Flux Tower Update (March 25, 2006)

(Reported by Erik Velasco)

Olefins fluxes
The eddy covariance system to measure olefin fluxes using a Fast Olefin Sensor has been working properly the entire campaign.

PTR-MS fluxes
Fluxes of a number of aromatic and oxygenated VOCs have been measured by the disjunct eddy covariance technique using a Proton Reaction Mass Spectrometer.
In particular we have been measuring fluxes of toluene and C2-benzenes.

Fluxes of VOC by DEA
We have measured fluxes of selected VOCs through the Disjunct Eddy Accumulation technique. Samples of VOCs are collected in canisters in hourly periods as function of the up or down winds. The samples are analyzed by GC-FID. Preliminary fluxes look promissory.

The rain storm on March 24 affected our system. We are fixing it.

Fluxes of CO
Using a commercial CO monitor and the gradient method we have been measuring fluxes of CO.

Fluxes of CO2
We are measuring fluxes of CO2 by two techniques: eddy covariance with an open path sensor and by the gradient method using a close LICOR sensor.

Fluxes of aerosols
We are using an Aerodyne Mass Spectrometer to measure fluxes of aerosols. The AMS has been failing constantly. Today is the first day in which the AMS hasn't failed.

PPAH measurements
We have been measuring PPAH concentrations and the active surface area of aerosols at different heights using photoionization sensors and the flux tower. PPAH concentrations have been lower than 10 ng ! m-3 at heights above 15 m.

Aerosol sampling
Colleagues from UNAM and UCSD have been collecting aerosols samples satisfactorily to analyze their composition and structure.

DOAS system
Colleagues from UCLA are measuring profiles of pollutants such as O3, SO2, HONO, HNO3, etc using a DOAS and three mirrors located at different heights at the PEMEX tower. Besides, they are using a MAX DOAS to get vertical profiles.