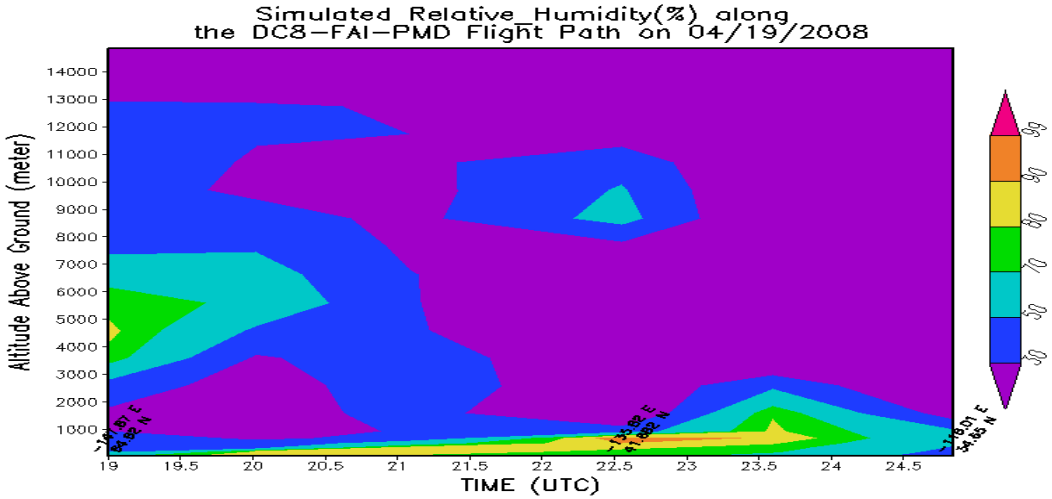
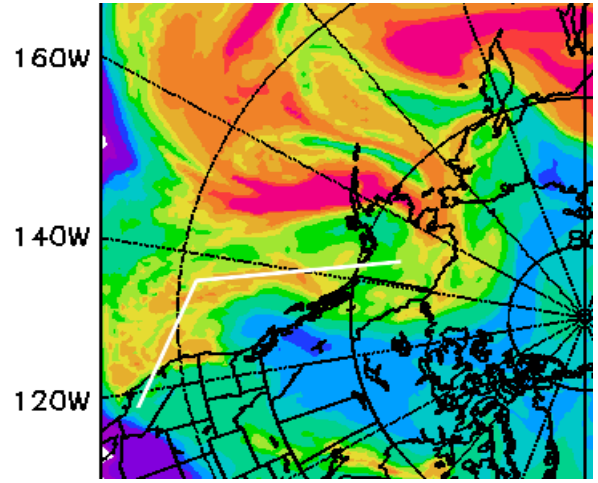
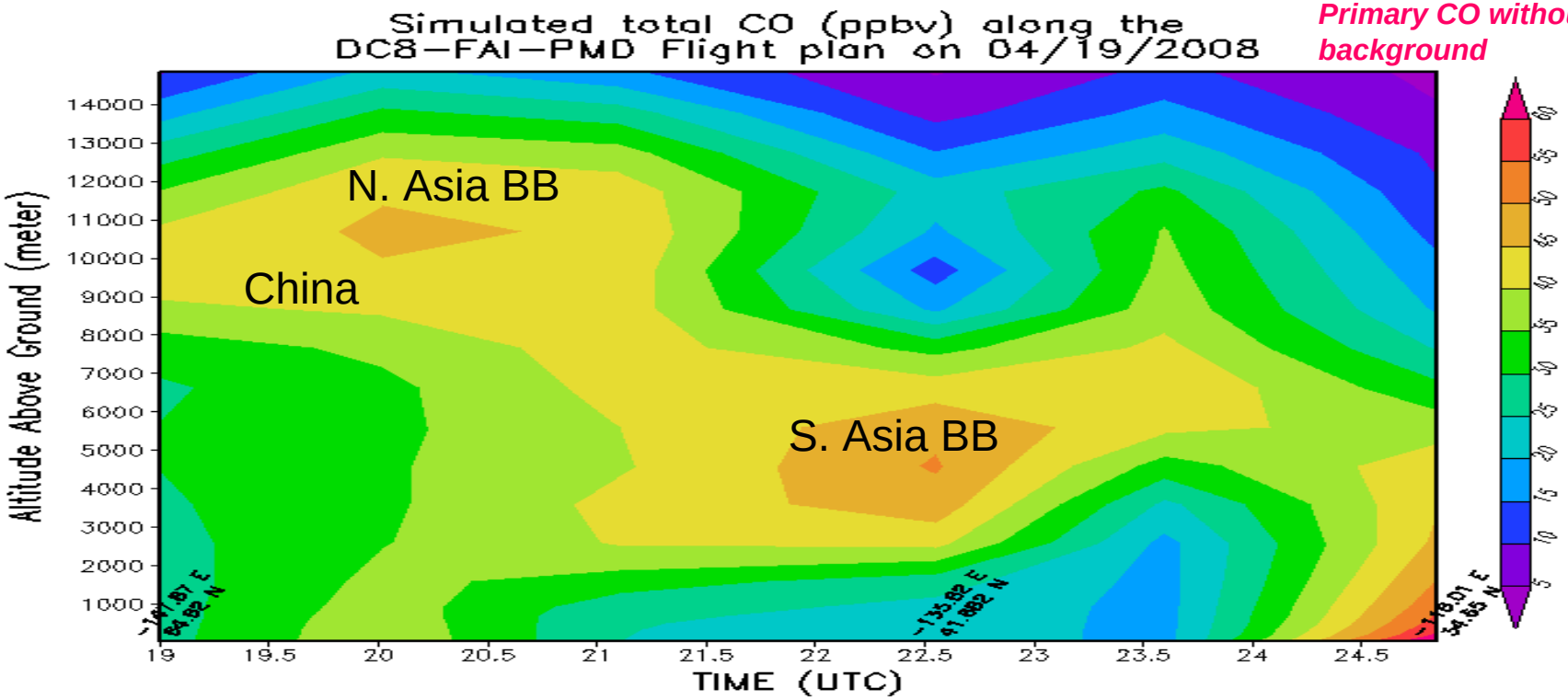
STEM Forecasts Along Return 4-19



