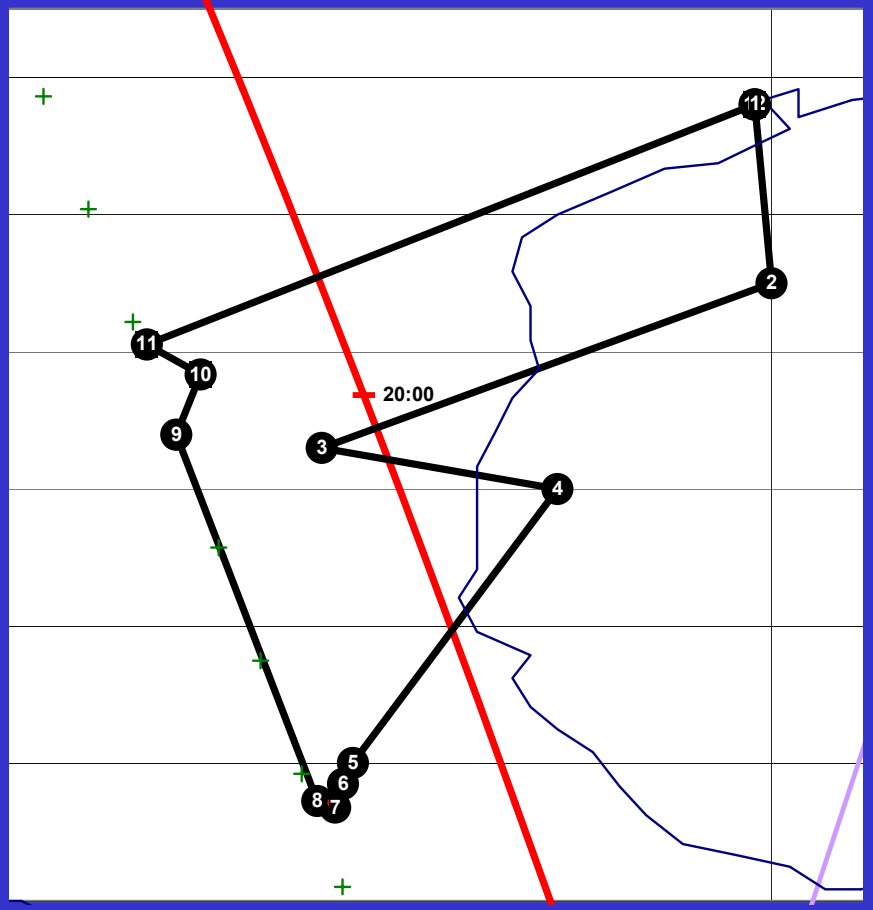
Plan for INTEX-B flight#8 – Houston local 6 on Sunday 3/19
updated 3/19 @18Z

Objectives:

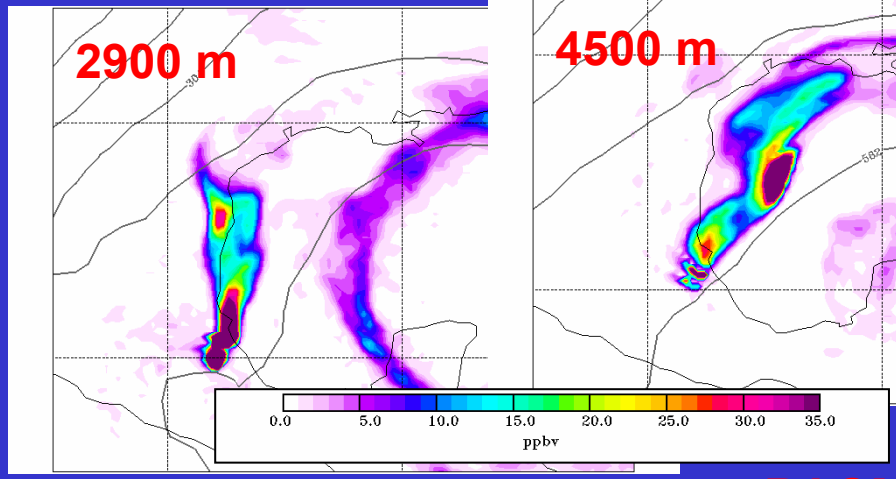
- MC plume over northern Mexico & offshore
- MC Basin transect
- OMI & TES validation
- Coordination with J-31
- Asian influence



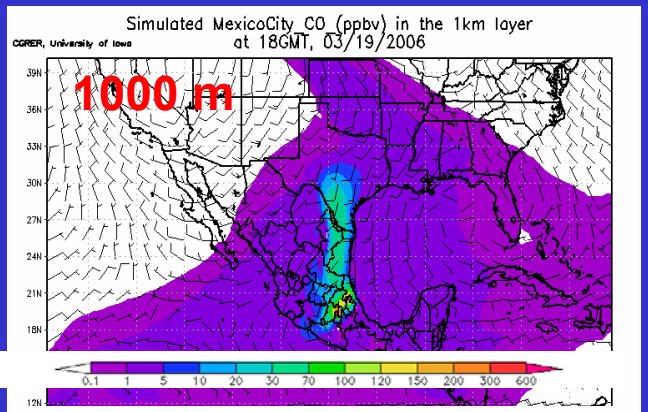
- Points 1-5: vertical profiling at 1-25K
- Point 5: 15 → 1K spiral coordinated with J-31
- Points 5-8: MC Basin sampling
- Points 8-11: OMI & TES validation tracks w/spiral at pt. 10 (Monterrey) + TES spiral
- Points 11-1: Asian influence and vertical profiling

