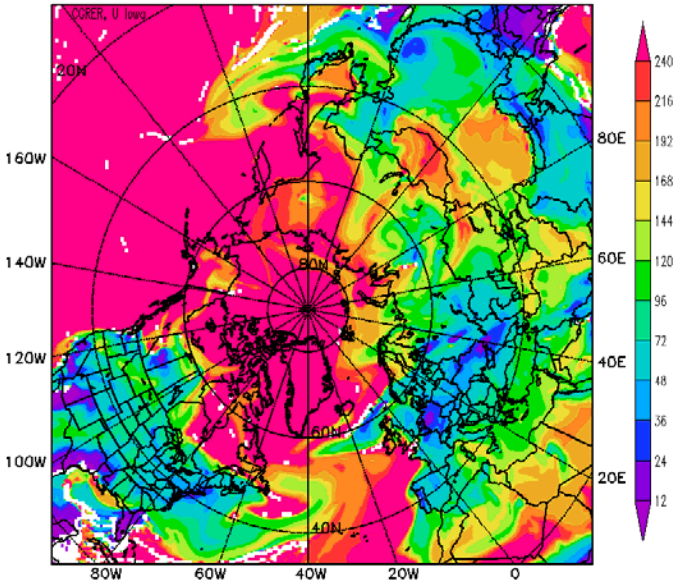
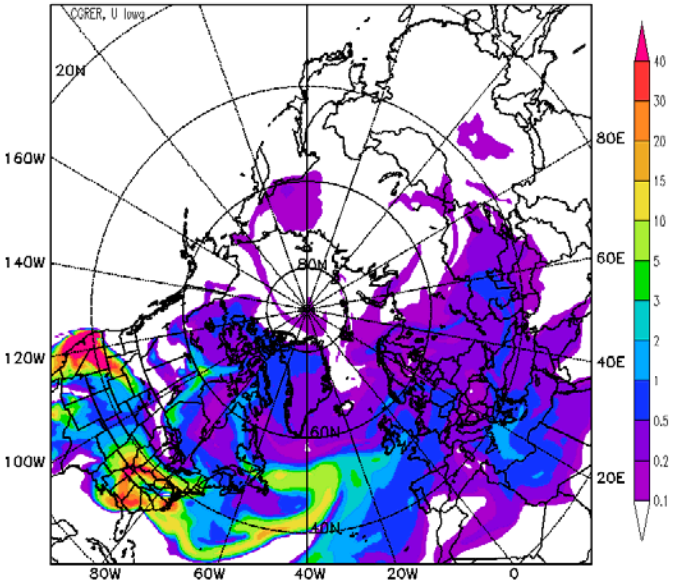
IOWA STEM model forecast

06/25/08

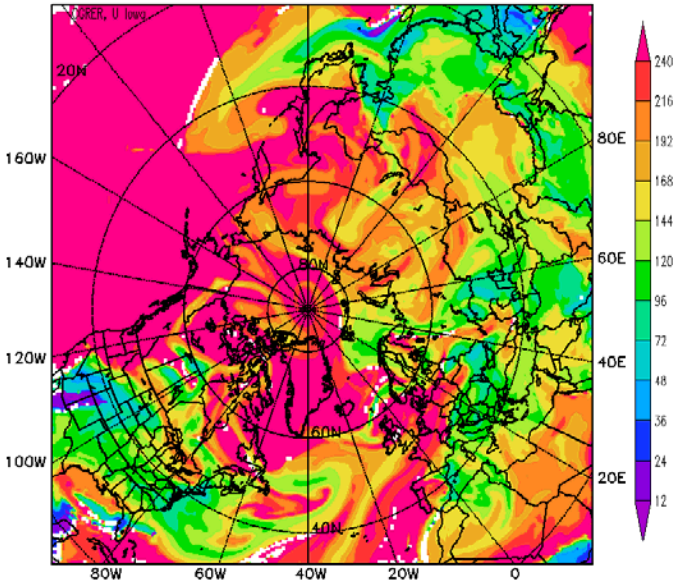
Simulated VOC_Averaged_Age (hour) in the 1.5km layer at 18UTC, 06/26/2008



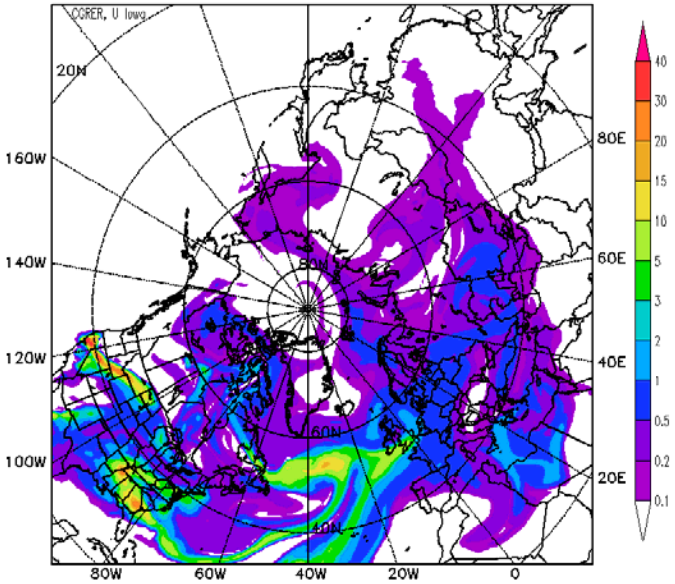
Simulated NAmerica_BB_CO (ppbv) in the 1.5km layer at 18UTC, 06/26/2008



Simulated VOC_Averaged_Age (hour) in the 5.5km layer at 18UTC, 06/26/2008

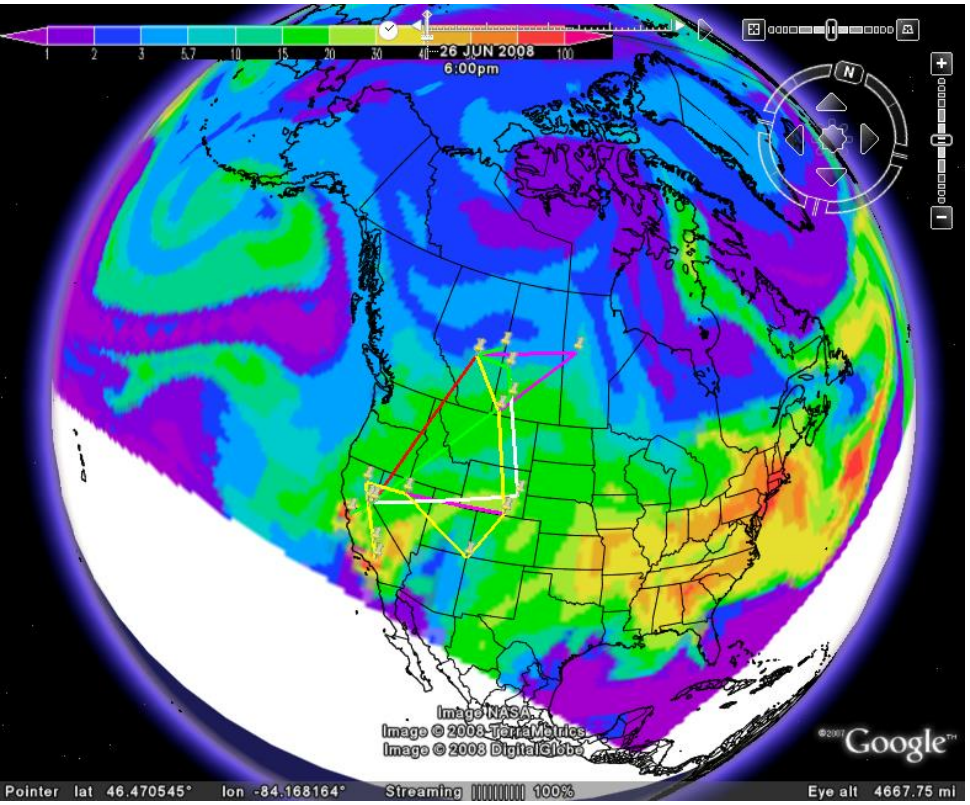


Simulated NAmerica_BB_CO (ppbv) in the 5.5km layer at 18UTC, 06/26/2008

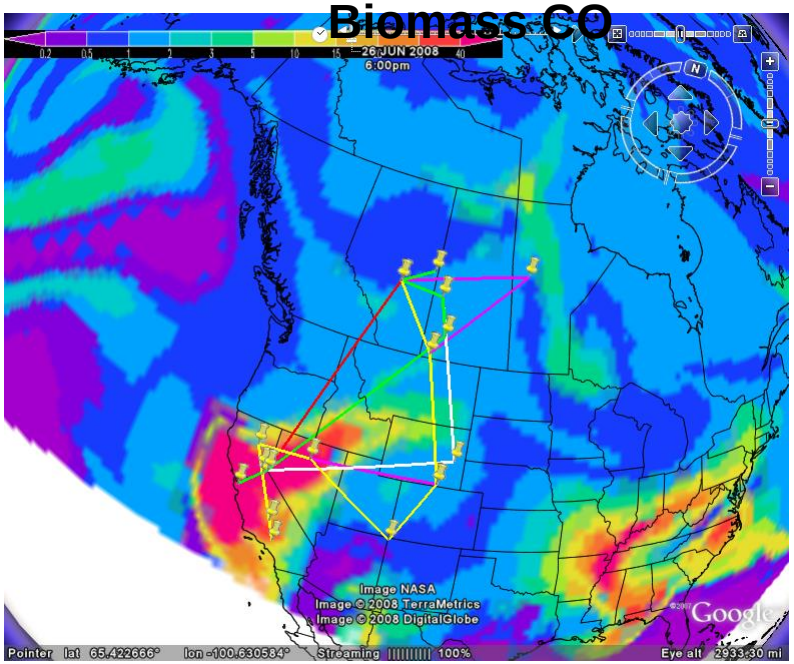


1.5 km

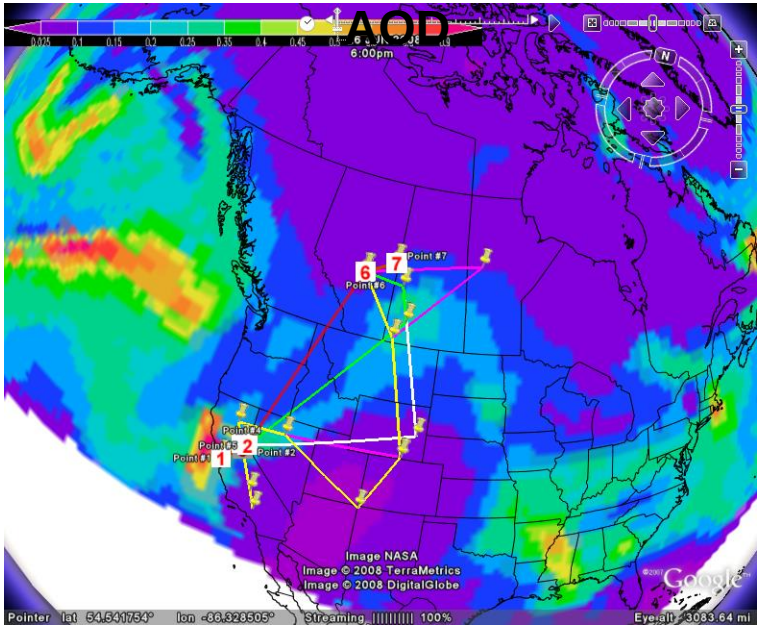
CO



Biomass CO



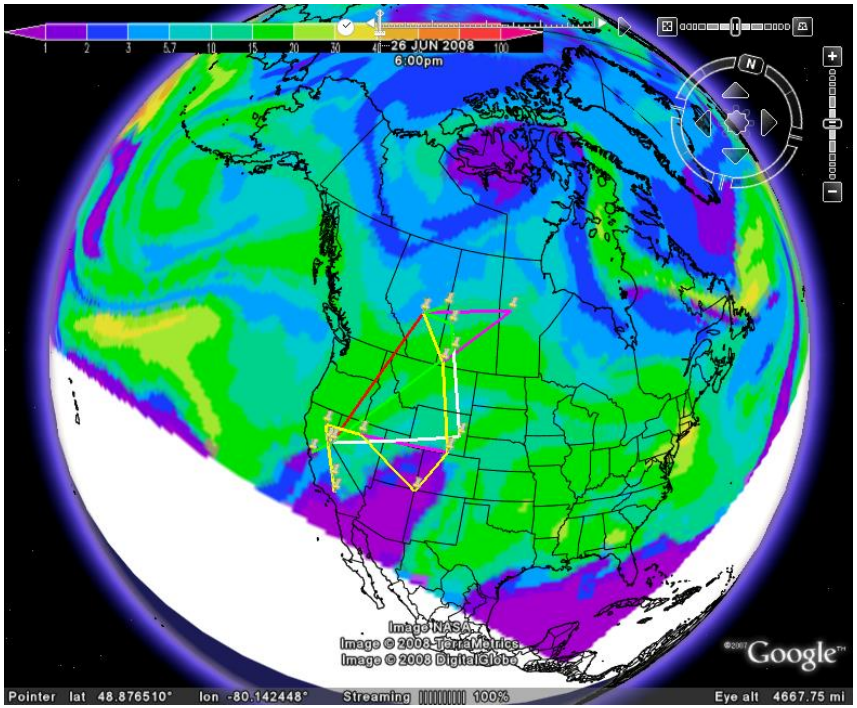
AOD



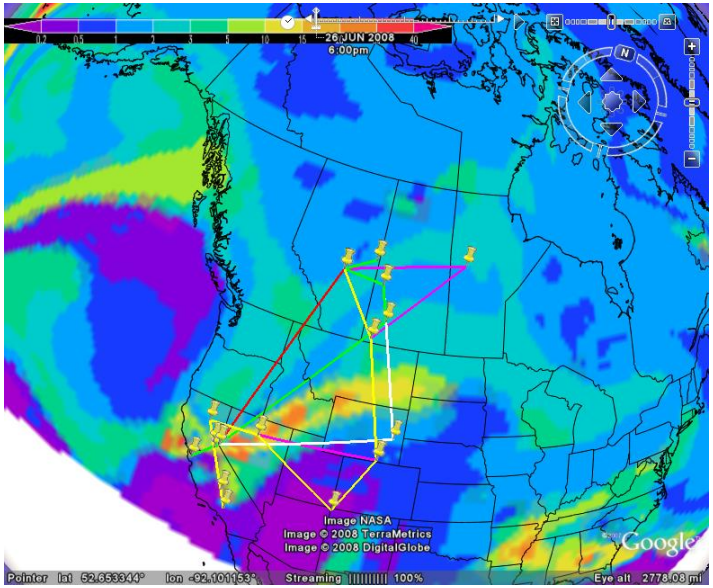
Yellow DC8 – V1
Magenta DC8 – V2
Red P3- Plan B
White P3 – Plan C
Green P3-Plan D