AOD



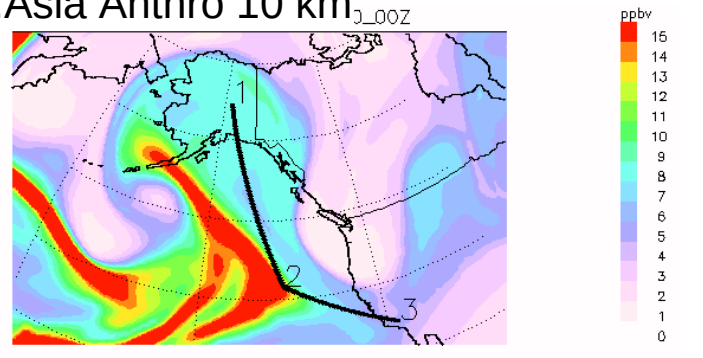


Primary CO without background

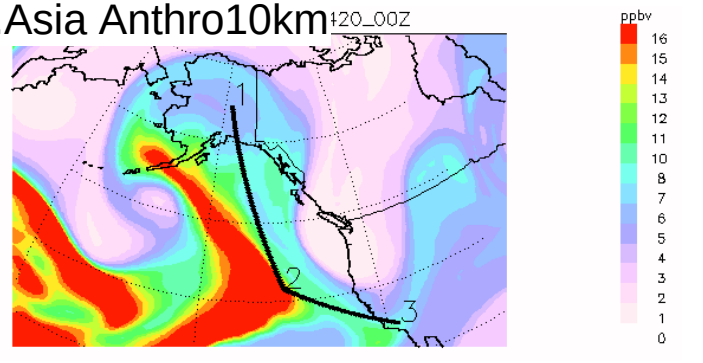
MZ4/GFS Apr 19 21Z

forecast from Apr 17

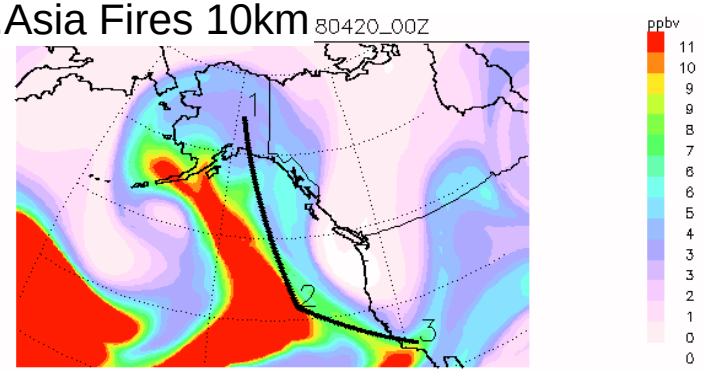
N.Asia Anthro 10 km



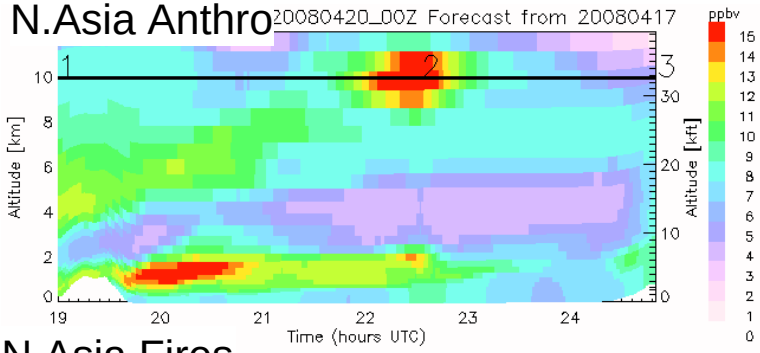
S.Asia Anthro10km



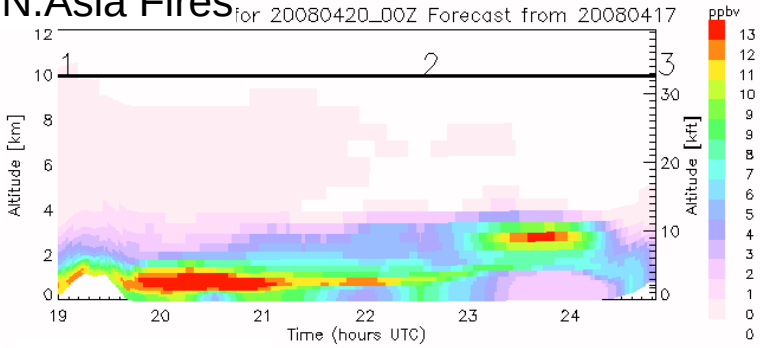
S.Asia Fires 10km



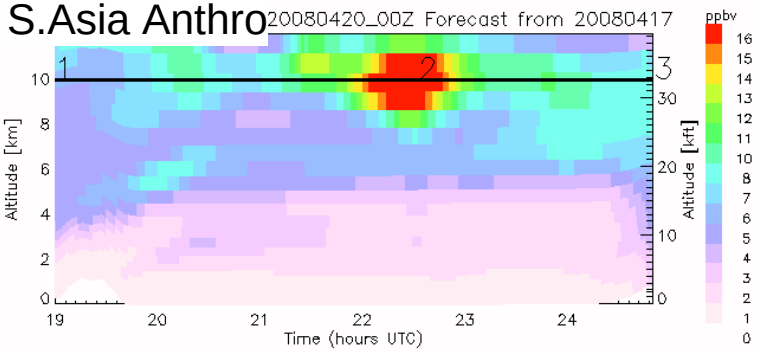
N.Asia Anthro



N.Asia Fires



