

ARI Mobile Lab Activities

Update March 22: Santa Ana (reported by Scott Herndon)

The truck had a hot drive from T1 to Santa Ana. On-road data was recorded. At Santa Ana there have been some changes to the road and evidently it was like déjà vu to get the truck up to Santa Ana. The lab is positioned for the O3 south day anticipated tomorrow.

After that, decisions regarding the last 4-5 days are pressuring one another. Soot and Tula have patiently waited as the truck has been making its rounds.

Update March 23 (reported by Berk Knighton)

The mobile lab is now located at Santa Ana. We suffered a regional wide power outage Wednesday evening that brought all of the instruments down on the mobile lab. The mobile lab is now be manned 24 hours a days. We recovered from the incident relatively unscathed and all of the instruments were operational by Thursday morning.

The Norte event never materialized and we only saw limited outflow from the city. We did observe elevated SO₂ levels which were correlated with increased particle number densities. The NO_x to NO_y ratio and the distribution of aromatic compounds observed by the PTR-MS indicated that we did observe some intrusions of photochemically processed air.

It rained last night. Predictions were still calling for outflow from the city later in the evening. It will be interesting to see what impact the rain had on our observations. The mobile lab will remain at Santa Ana Friday (March 24).

Below is the figure of the hydrocarbon data taken during our drive from T1 to Santa Ana. Note the increase in all of the hydrocarbon levels as we pass through the city ~ 12:00 - 1:40 pm. Also note the elevated levels of acetone and acetaldehyde in the northern part of the city (early time period) relative to that in the south. The prevailing winds that day were from south to north.

Drive data from T1 to Santa Ana. Note elevated hydrocarbon levels as we pass through the center of city ~ 12:00 - 1:40 PM.

