

Recent Hourly Gas Chromatographic Measurements from the WLEF Tall Tower

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Hourly measurements of CO (Figure 1), CH₄, N₂O, and SF₆ resumed on the WLEF tall tower (45.93°N, 90.27°W, 472 m above sea level) in August 2003 at three levels (30, 76, and 396 m). The measurements were made using a 4-channel gas chromatograph with electron capture detector ECD detectors. Hourly measurements of three CFC species (F11, F12, and F113) resumed in June 2004. All of the measured species except for F113 show significant day-to-day variability, reflecting the influence of spatially heterogeneous sources. We will present the hourly measurements, comparisons with weekly flask measurements, correlations between different species, and an investigation of near-field source patterns using the Stochastic Time-Inverted Lagrangian Transport (STILT) model.

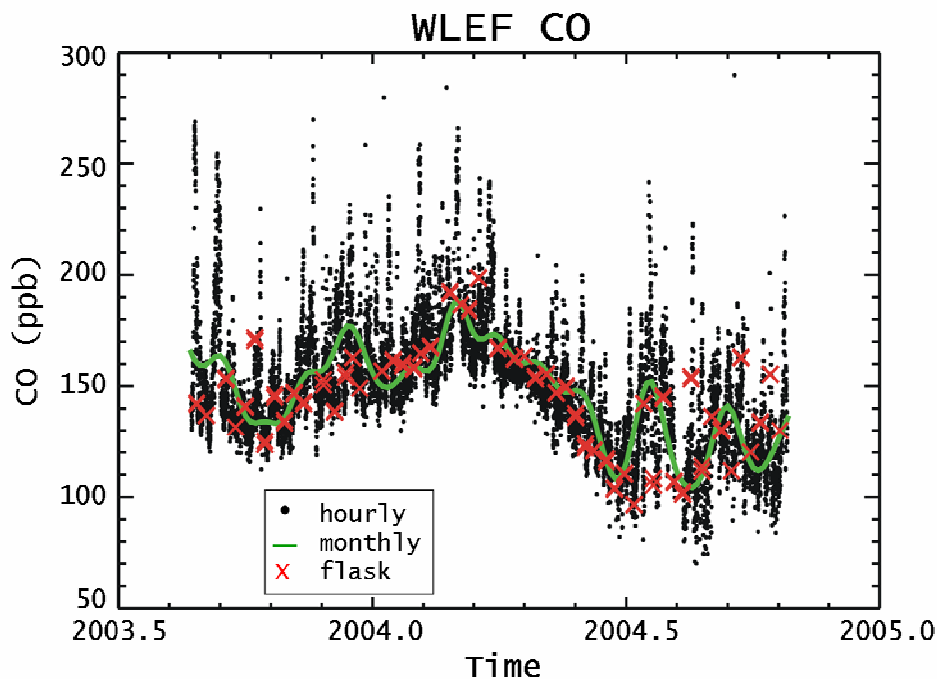


Figure1. Recent hourly measurements of carbon monoxide from the WLEF tall tower, shown with monthly smoothing of the hourly measurements and flask measurements, for comparison.