S.Asia Anthro



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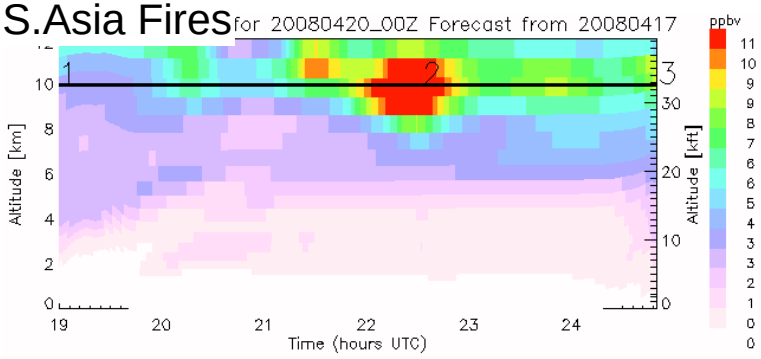
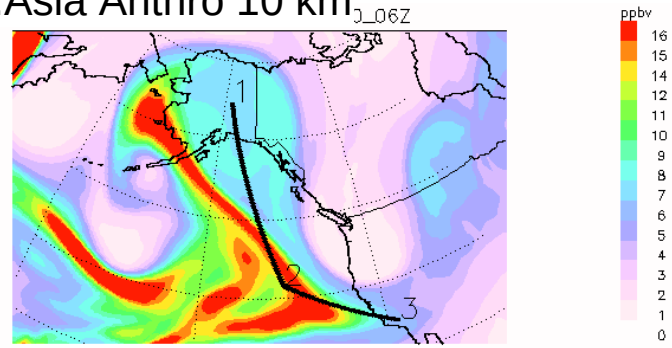


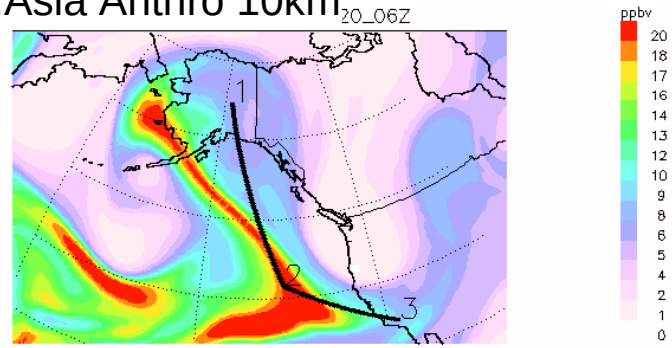
MZ4/GFS Apr 20 3Z

forecast from Apr 17

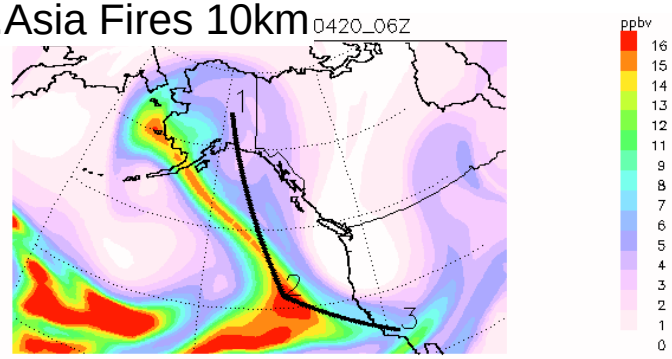
N.Asia Anthro 10 km



S.Asia Anthro 10km



S.Asia Fires 10km



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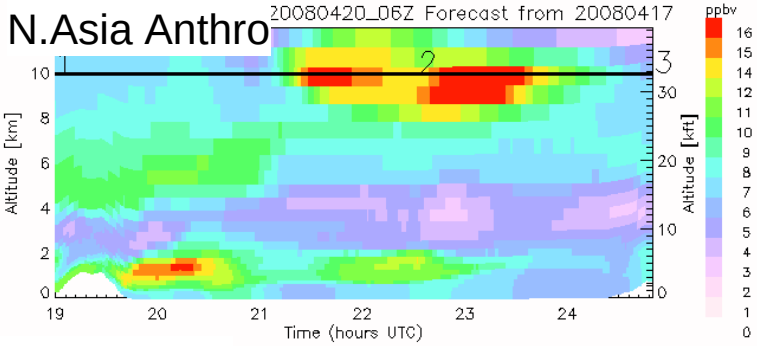

