

Basin-Scale Forecasting

Benjamin de Foy

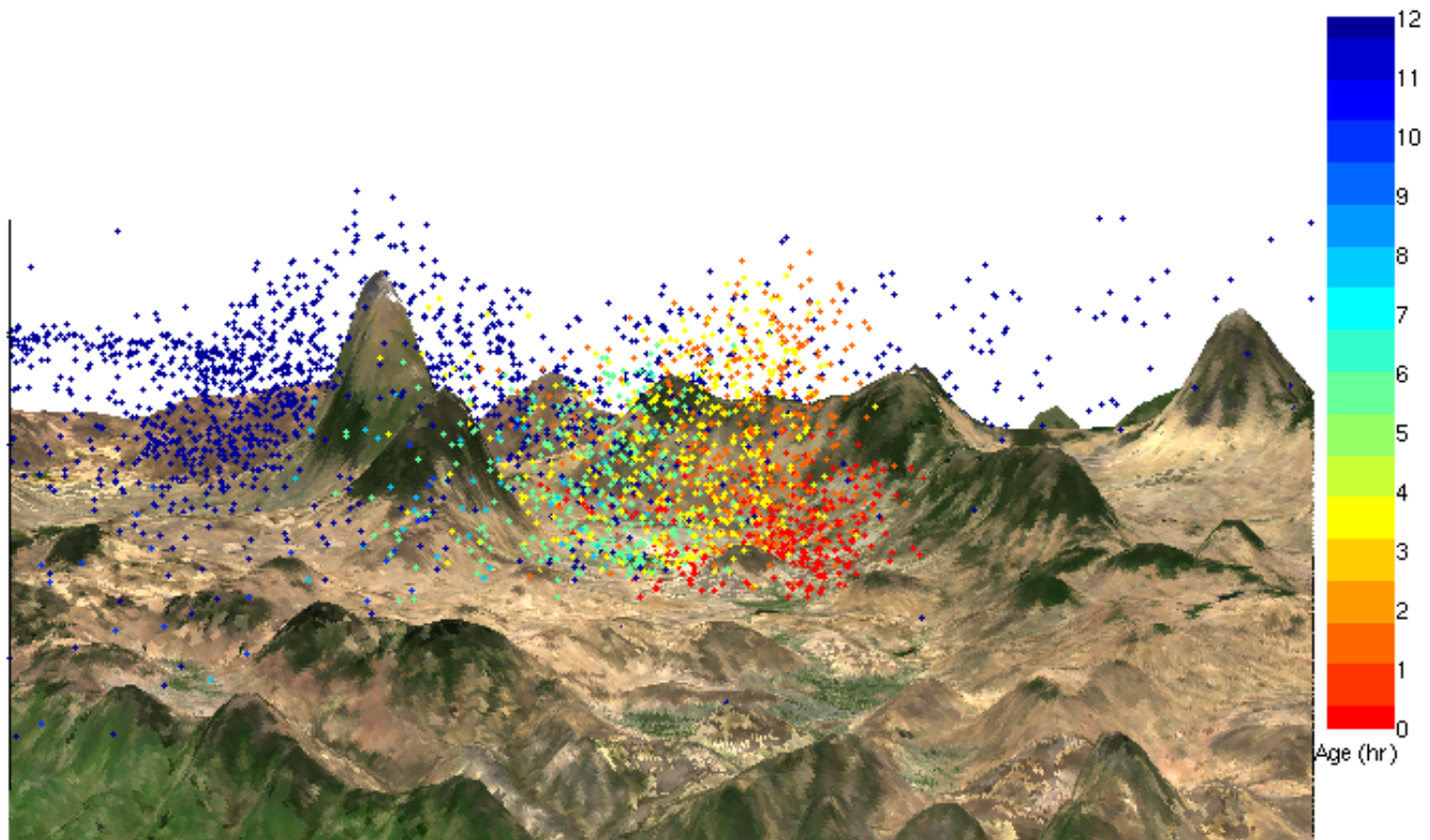
Molina Center for Energy and the Environment

14th March 2006

(<http://mce2.org/forecast>)

