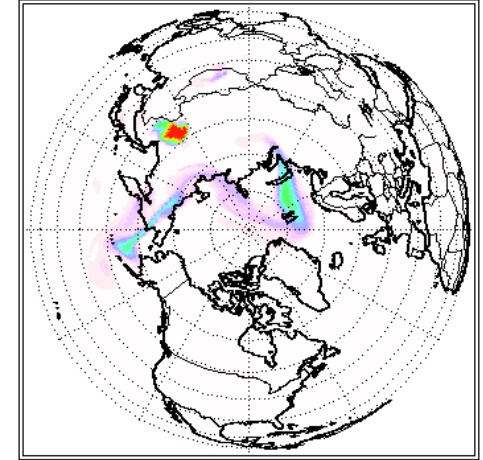
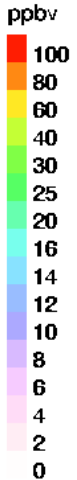
CO_{nasb} 20080410-18Z Surface



CO_{nasb} 20080410-18Z 3km



CO_{nasb} 20080410-18Z 6km



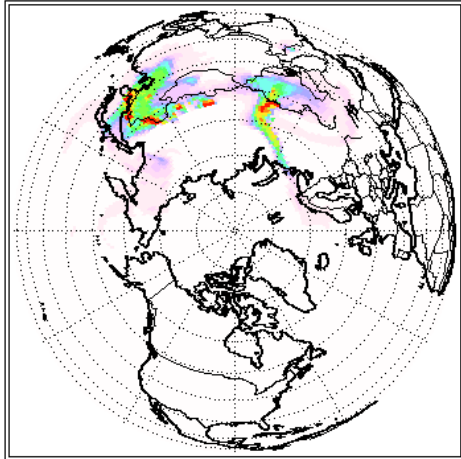
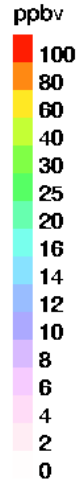
MOZART Forecast from 20080410

MOZART Forecast from 20080410

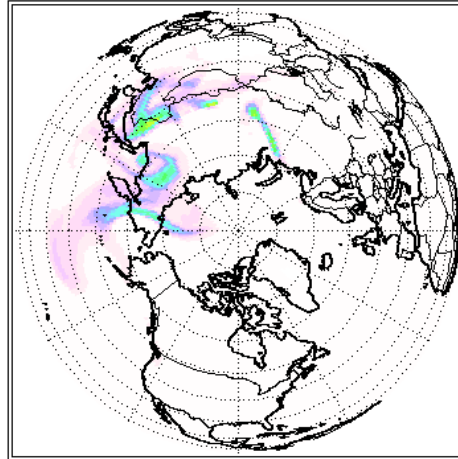
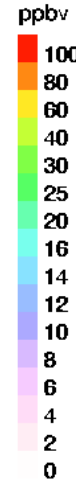
MOZART Forecast from 20080410

CAM/DART for Apr 10/18Z

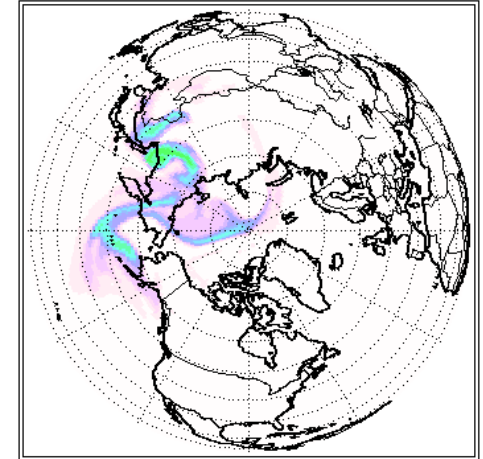
CO_{nasb} 20080410-18Z Surface



CO_{nasb} 20080410-18Z 3km



CO_{nasb} 20080410-18Z 6km



CAM Forecast from 20080409

CAM Forecast from 20080409

CAM Forecast from 20080409

Plume from Fires in Southern Russia Apr 11-13

Apr 11

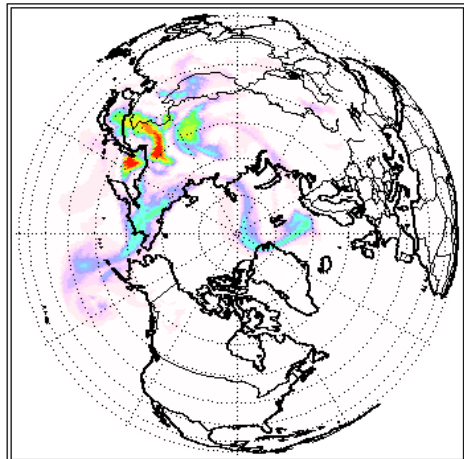
Apr 12

Apr 13

MZ4/GFS at 3 km

CO_{nasb} 20080411-18Z 3km

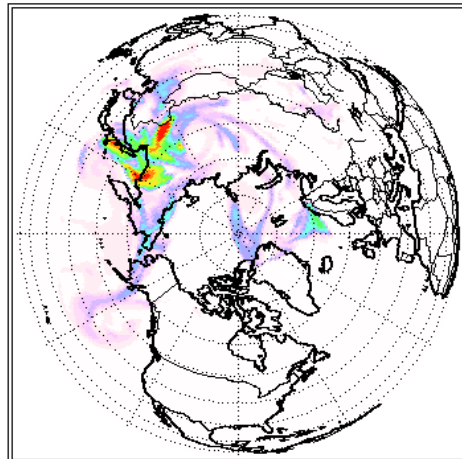
ppbv
100
80
60
40
30
25
20
16
14
12
10
8
6
4
2
0



MOZART Forecast from 20080410

CO_{nasb} 20080412-18Z 3km

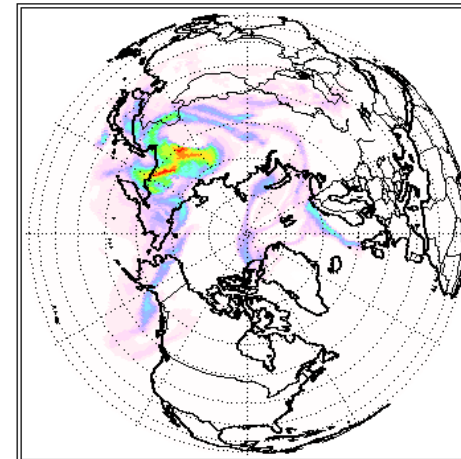
ppbv
100
80
60
40
30
25
20
16
14
12
10
8
6
4
2
0