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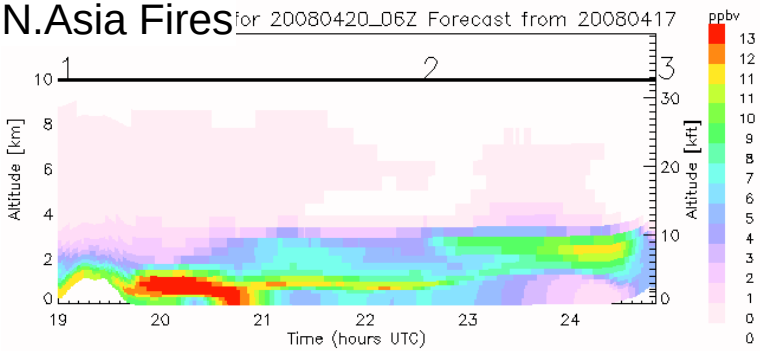

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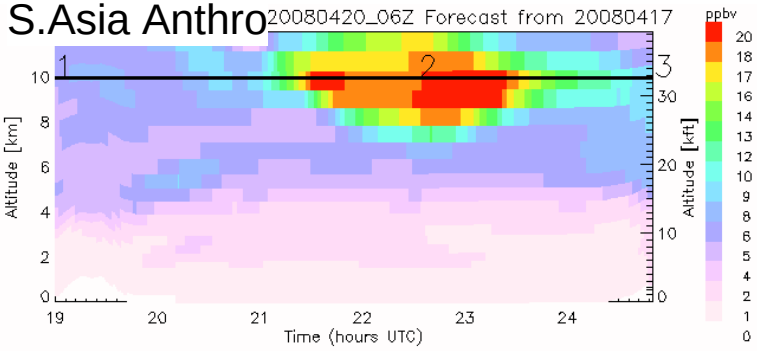
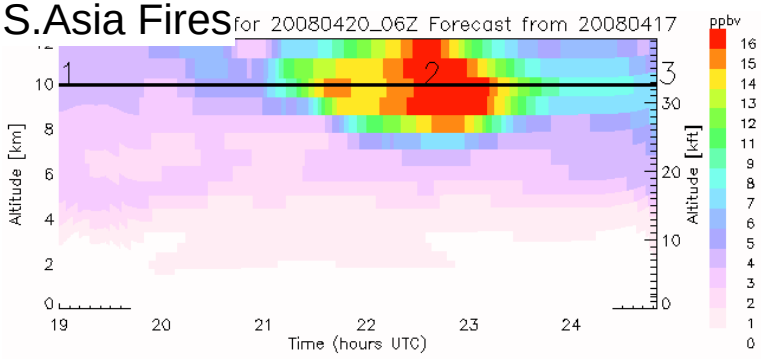