MCMA Plume Cloud 08-Mar-2006 12:00 - 13:00 CST

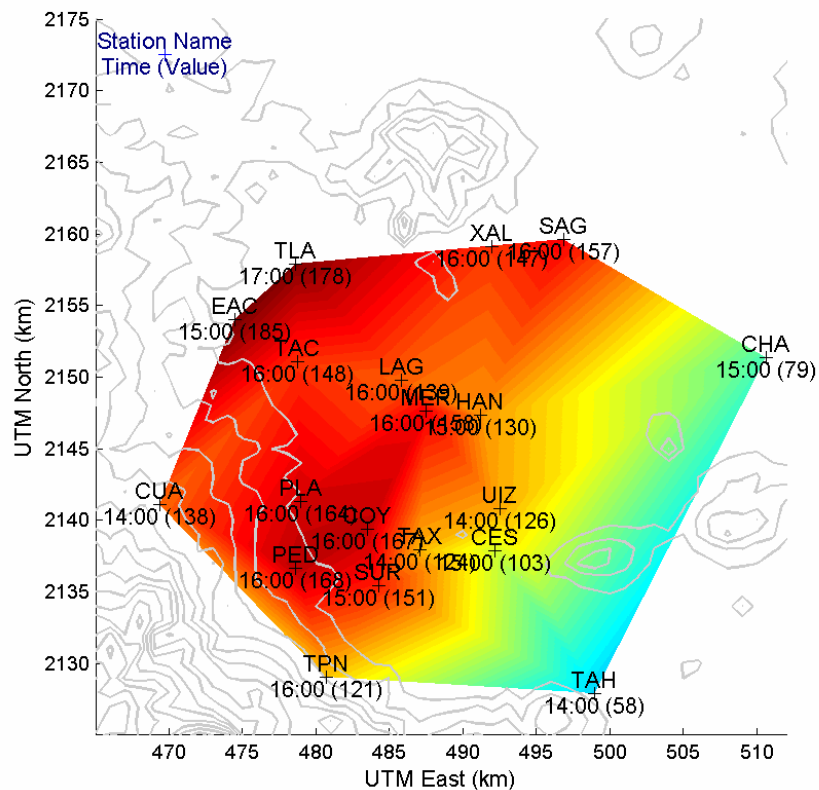
72 hr FLEXPART forward trajectories



SIMAT Max Surface Ozone so far: Sat 11 March

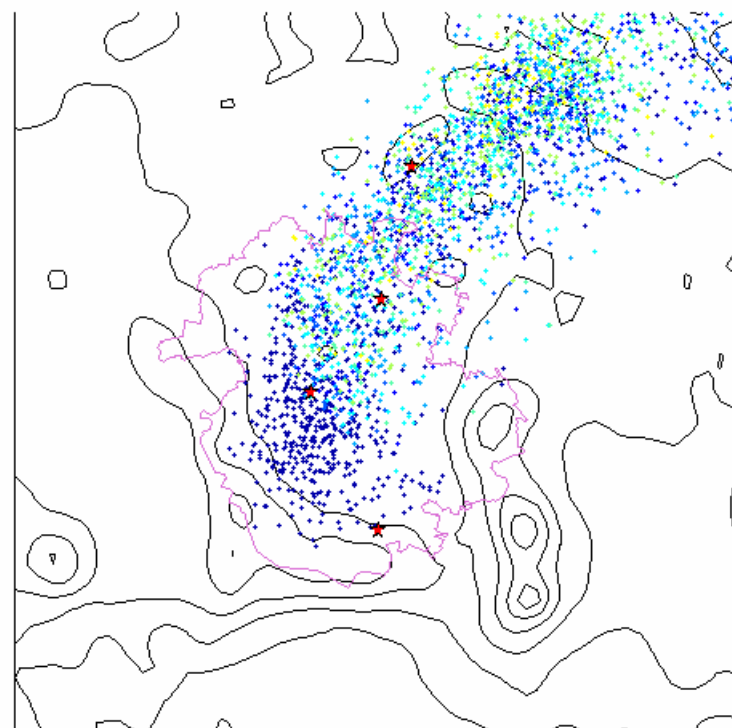
<http://catalog.eol.ucar.edu/milagro/>

Max O3 (SIMAT) for Sat 11-Mar-2006
Range: 58 - 185 ppb



MCMA CO Tracer, 16:00 CST

MCMA Plume Cloud 11-Mar-2006 16:00 - 17:00 CST
72 hr FLEXPART forward trajectories