MOZART Forecast from 20080410

CO_{nasb} 20080413-18Z 3km

ppbv
100
80
60
40
30
25
20
16
14
12
10
8
6
4
2
0

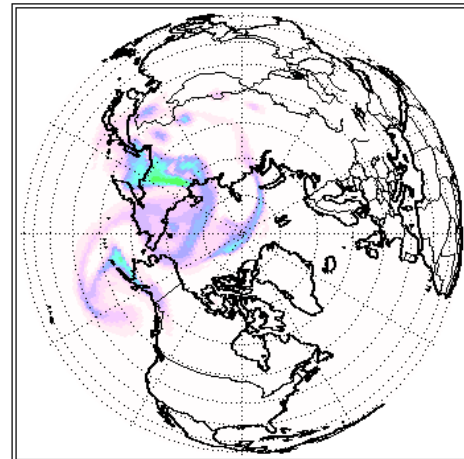


MOZART Forecast from 20080410

CAM/DART at 6 km

CO_{nasb} 20080411-18Z 6km

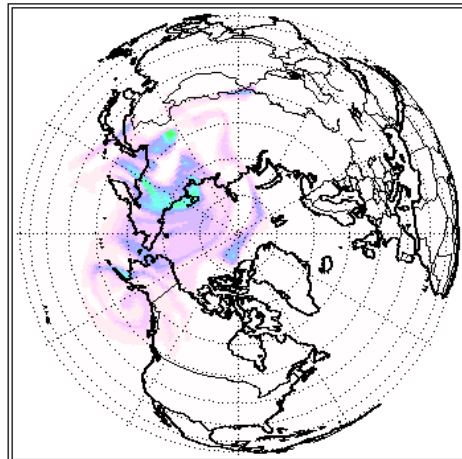
ppbv
100
80
60
40
30
25
20
16
14
12
10
8
6
4
2
0



CAM Forecast from 20080409

CO_{nasb} 20080412-18Z 6km

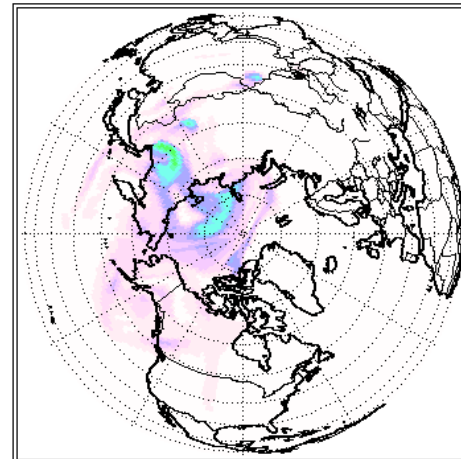
ppbv
100
80
60
40
30
25
20
16
14
12
10
8
6
4
2
0



CAM Forecast from 20080409

CO_{nasb} 20080413-18Z 6km

ppbv
100
80
60
40
30
25
20
16
14
12
10
8
6
4
2
0



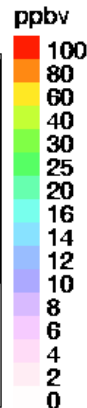
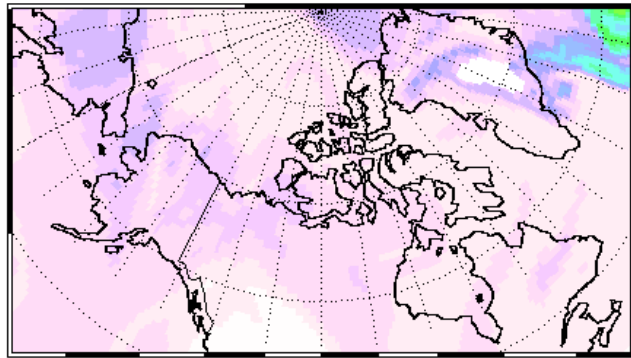
CAM Forecast from 20080409

MZ4/GFS

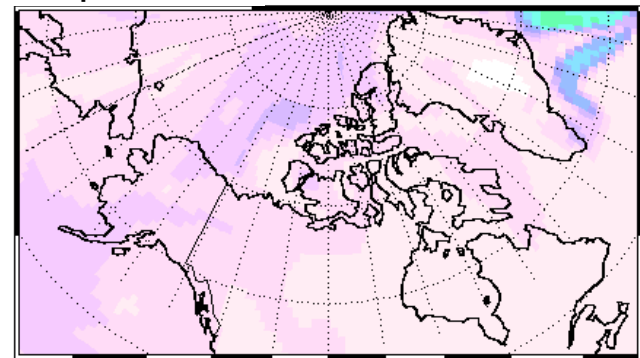
Apr 12

CAM/DART

Europe Anthro 20080412-18Z 3km

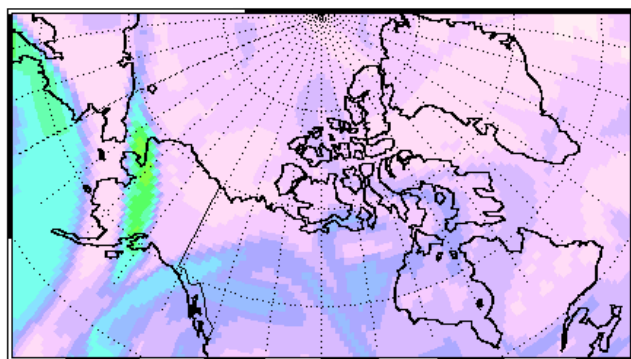


Europe Anthro 20080412-18Z 3km

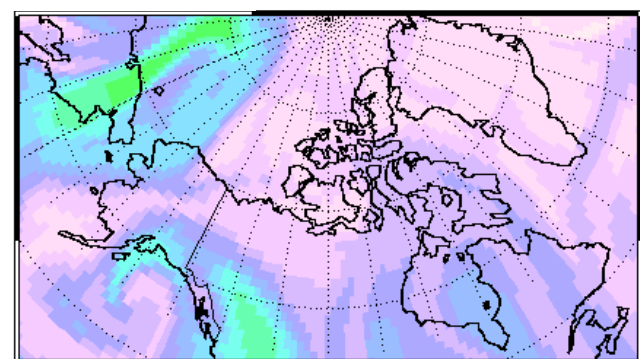


Aged
European air
over Alaska

N.Asia Anthro 20080412-18Z 6km



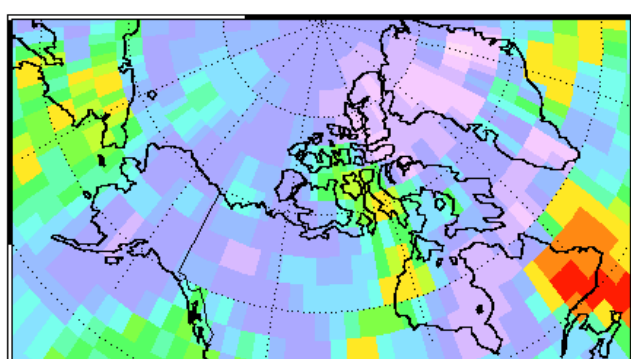
N.Asia Anthro 20080412-18Z 6km



Fire plumes
coincide with
these anthro
plumes

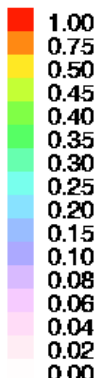
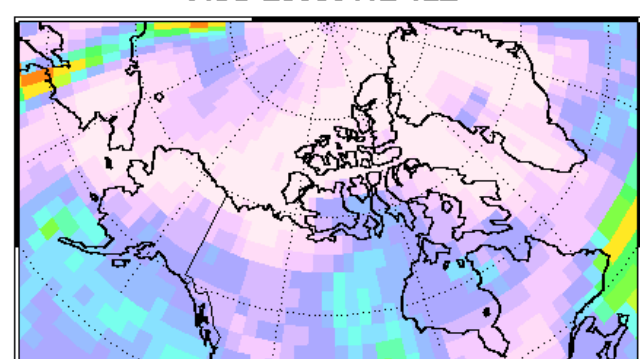
MOZART Forecast from 20080410

