Balloon Launch Field Notes

Summary: Afternoon launch on NW flow coordinated with C130 near US border
Launch Date and time: March 18, 2006 at ~4:30 and ~6:00 pm
Balloons: CMET (standard size / 110 liter sp volume)
Launch Team: Paul and Oscar
Weather: Southerly winds, hazy
Departure Time (from Veracruz): ~8:15 AM
Launch Sites and Arrival Times:
Tepeji del Rio at ~3:30 pm
System failures: terminator failure on one balloon
Transport Issues: none but van barely powerful enough to get up out of MC
Launch Errors: heated first balloon in car - overshot to ~20,000 ft and saved
Operational Errors: none
Science Data: yes - plume found by C130, thin and diluted as expected
Additional Data: good CO and O3 from mobile instrument w/ UNH O3 sensor
Duration: 25 hours, 30 hours

Notes: Two balloons were transported by minivan to Mexico City in a large cargo van. In Mexico City, air was hazy. The launch site was found quickly by turning off the autopista at the first exit for Tepeji del Rio, traveling north approximately 1 km and turning right just prior to a pedestrian bridge onto a steep road. The site was a large dirt field with piles of debris at the south end. Some convective cumulus were seen on peaks to south of launch site. First CMET balloon was launched with 28 kPa DP with preheating to clear power lines at the north end of the launch site. It ascended rapidly to ~20,000 ft, stabilized, and returned slowly to its control altitude. The second balloon was launched ~2 hours later (at dusk) with no preheating. It cleared the power lines but then descended into a gully north of the site. A quick phone call to Tom and new control constants sent the balloon up several minutes later. During the return trip through MC, the haze grew more intense with many drivers using their headlights before nightfall. At the worst point (near tolls) the air stung the eyes. Took extensive photos at the site and further south at the toll plaza (first?) south of the site. The return route was closer to MC center in order to drop Maurico a bus station. The balloons were well controlled through the night and the next day (over the Gulf). Power had to be managed carefully to allow for multiple soundings. Soundings provided excellent information about layers and shear, particularly on the plains southwest of Tampico. Successful intercept with C130 followed by termination near the limit of US airspace. Houston Center said they could accommodate a crossing, but only with more warning (several days). First balloon terminated successfully. Second did not terminate and had to be crash-landed into the Gulf.