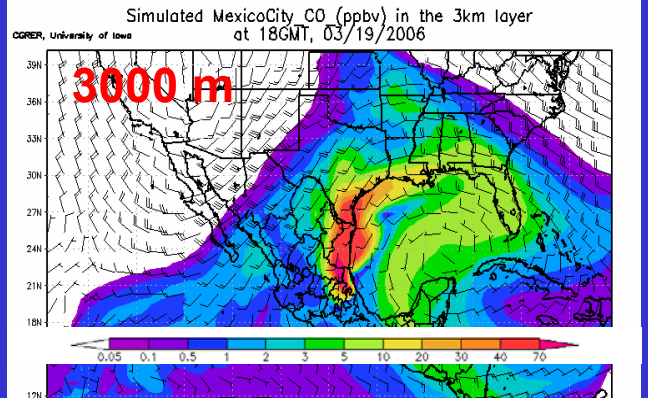
FLEXPART MC CO

Sunday 3/19 18Z

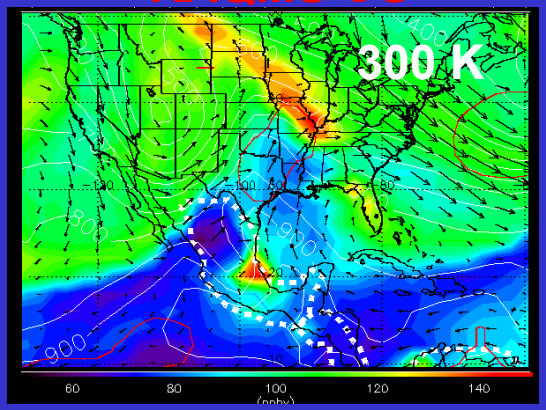


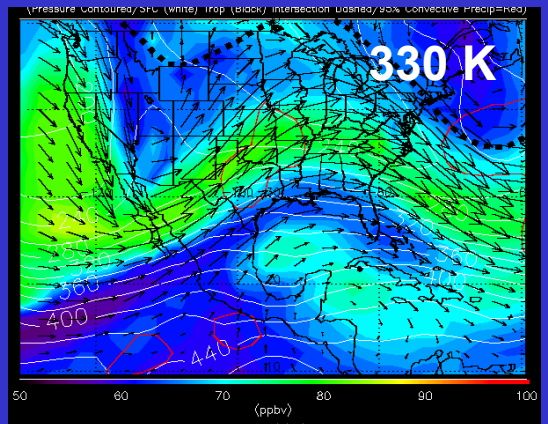
STEM MC CO



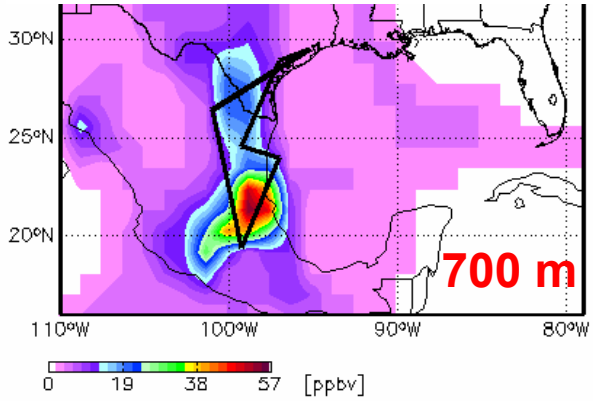


RAQMS CO

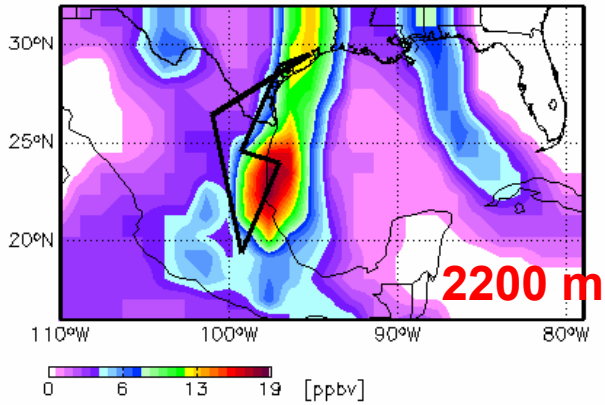




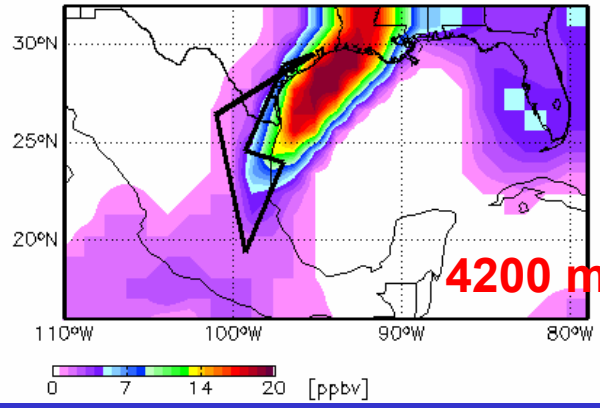
GMAO C. American CO



C. American FF CO 20060319 18 GMT at 790 hPa (2.2 km)

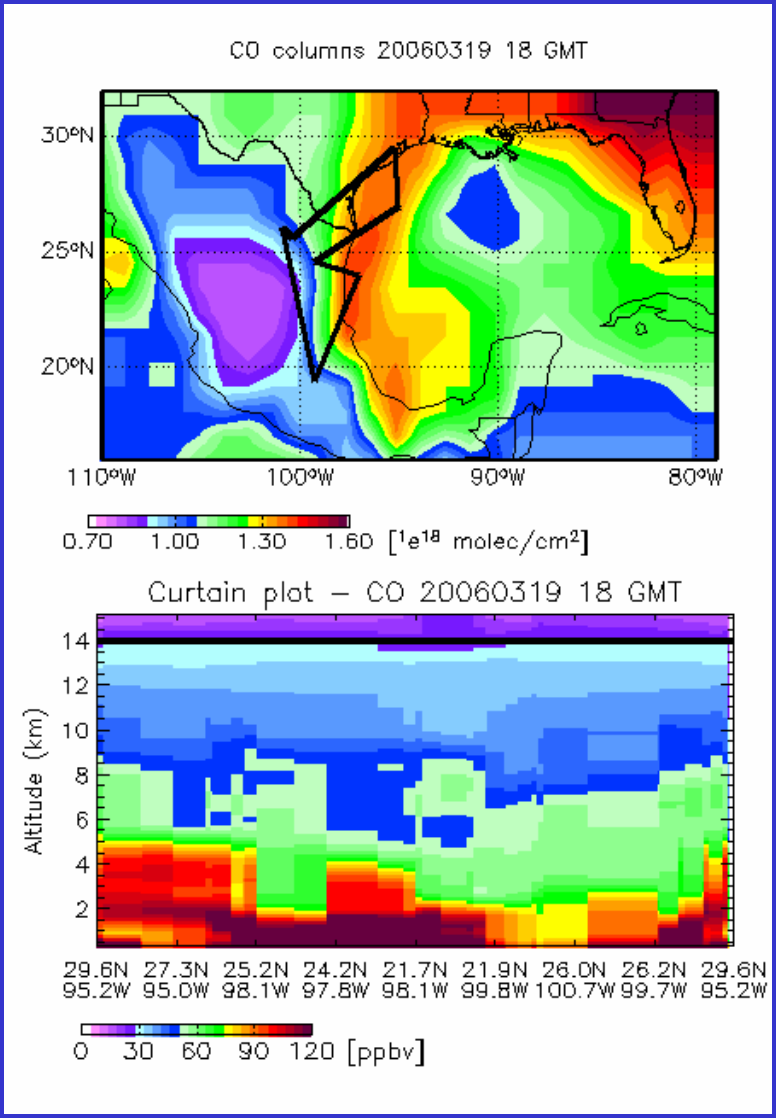


C. American FF CO 20060319 18 GMT at 600 hPa (4.2 km)

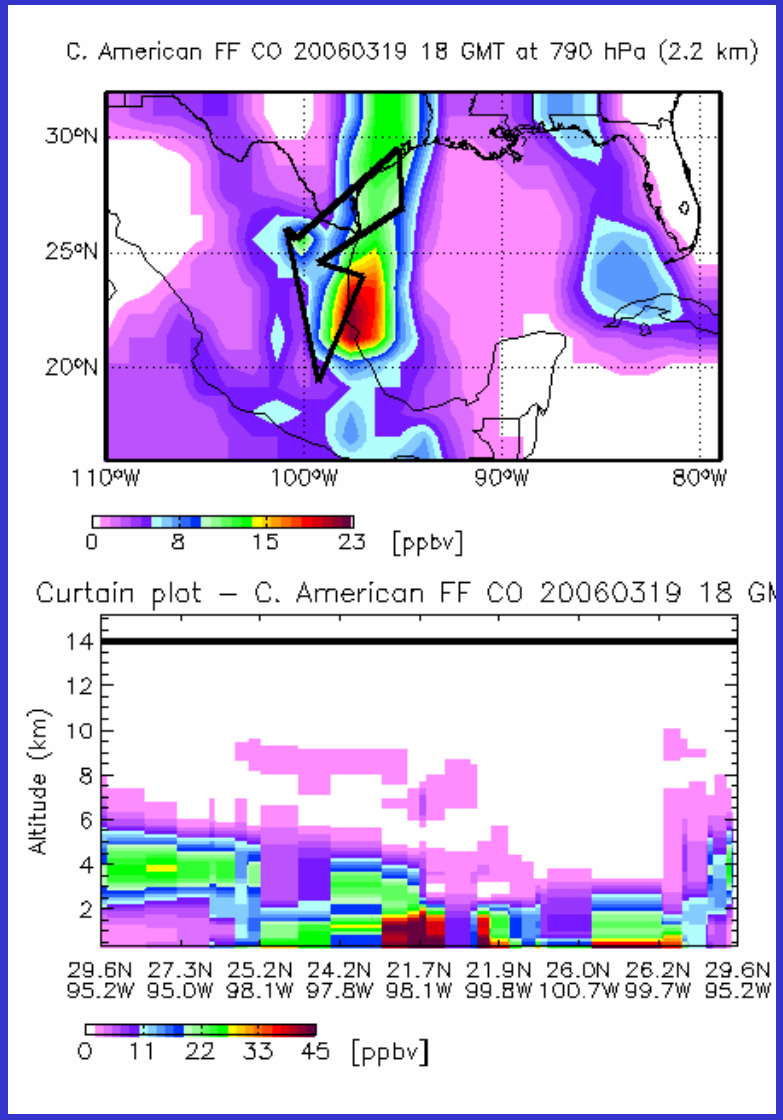


For Sunday: a nice mix.