AOD 20080412-00Z



CAM Forecast from 20080409

AOD 20080412-12Z



MOZART Forecast from 20080410

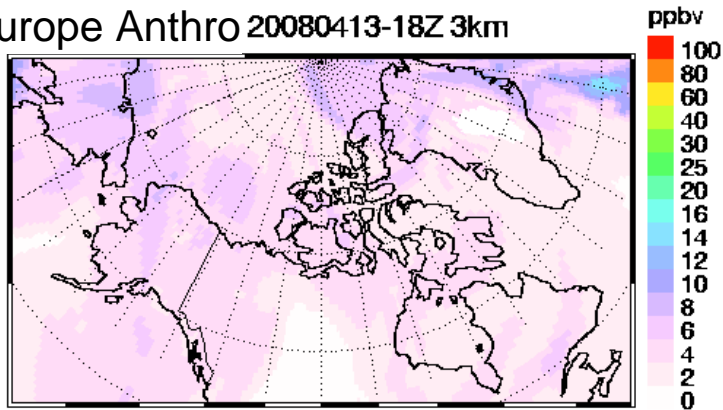
CAM Forecast from 20080409

MZ4/GFS

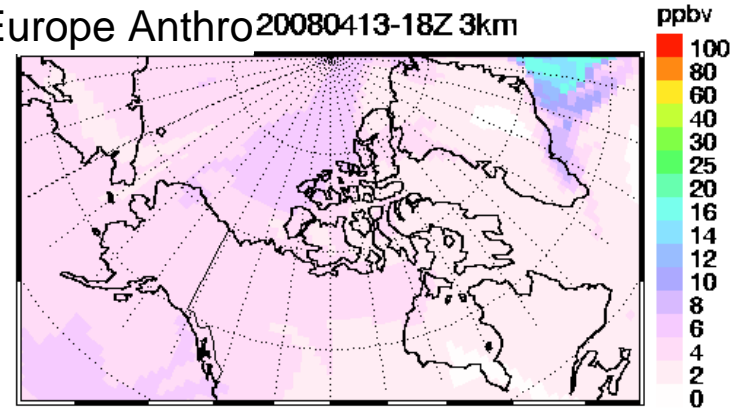
Apr 13

CAM/DART

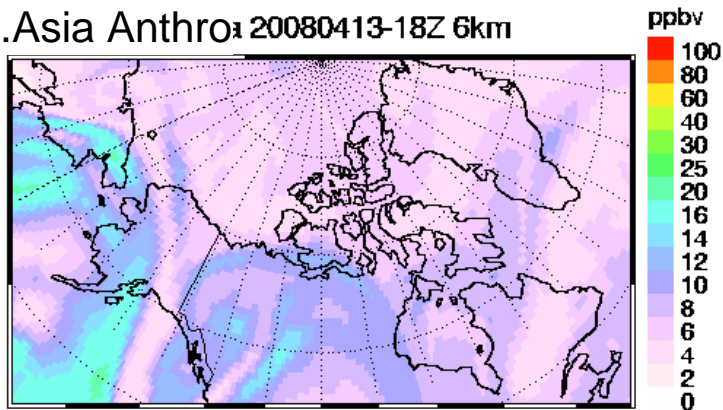
Europe Anthro 20080413-18Z 3km



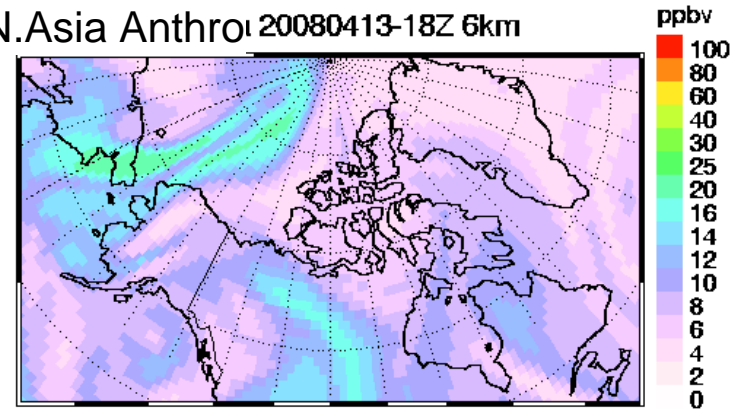
Europe Anthro 20080413-18Z 3km



N.Asia Anthro 20080413-18Z 6km

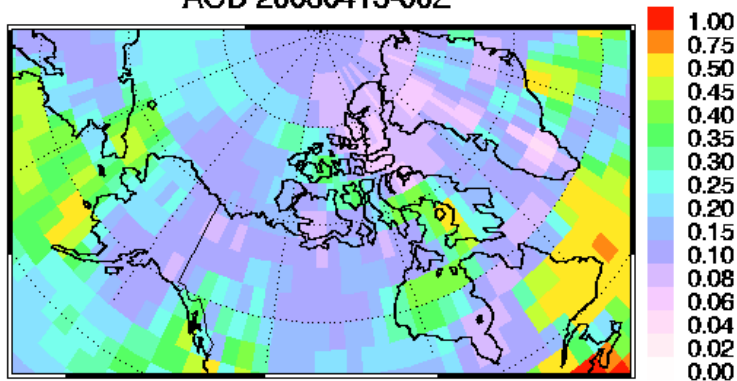


N.Asia Anthro 20080413-18Z 6km



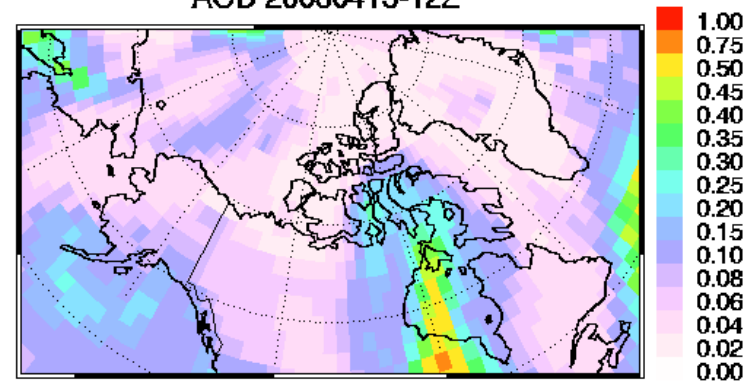
MOZART Forecast from 20080410

AOD 20080413-00Z



CAM Forecast from 20080409

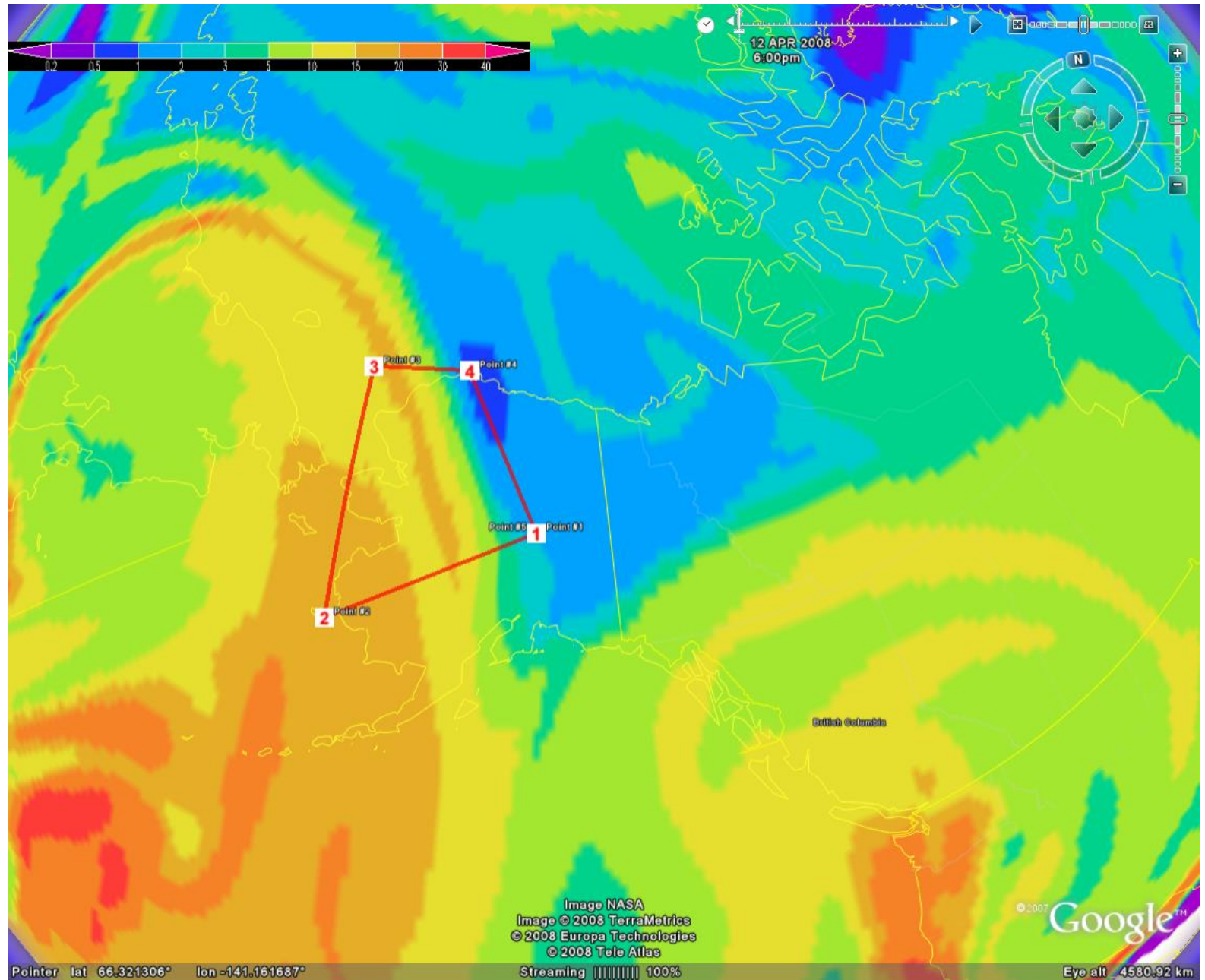
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MOZART Forecast from 20080410