5.5 km

CO



Biomass CO



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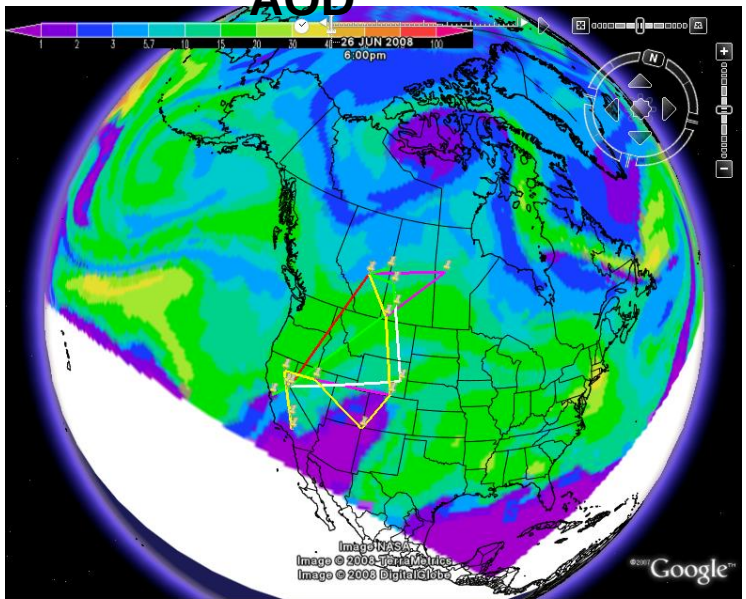
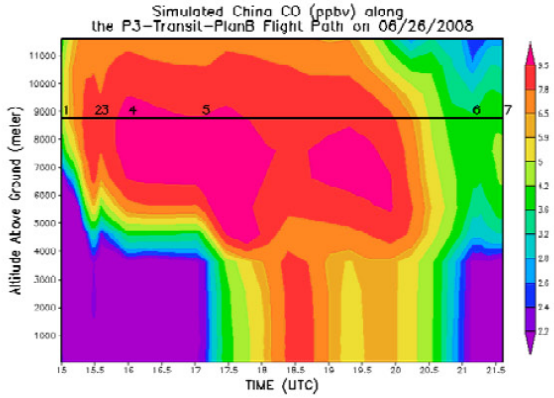
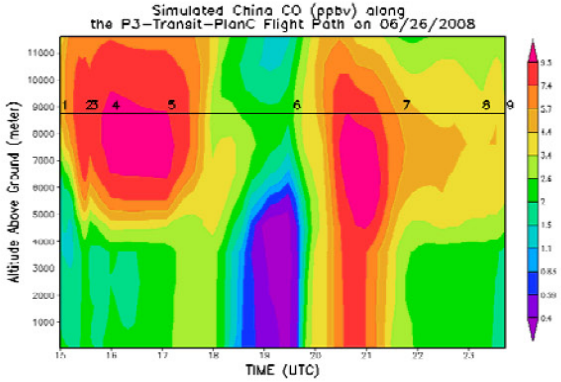


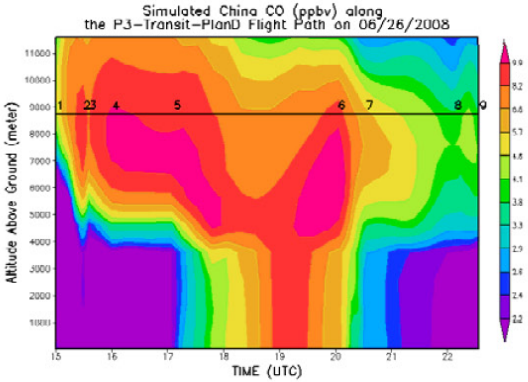
Yellow DC8 – V1
Magenta DC8 – V2
Red P3- Plan B
White P3 – Plan C
Green P3-Plan D



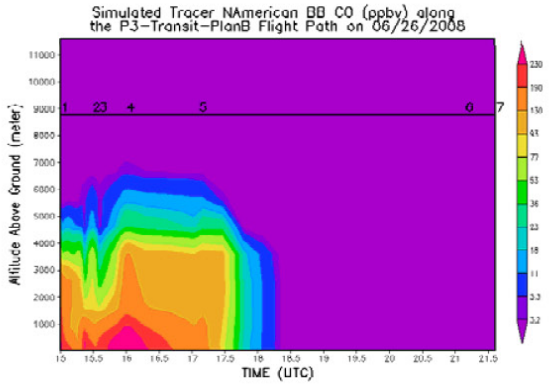
china-P3-Transit-PlanB-06-26



china-P3-Transit-PlanC-06-26



china-P3-Transit-PlanD-06-26



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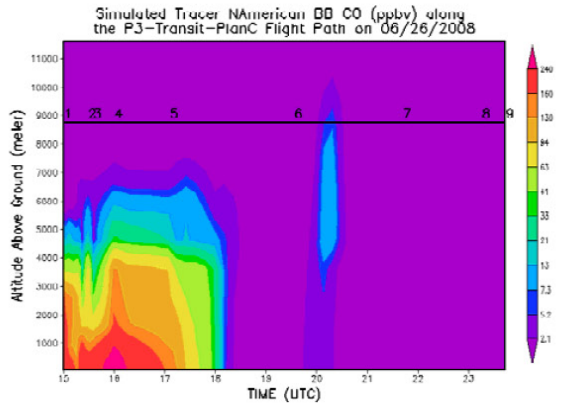

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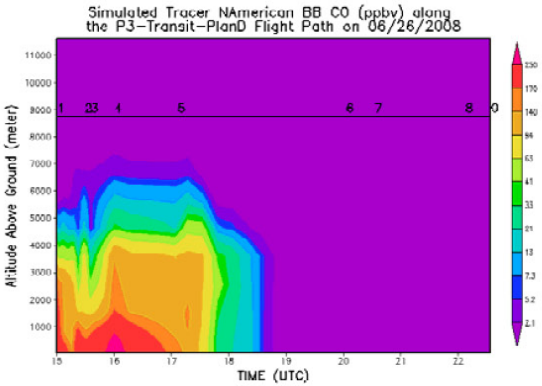

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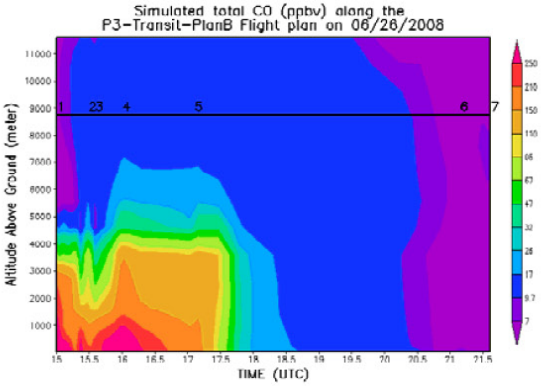
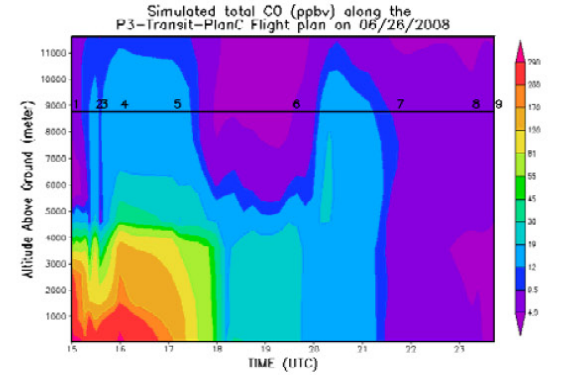


totalco-P3-Transit-PlanB-06-26



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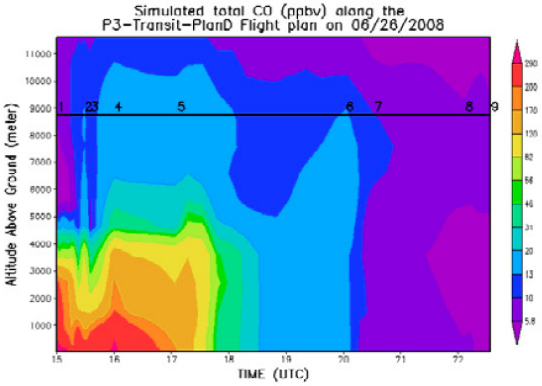
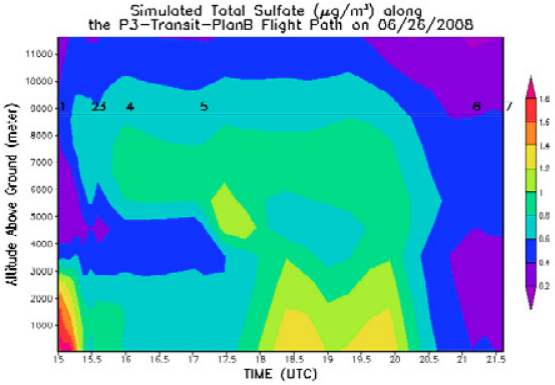
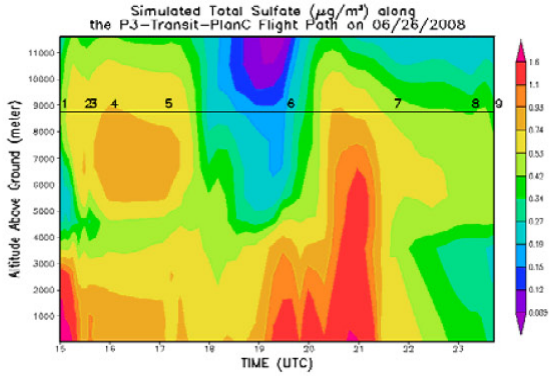