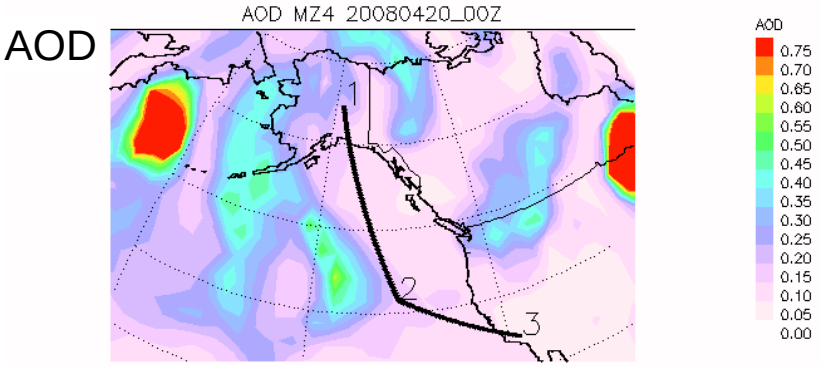
S.Asia Fires

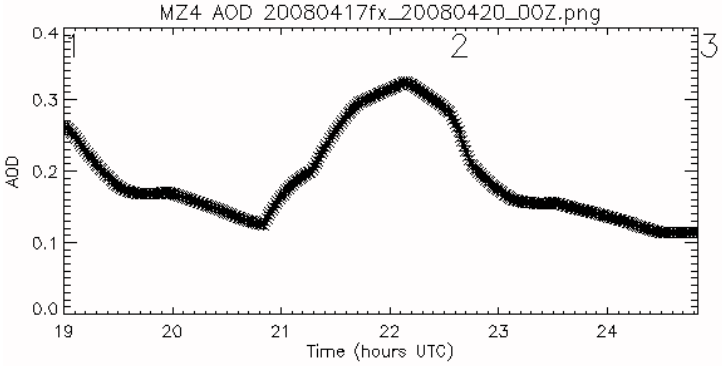


MZ4/GFS Apr 19 21Z

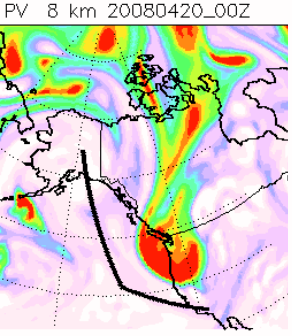
forecast from Apr 17

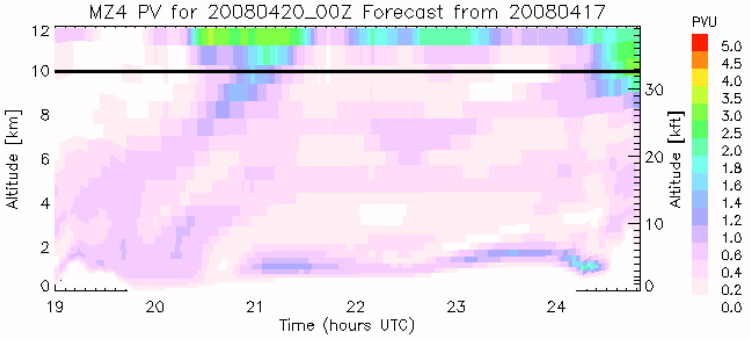
AOD



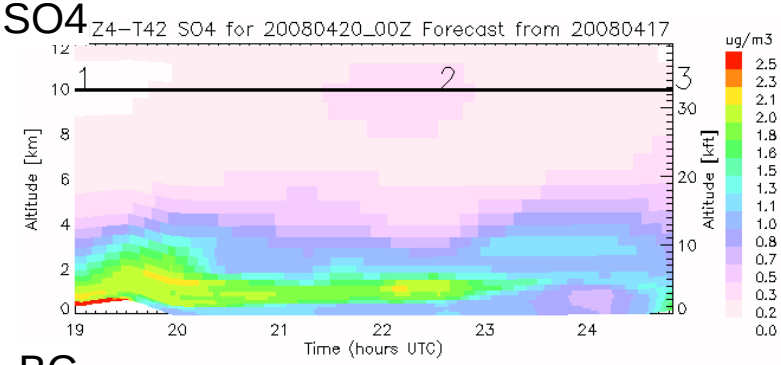


Potential Vorticity

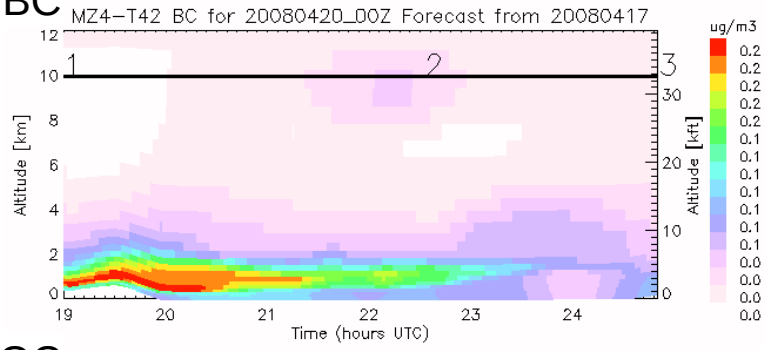




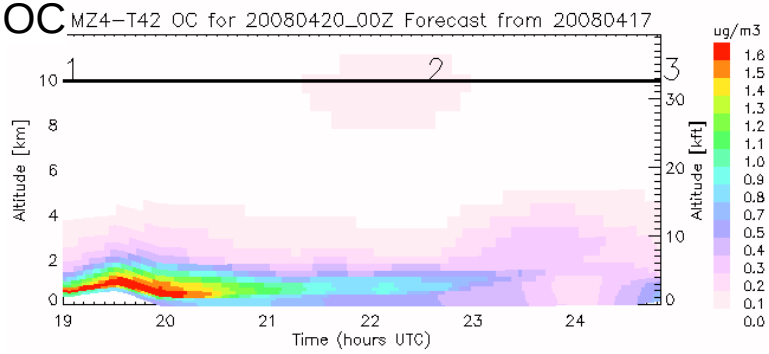
SO4

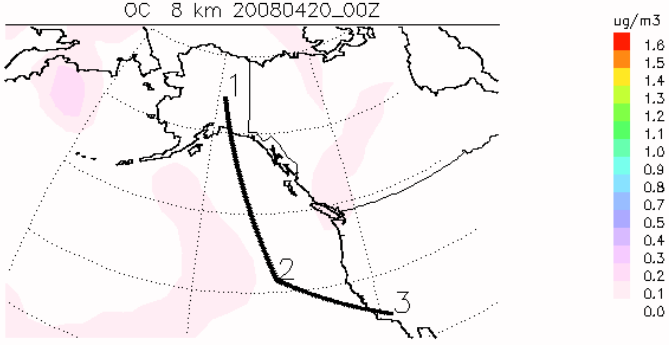


BC



OC

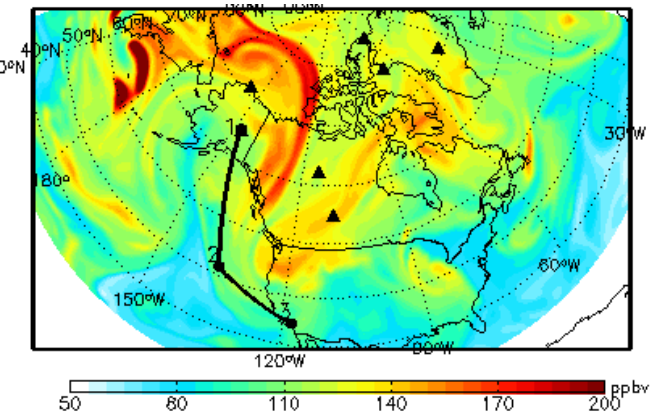




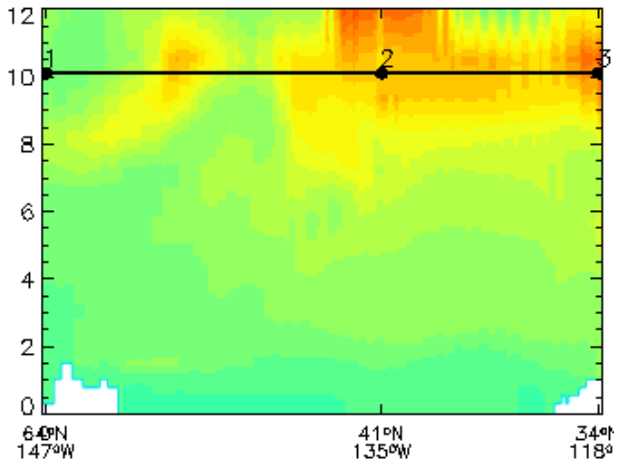
GEOS-5 forecasts for 4/19/2008 DC-8 Going home!