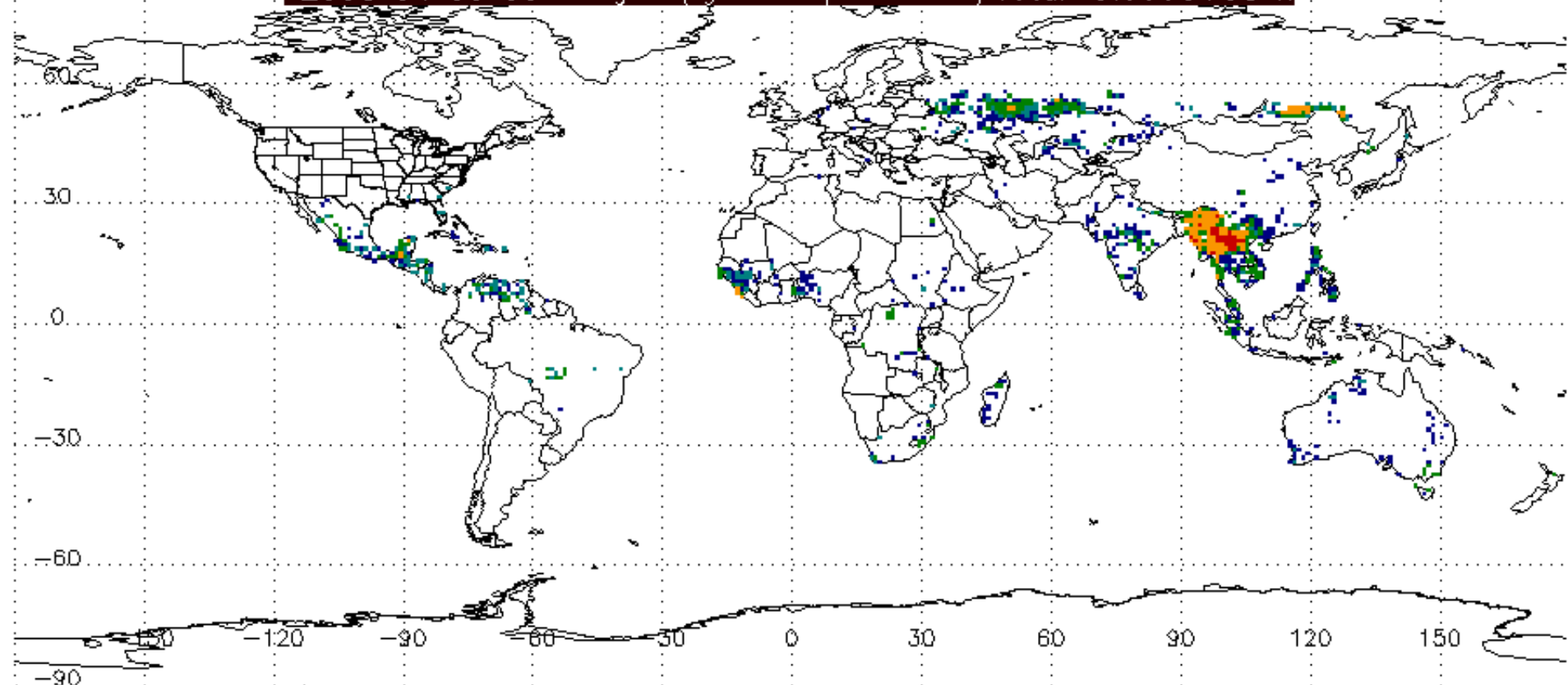
CAM Forecast from 20080409

Biomass CO 8.4 km layer, April 12, 66 hr forecast





2008 04 09 99 log 10 (kg emitted per 86400. s) Total=9.906e+08 k

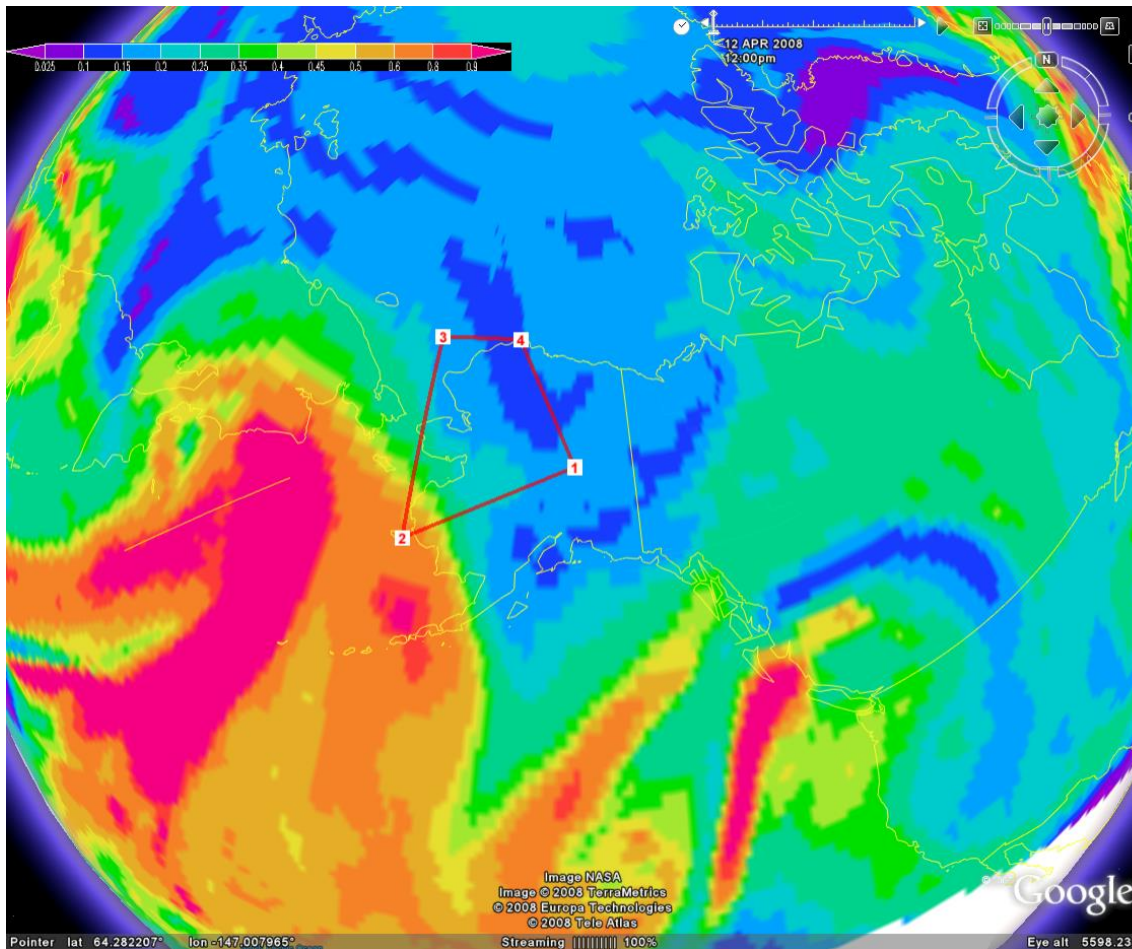


Apr 10 08:10:34 2008

NRL/Monterey Aerosol Modeling

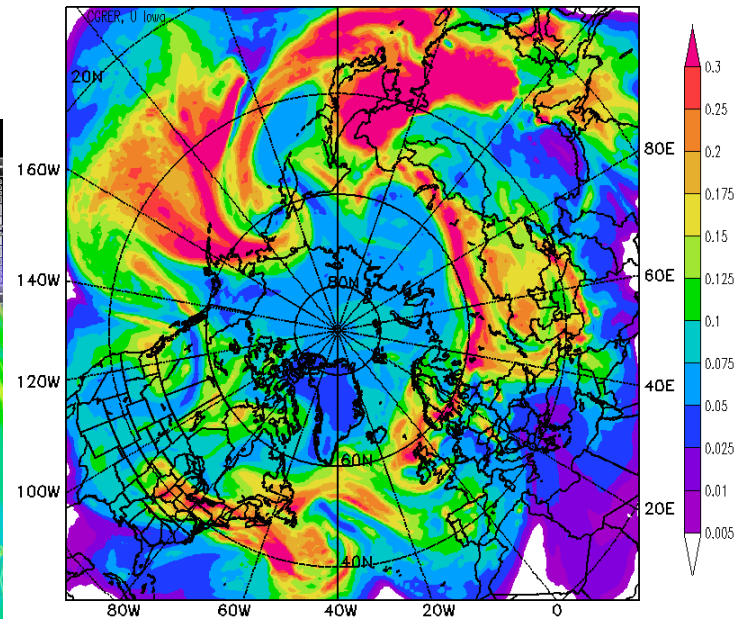
2008040999

April 12, 66 hr forecast

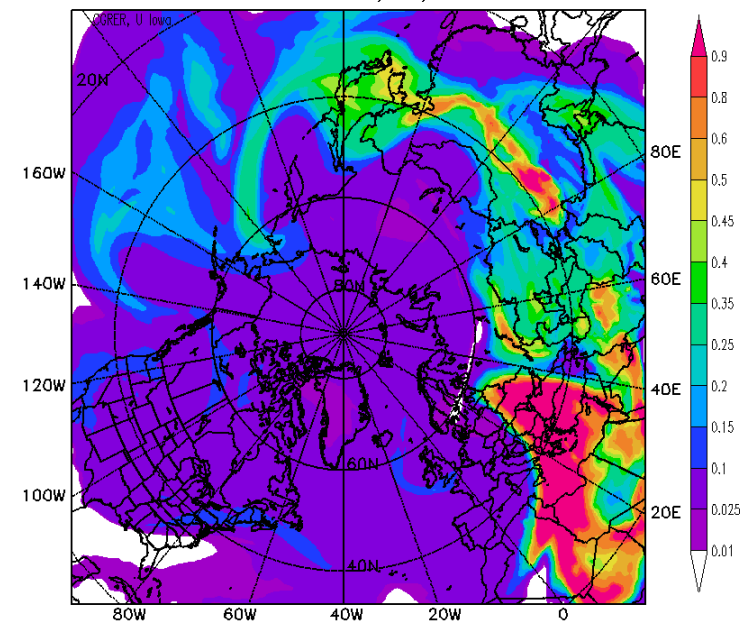


Total Column AOD

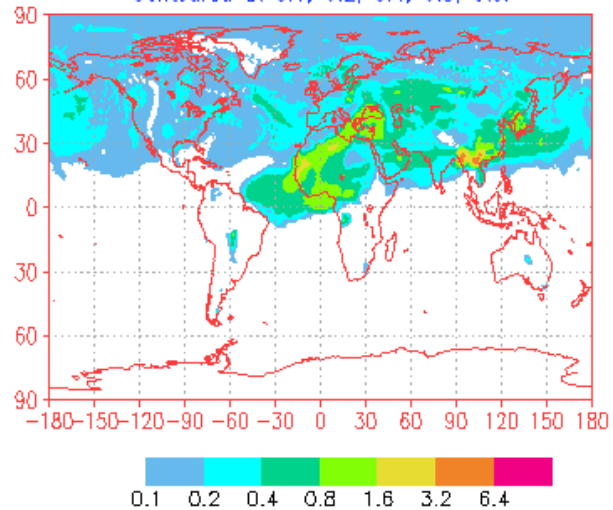