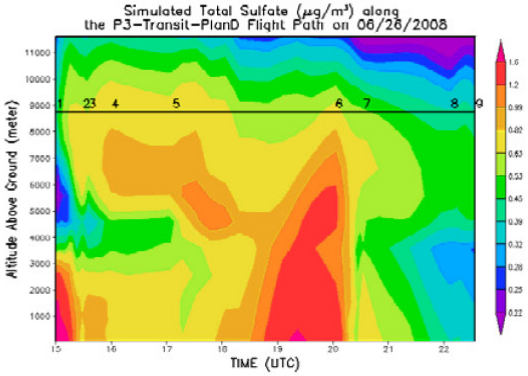
totalco-P3-Transit-PlanD-06-26



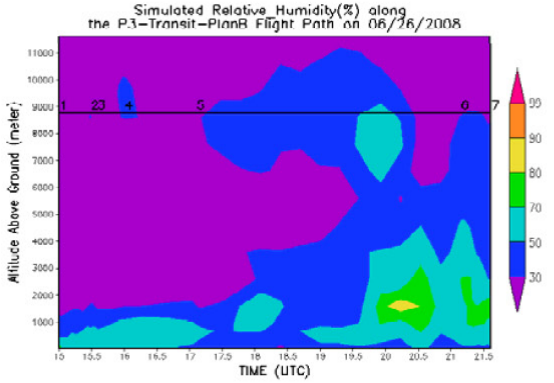
sulfate-P3-Transit-PlanB-06-26



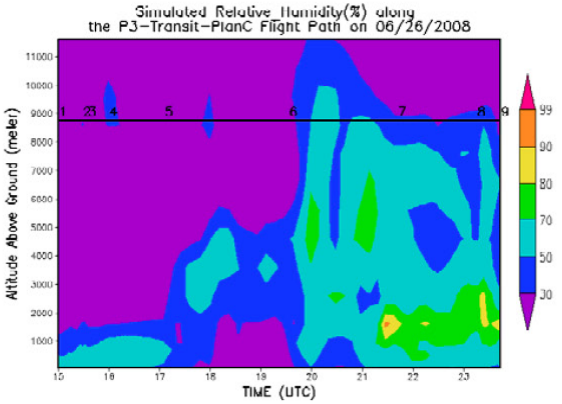
sulfate-P3-Transit-PlanC-06-26



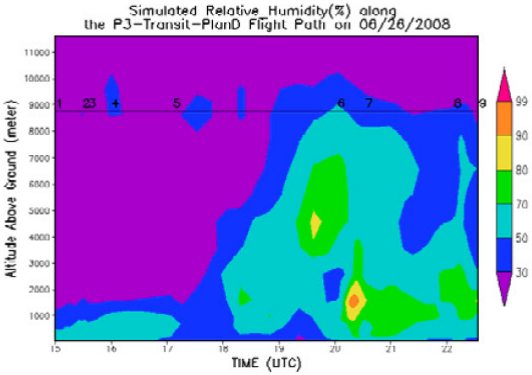
sulfate-P3-Transit-PlanD-06-26



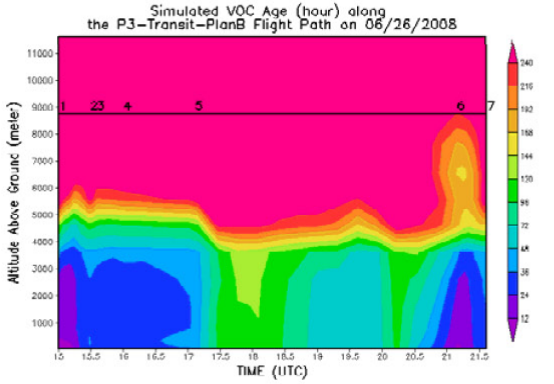
rh-P3-Transit-PlanB-06-26



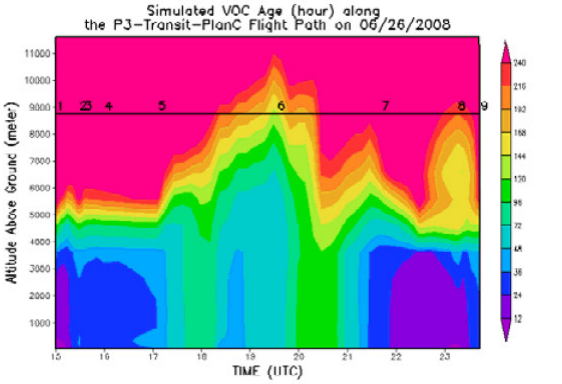
rh-P3-Transit-PlanC-06-26



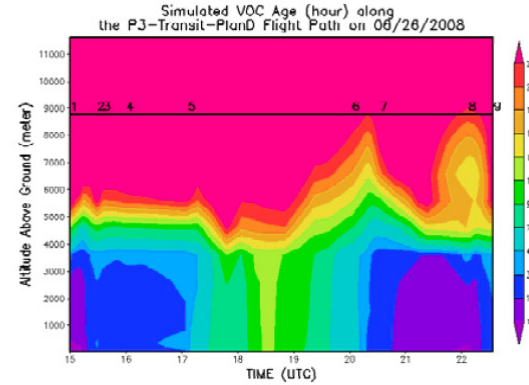
rh-P3-Transit-PlanD-06-26



vocage-P3-Transit-PlanB-06-26



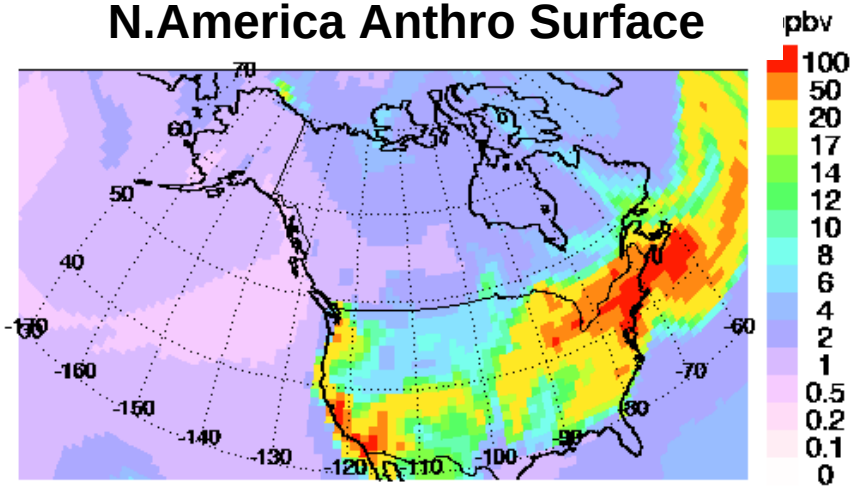
vocage-P3-Transit-PlanC-06-26



vocage-P3-Transit-PlanD-06-26

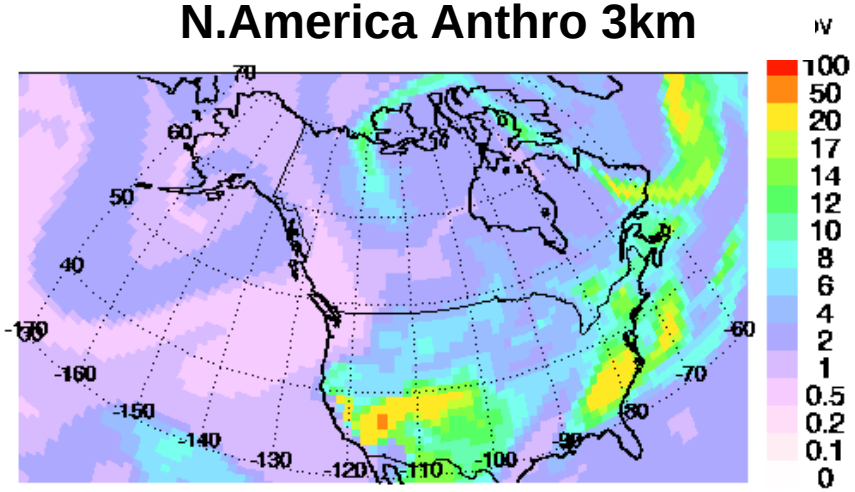
CAM-Chem/DART June 26 21Z (fx from 06-24-12Z)

N.America Anthro Surface



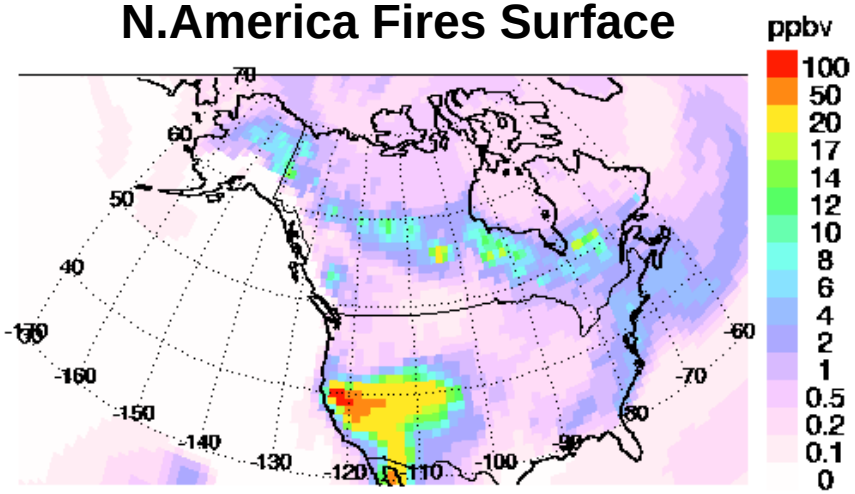
CAM Forecast from 20080624

N.America Anthro 3km



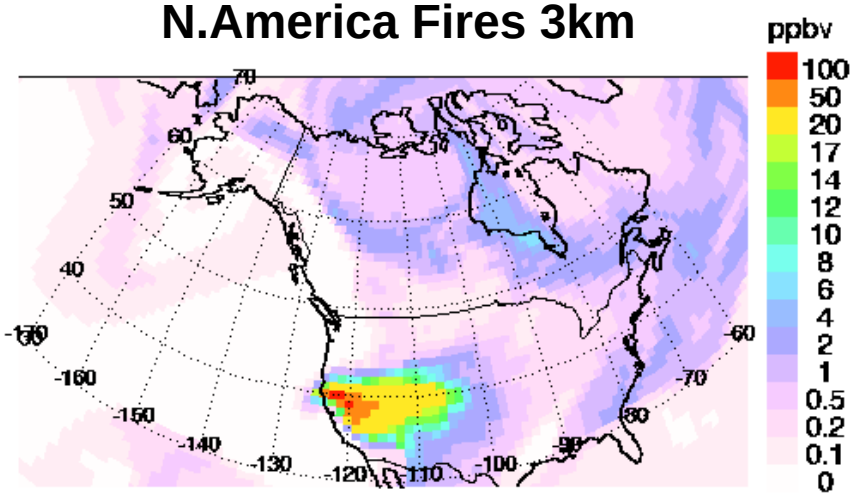
CAM Forecast from 20080624

N.America Fires Surface



CAM Forecast from 20080624

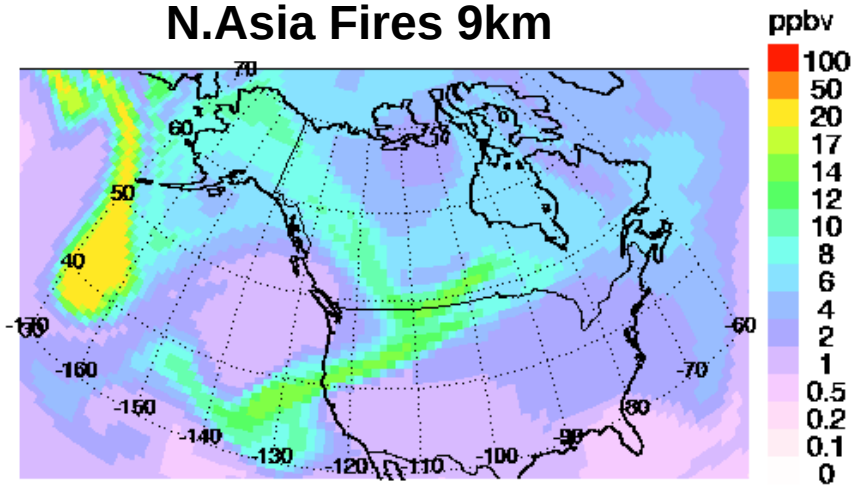
N.America Fires 3km



CAM Forecast from 20080624

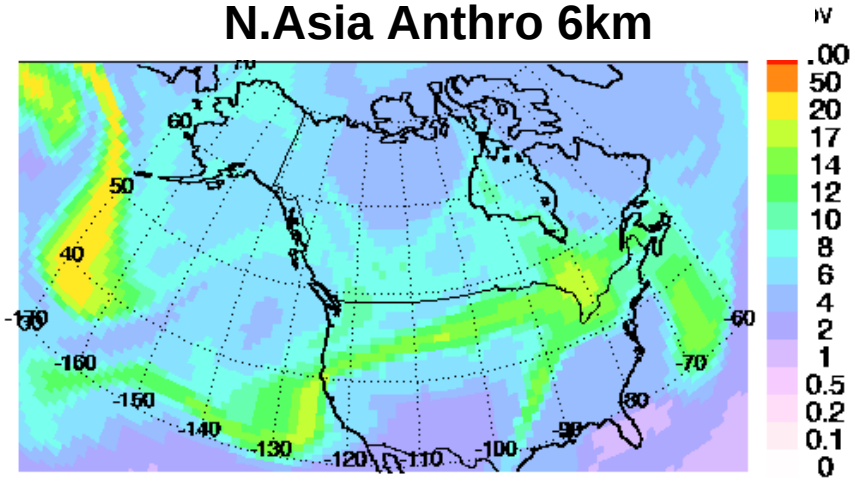
CAM-Chem/DART June 26 21Z (fx from 06-24-12Z)

N.Asia Fires 9km



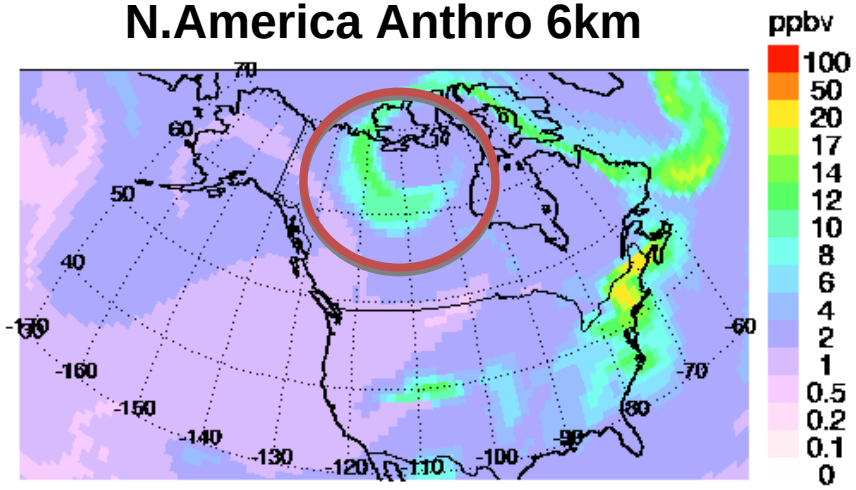
CAM Forecast from 20080624

N.Asia Anthro 6km



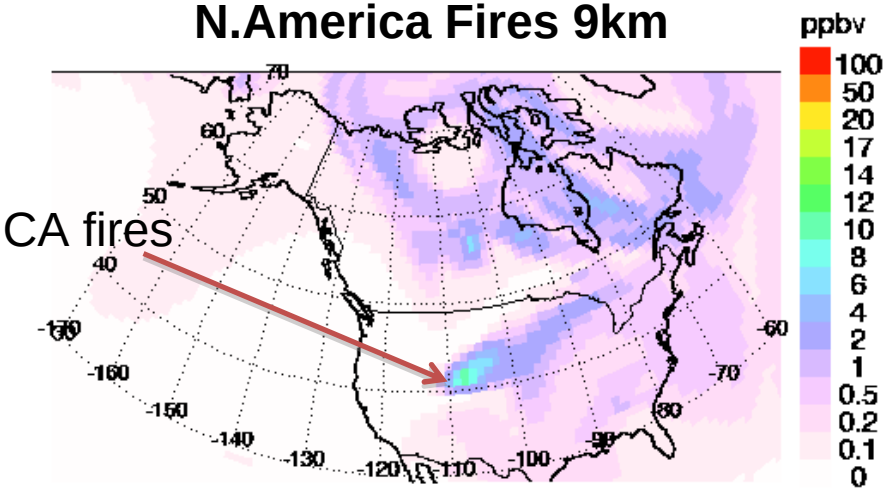
CAM Forecast from 20080624

N.America Anthro 6km



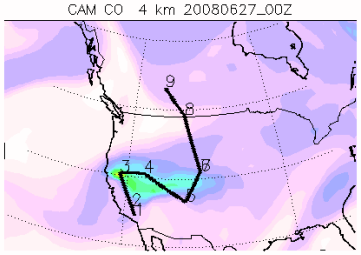
CAM Forecast from 20080624

N.America Fires 9km



CAM Forecast from 20080624

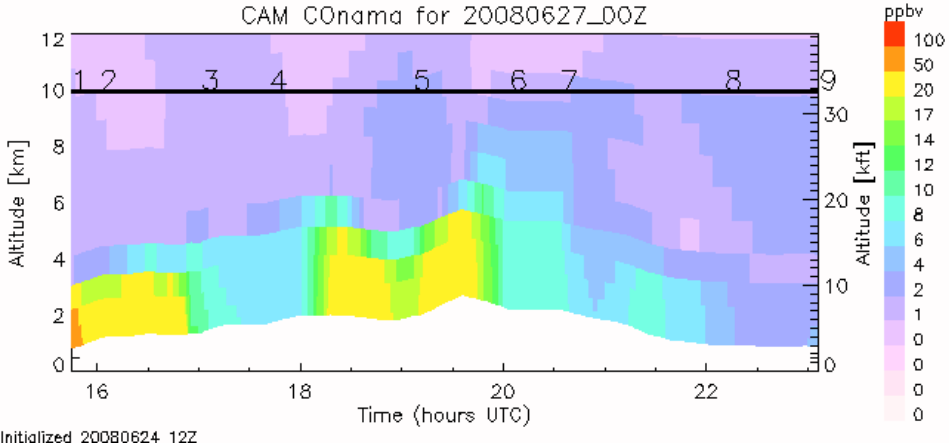
Transit-v1 June 26 21Z (fx from 06-24-12Z)