Initialized at 20080417-06Z

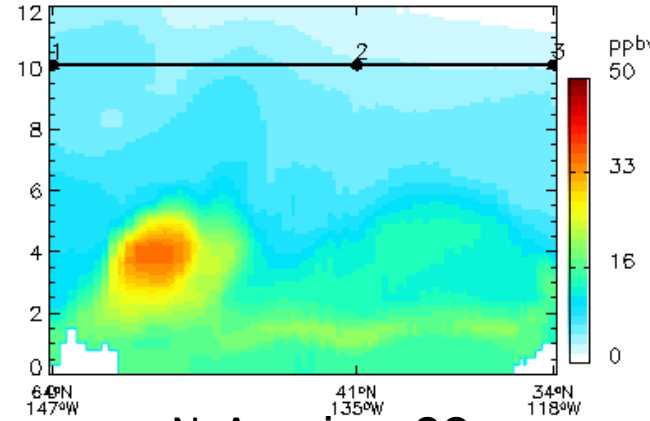
Total CO 500 hPa



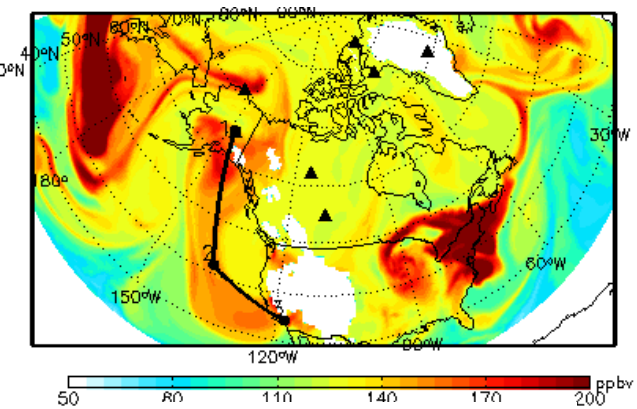
Non-boreal biomass CO



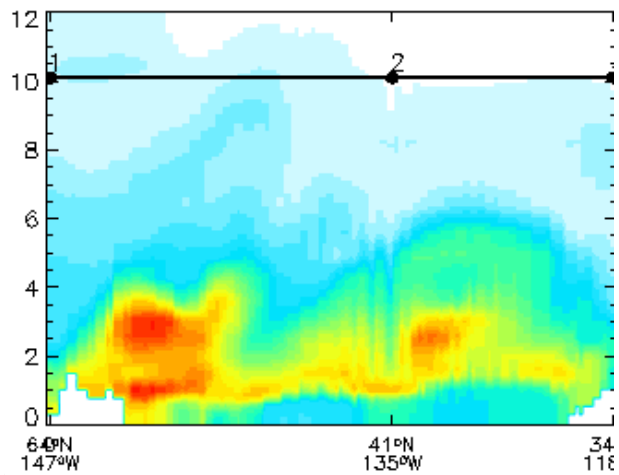
European CO



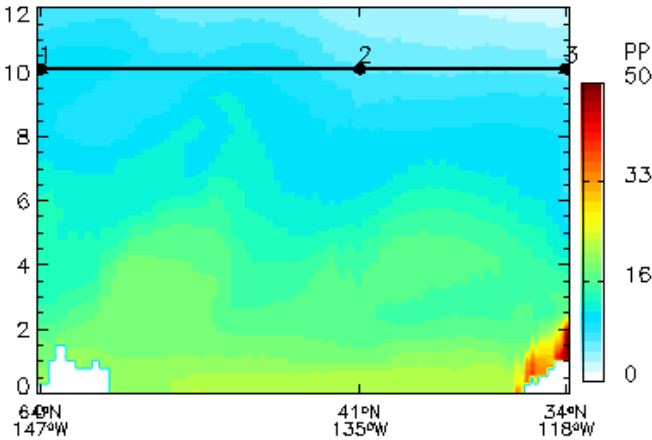
Total CO 850 hPa



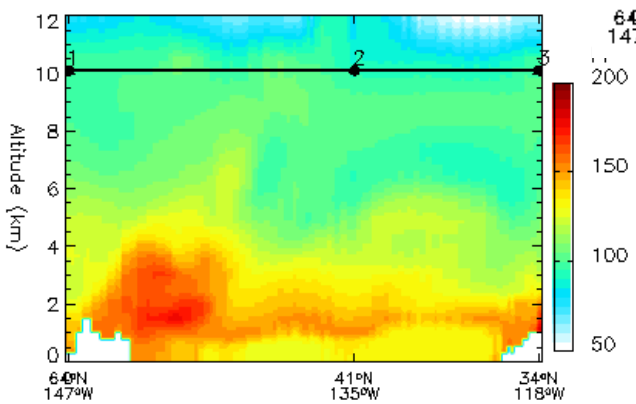
Boreal biomass CO



N. American CO



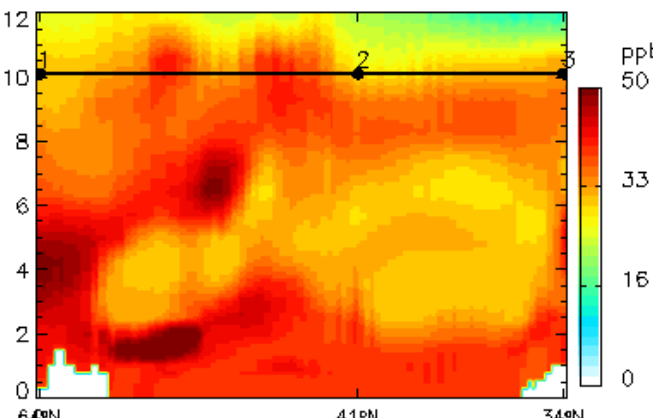
Total CO



Distinguishable plumes!

