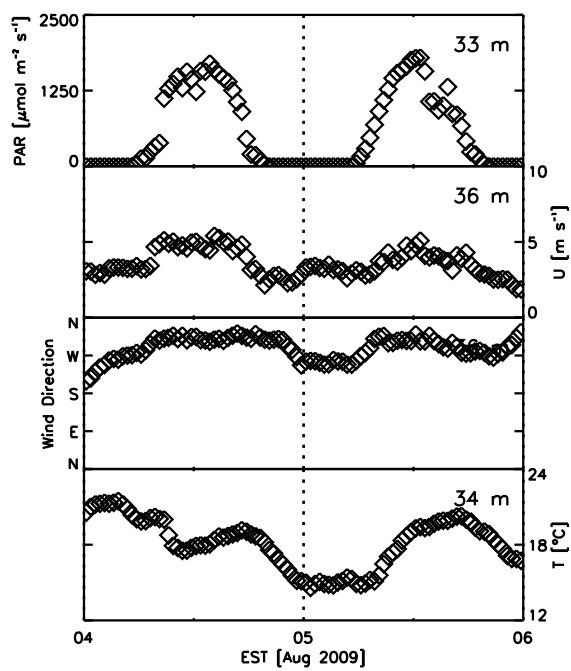


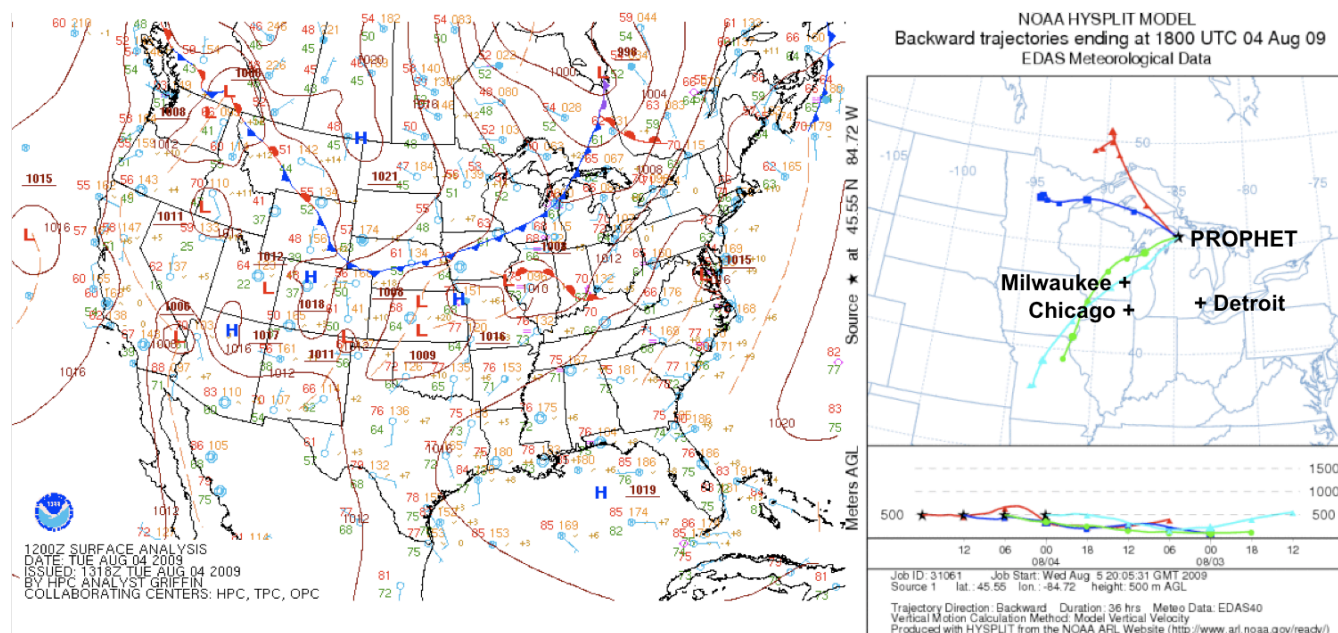
# **In-canopy gas-phase chemistry during CABINEX 2009: Sensitivity of a 1D canopy model to vertical mixing and isoprene chemistry Supplement**

**Abstract.** Synoptic-scale meteorological conditions for the 4–5 August 2009 case period, time series of meteorology used as input in CACHE, and modeled versus measured gly-oxal.