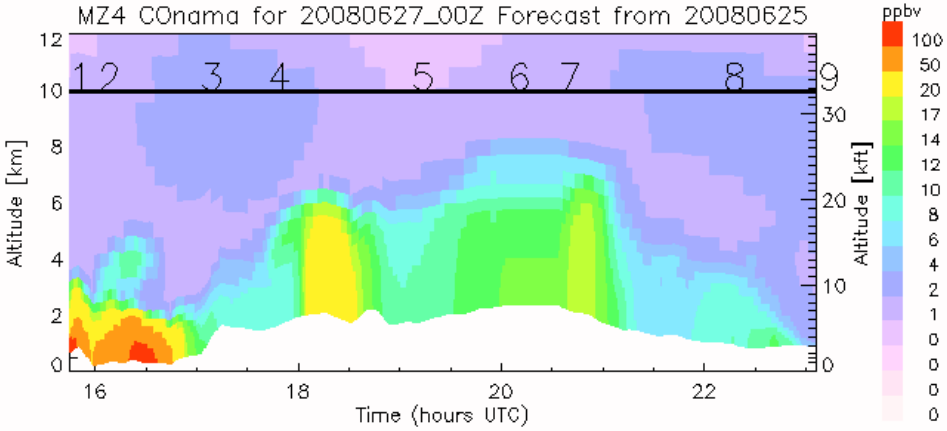
CAM-chem/DART

MOZART-4/GFS

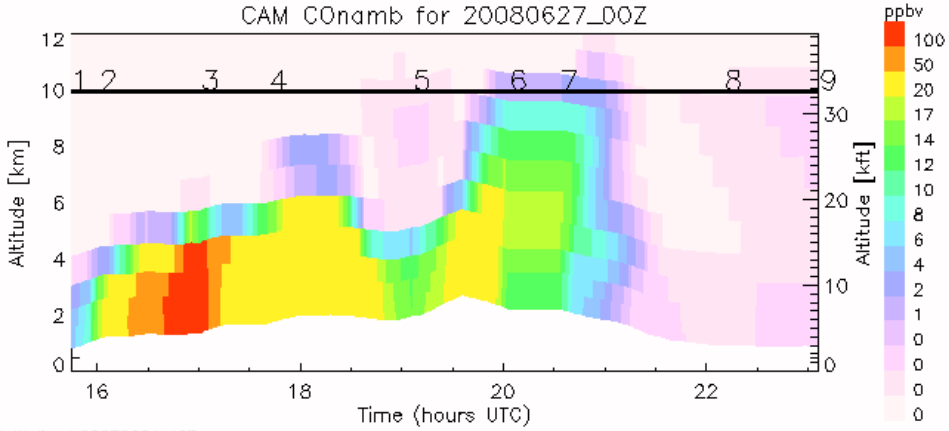
N.America Anthro



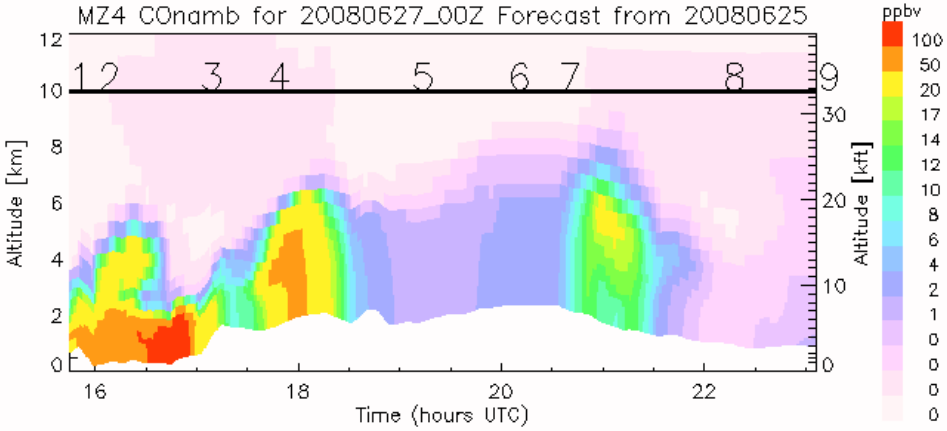
N.America Anthro



N.America Fires



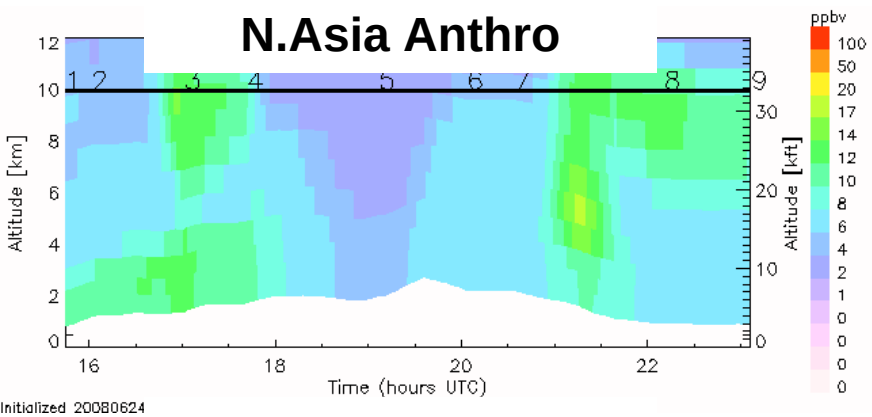
N.America Fires

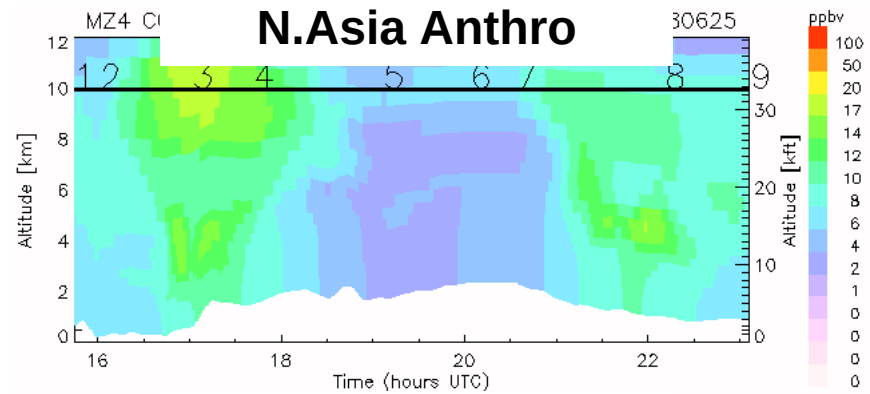


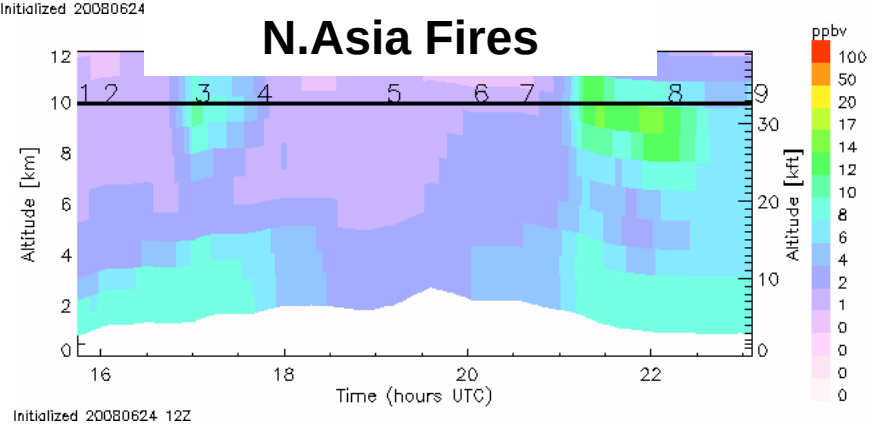
Transit-v1 June 26 21Z (fx from 06-24-12Z)