GMAO forecast initialized 3/17 0Z

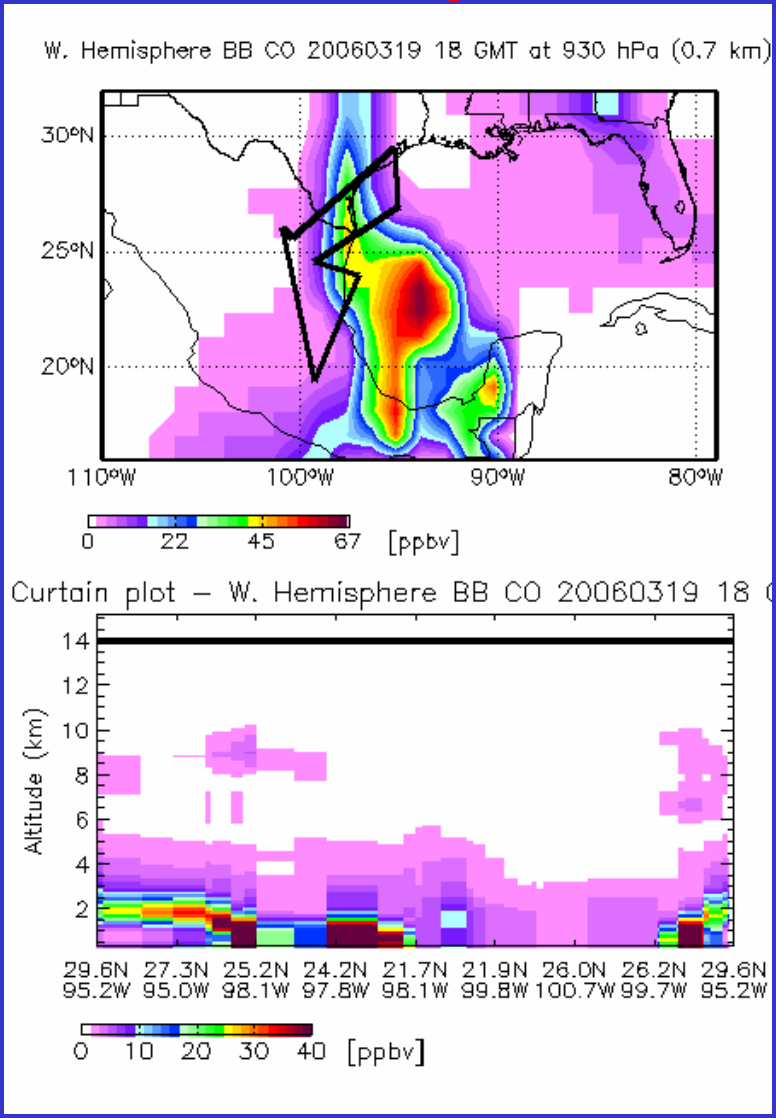


Mexican outflow…

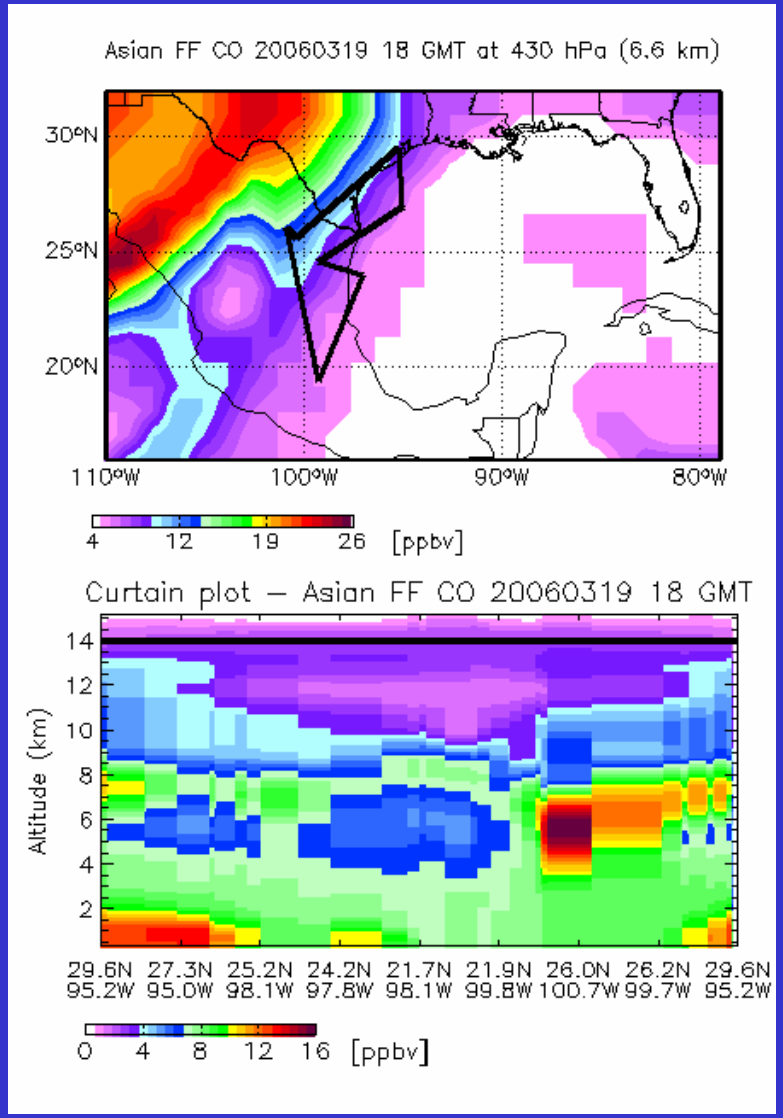


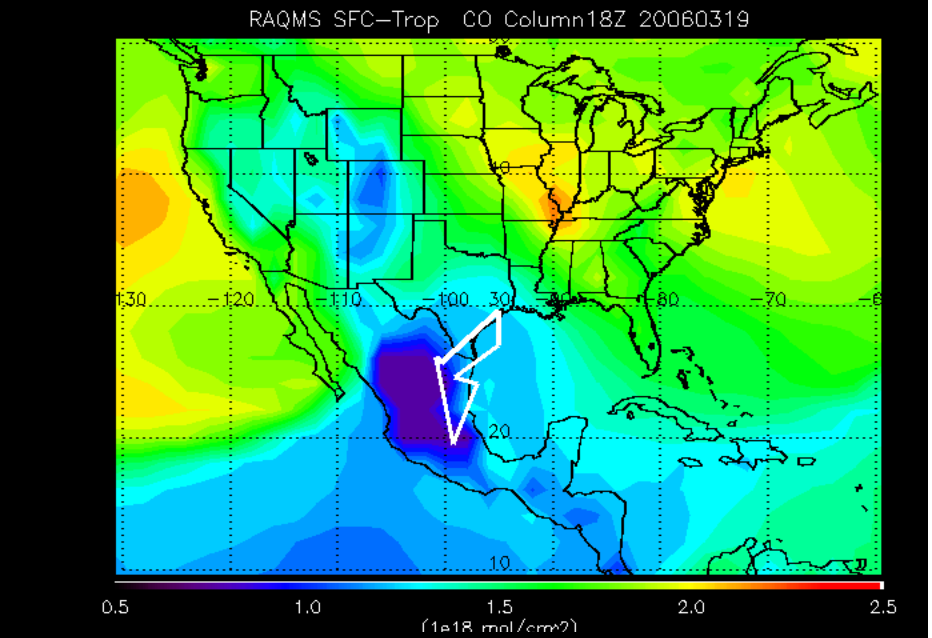
