

## ATMOSPHERIC STATION

<b>Name:</b>	Monte Cimone (IT-CMN)
<b>Location (lat-long):</b>	Italian northern Apennines, 44.1666 – 10.6833, 2165 m a.s.l.
<b>Environment:</b>	Mountain peak
<b>Operational history:</b>	1978 – present.
<b>Scientific purpose:</b>	To investigate long-term variability of greenhouse gases as well as the role played by anthropogenic emissions and natural processes
<b>Station description:</b>	<p>Mt. Cimone is the only Global Station of the WMO/GAW in Italy. It is composed by the Operative Base of the Mountain Air Force Center (CAMM - Monte Cimone) and the “O. Vittori” climate observatory (CNR-ISAC). Mt. Cimone is the highest peak of the Northern Apennines with a completely free horizon. The closest inhabited areas are small villages situated 15 km from and about 1100 m below the station, whereas major towns are situated in the lowlands about 60 km away (Bologna on NE and Florence on SW). The industrial areas are not closer than 40 km and 2 km lower. The Laboratory runs on electric energy only. Forest of conifers and beech trees grow up to 1600 m, so that the station is above the timberline. Prevailing wind directions: SSW and NE.</p> <p>The measurement site is considered representative of the background conditions of the southern Europe/Mediterranean basin.</p> <p>Thanks to the co-operation between Italian Air Force, CNR-ISAC and Urbino University, Mt. Cimone provides continuous (365/365 and 24/24) observations of ICOS parameters and other atmospheric variables (trace gases and aerosol). The CNR observatory is equipped with fast internet connection for near real-time data delivery and remote control of instrumentation.</p>
<b>Measured ICOS core parameters:</b>	Atmospheric carbon dioxide, methane.
<b>Measured ICOS desirable parameters:</b>	Wind speed and direction. Atmospheric pressure, air temperature, relative humidity, carbon monoxide (in progress).
<b>Other measured parameters:</b>	Reactive gases (O <sub>3</sub> , NO, NO <sub>2</sub> , SO <sub>2</sub> ), greenhouse gases (CFCs, HFCs, SF <sub>6</sub> , N <sub>2</sub> O) and aerosol physical parameters (aerosol scattering and absorption, number size distribution,

integrated number concentration, equivalent black carbon, aerosol optical depth).

**Website/data portal:**

<http://www.aeronautica.difesa.it/cimone>

<http://www.isac.cnr.it/cimone>

**Responsible organization:**

Italian Air Force and National Research Council of Italy

**Principal investigator:**

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***Mt. Cimone with Air Force and CNR observatories***



***"O. Vittori" CNR observatory***



***Trace gas laboratory at the "O. Vittori" CNR observatory***



***Italian Air Force observatory***