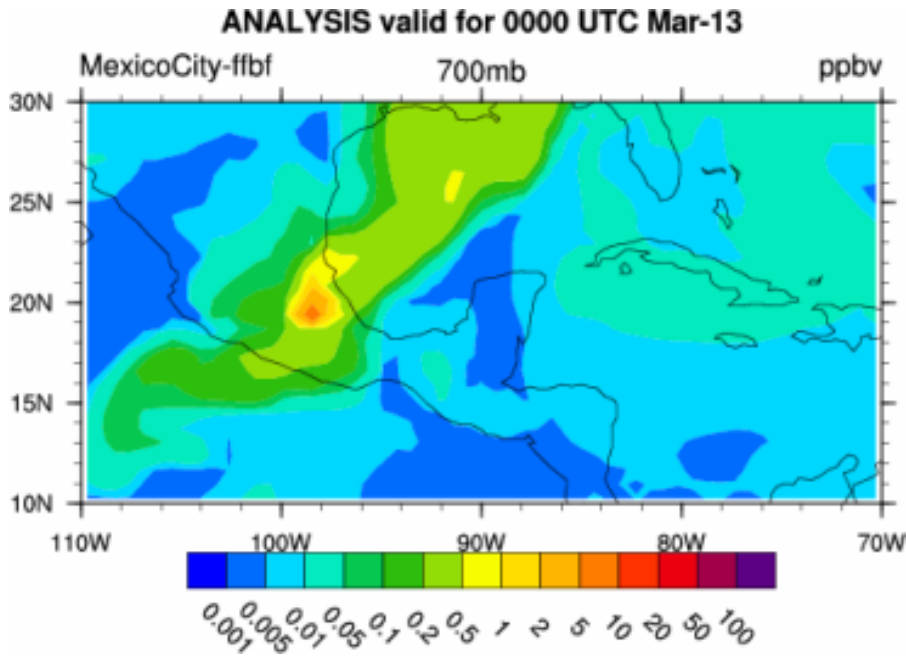


MODIS Biomass Burning Modis Rapid Fire, Sunday 5th March

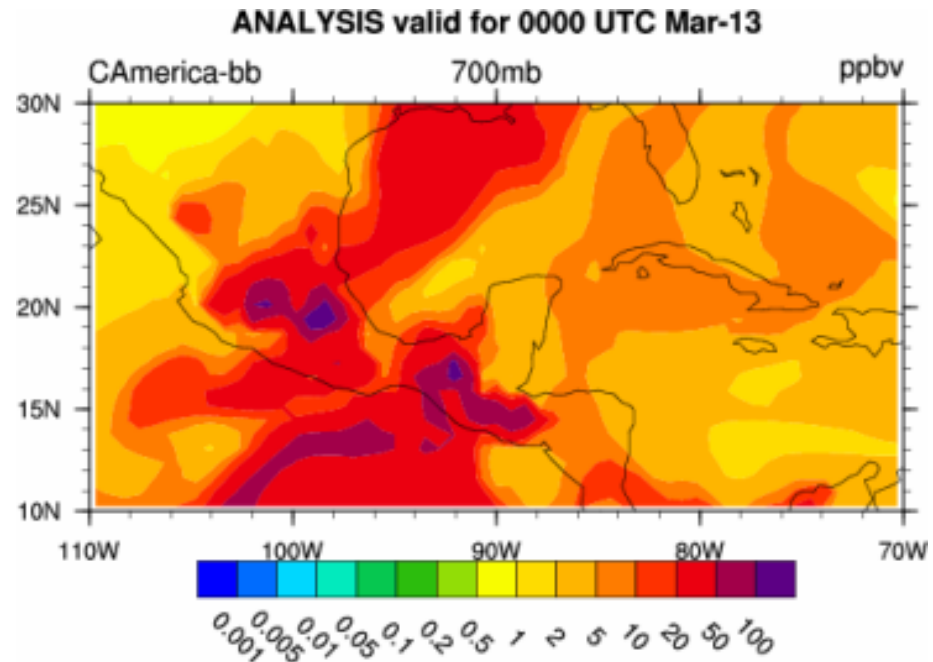


MOZART Near-Real Time MOPITT CO Assimilation

MCMA: Fossil Fuel + Biomass

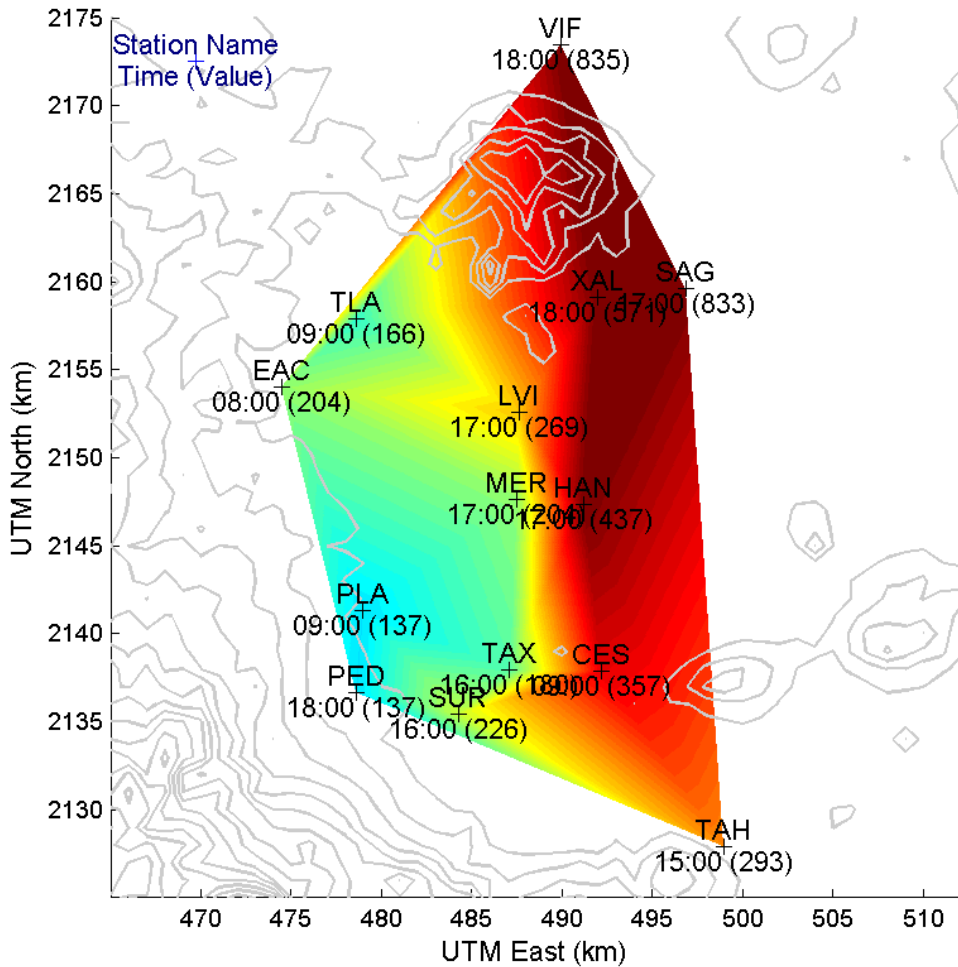