GMAO forecast initialized 3/17 0Z

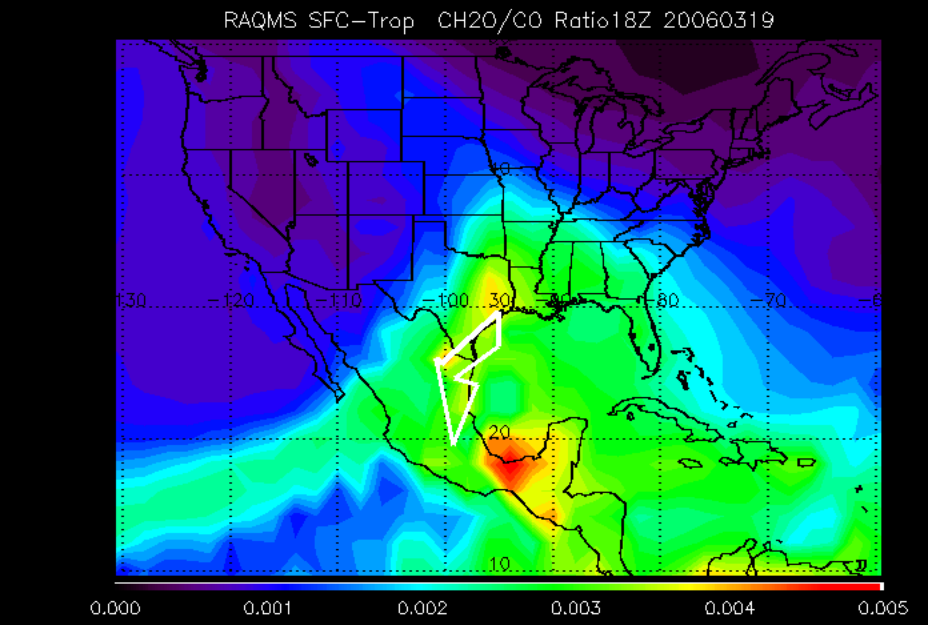
… biomass burning…

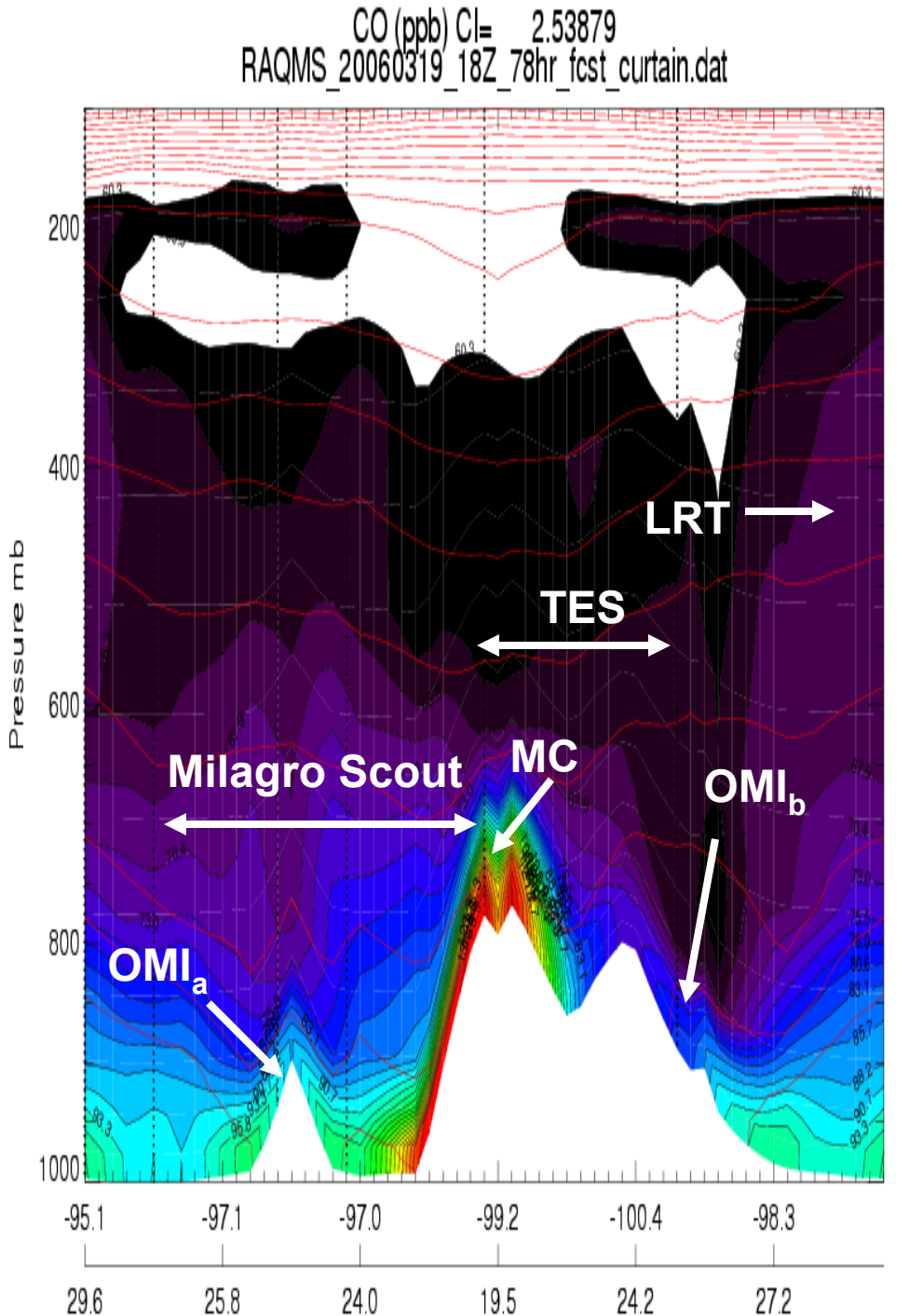


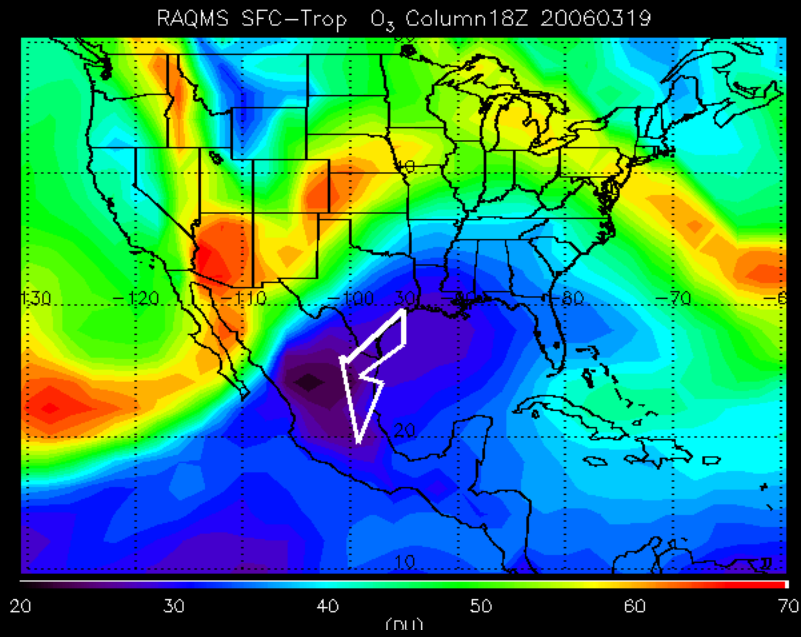
… and Asian inflow.