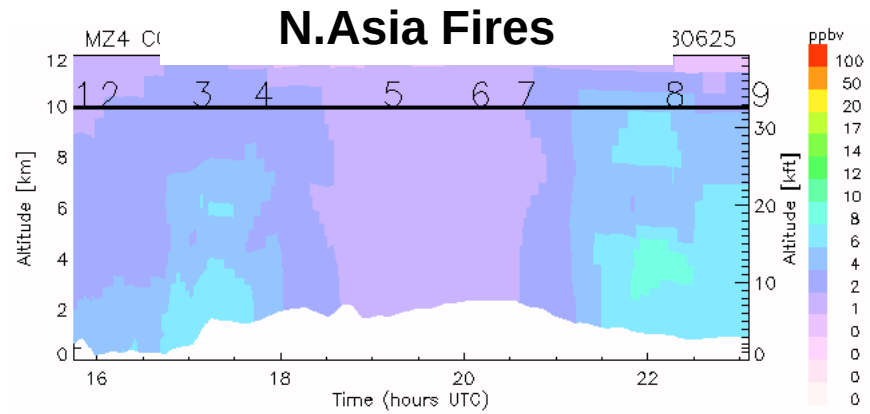
CAM-chem/DART

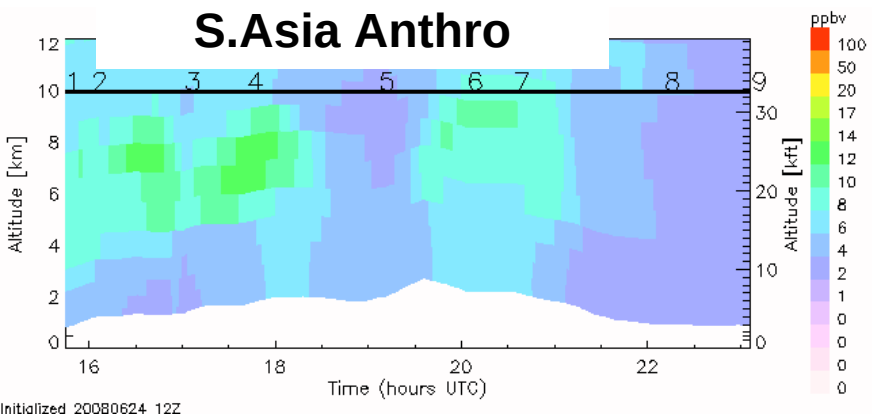
MOZART-4/GFS

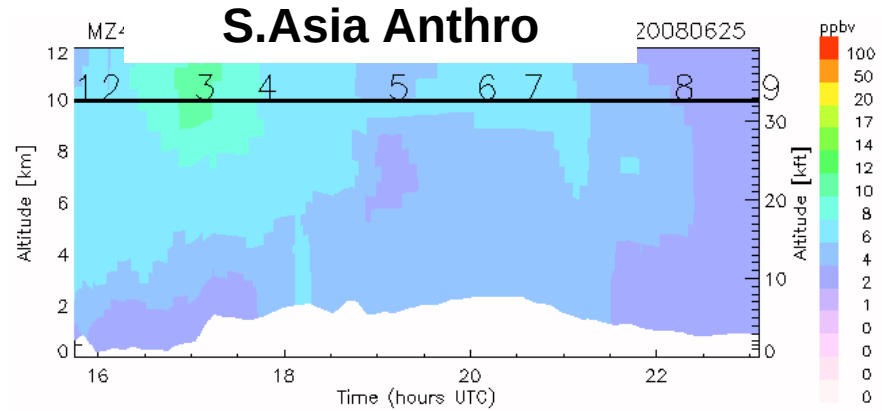






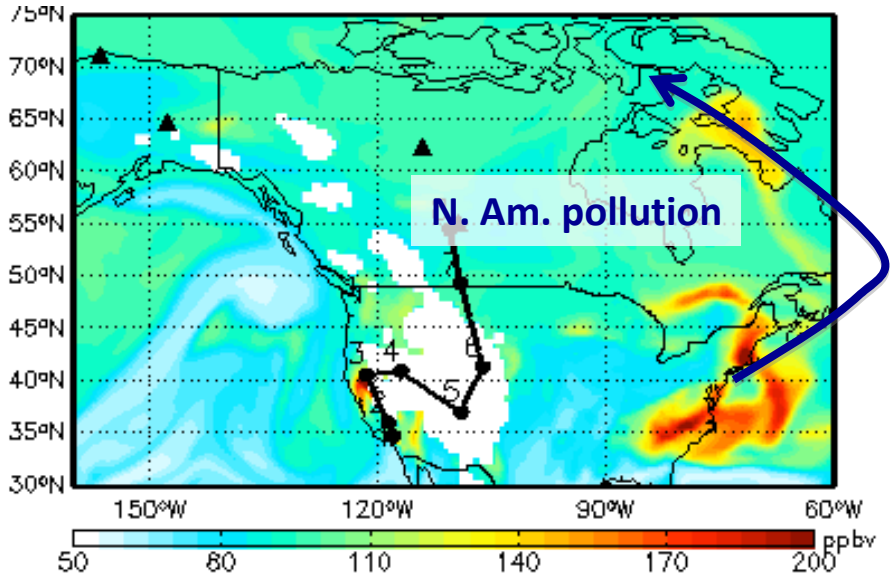




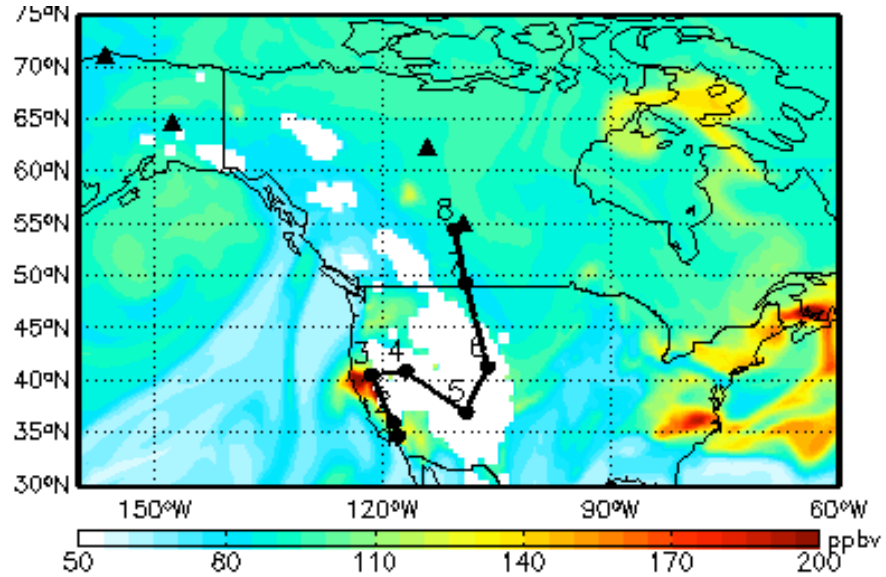


GEOS-5 Outlook: 850 hPa (1.5 km) CO at 19:30Z

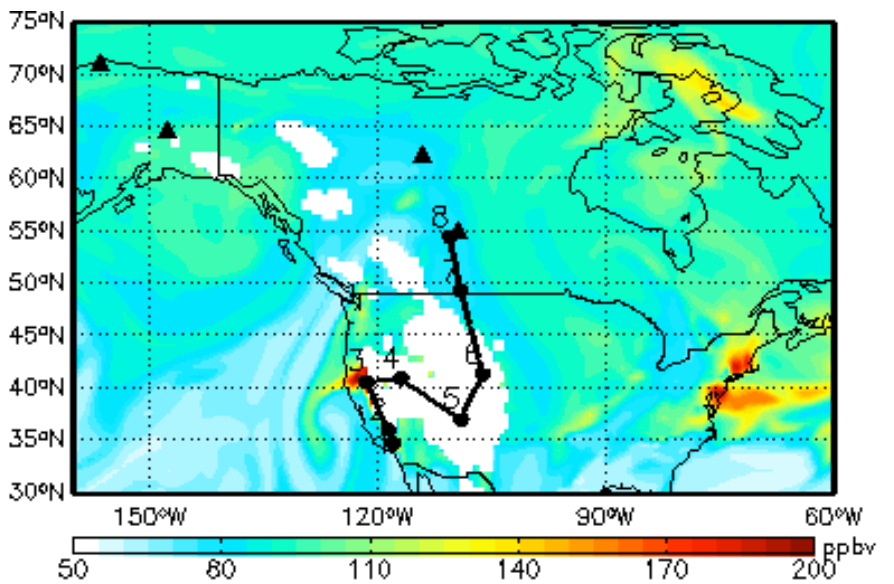
June 26



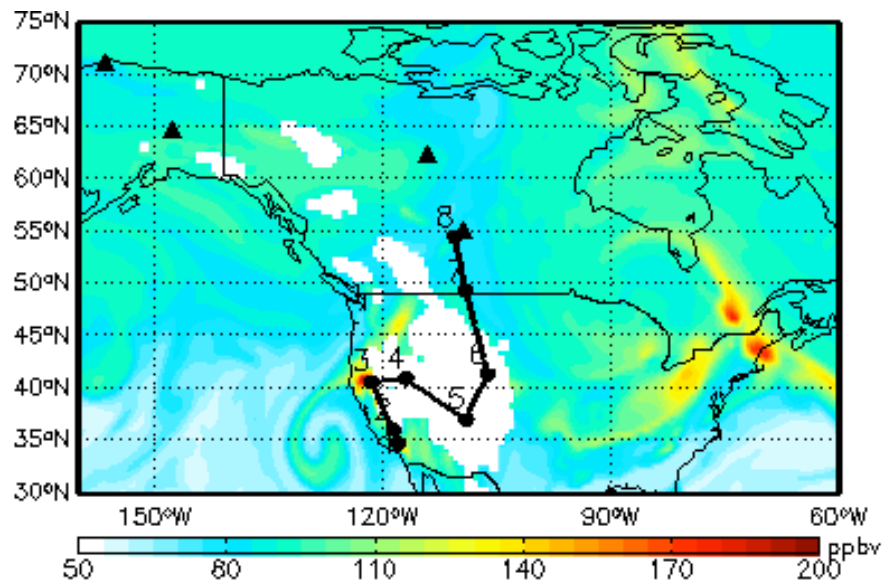
June 27



June 28

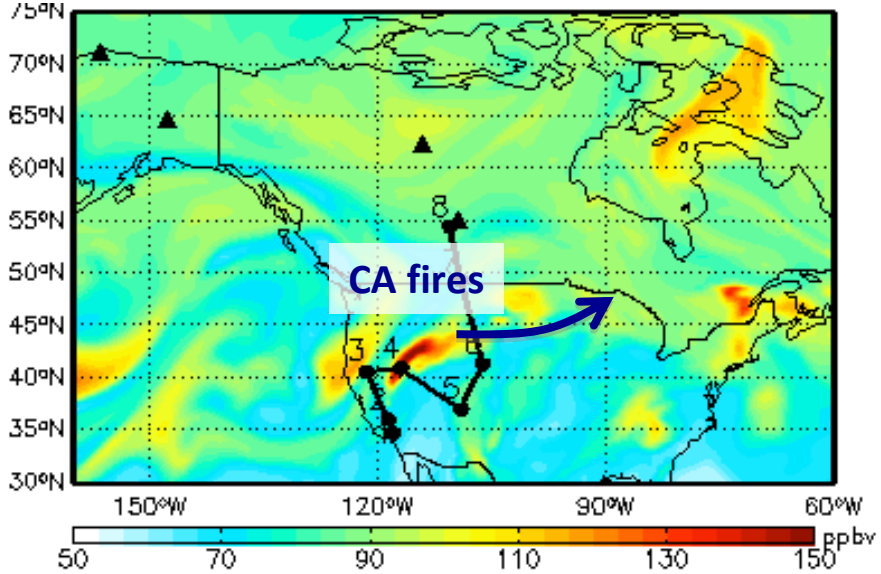


June 29

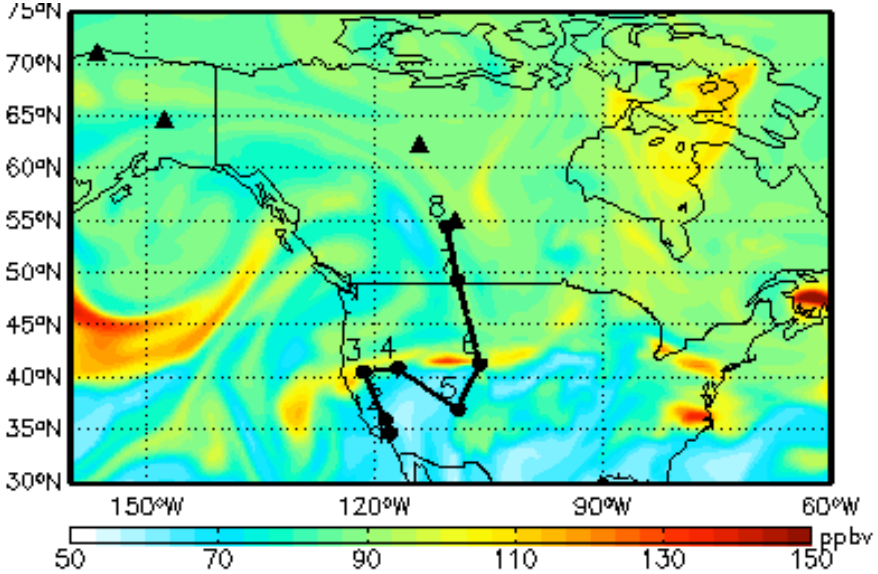


GEOS-5 Outlook: 500 hPa (5.6 km) CO at 19:30Z

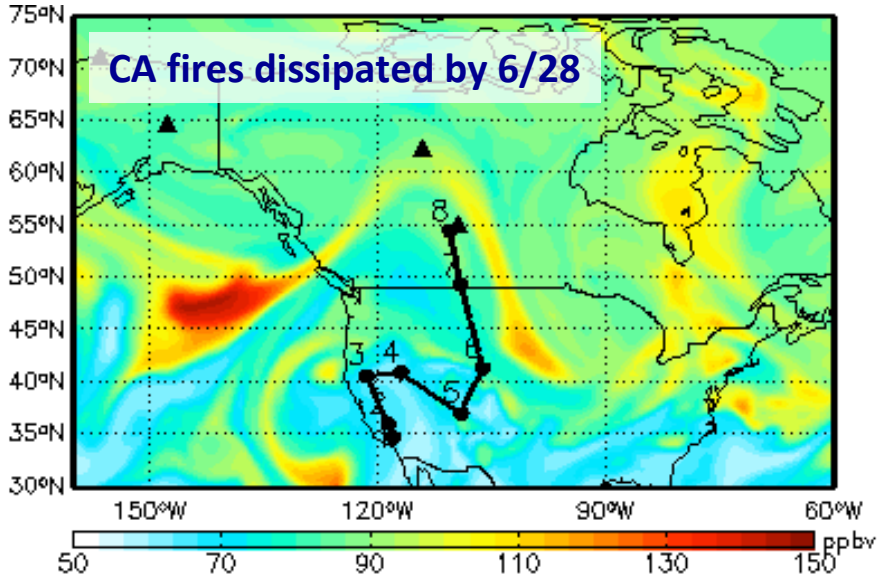
June 26



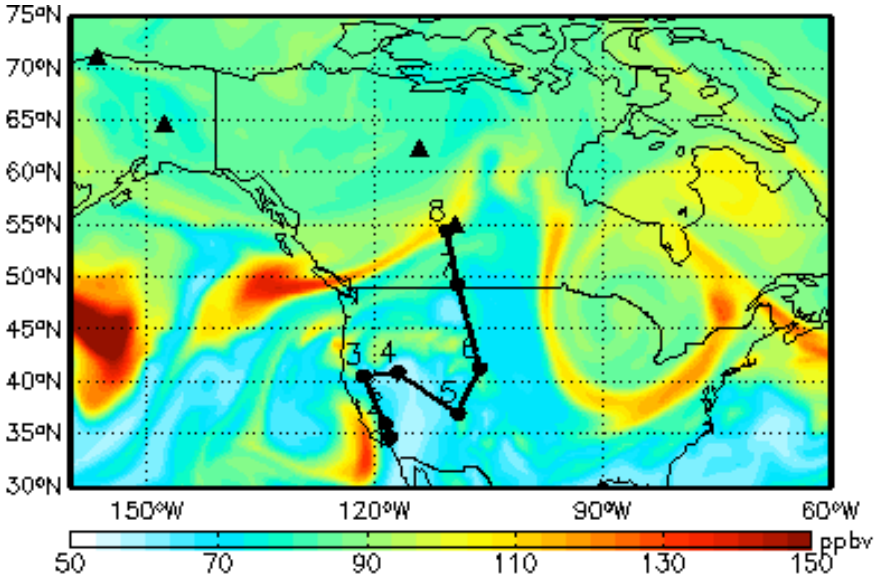
June 27



June 28

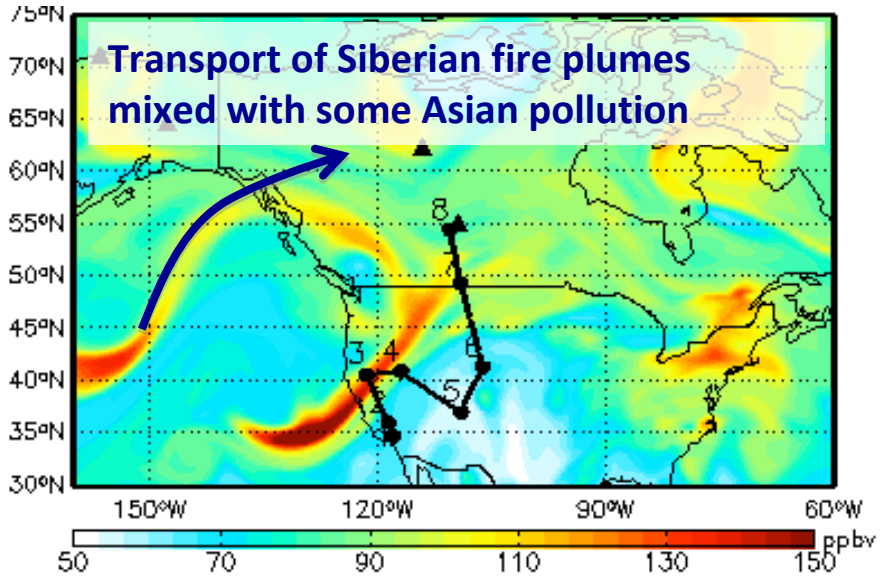


June 29

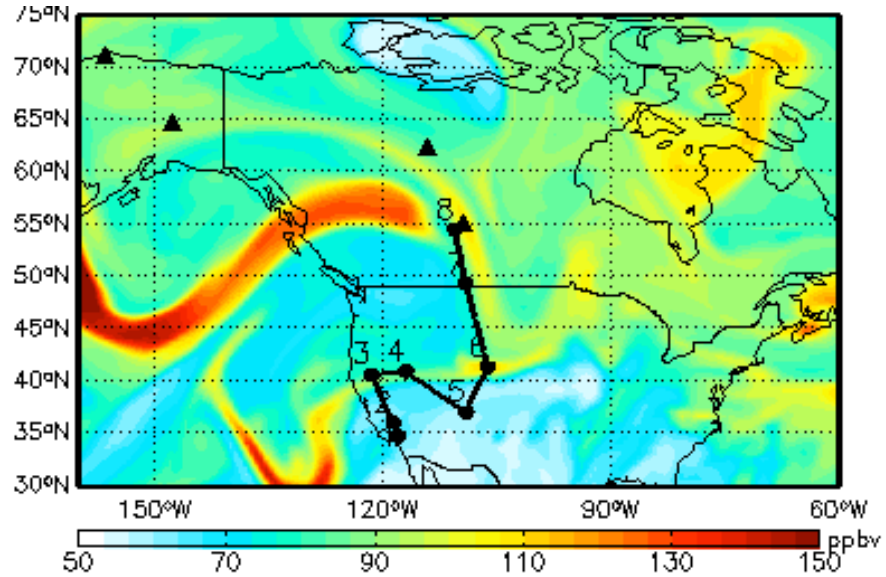


GEOS-5 Outlook: 350 hPa (8.1 km) CO at 19:30Z

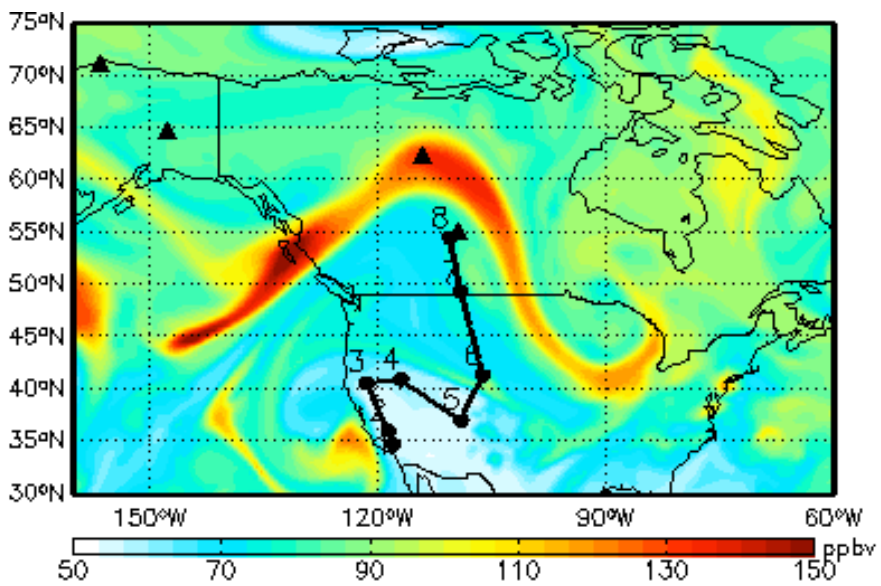
June 26



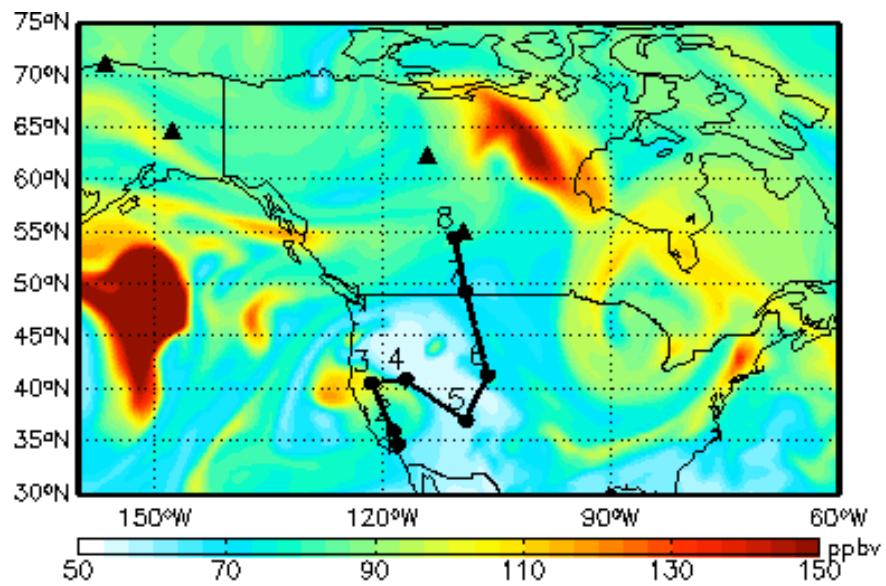
June 27



June 28

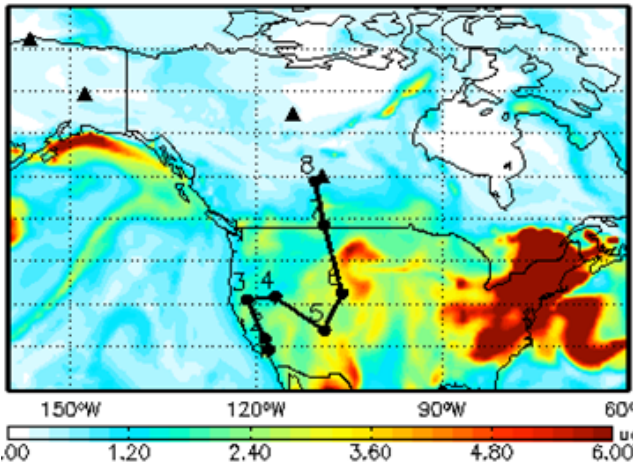


June 29

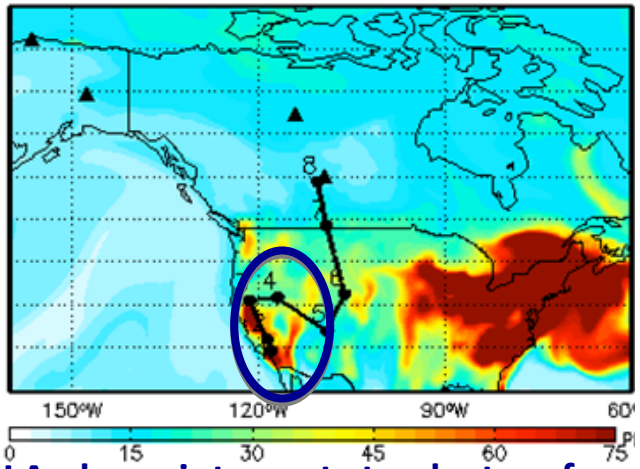


Transit flight – 6/26 19:30Z (all at Surface)