Central America Biomass Burning

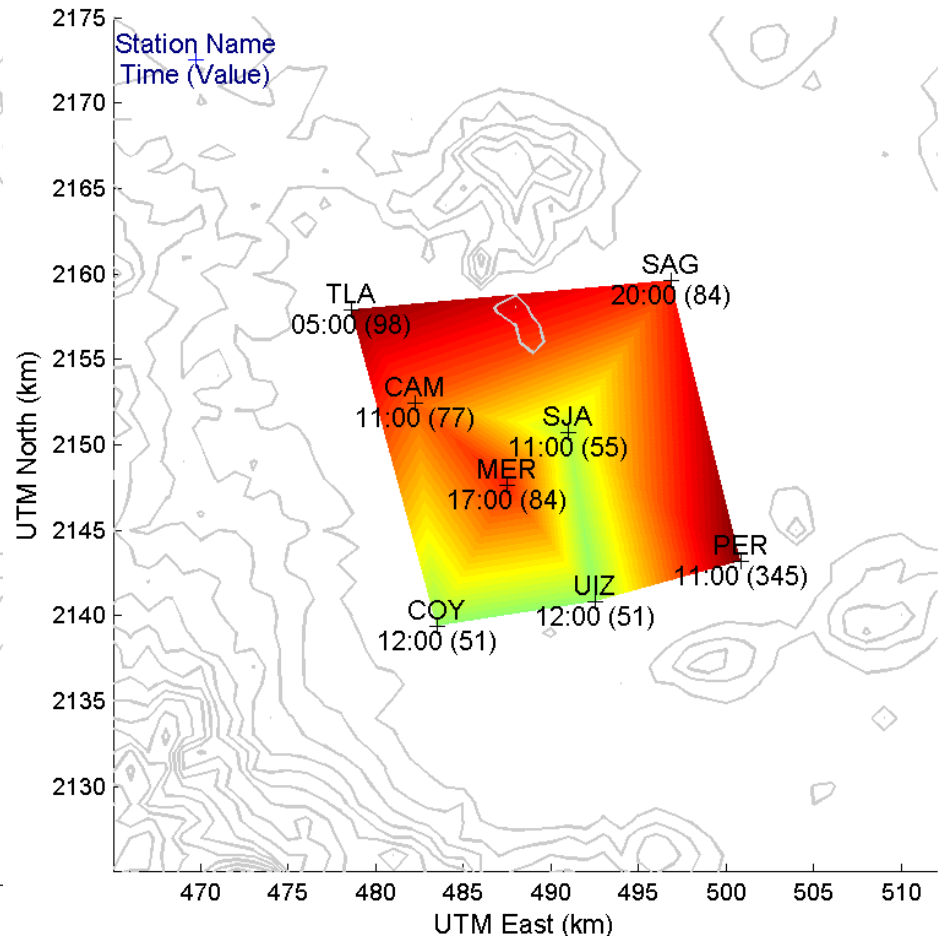


SIMAT Max Surface PM10 and PM2.5 for Thu 9 March

Max PM10 (SIMAT) for Thu 09-Mar-2006
Range: 137 - 835 ug/m3



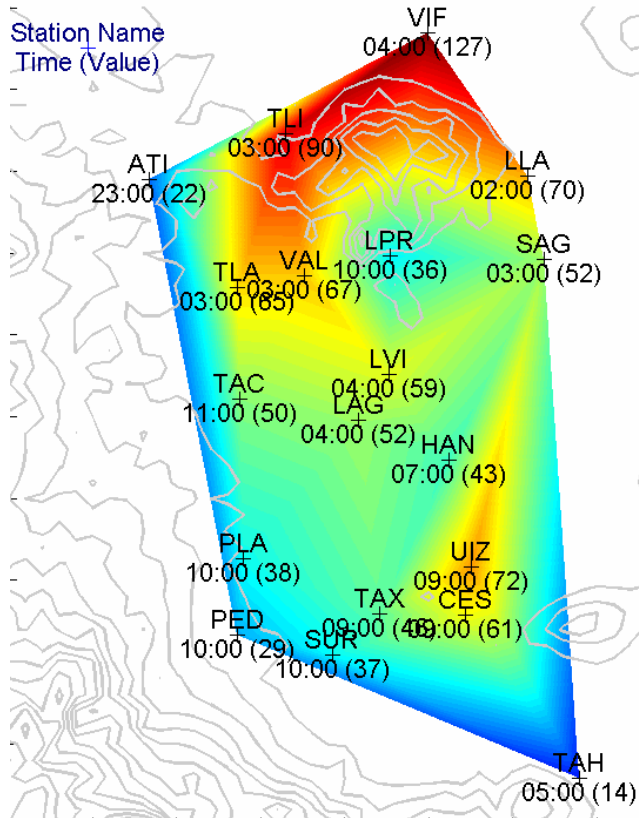
Max PM2.5 (SIMAT) for Thu 09-Mar-2006
Range: 51 - 345 ug/m3