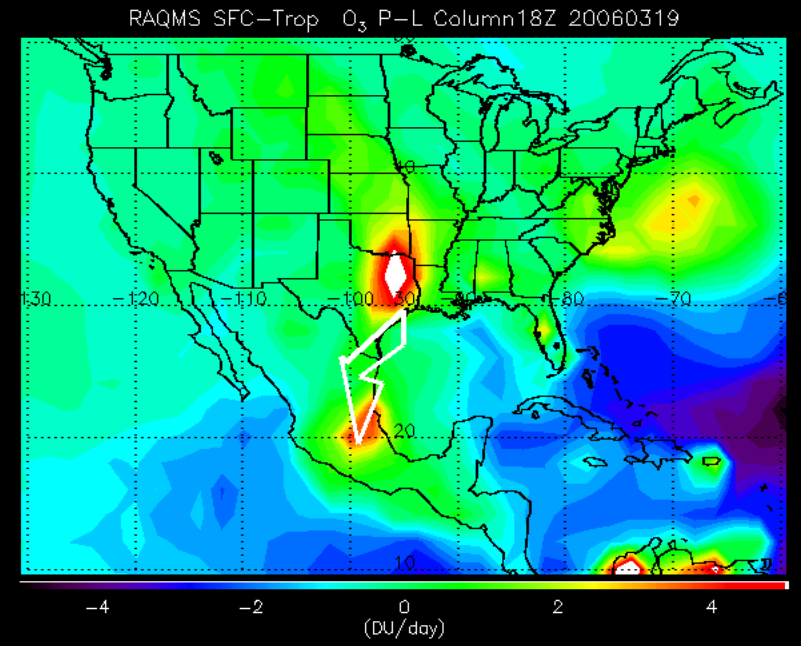


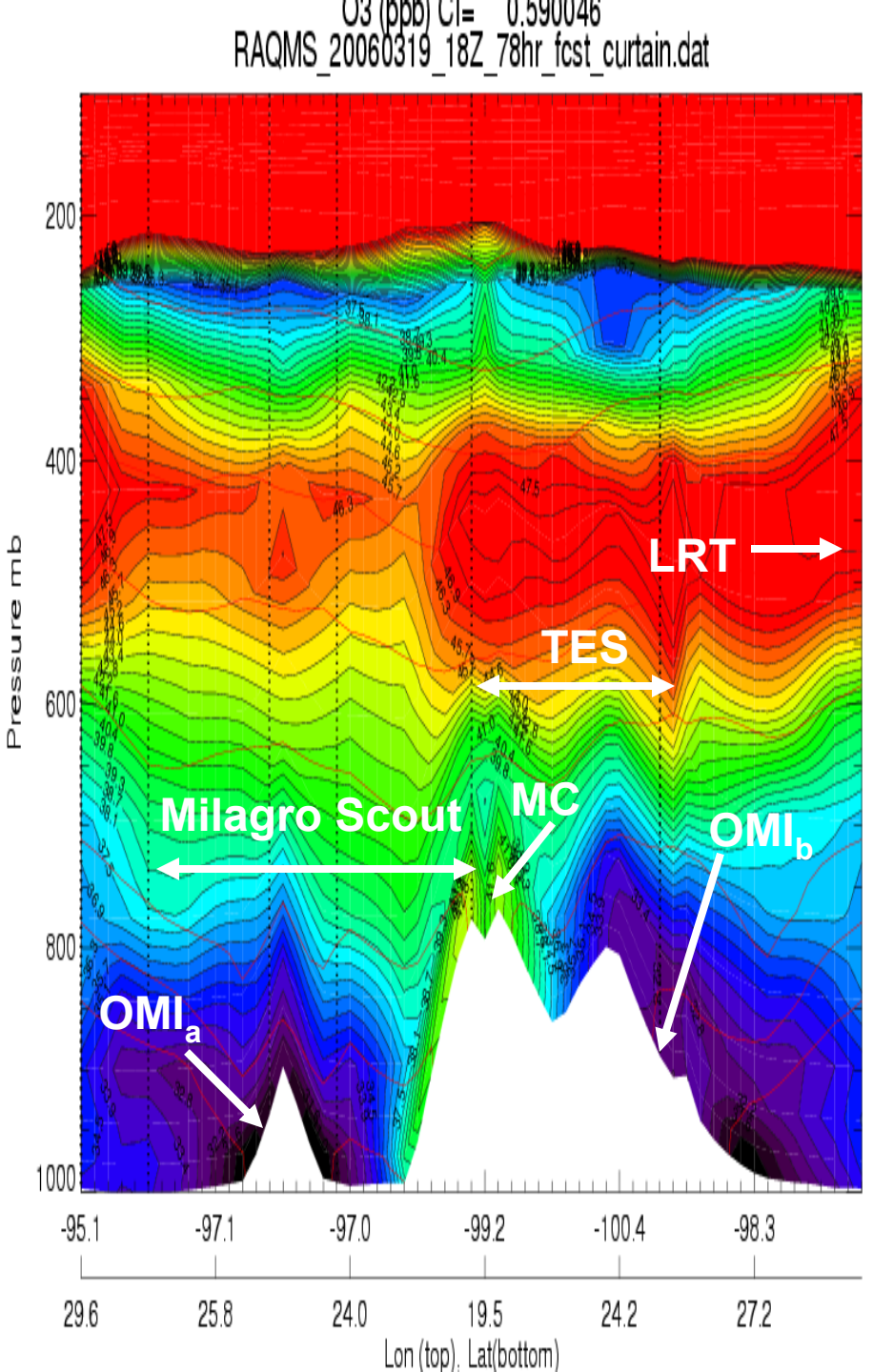

RAQMS SFC–Trop CO Column18Z 20060319
0.5
1.0
1.5
2.0
2.5
(1e18 mol/cm^2)

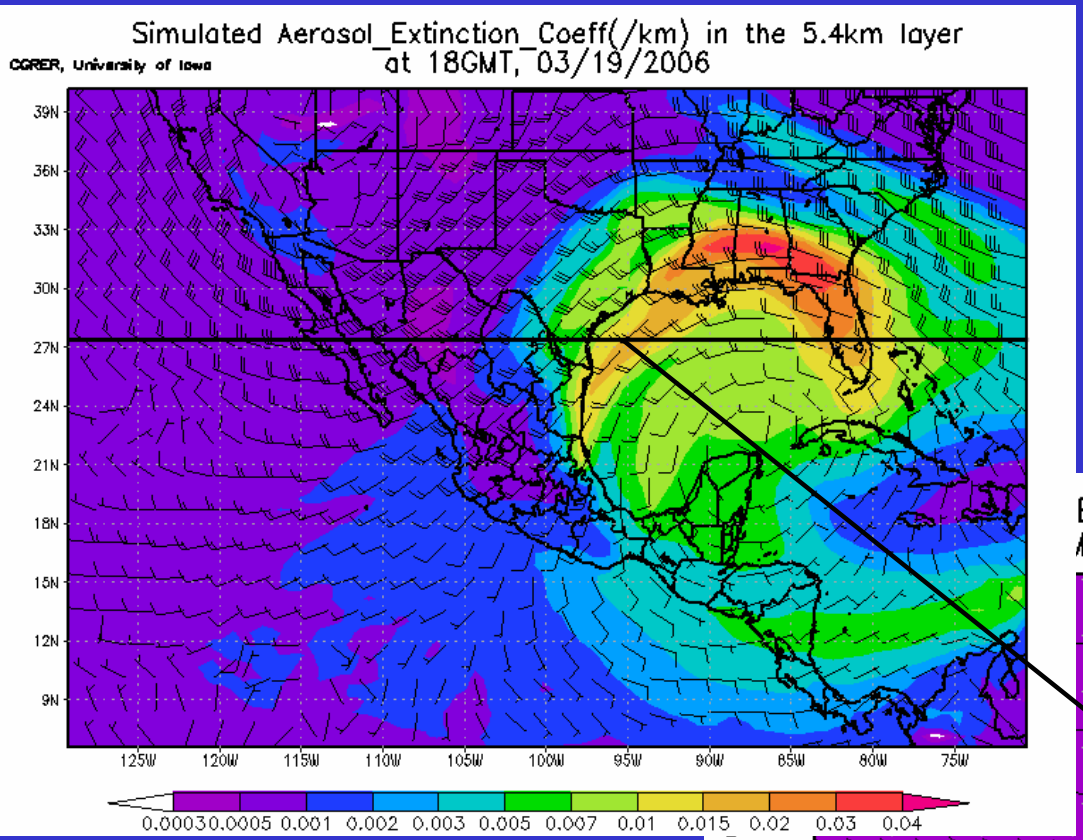

RAQMS SFC–Trop CH2O/CO Ratio18Z 20060319
0.000
0.001
0.002
0.003
0.004
0.005


CO (ppb) CI= 2.53879
RAQMS_20060319_18Z_78hr_fcst_curtain.dat
Pressure mb
200
400
600
800
1000
LRT
TES
Milagro Scout
MC
OMIb
OMIa
-95.1
-97.1
-97.0
-99.2
-100.4
-98.3
29.6
25.8
24.0
19.5
24.2
27.2

