



## **Tropospheric ozone behaviour at the ABC-Pyramid Observatory (Nepal, 5079 m asl)**

P. Cristofanelli (1), F. Calzolari (1), U. Bonafe' (1), A. Marinoni (1), F. Roccatò (1), E. Vuillermoz (2), G.P. Verza (2) and P. Bonasoni (1)

(1) ISAC-CNR, Bologna, Italy; (2) Ev-K2-CNR Committe, Bergamo, Italy

In the framework of Ev-K2-CNR “SHARE ASIA” and UNEP “ABC” projects, with the purpose to investigate natural and human-induced environmental changes at different scales (global, regional and local), continuous measurement of surface ozone have been conducted at high altitude in Himalayas.

In this work, we present the first year of ozone measurements, started in February 2006 and recorded at the ABC-Pyramid Observatory. This is a scientific research station installed at 5079 m a.s.l., in the high Kumbu valley (Nepal) on the southern edge of the Himalayas ridge. The yearly behaviour of ozone concentration exhibited a seasonal cycle with high values during dry and pre-monsoon periods and low values during the monsoon season. Even though in average, no diurnal variations has been recorded at the ABC-Pyramid site, ozone concentration can be strongly influenced not only by local mountain/valley breeze circulation but also by regional and “long-range” transport processes as stratospheric intrusions or air mass rich in mineral dust and/or anthropogenic pollutants. For each class of these transport phenomena, a case study will be analysed.