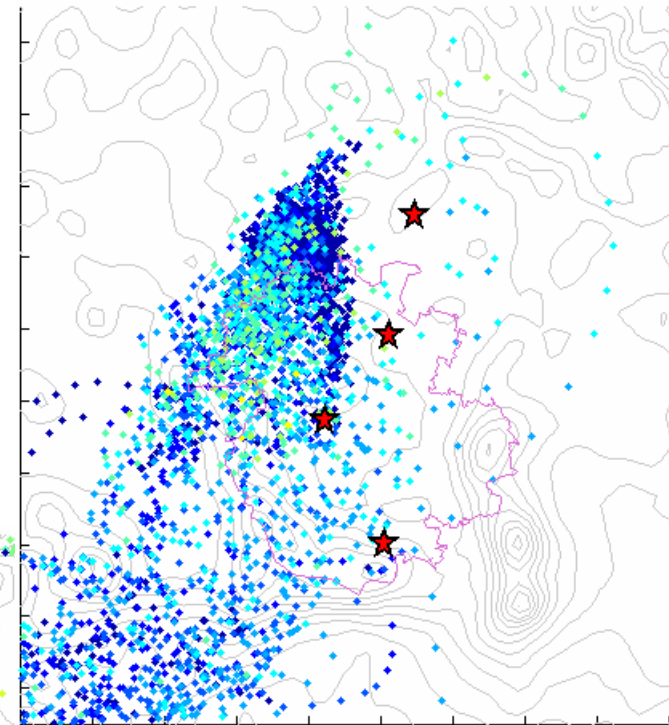
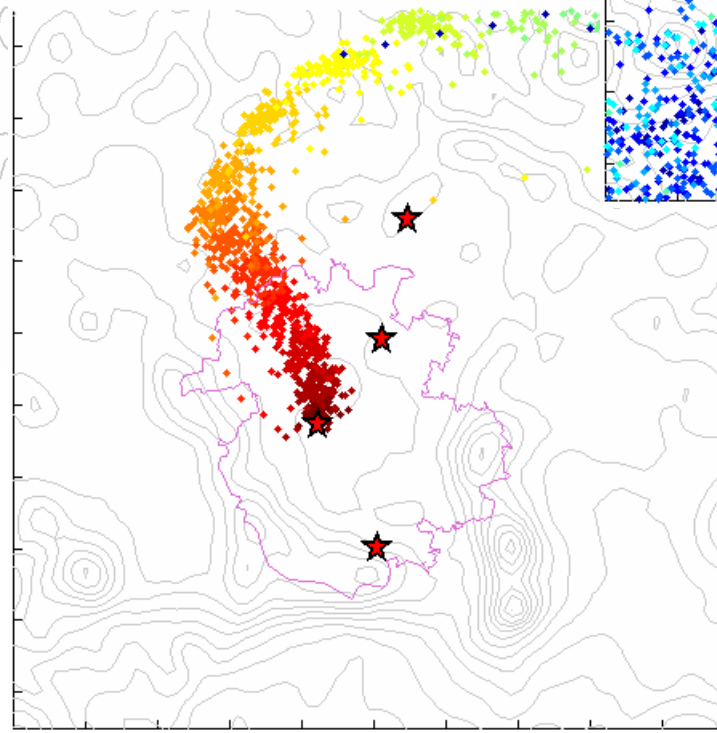
SO2 peak: Sat 4 March, 04:00 CST