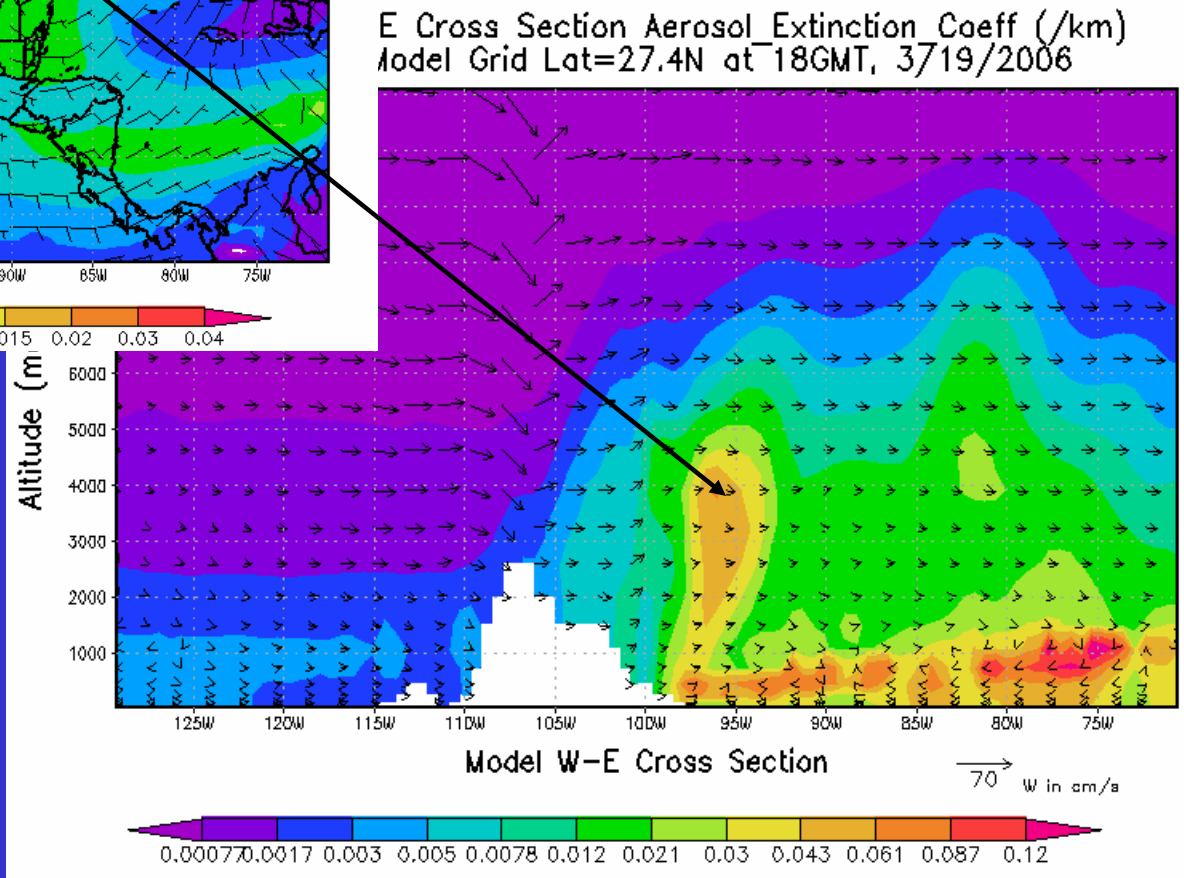

RAQMS SFC–Trop O_3 Column18Z 20060319
20
30
40
50
60
70
(DU)

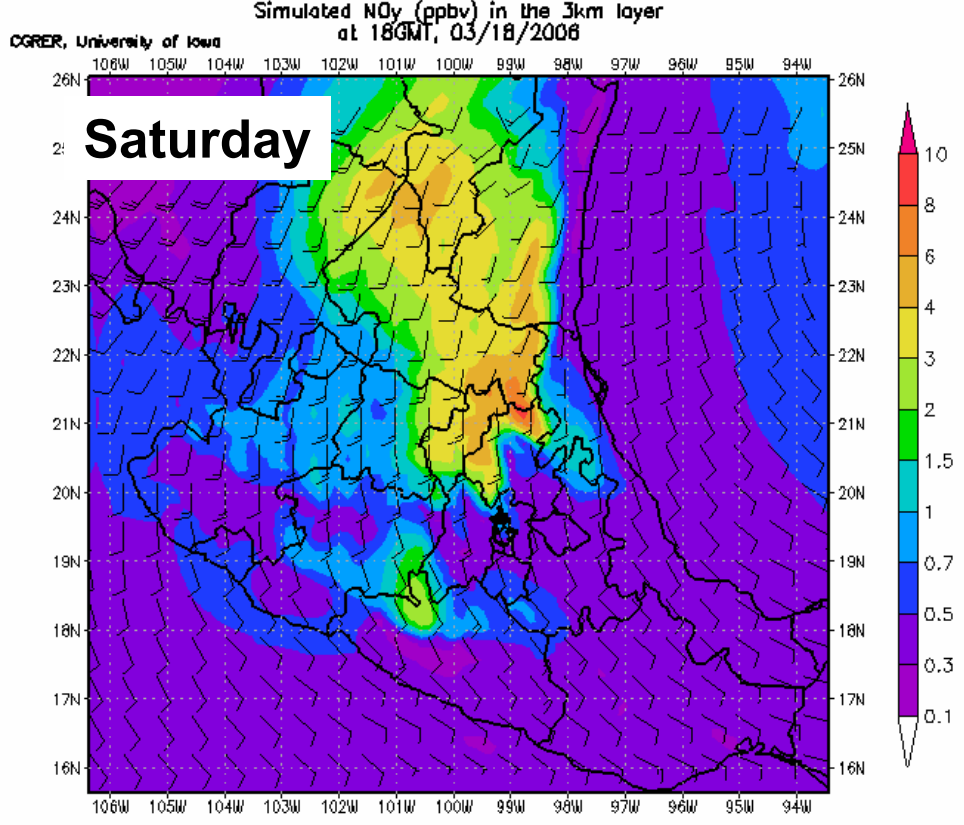

RAQMS SFC–Trop O_3 P–L Column18Z 20060319
−4
−2
0
2
4
(DU/day)

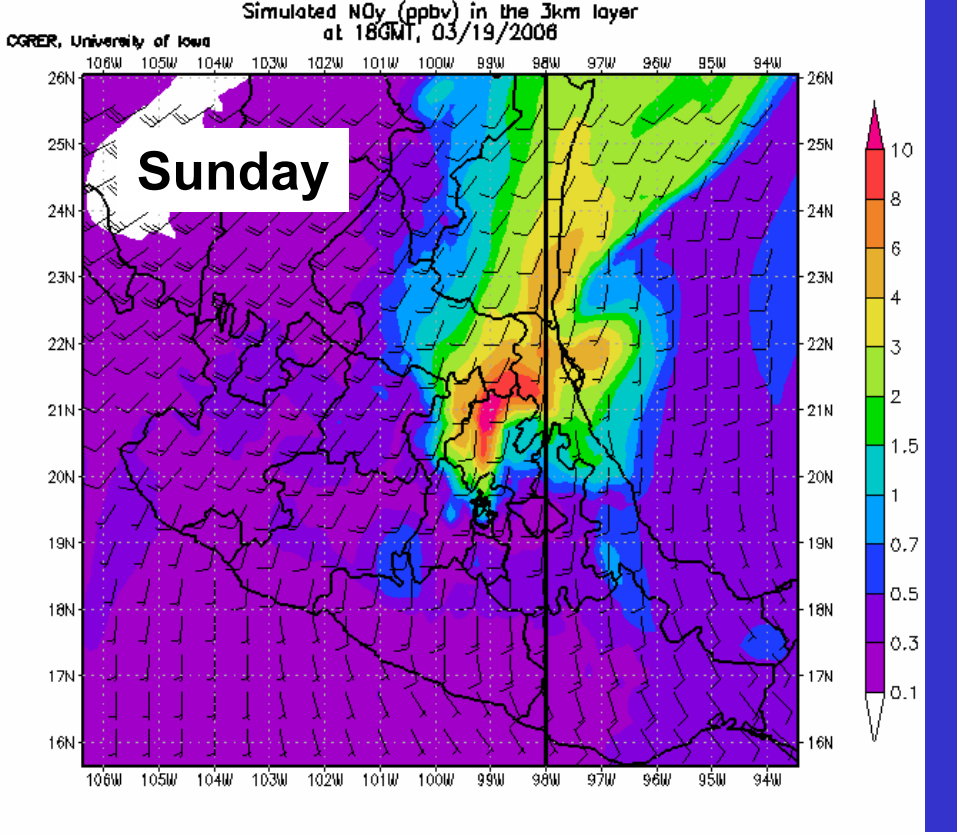

O3 (ppb) CI= 0.590046
RAQMS_20060319_18Z_78hr_fcst_curtain.dat
Pressure mb
200
400
600
800
1000
LRT
TES
Milagro Scout
MC
OMI$_b$
OMI$_a$
-95.1
-97.1
-97.0
-99.2
-100.4
-98.3
29.6
25.8
24.0
19.5
24.2
27.2
Lon (top), Lat(bottom)

