



Continuous measurements of aerosol parameters at the ABC-Pyramid Observatory (Nepal, 5079 m asl)

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With the purpose to well characterize the aerosol properties at high Himalayan altitudes, continuous measurements of chemical, physical and optical properties of particulate matter have been carried out at the ABC-Pyramid Observatory (5079 m a.s.l., Nepal) since March 2006. This activity, conducted in the framework of Ev-K2-CNR “SHARE ASIA” and UNEP -“ABC” projects, permits to well investigate seasonal and short-term variations of aerosol properties in the middle troposphere of the southern Himalayan ridges.

In this work, aerosol size distribution ($10\text{nm} \leq D \leq 30\text{nm}$), aerosol mass (PM₁, PM₁₀), aerosol total scattering and absorbing coefficients, as well as chemical composition and aerosol AOD have been considered. This large set of continuous measurements permitted to draw a characterization of the atmospheric aerosol in terms of typical behaviour, possible source origins and air mass transport processes.