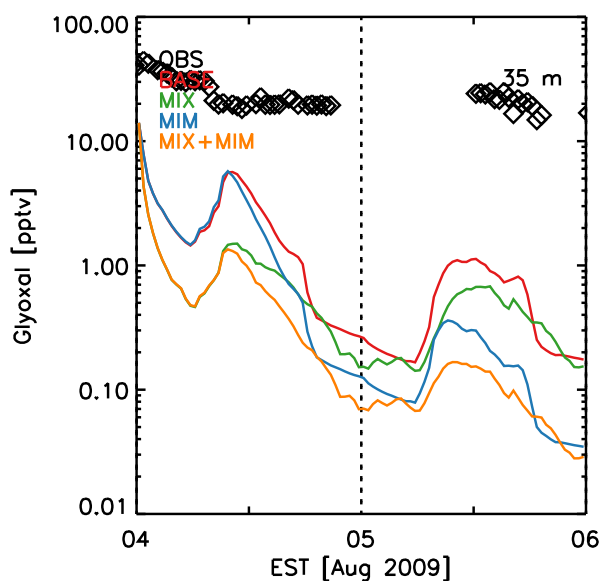
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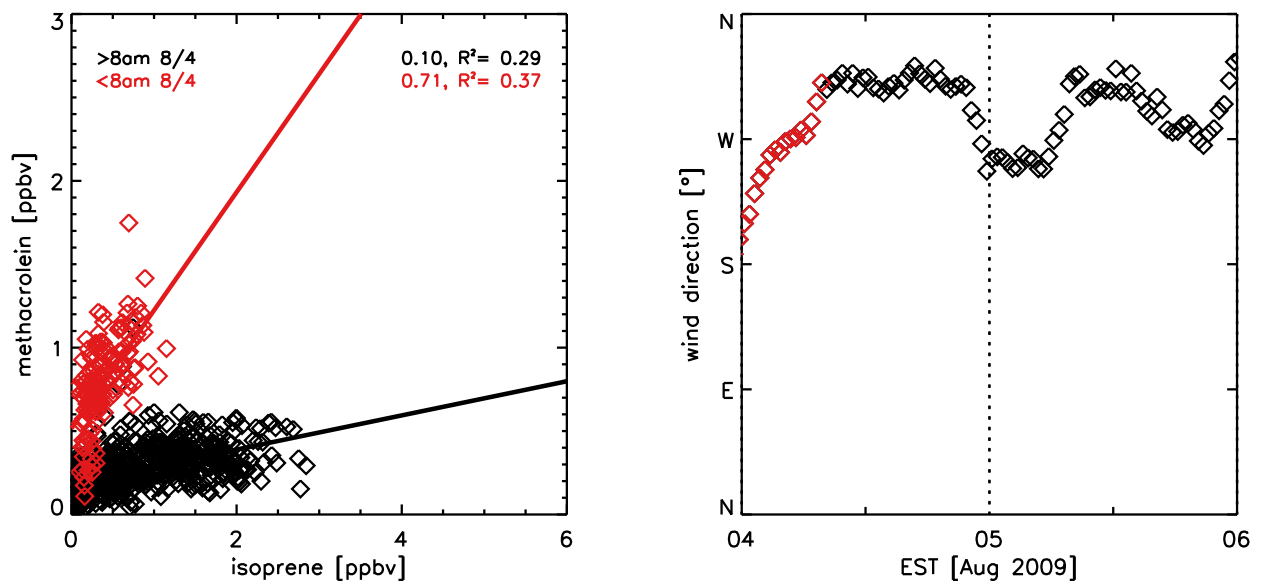
**Fig. 1.** Observed photosynthetically-active radiation (PAR), wind speed ( $U$ ), wind direction, and temperature ( $T$ ) measured at the PROPHET tower.



**Fig. 2.** Surface reanalysis (left) for 07 EST 4 August 2009 and 36-hour backward trajectories (right) ending at 19 EST on 3 August 2009 (cyan), and 01 EST (green), 07 EST (blue), and 13 EST (red) on 4 August 2009. Surface reanalysis data is provided by the National Center for Environmental Prediction (NCEP), a division of the NOAA Climate Diagnostics Center. Back-trajectory data is provided by the NOAA (R. R. Draxler and G. D. Rolph, HYSPLIT (Hybrid Single-Particle Lagrangian Integrated Trajectory) model, accessed via NOAA ARL READY Website, Air Resour. Lab., NOAA, Silver Spring, Md., 2003, available at <http://www.arl.noaa.gov/ready/hysplit4.html>)



**Fig. 3.** Measured and modeled glyoxal concentrations during the 4–5 August 2009 simulation period.



**Fig. 4.** MACR+MVK/isoprene ratios for the full CABINEX 2009 campaign (1 Jul–9 Aug, left) and the two-day case study (45 Aug, center). Wind direction for the two-day case study are shown at right. In the center and right plots, red values indicate observations prior to the frontal passage (approx. 8 AM), and the black values represent after the frontal passage. Slopes of the linear regressions and the correlation coefficients ( $R^2$ ) are given in the upper right hand corner of the left and center figures.