

Results from the Trinidad Head Site During the ITCT-2K2 Field Study

D.D. Parrish¹, D.B. Millet², and A.H. Goldstein²

¹NOAA Aeronomy Laboratory, 325 Broadway, Boulder, CO 80305-3328;
303-497-5274, Fax: 303-497-5126, E-mail: David.D.Parrish@noaa.gov

²ESPM–Ecosystem Sciences, University of California, Berkeley, CA 94720-3110

The establishment of the CMDL baseline observatory at Trinidad Head, California, in spring of 2002 provided us the opportunity to operate a marine boundary layer surface site during the Intercontinental Transport and Chemical Transformation 2000 (ITCT-2K2) field study in April and May 2002. The long-term measurements of CMDL and colleagues were enhanced with a suite of short-term measurements. These included measurement of gas-phase hydrocarbons and oxygenated volatile organic carbons (VOCs), and size-resolved aerosol composition. This latter analysis was performed by aerosol mass spectrometers and a Davis Rotating-drum Universal-size-cut Monitoring (DRUM) sampler with synchrotron X-ray fluorescence. An overview is presented of some of the important results that are beginning to emerge from the analysis. For example, as shown in Figure 1, the oxygenated VOC measurements provide evidence for an important light-driven maritime source of acetaldehyde (CH_3CHO).

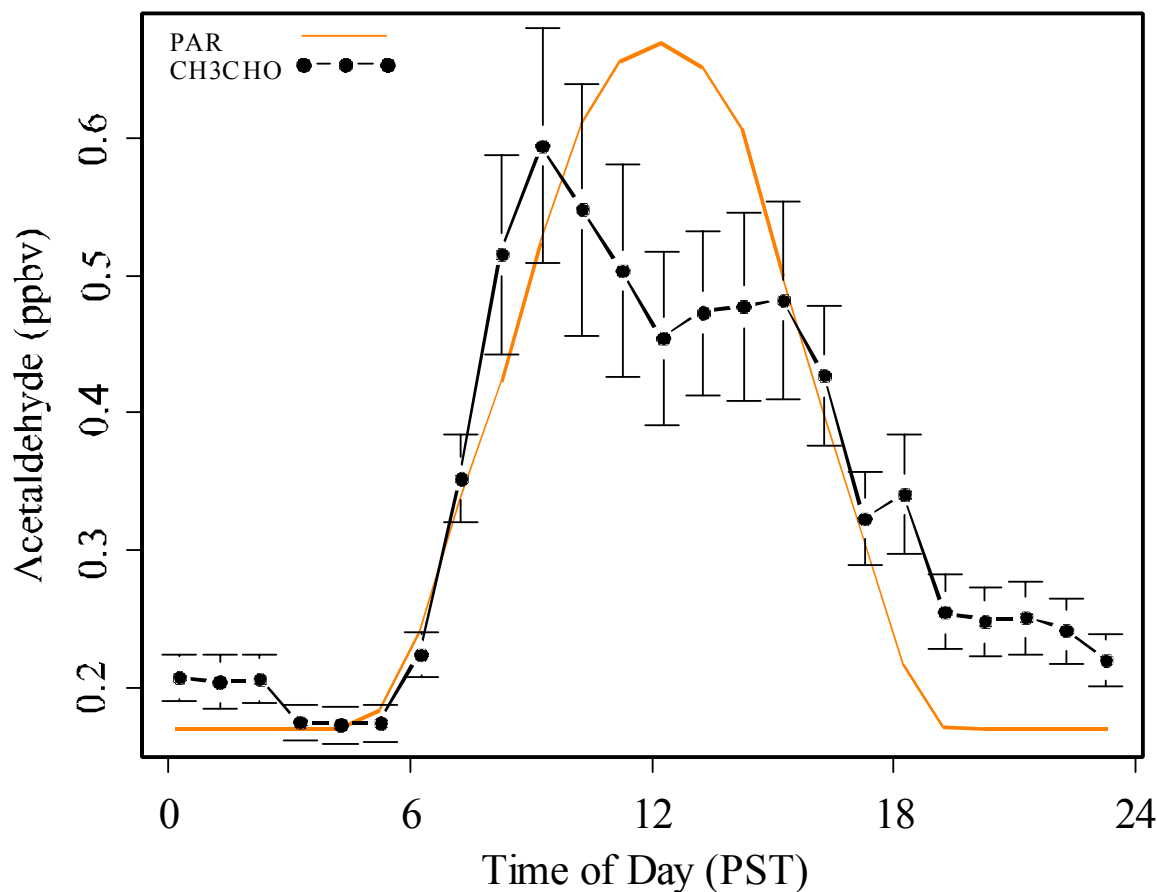


Figure 1. Acetaldehyde (CH_3CHO) and photosynthetically active radiation (PAR) as a function of time for 1 day of the ITCT-2K2 study at Trinidad Head.