Simulated Sulfate_Aerosol_Optical_Depth
at 18UTC, 04/12/2008



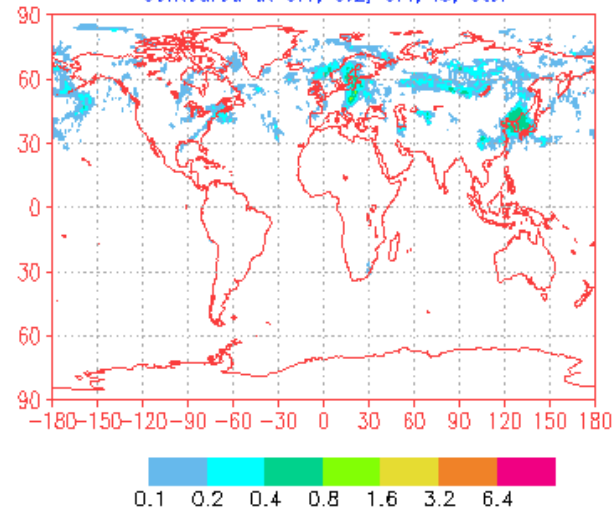
Simulated Dust_Aerosol_Optical_Depth
at 18UTC, 04/12/2008



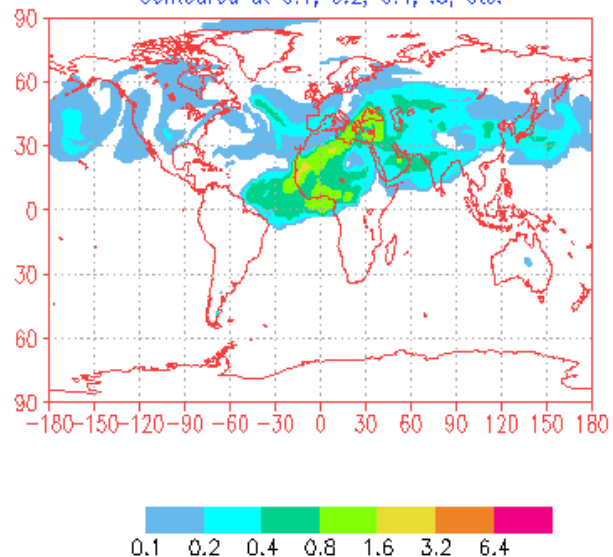
NAAPS Total Optical Depth for 18:00Z 12 Apr 2008
Contoured at 0.1, 0.2, 0.4, 0.8, etc.



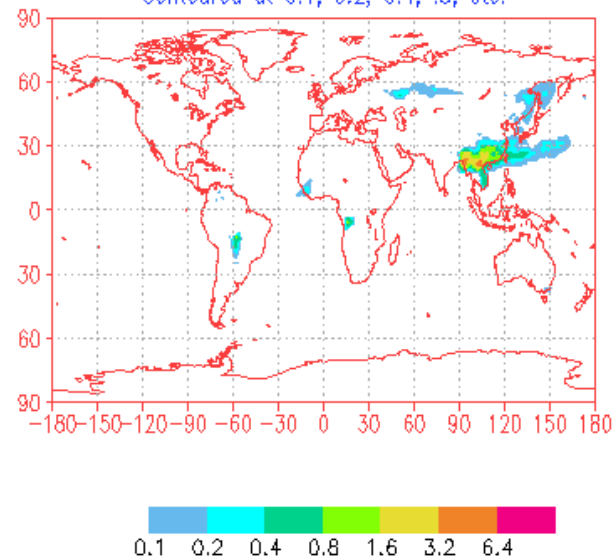
NAAPS Sulfate Optical Depth for 18:00Z 12 Apr 2008
Contoured at 0.1, 0.2, 0.4, .8, etc.



