

## ATMOSPHERIC STATION

<b>Name:</b>	Plateau Rosa (IT-PRS)
<b>Location (lat-long):</b>	Northwestern Italian Alps, 45.9350 – 7.7070, 3480 m a.s.l.
<b>Environment:</b>	Very high mountain.
<b>Operational history:</b>	1989 – 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>Plateau Rosa is a Regional Station of the WMO/GAW. The high alpine research station Plateau Rosa (GAW Identification Code: PRS) is located in the north-western Alps area, in Valle d'Aosta, in the municipality of Valtournenche. The station is collocated in the Testa Grigia Laboratory and belongs to the National Research Council. It is collocated upon a large snow-clad bare mountain plateau and far from urban and polluted zones. No vegetation or soil is present in the vicinity.</p> <p>The station is equipped with an electrical heating system and does not use any fossil fuel. The Plateau Rosa is accessible for tourists in particular during the ski season, diesel-operated snow cars are sometimes used to maintain, at lower altitudes, proper conditions for skiing activity. The arrive of cable car is next to the monitoring station but approximately 10 m below the inlet pipeline. In the vicinity of the measuring station is placed a refuge and a cable car, which both operate only during daylight hours and for about eight months a year. The closest settlements are the tourist villages Cervinia (altitude 2050 m a.s.l. and 700 inhabitants) and Valtournance (altitude 1524 m a.s.l. and 2162 inhabitants), approximately 6 km to the W and 7.9 km to the W-SW, respectively. Aosta (altitude 583 m a.s.l. and 34'324 inhabitants) is located approximately 38 km while Turin (889'600 inhabitants), the first city closed to Plateau Rosa is at 96 km to the South. The highly industrialized Po Valley in Northern Italy is located at least 100 km to the SE.</p> <p>The climate at Plateau Rosa station is typical of a continental very high mountain location, with relatively large diurnal and seasonal variations of temperature, frequent changes of atmospheric pressure and strong winds.</p>

Owing to its high altitude and position, it results very often collocated out of the planetary boundary layer and so it is suitable for the background measurement of greenhouse gases. The internet connection does not exist. The landline telephone is available and enough reliable.

**Measured ICOS core parameters:** Atmospheric carbon dioxide and methane.

**Measured ICOS desirable parameters:** Wind speed and direction. Atmospheric pressure, air temperature, relative humidity.

**Other measured parameters:** Reactive gases ozone (O<sub>3</sub>).

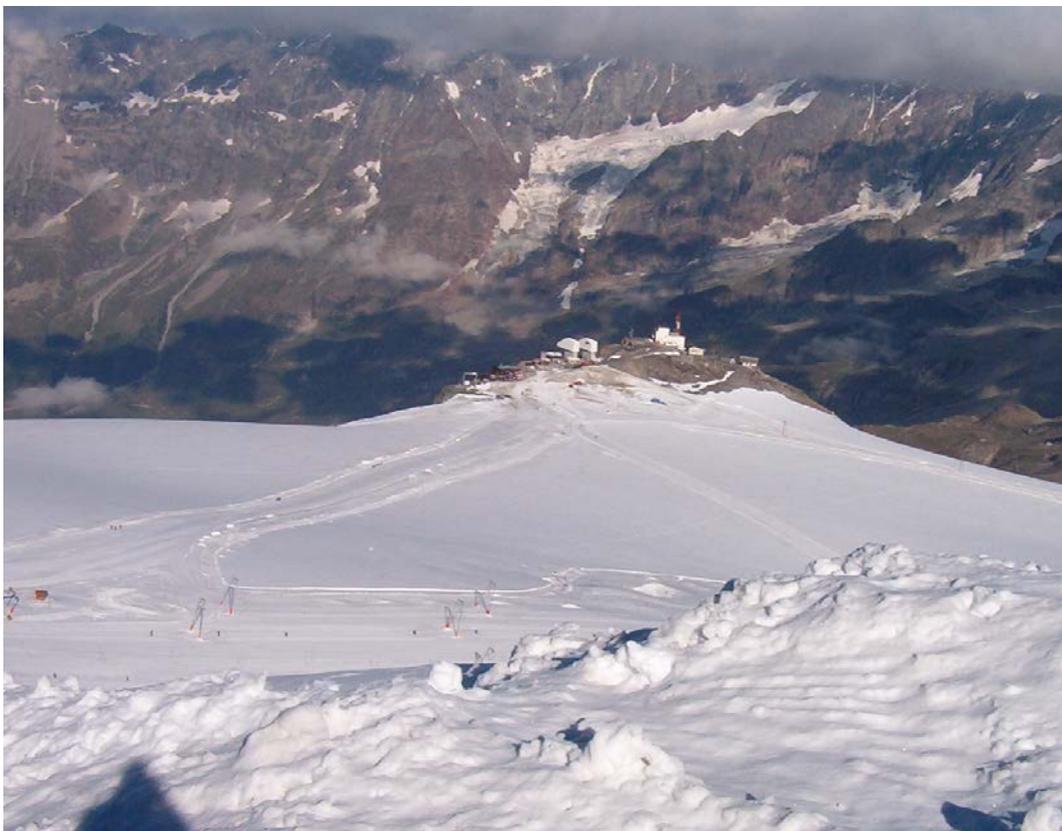
**Website/data portal:** <http://oasi.rse-web.it/>

**Responsible organization:** Ricerca sul Sistema Energetico - RSE S.p.A.

**Principal investigator:** Francesco Apadula ([francesco.apadula@rse-web.it](mailto:francesco.apadula@rse-web.it))

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### Station environment



Plateau Rosa site location (Testa Grigia Laboratory)