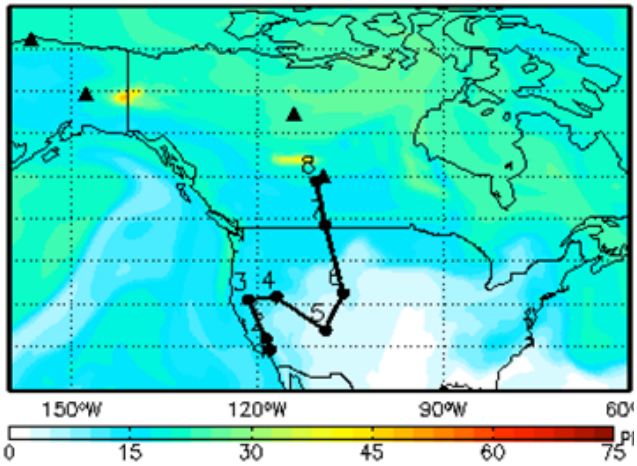
Sulfate aerosol



N American fossil fuel CO

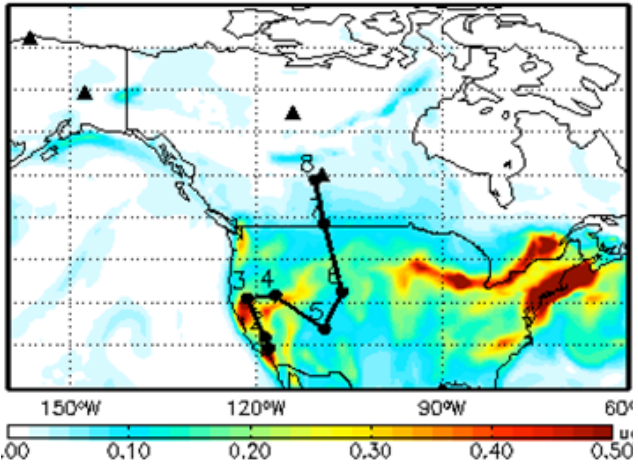


Boreal biomass burning CO

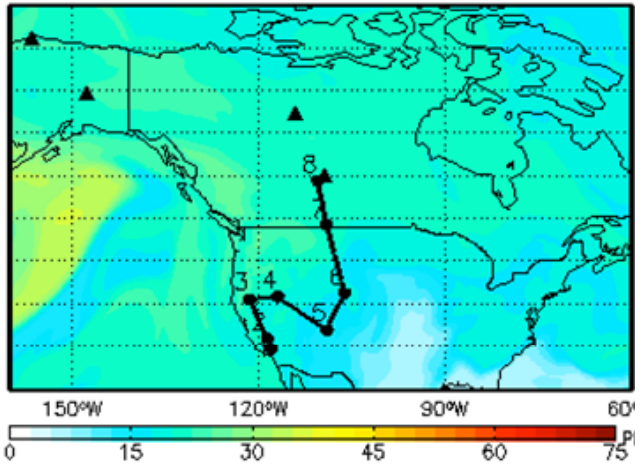


LA plume intersects track at surface

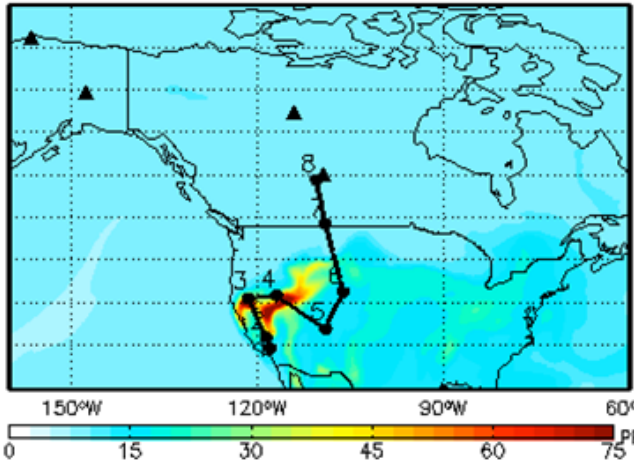
Black carbon aerosol



Asian fossil fuel CO

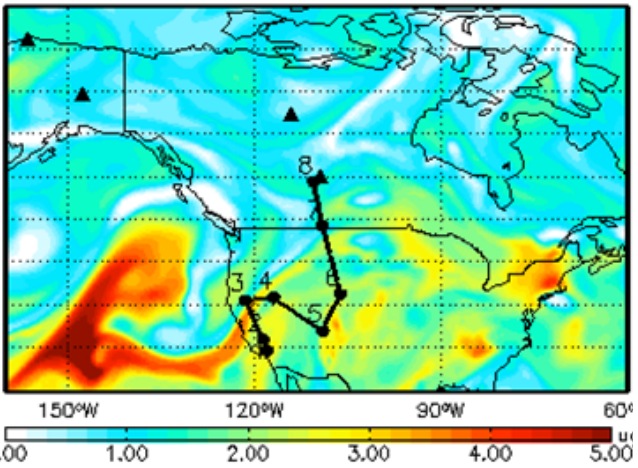


Non-boreal biomass burning CO

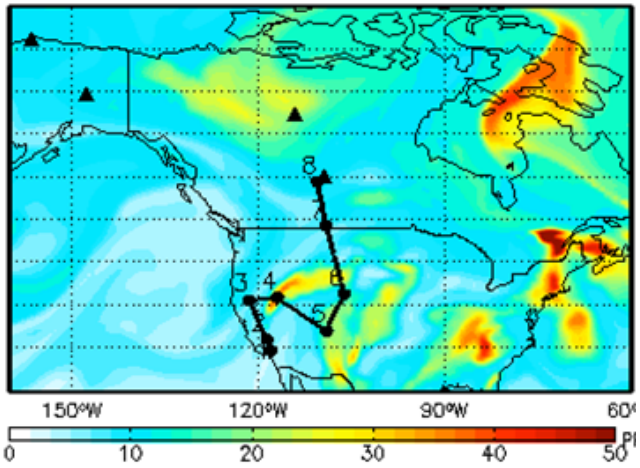


Transit flight – 6/26 19:30Z (all at 500 hPa) - ***Same story as yesterday***

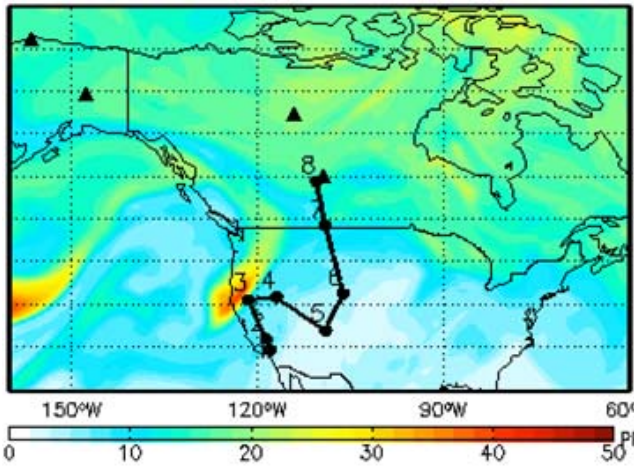
Sulfate aerosol



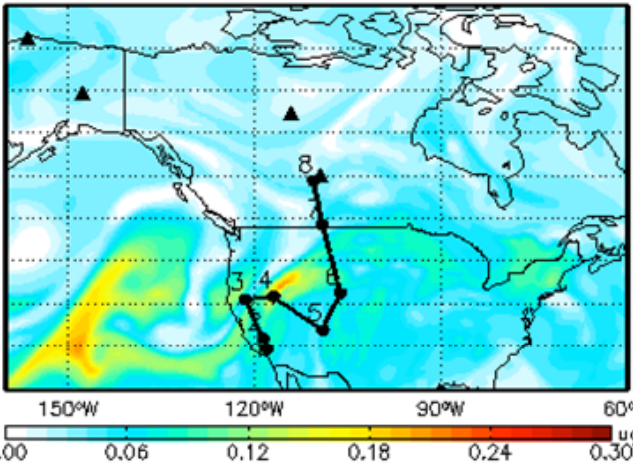
N American fossil fuel CO



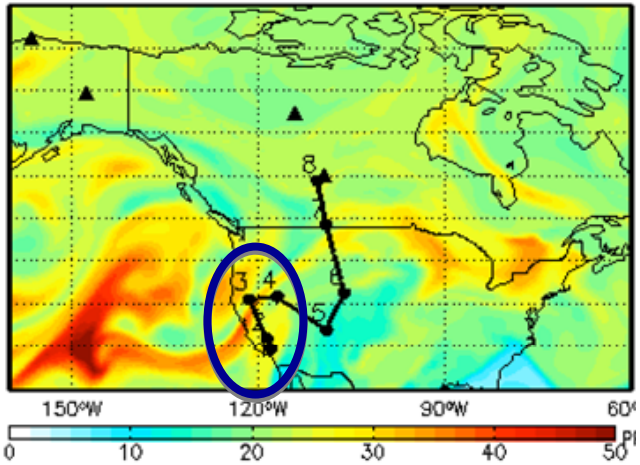
Boreal biomass burning CO



Black carbon aerosol

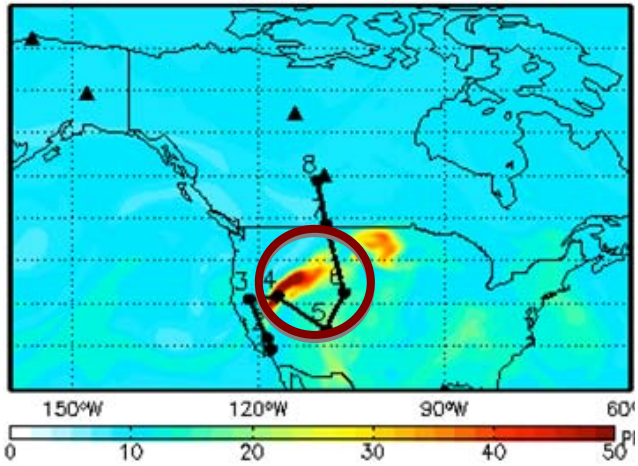


Asian fossil fuel CO



Asian plume still crosses start of flight track

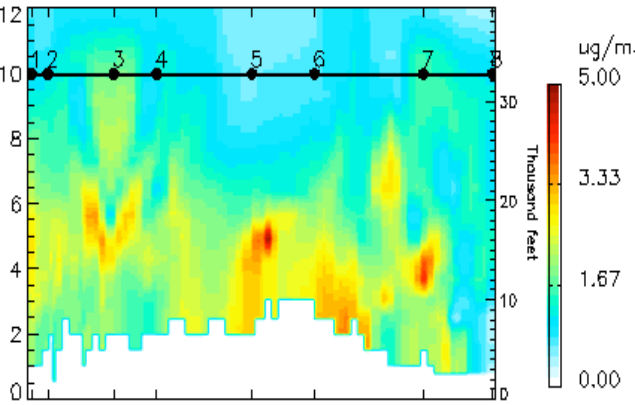
Non-boreal biomass burning CO



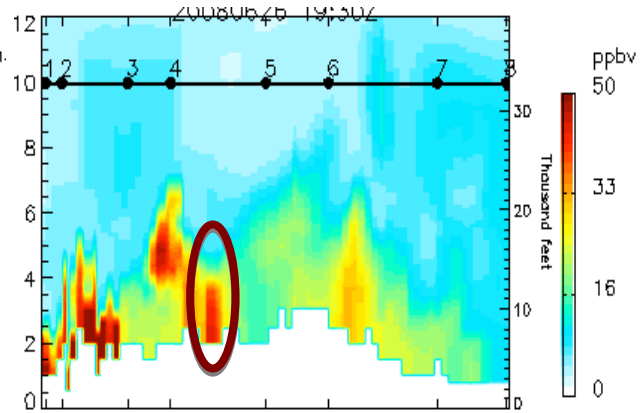
Flight track still intersects both the center and outflow of the fire plume