Forward Tula Tracer, 00:00

Max SO2 (SIMAT) for Sat 04-Mar-2006
Range: 14 - 127 ppb



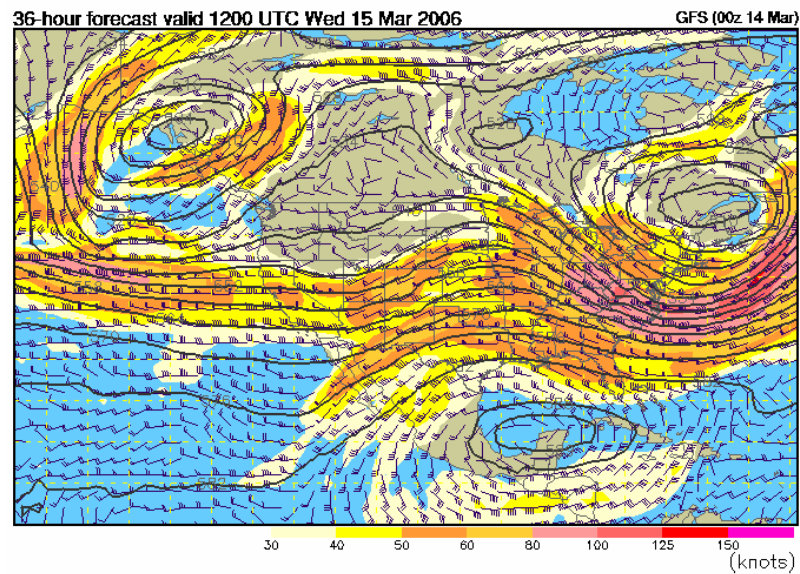
T0 Back-Trajectory, 04:00



Large Scale Weather Outlook – GFS 500mb Heights

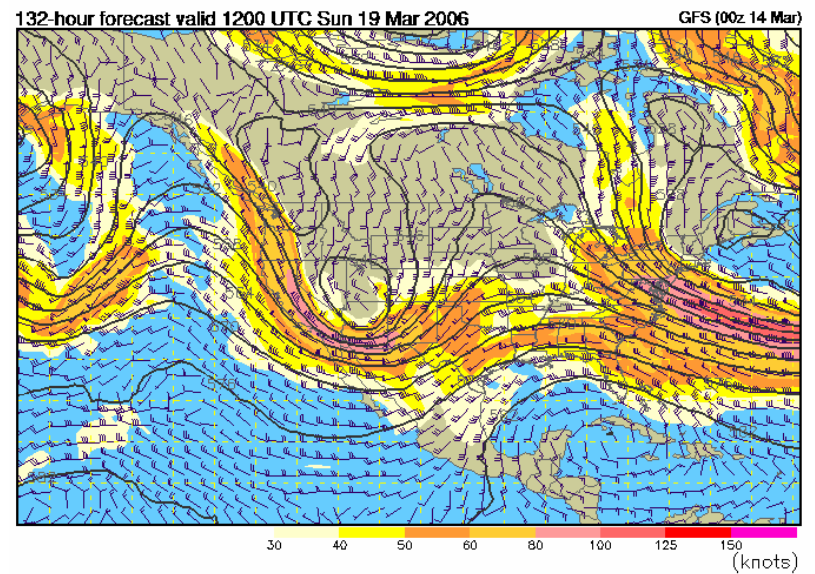
Wed 06:00 CST

500 mb Heights (dm) / Isotachs (knots)



Sun 06:00 CST

500 mb Heights (dm) / Isotachs (knots)