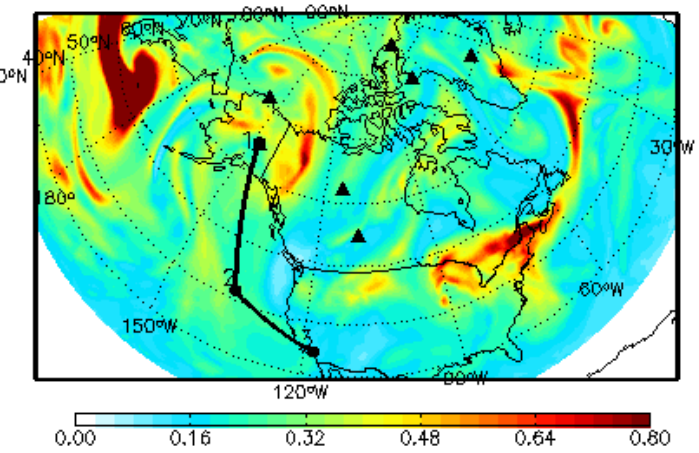
- Non-boreal high up
- Boreal 2-4 km
- Asian up and down

Asian

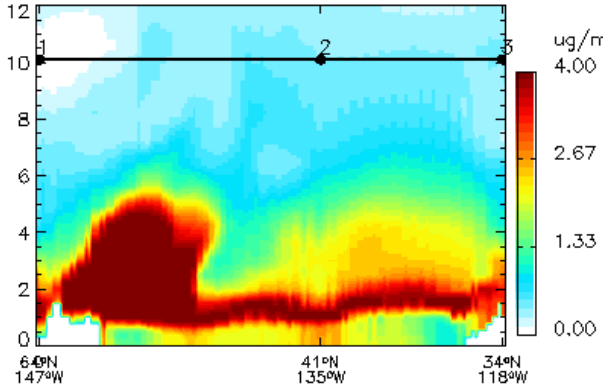


GEOS-5 forecast for 4/19/2008 19:30Z – Aerosols

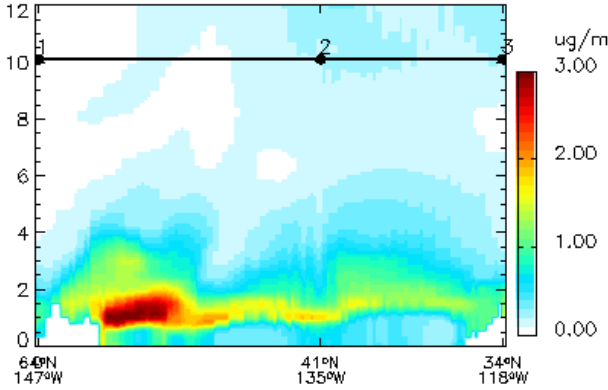
Total AOD 550 nm



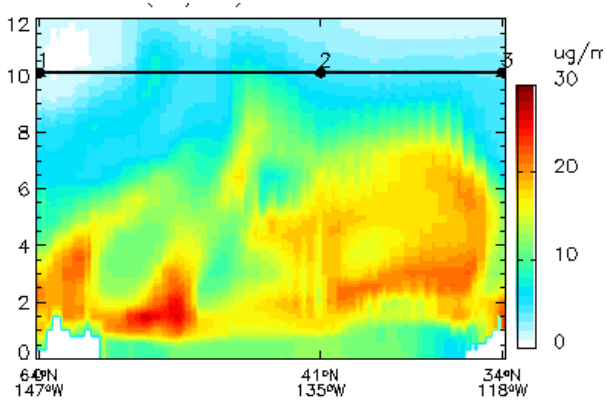
Sulfate



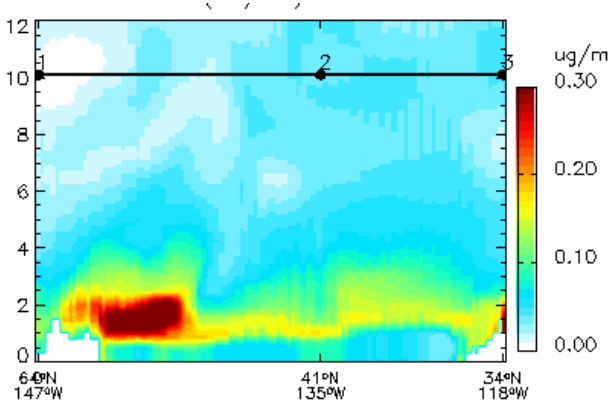
Organic carbon



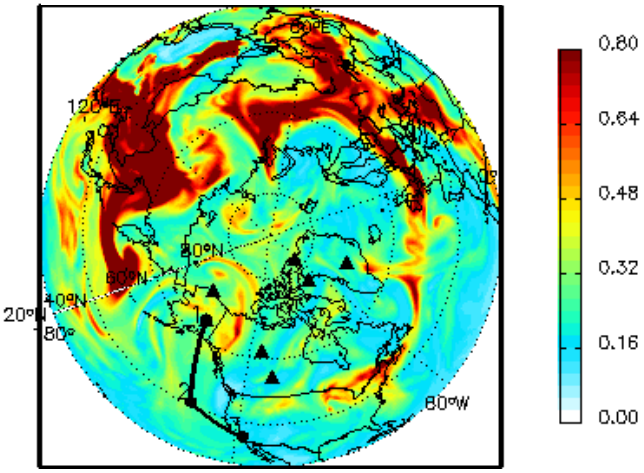
Dust



Black carbon