Transit flight – 6/26 19:30Z - ***Same story as yesterday***

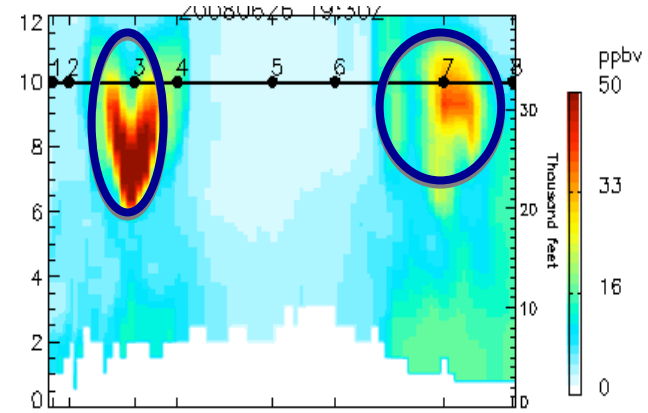
Sulfate aerosol



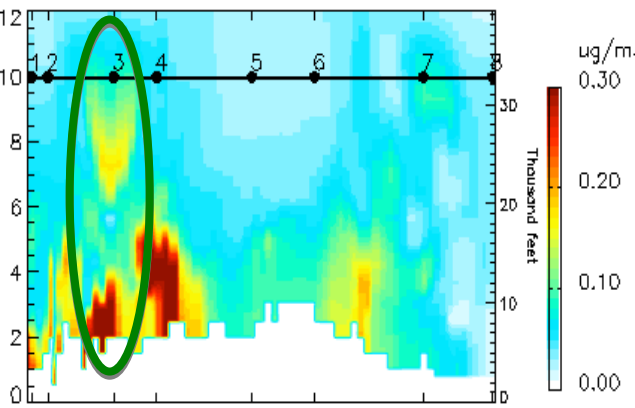
N American fossil fuel CO



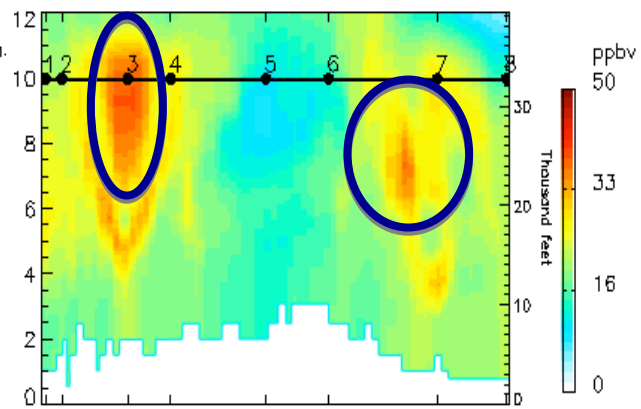
Boreal biomass burning CO



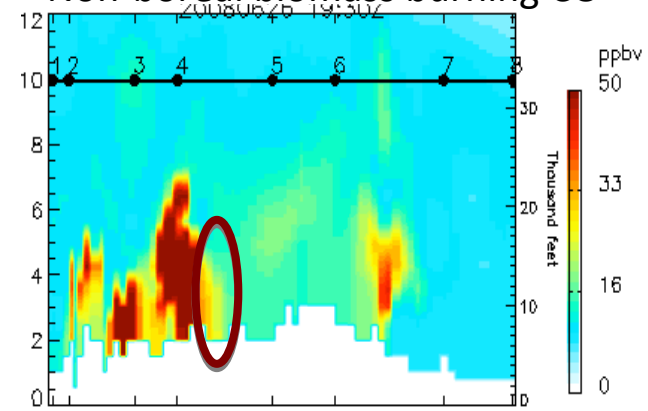
Black carbon aerosol



Asian fossil fuel CO



Non-boreal biomass burning CO

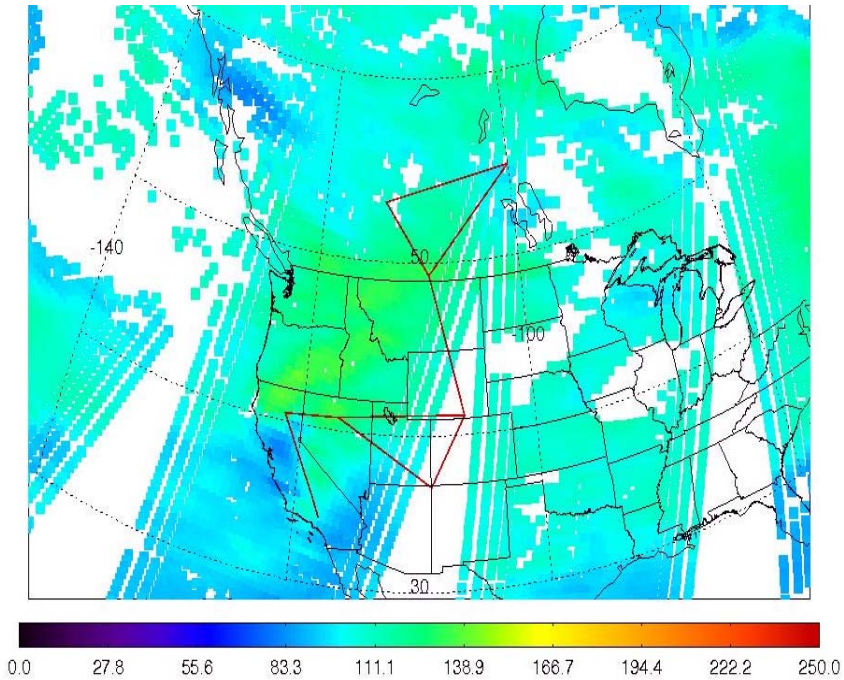


- Siberian fire plumes transported at slightly different altitude from Asian pollution

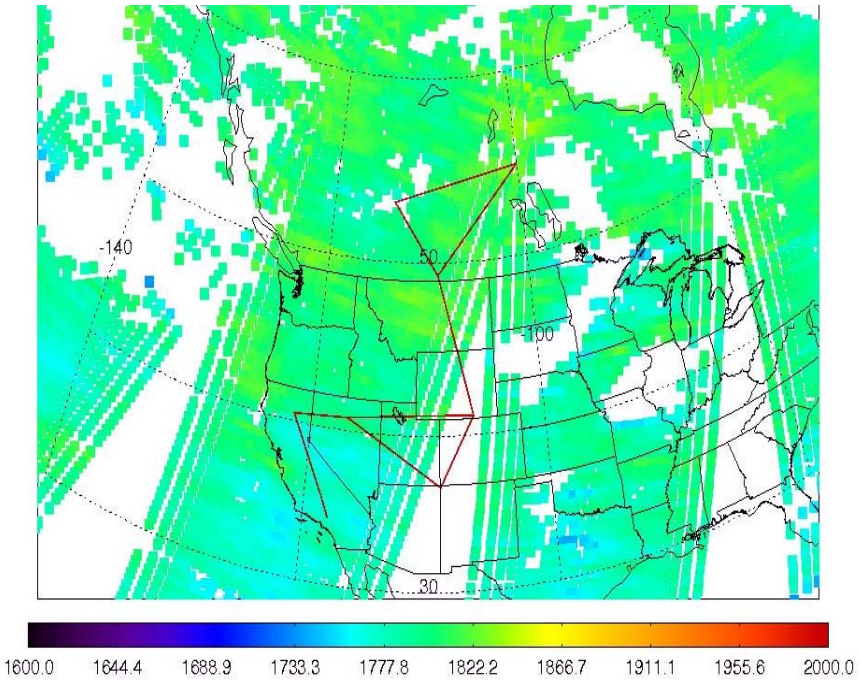
- Capture both California & Siberian fires at point 3

- LA plume visible at surface; separate from fire plume

AIRS Support for ARCTAS/CARB



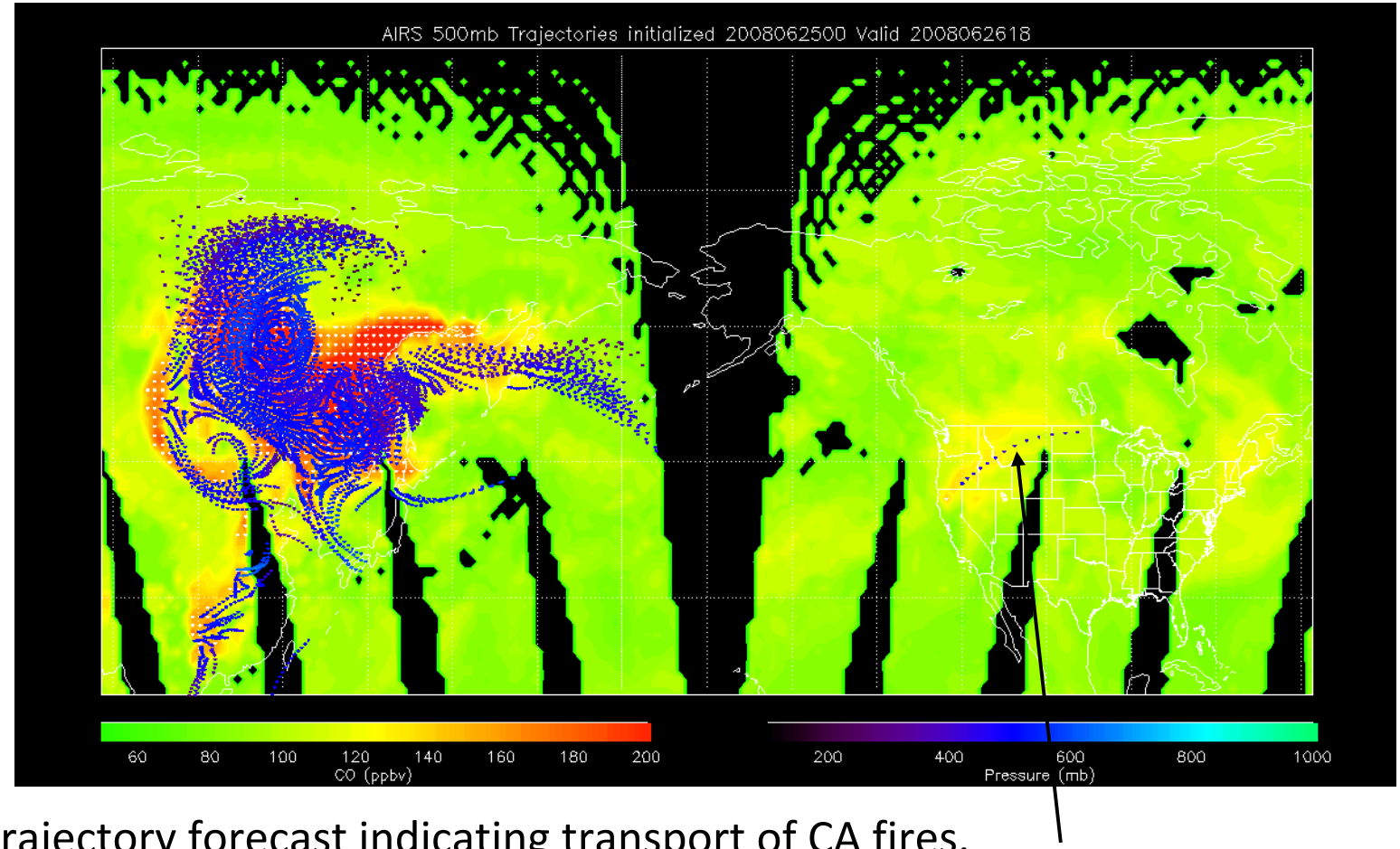
ACKNOWLEDGEMENT: AIRS NRT products by NASA DAAC



