

Metadata Details

Title

Diurnal and Seasonal Variability in Carbon Monoxide at Maitri, Antarctica.

Science Keywords

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|-----------------|-----------------------|
| Category | Atmosphere |
| Topic | Atmospheric Chemistry |
| Expedition Year | 2003-2004 |
| ISO Topic | Atmosphere |

Summary

Abstract

Measurement of carbon monoxide (CO) has been carried out from a pristine site, Maitri, (70.77° S, 11.43° E) Antarctica. The obtained time series data for one-year period (January ? December 2004) clearly indicates the occurrence of definite diurnal and seasonal variation of CO concentration in ambient air at Antarctica. Monthly mean CO concentration has generally been observed highest in the months of August (72.62 ? 24 ppbv), September (73.17 ? 28 ppbv) and October (73.25 ? 27 ppbv) and minimum in the months of January (42.77 ? 15.06 ppbv) and February (43.24 ? 14.64 ppbv). Diurnal changes were systematically observed, with higher CO concentration during daytime sunlit period. This CO enhancement in daytime sunlit period could be due to the photochemical production by photolysis of organic matter.

Purpose

To study the diurnal and seasonal pattern of CO, online measurements of CO were carried out at Maitri, Antarctica. Here we report the results obtained from 12 months of regular observation during 2004 period, which shows the existence of diurnal and seasonal pattern of CO in Antarctica.

Data Center