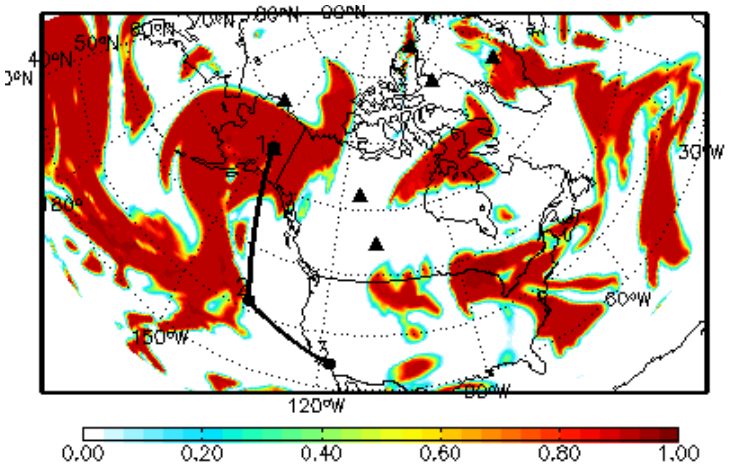
Total AOD 550 nm



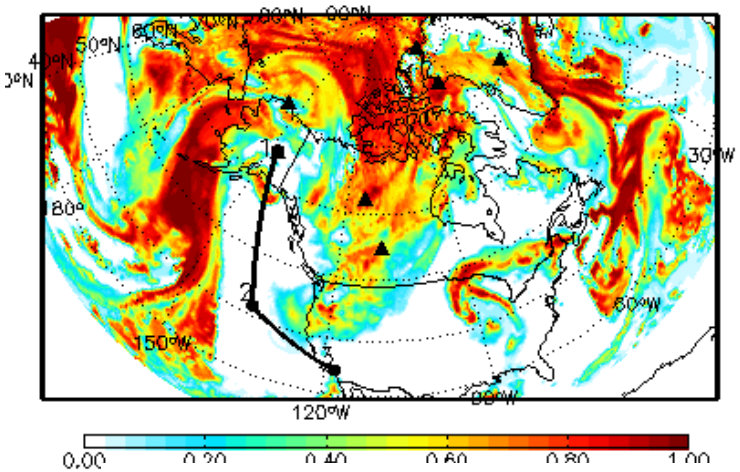
Aerosols are concentrated in mid to lower altitudes

GEOS-5 forecast for 4/19/2008 19:30Z – Clouds

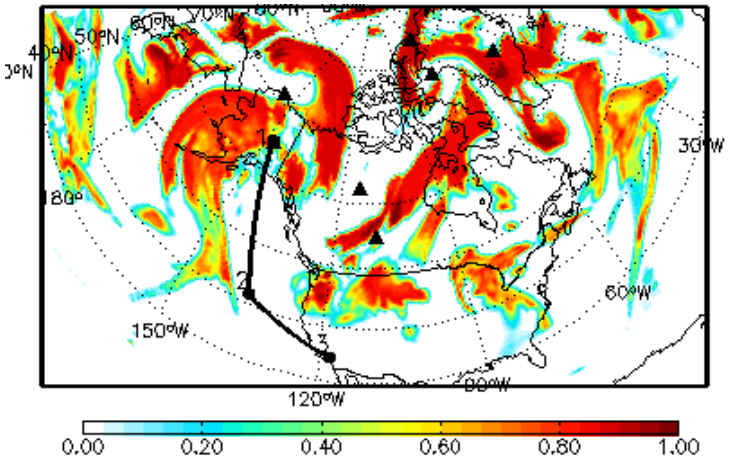
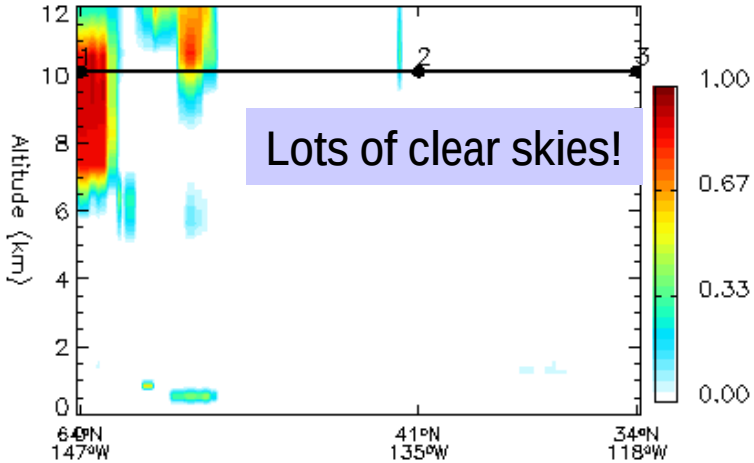
High cloud fraction (< 400 hPa)



Low cloud fraction (1000-700 hPa)



Middle cloud fraction (700-400 hPa)



Cloud fraction along flight track