ACKNOWLEDGEMENT: AIRS NRT products by NASA DAAC

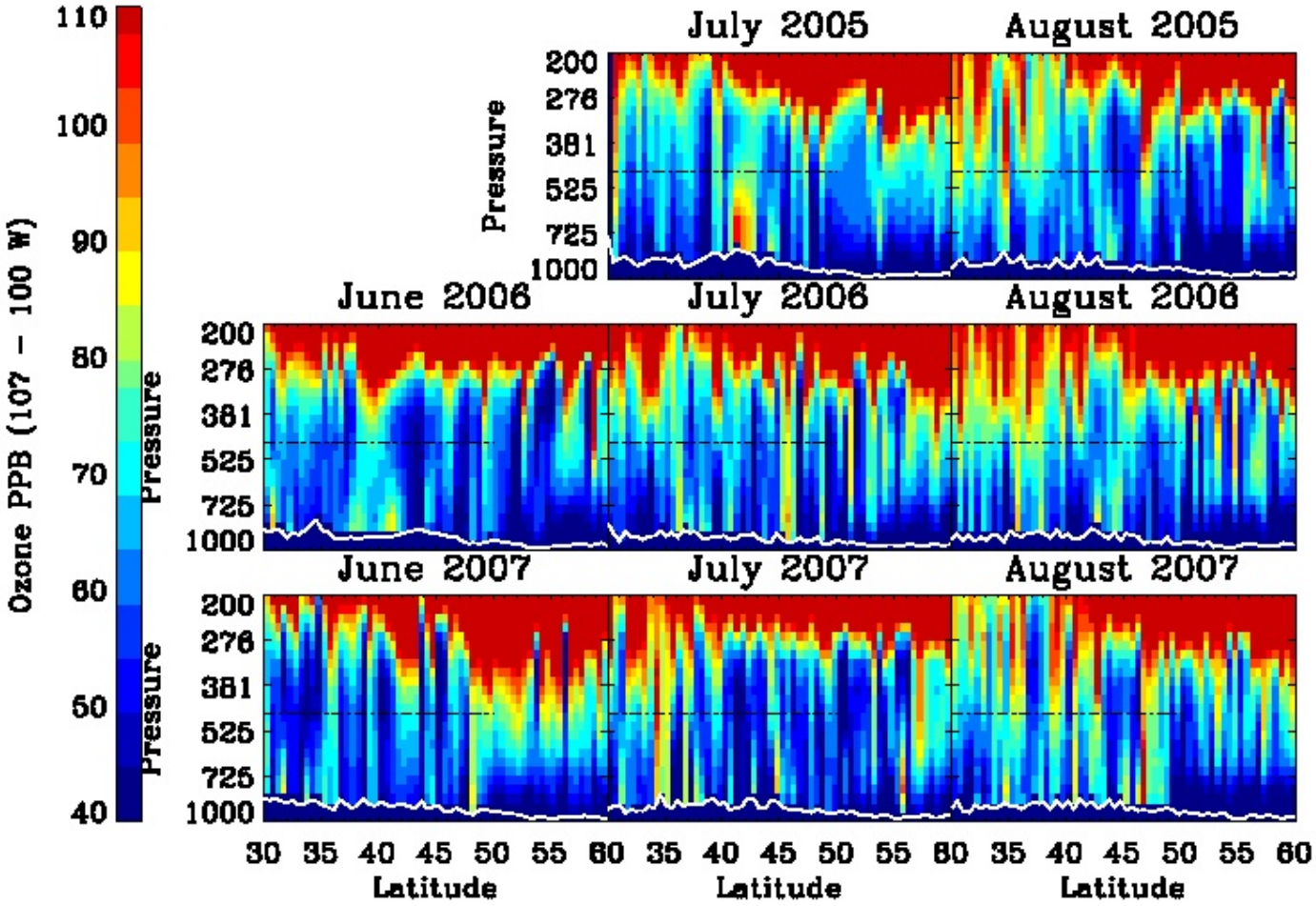
- Transit flight will cross transported biomass burning plumes from CA
- CH4 is relatively high over mid-west US and Canada.

AIRS Support for ARCTAS/CARB

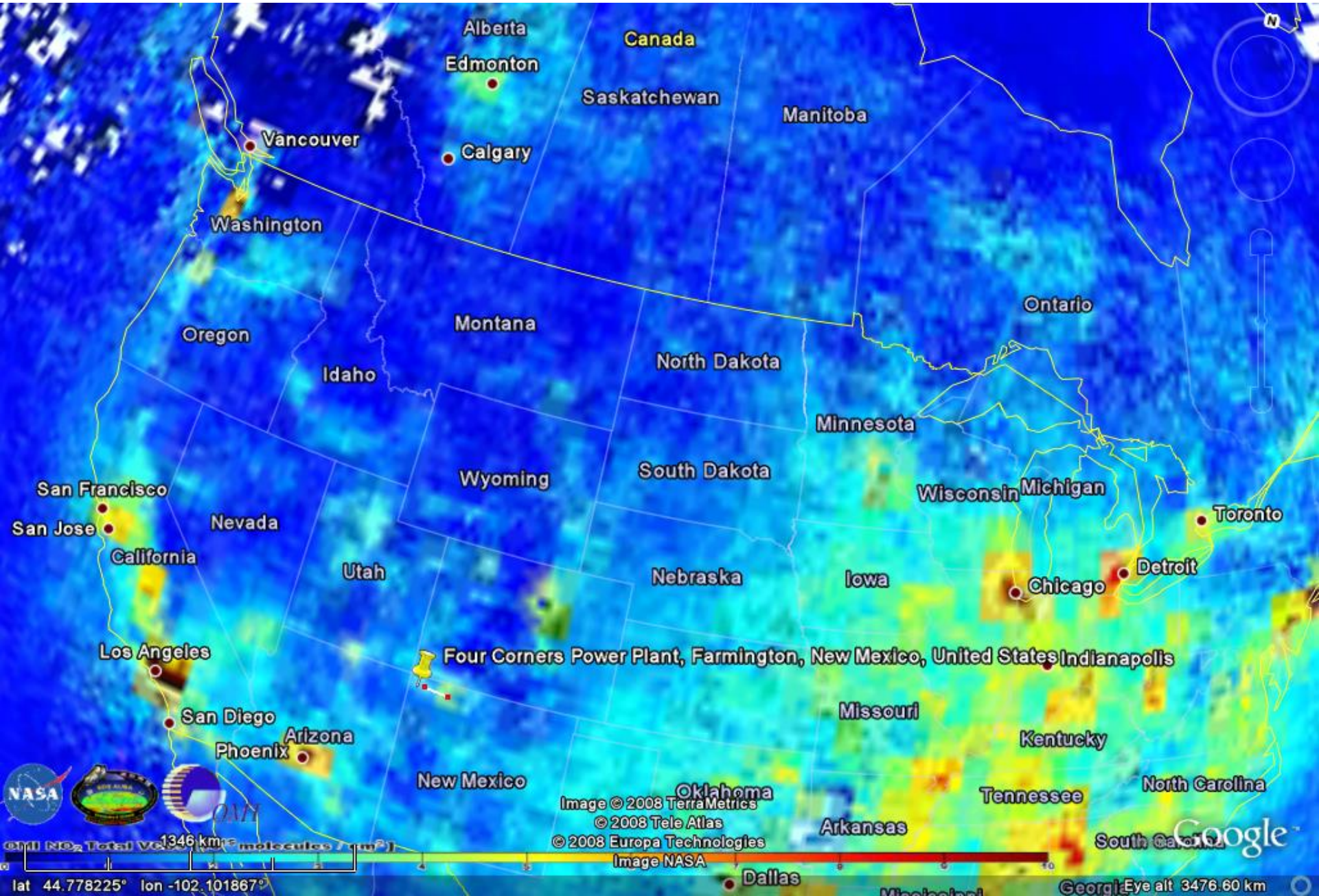


- Trajectory forecast indicating transport of CA fires.
- Asian transport continues but slowly.

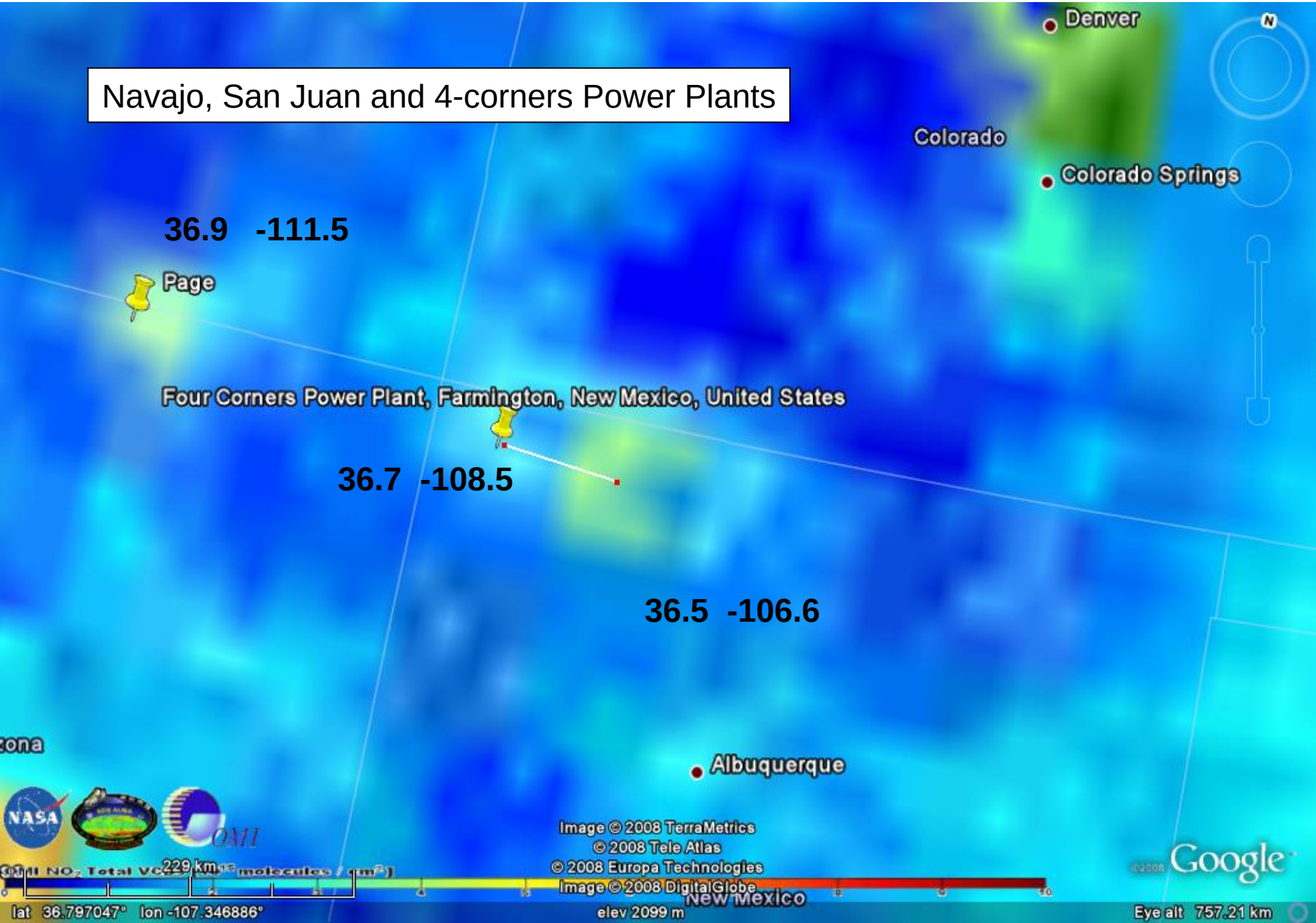
Summer-time Vertical Distribution of Ozone for Boulder to Canada transit as observed by TES



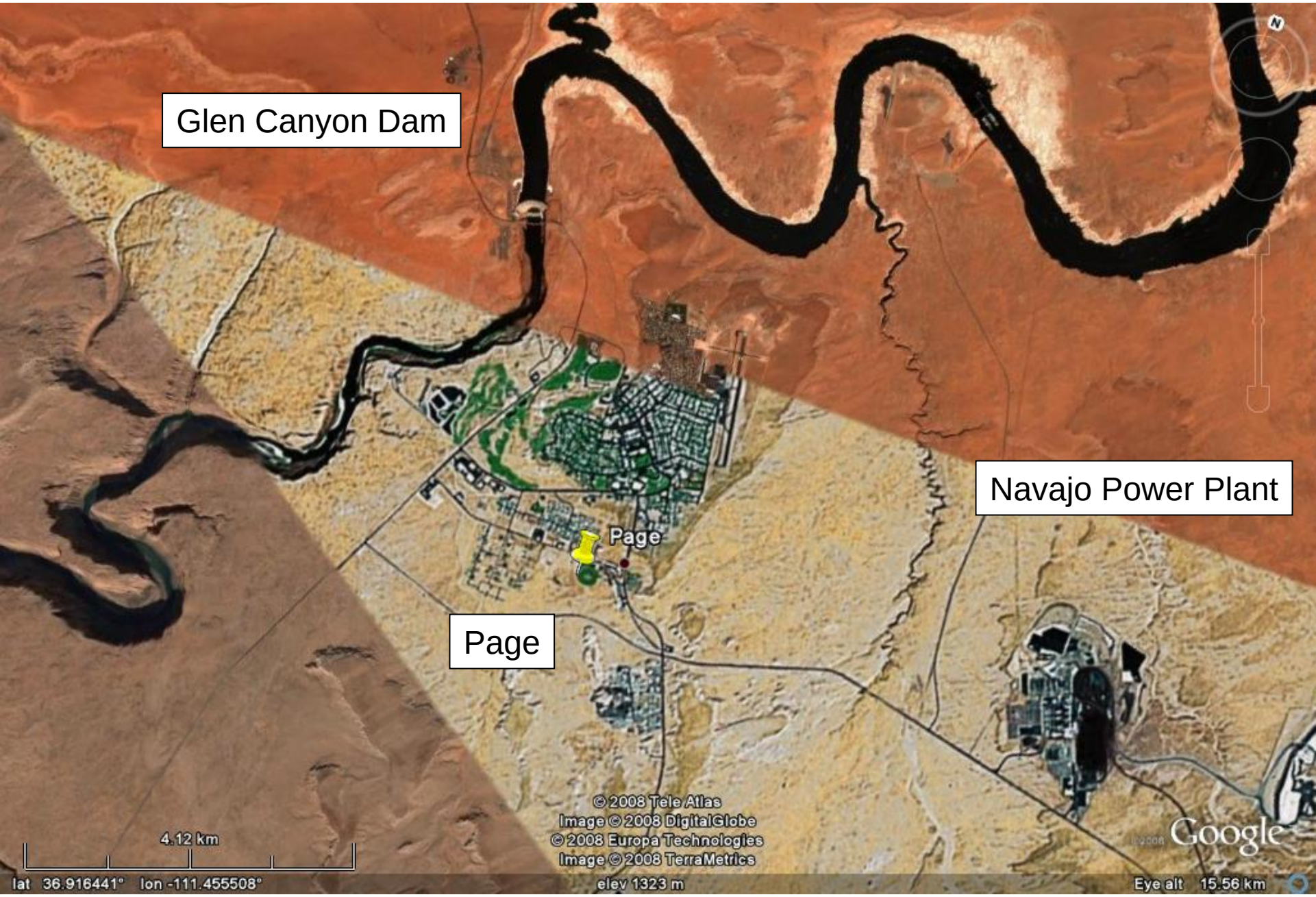
June 2007 Average OMI NO_2 Column—Standard product



June 2007 Average OMI NO_2 Column—Standard product



2250 MW Coal Fired Plant



~4000 MW—Coal Fired, Four Corners and san Juan Power Plants