

## The Mt. Kenya GAW Station Report, Recent Results, and Long-Term Planning

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Among the six new Global Atmosphere Watch (GAW) stations, one is at Mt. Kenya (Figure 1). It provides continuous high-quality data and long-term information of the atmospheric responses to global change caused by natural or anthropogenic activities. The data are also used for research into climate-change prediction. The station is situated in the Mt. Kenya National Park at an elevation of 3897 m above sea level and close to the equator at 0° 3'S, 37° 18'E. Routine measurements of CO, O<sub>3</sub>, black carbon, solar radiation, precipitation chemistry, and meteorology have been ongoing since 1999. The remote high-altitude site frequently encounters free tropospheric air and offers an ideal environment for measuring background levels of greenhouse gases and aerosols as well as tropospheric chemical and dynamic processes that affect their concentrations.

Recently, cooperative flask sampling started with CMDL for the analysis of CO, CO<sub>2</sub>, N<sub>2</sub>O, CH<sub>4</sub>, H<sub>2</sub>, SF<sub>6</sub>, and the natural isotopes. Initial results of samples analyzed at CMDL give values in the range of 370-380 ppm for CO<sub>2</sub> but more data are required to make a time series. CMDL and GAWTEC conducted training for scientists at the station and more training is expected. Instrument calibration was undertaken in February 2005 by the World Meteorological Organization (WMO) World Calibration Centre in Switzerland for surface ozone, carbon monoxide, and methane. The results of the intercomparison look very good. The GAW data are edited by staff at the station and the data are also sent to the WMO GAW world data centers. Recent facility status and upgrades include an increase in personnel, an upgrade of the data acquisition system, installation of new computers with a Global System for Mobile communications/General Packet Radio Service (GSM/GPRS) modem enabling easy and remote data access by international research scientists. For the station to realize its full potential, there is an urgent need to include more parameters in its observational program to increase the spatial coverage of most parameters observed. The way forward is to collaborate with well-established research institutions and funding agencies to start new programs at the station.

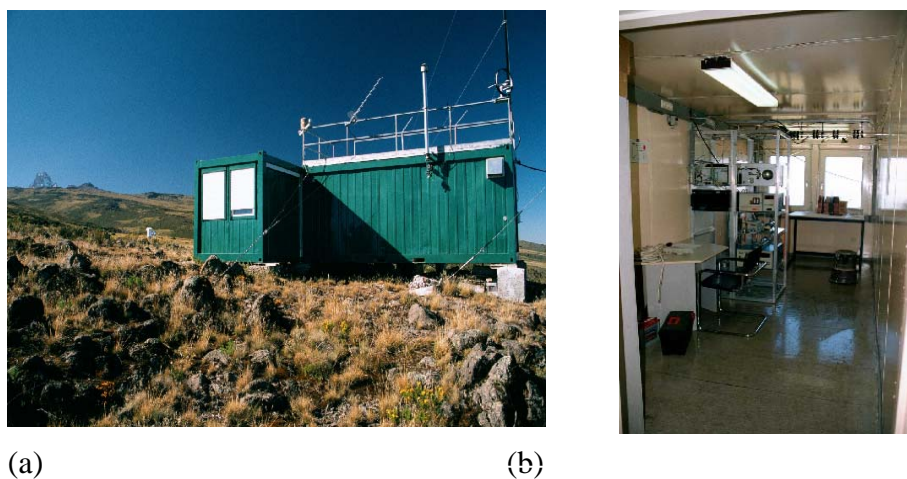


Figure 1. External (a) and internal (b) view of the station.