

Trinidad Head After One Year

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Using the Intercontinental Transport and Chemical Transformation 2002 (ITCT-2K2) experiment as a springboard, CMDL formally began operation of its fifth observatory in spring of 2002. Trinidad Head (THD), California, is the first observatory added to CMDL's network since 1973. Initial efforts, although paired with a broader scope of measurements for the ITCT effort, were modest in scope. Before this, however, balloonborne ozonesondes had been launched since 1995 from the Humboldt State University Marine Laboratory near Trinidad Head. Also, sample collection for nitrous oxide (N_2O) and many halogenated gases (e.g., Figure 1) began in early 2002, making use of the inlets for the Advanced Global Atmospheric Gases Experiment (AGAGE) in situ instrument at the north end of the site. In April, the CMDL trailer was installed on site, along with an additional trailer for the ITCT measurements. As the ITCT project geared up, CMDL installed a radiation array, instruments for measuring the size distribution and chemical composition of aerosols, and a spectrometer for measuring surface ozone. Flask samples for carbon cycle gases were also collected during and after the ITCT experiment.



The ITCT experiment ended in May, but the radiation array and the CMDL trailer with its instrumentation remain on top of Trinidad Head. Halocarbon sampling and ozonesonde launches also continue as they had previously. The temporary scaffolding for sampling inlets will be replaced with a 10-m tower, to be installed upon final environmental approval. This site has also generated interest from other line offices of NOAA, specifically the National Weather Service (NWS), which will be installing a taller tower for wind measurements, and NOAA's National Climate Data Center (NCDC), which will be surveying the site for part of its Climate Reference Network (CRN), a long-term effort to monitor global climate change.

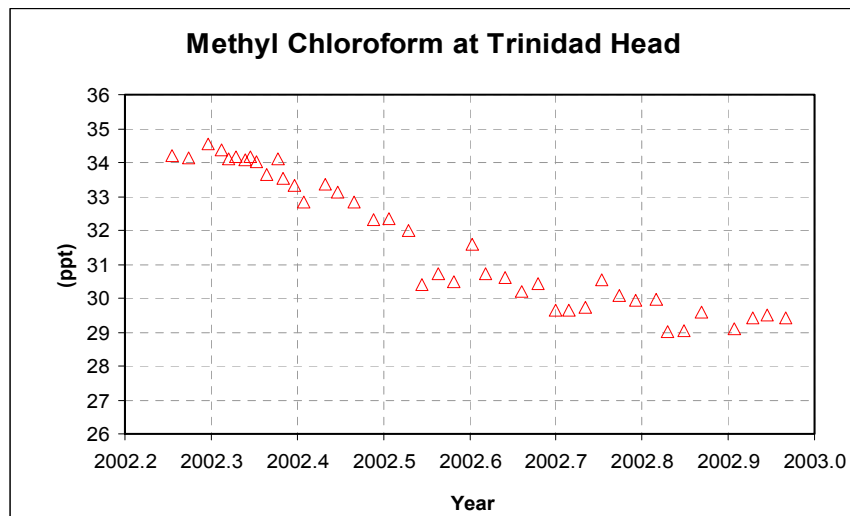


Figure 1. Methyl chloroform (CH_3CCl_3) from flask samples collected at Trinidad Head, California. This is one of a number of gases now decreasing in the atmosphere as a result of the Montreal Protocol restrictions on production. Changes in the atmospheric mixing ratio of this gas has been used in the past to calculate the global mixing ratio of the hydroxyl (OH) radical, the primary oxidant in the troposphere.