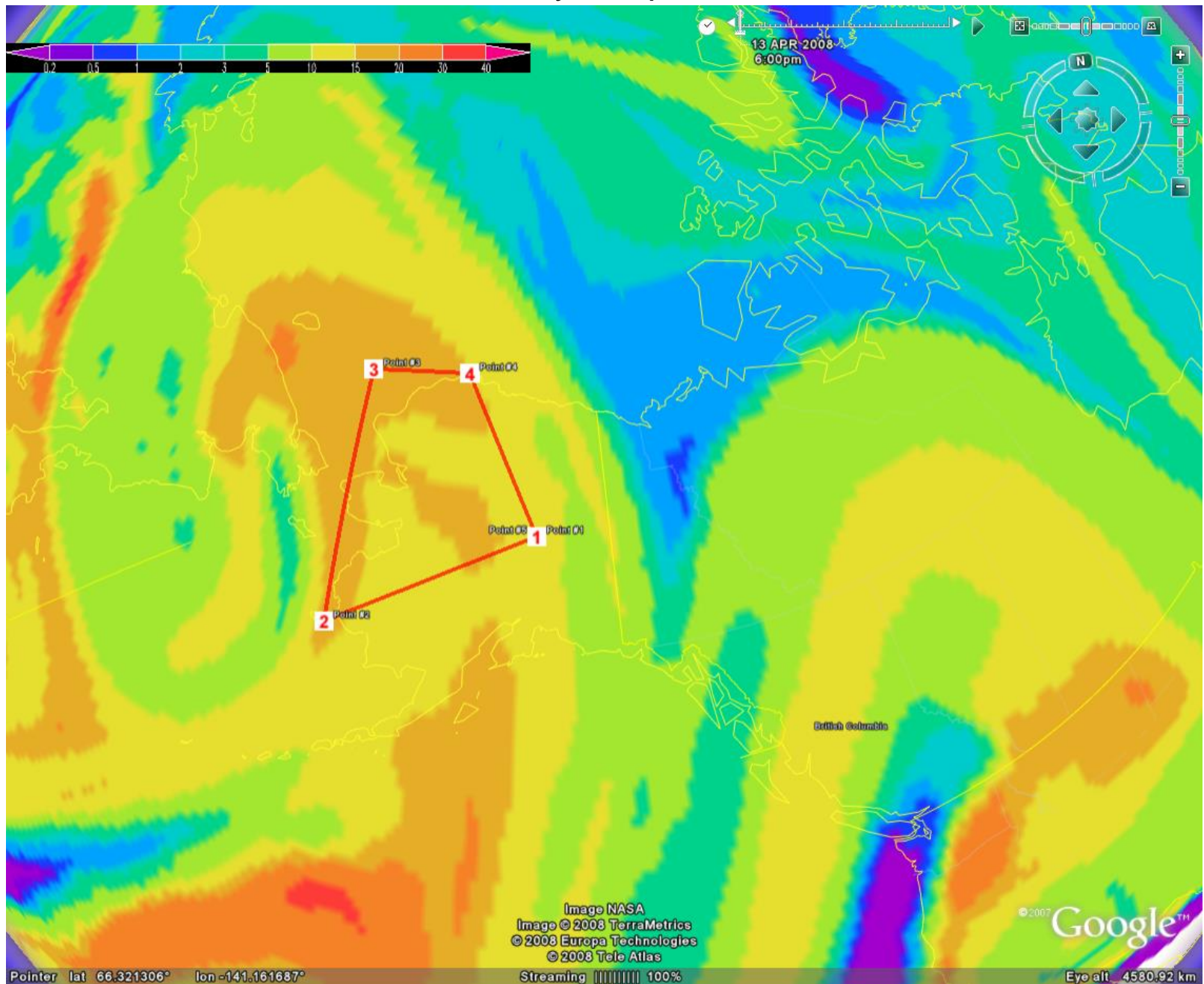
NAAPS Dust Optical Depth for 18:00Z 12 Apr 2008
Contoured at 0.1, 0.2, 0.4, .8, etc.



NAAPS Smoke Optical Depth for 18:00Z 12 Apr 2008
Contoured at 0.1, 0.2, 0.4, .8, etc.