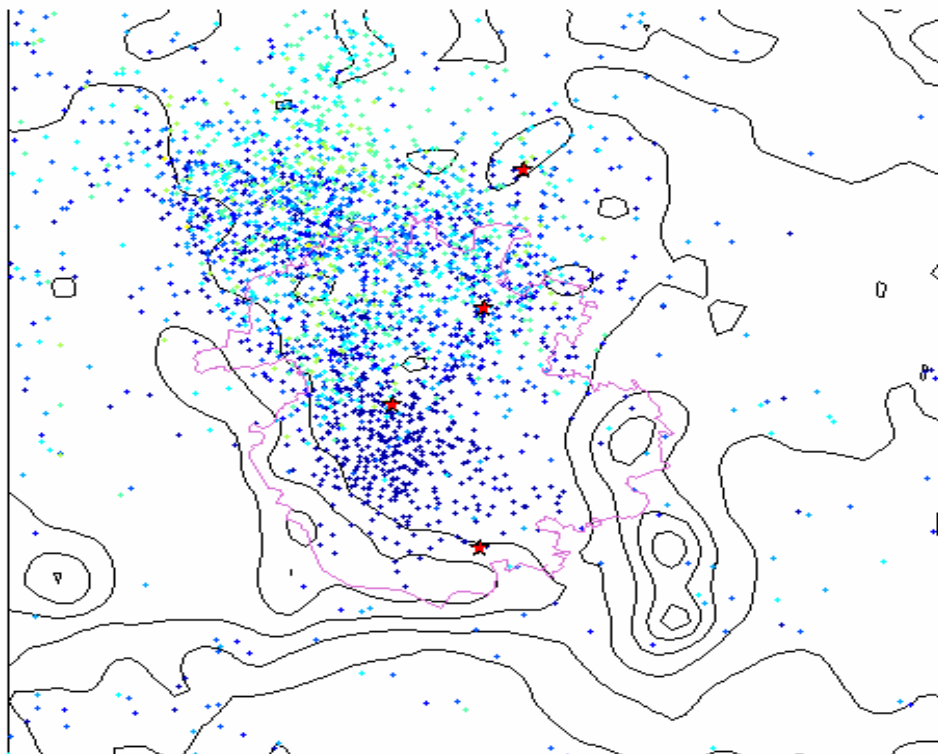


MCMA Forward Trajectories: Urban Plume based on CO Tracer

<http://mce2.org/forecast>

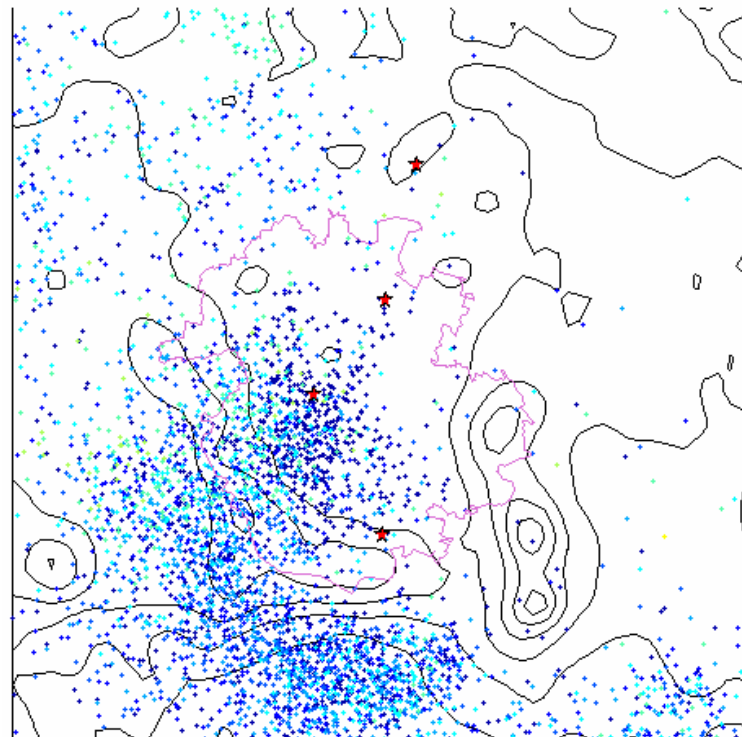
Tue 14, 14:00: Plume to NW

MCMA Plume Cloud 14-Mar-2006 14:00 - 15:00 CST
72 hr FLEXPART forward trajectories



Thu 14, 14:00: Plume to SW

MCMA Plume Cloud 16-Mar-2006 14:00 - 15:00 CST
72 hr FLEXPART forward trajectories