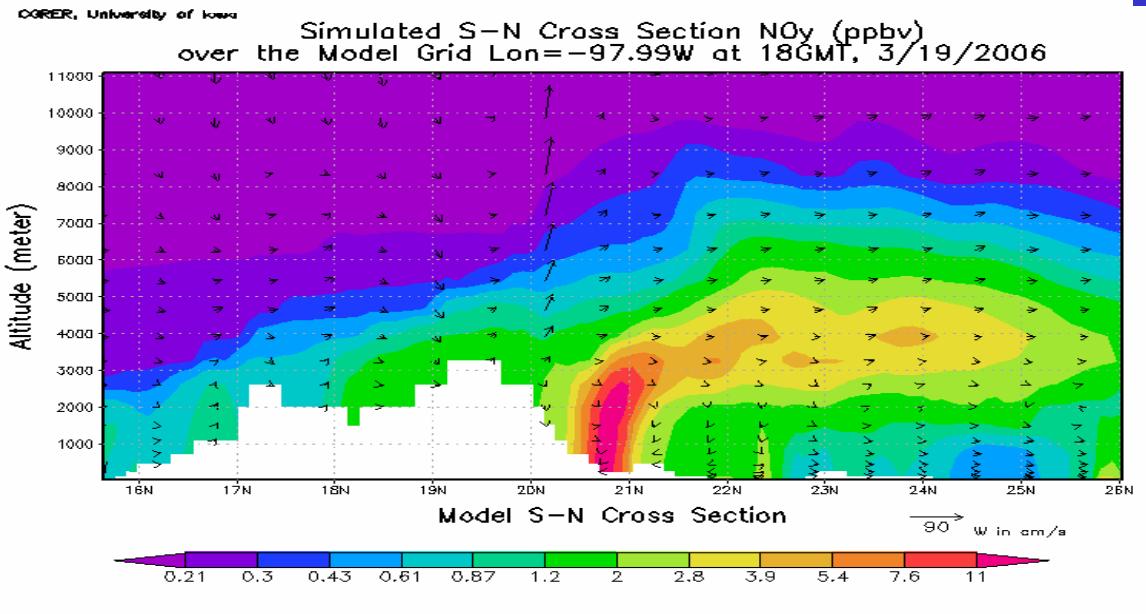


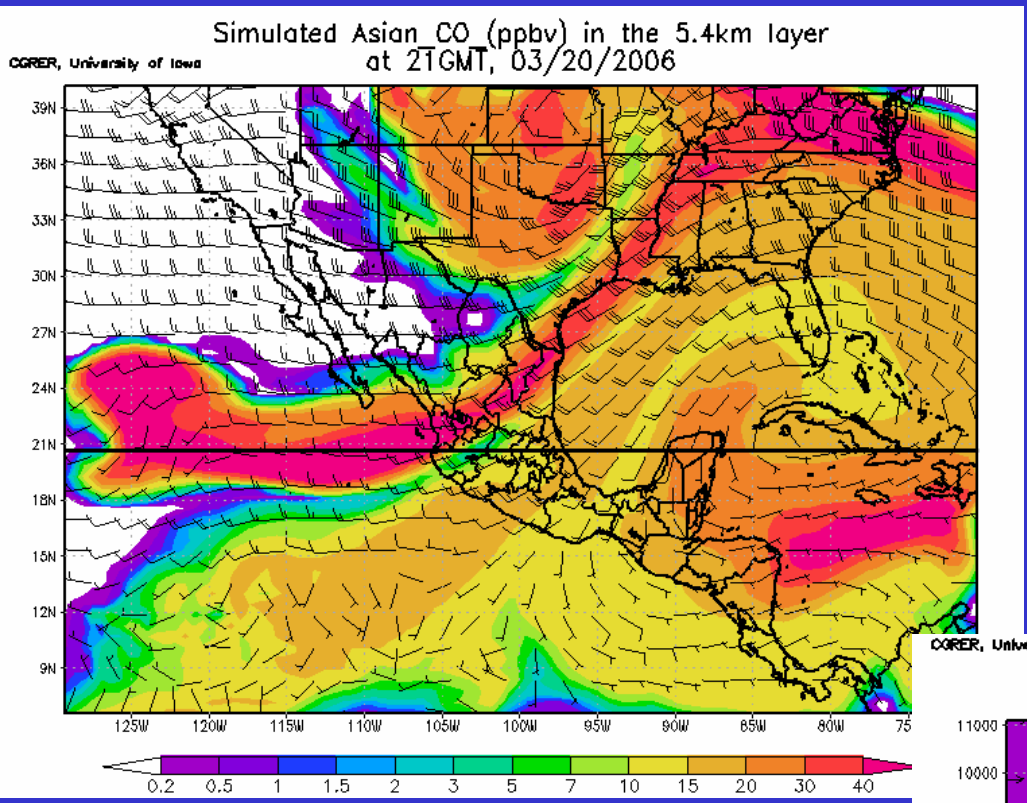
Aerosol extinction distribution will show elevated vertical structures

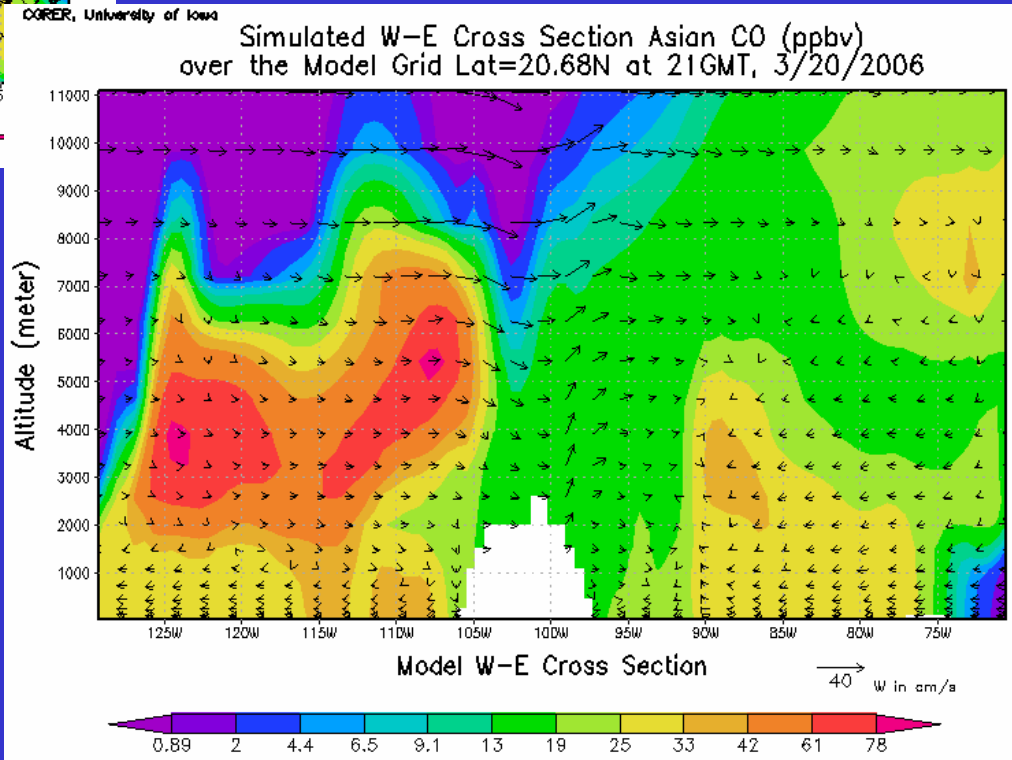



Simulated NOy (ppbv) in the 3km layer
at 18GMT, 03/18/2006
CGRER, University of Iowa
Saturday
10
8
6
4
3
2
1.5
1
0.7
0.5
0.3
0.1

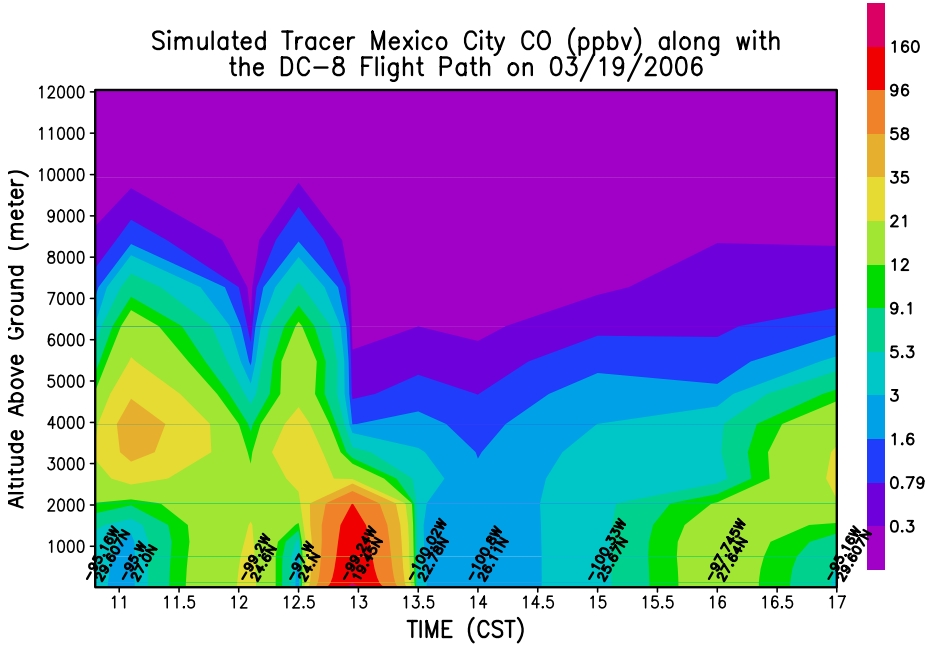

Simulated NOy (ppbv) in the 3km layer
at 18GMT, 03/19/2006
CGRER, University of Iowa
Sunday
10
8
6
4
3
2
1.5
1
0.7
0.5
0.3
0.1