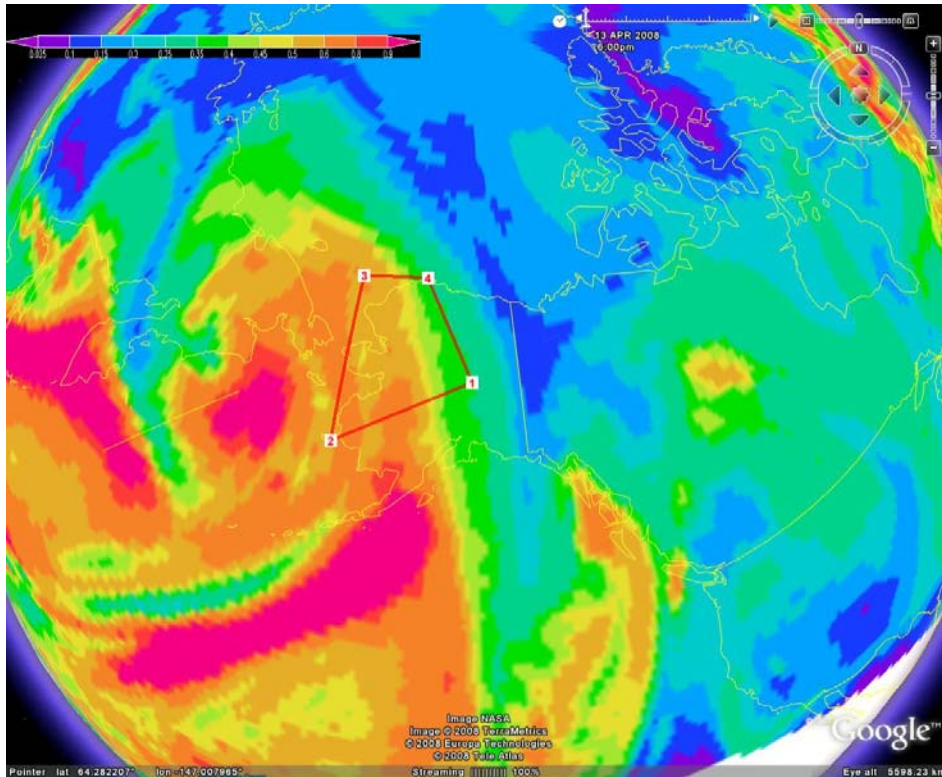


Biomass CO 8.4 km layer, April 13, 90 hr forecast

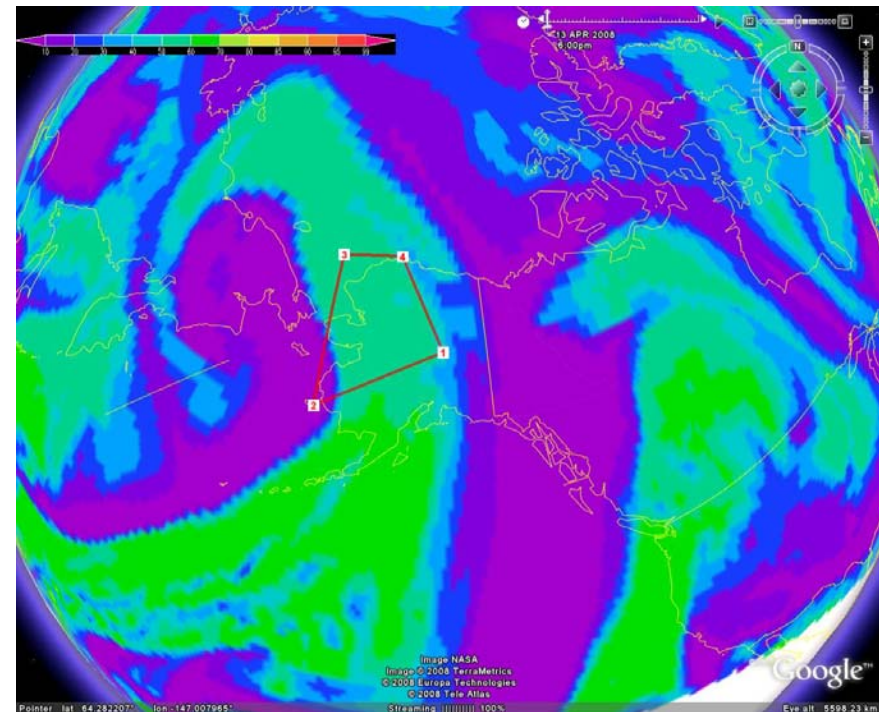
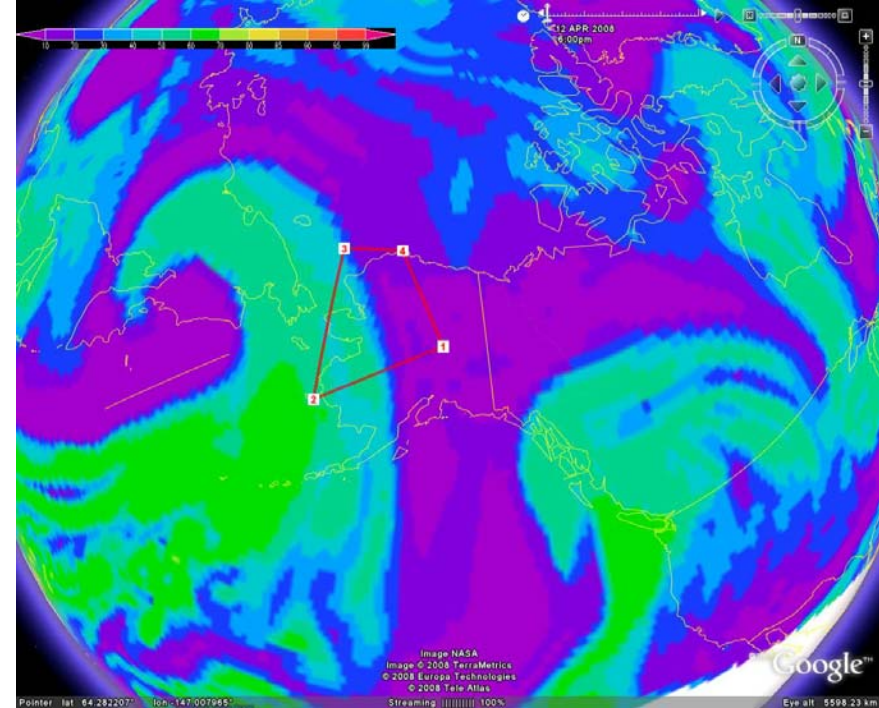


RH, 8.4km, 66hr
Apr 12th

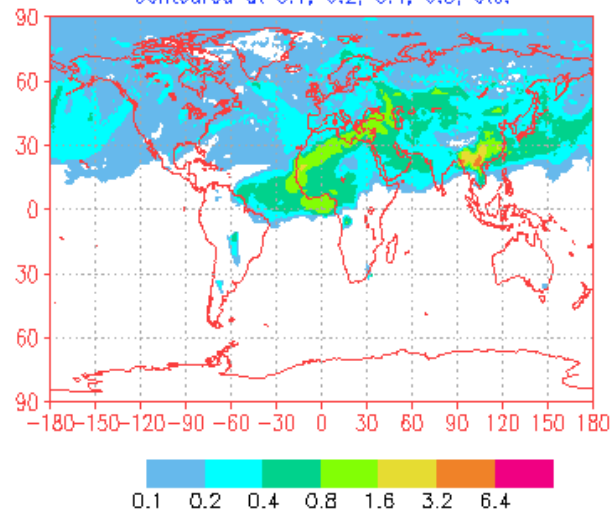
AOD, April 13th (90 hr)



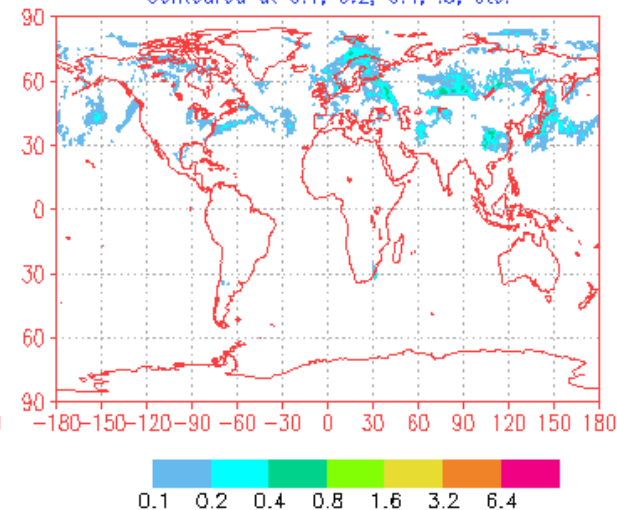
RH, 8.4km, 90hr
April 13th



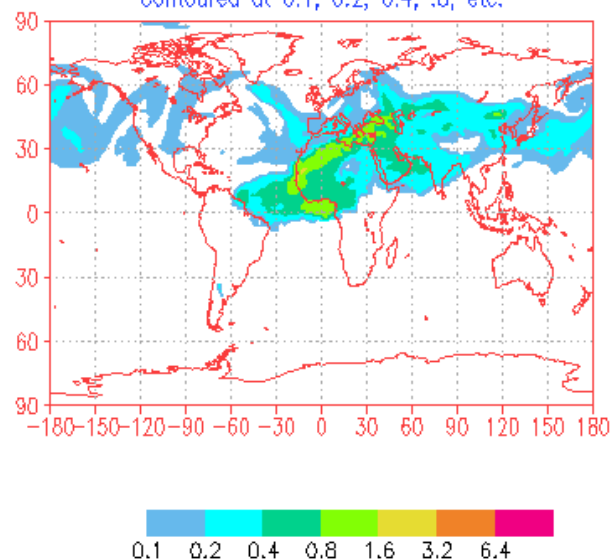
NAAPS Total Optical Depth for 18:00Z 13 Apr 2008
Contoured at 0.1, 0.2, 0.4, 0.8, etc.



NAAPS Sulfate Optical Depth for 18:00Z 13 Apr 2008
Contoured at 0.1, 0.2, 0.4, .8, etc.



NAAPS Dust Optical Depth for 18:00Z 13 Apr 2008
Contoured at 0.1, 0.2, 0.4, .8, etc.



NAAPS Smoke Optical Depth for 18:00Z 13 Apr 2008
Contoured at 0.1, 0.2, 0.4, .8, etc.

