



### *Regional field trip #3*

## *Permafrost, Glaciers and Climate Change in Valle d'Aosta: from Mont Blanc to Matterhorn*

**Location:** Val Ferret and Valtournenche in Italy

**Organization:**

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**Affiliations:**

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<sup>(2)</sup> Glacier & Permafrost Office, Fondazione Montagna Sicura, Courmayeur, Italy.

**Duration:**

2 days (June 30<sup>th</sup> – July 1<sup>st</sup>)

**Description:**

This field trip will take the participants to the discovery of the south side of Mont Blanc and Matterhorn by crossing the beautiful [Aosta Valley](#), a small Italian region surrounded by the highest peaks of the Alps. During the trip the participants will have the opportunity to observe and discuss the impacts of climate change on mountain slopes dynamics, glaciers, geohazards and natural resources.

The hot topics of the two days will include the hanging glacier of Grandes Jorasses and its monitoring system, the glacier/permafrost interaction at the Grapillon monitoring site, the Brenva rock-ice avalanche, the visits of Cime Bianche monitoring site, Gran Sometta rock glacier and Matterhorn.

The excursion will take place in alpine environment at altitudes between 2000 and 3100 m a.s.l, and is physically demanding. A 6 hours walk is planned for each day, with about 500 m of positive difference in level. Adequate equipment (good hiking shoes and all-weather clothes) and a fit physical condition are expressly required.

For further details look below the tentative programs of the two days.

This field trip is organized by [ARPAVdA](#), the Regional Agency for the Environmental Protection of the Aosta Valley. The program could slightly change in case of bad weather.

**Price:** 300 €

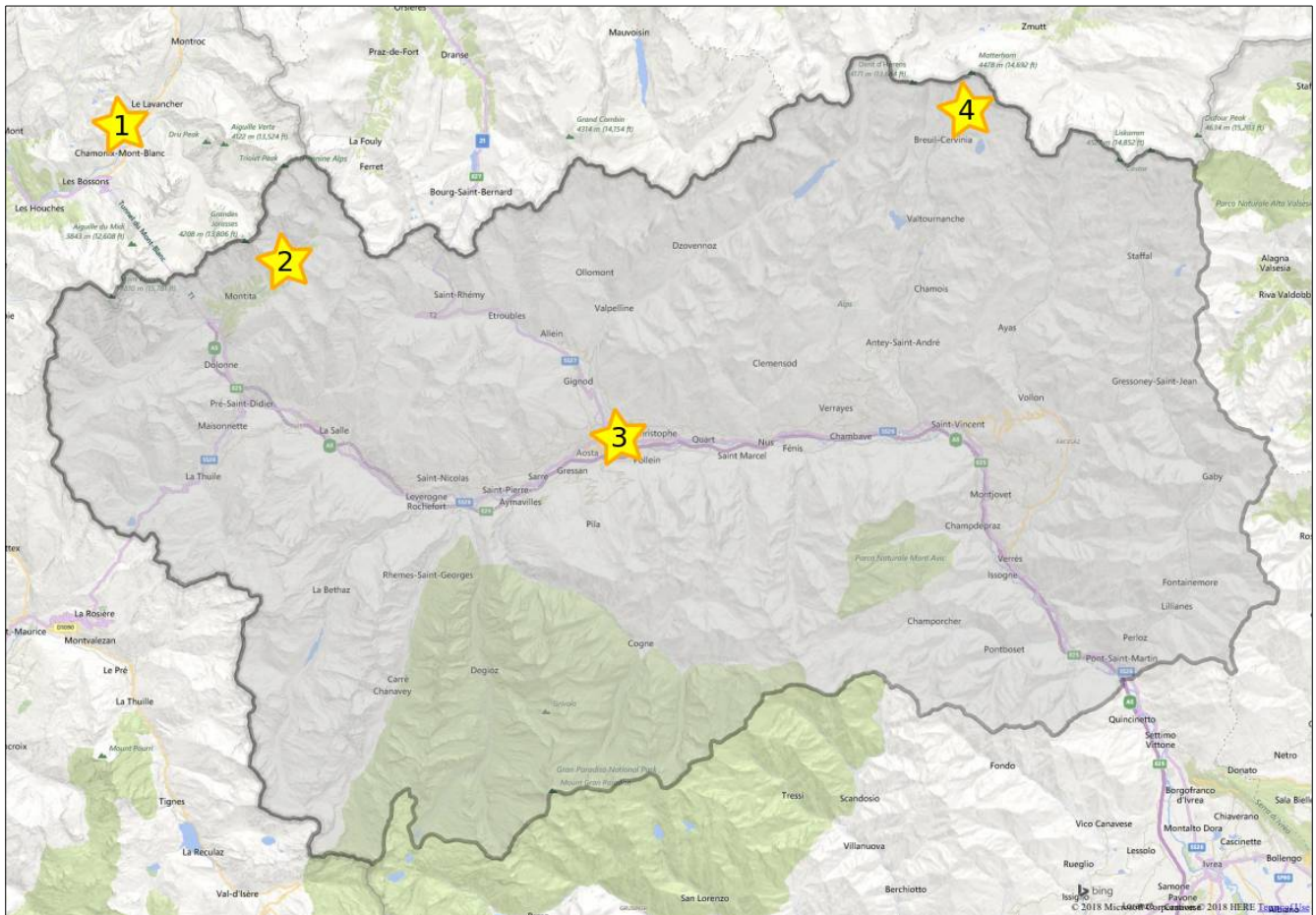
**Num. Max Participants:** 20

**Num. Min Participants:** 10

**Contact:**

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## Preliminary Program by Day