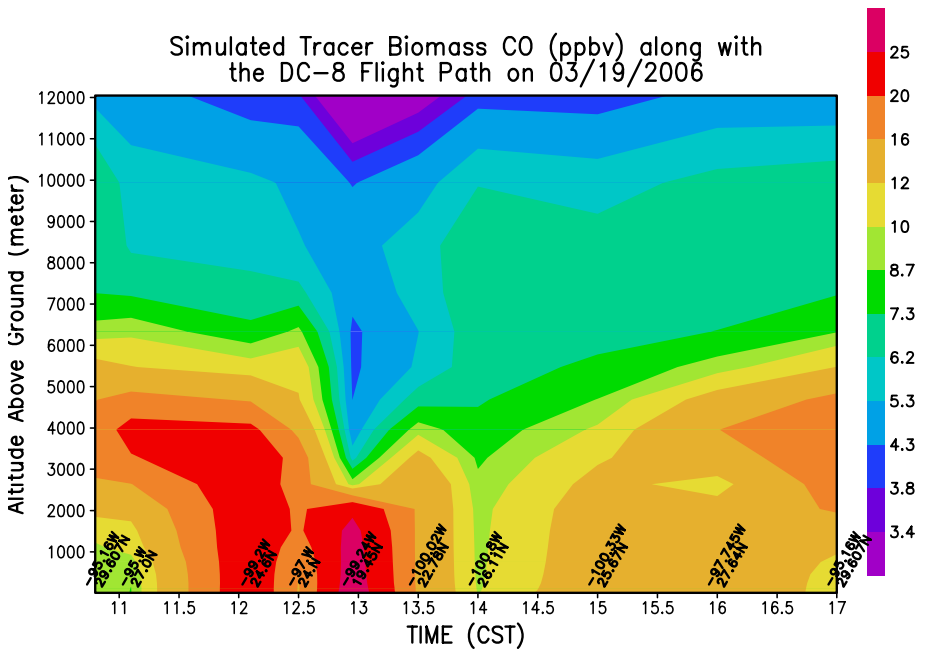

CGRER, University of Iowa
Simulated S-N Cross Section NOy (ppbv)
over the Model Grid Lon=-97.99W at 18GMT, 3/19/2006
Altitude (meter)
Model S-N Cross Section
90
W in cm/s
0.21
0.3
0.43
0.61
0.87
1.2
2
2.8
3.9
5.4
7.6
11

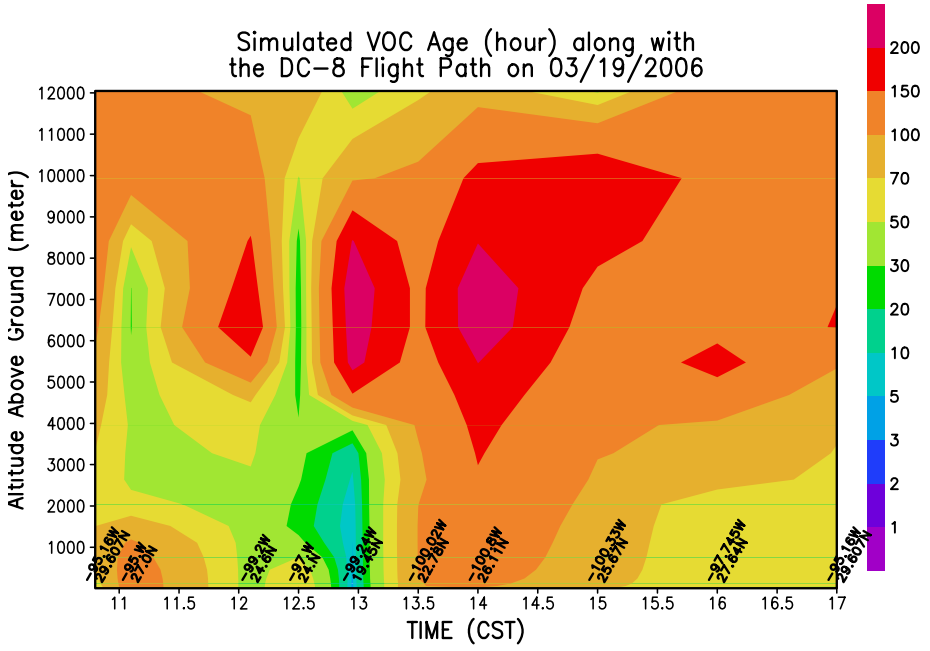


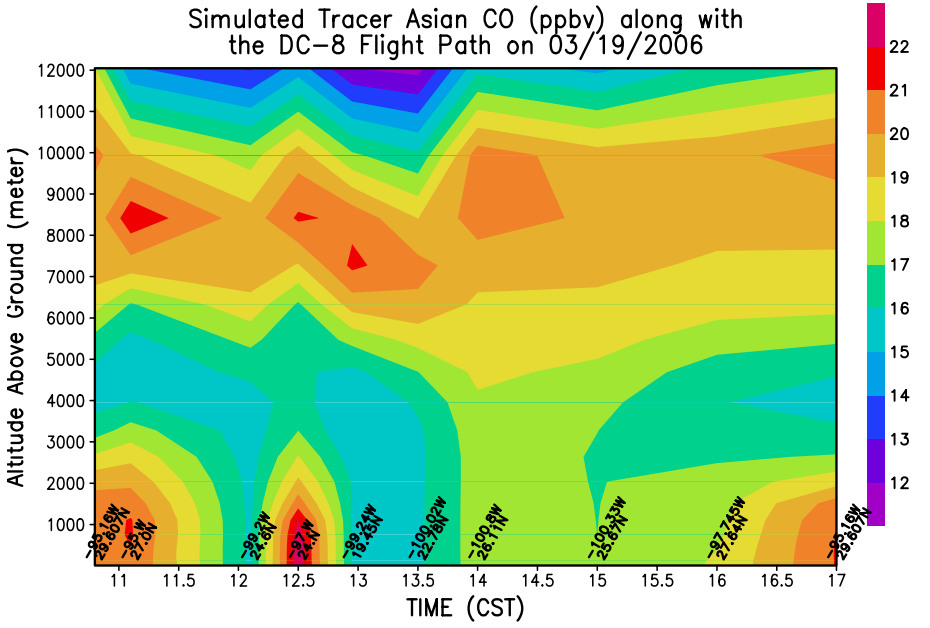


Asian influence will appear in northern Mexico


Simulated Tracer Mexico City CO (ppbv) along with
the DC-8 Flight Path on 03/19/2006
Altitude Above Ground (meter)
TIME (CST)
160
96
58
35
21
12
9.1
5.3
3
1.6
0.79
0.3


Simulated Tracer Biomass CO (ppbv) along with
the DC-8 Flight Path on 03/19/2006
Altitude Above Ground (meter)
TIME (CST)
25
20
16
12
10
8.7
7.3
6.2
5.3
4.3
3.8
3.4


Simulated VOC Age (hour) along with
the DC-8 Flight Path on 03/19/2006
Altitude Above Ground (meter)
TIME (CST)
200
150
100
70
50
30
20
10
5
3
2
1


Simulated Tracer Asian CO (ppbv) along with
the DC-8 Flight Path on 03/19/2006
Altitude Above Ground (meter)
TIME (CST)
22
21
20
19
18
17
16
15
14
13
12