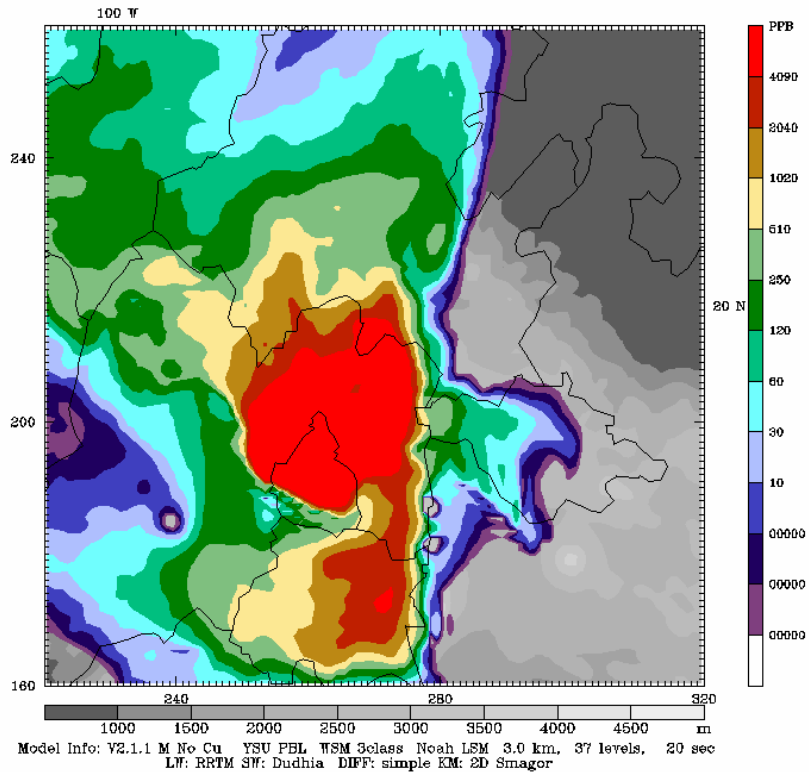


MCMA Forward Trajectories: Urban Plume based on CO Tracer

<http://www.mmm.ucar.edu/projects/mirage>

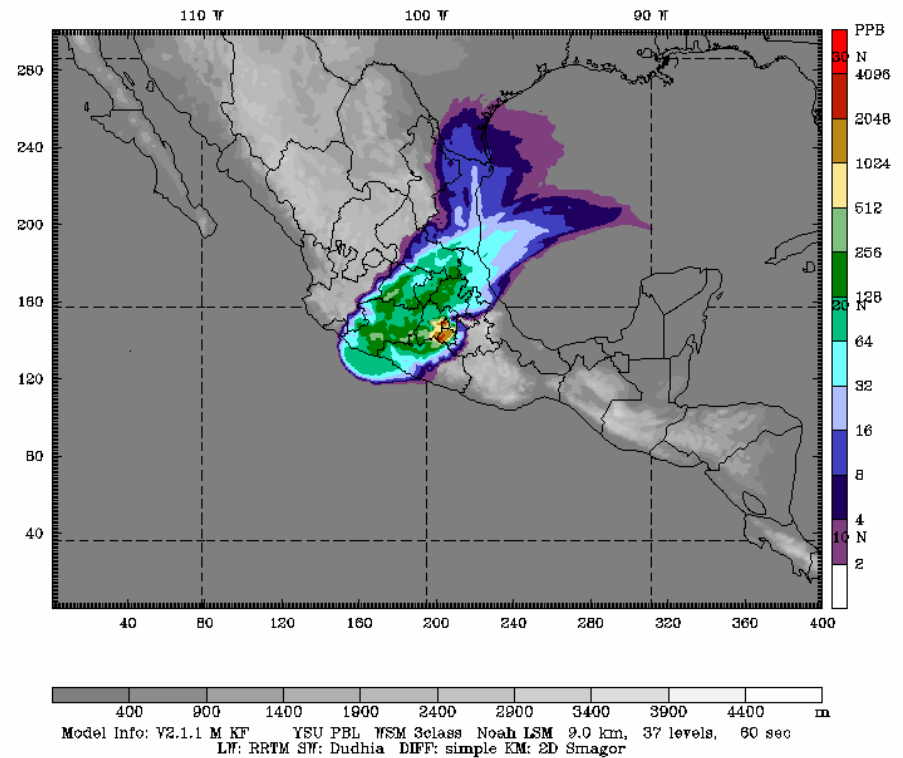
Tue 14, 14:00: Plume to N

Dataset: dom2 RIP: dom2 Init: 0000 UTC Tue 14 Mar 06
 Fcst: 20.00 h Valid: 2000 UTC Tue 14 Mar 06 (1300 MST Tue 14 Mar 06)
 Terrain height AMSL
 Mass weighted c1 integral



Thu 14, 14:00: Plume to SW

Dataset: dom1 RIP: dom1 Init: 0000 UTC Tue 14 Mar 06
 Fcst: 69.00 h Valid: 2100 UTC Thu 16 Mar 06 (1400 MST Thu 16 Mar 06)
 Terrain height AMSL
 Mass weighted c1 integral

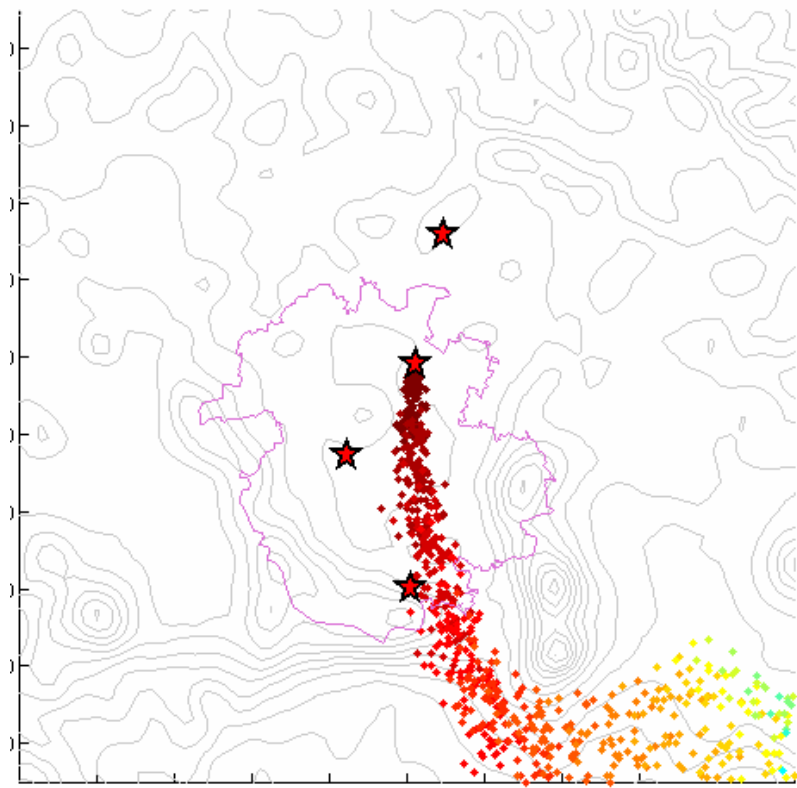


Back-Trajectories for Tue 14 March

Possible Lagrangian Exp Day: Urban outflow reaches T1 and T2

T1 Back-T. at 14:00-15:00

T1 Reverse Traj, 14-Mar-2006 14:00-15:00 CST
48 hr FLEXPART/MM5 Simulation



T2 Back-T. at 14:00-15:00

T2 Reverse Traj, 14-Mar-2006 14:00-15:00 CST
48 hr FLEXPART/MM5 Simulation