Regional map: 1. Chamonix, 2. Val Ferret (day1), 3. Aosta (hotel), 4. Cervinia (day2)

### - Thursday June 28th: regional field trip #3 information meeting at EUCOP

Short meeting to communicate the last minutes details of the field trip to the participants.

*Place and time to be defined.*

### - Saturday June 30<sup>th</sup> (Day 1) – Glaciers and permafrost in Val Ferret (Mont Blanc area)

Tentative Program

- 8:00 Departure of participants from Chamonix by private bus (exact place to be defined)
- 9:00 Start of the hike
- 9:00/10.15 From Lavachey (1650m) to Bonatti Hut (2025m) (stop 1)
- 11/14:30 From Bonatti Hut to Bertone Hut (2000m) (stop 2 and stop 3)
- 14:30 Lunch with traditional dishes
- 16/17:30 Return to the bus (Loc. Villair, 1350m)
- 17:30 End of the hike
- 17:30/18:30 Transfer to Aosta for the night (Hotel HB)

Topics stop 1: geology of the area, historical evolution of the Pré de Bar Glacier, presentation of the Petit Grapillon monitoring site (permafrost/glaciers interaction).

Topics stop 2: the Grandes Jorasses hanging glacier monitoring and risk management, temperatures evolution of the Grandes Jorasses north and south faces (permafrost in steep rock walls).

Topics stop 3: the Brenva rock-ice avalanche monitoring and risk management, view on the Miage Glacier.

## - Sunday July 1<sup>st</sup> (Day 2) – Permafrost in the Cervinia Basin (Matterhorn area)

### Tentative Program

- 8:00 Departure of participants from the Hotel HB
- 9:30 Cable-car from Cervinia (2000m) to Cime Bianche Laghi (2800m)
- 10:00 Start of the hike
- 10:00/11:00 From Cime Bianche Laghi to Colle Cime Bianche (3100m) (stop 1 and stop 2)
- 11:30/12:15 Descents to Gran Sometta rock glacier (2650m) (stop 3 and lunch break)
- 13:30/15:00 Return to the bus by walk (Cervinia)
- 15:00 End of the hike
- 15:00/16:00 Goodbye drink in Cervinia (with traditional appetizers)
- 16:00/18:30 Transfer to Chamonix (with one stop in Aosta if needed)

Topics stop 1: the fascinating geology of the area, temperatures of steep Matterhorn rock walls (from the bottom to the top)

Topics stop 2: presentation of the Cime Bianche monitoring site (role of the ground water and ice content on active layer dynamics, warming trends of deep permafrost temperatures)

Topics stop 3: the monitoring site of Gran Sometta rock glacier (monitoring of surface velocities from drone and continuous GNSS, internal structure and temperatures)

### *General information*

#### **Transportation**

All travels are foreseen by a bus rented for the field trip.

#### **Accommodation**

Hotel HB, Aosta (<http://www.hbaostahotel.com/>)

8 double rooms and 4 single rooms have been reserved.

#### **Meal**

Saturday: take in your backpack something to eat and drink during the morning. The lunch will be offered at the [Bertone Hut](#) in the early afternoon (around 2h30 p.m.). Dinner, free choice among the many restaurants, pubs and bars of Aosta (non included in the subscription).

Sunday: the Hotel HB will supply breakfast and backpack lunch for the day (2 sandwiches, 1 dessert, 1 fruit, 1 bottle of water). Goodbye drink in Cervinia.

Please don't forget to inform us about special diets!

#### **Price include:**

- organization of the excursion
- cable-car tickets
- accommodation and meals (dinner of Saturday excluded)
- transportation (bus from/to Chamonix)

#### **Price does not include:**

- the dinner of Saturday;
- any kind of insurance: it is strongly recommended that you are adequately insured for all of the activities that you will be taking part (hiking) and especially to take out insurance for repatriation in case of accident.

#### **What you need for each hiking day:**

Backpack (not too big!)

Hiking boot (no baskets!) and hiking socks

Hiking gear: functional T-shirt (both breathable and moisture-regulating), fleece, suitable pair of pants (take care to weather in mountain). Avoid extra gears and prefer light ones.

Waterproof/windbreaker jacket

Raingear (poncho can drape over your backpack and save you expense of a waterproof jacket)

Water bottle or camel bag

Cap, Sunglasses, Sunscreen

Thin gloves and Beanies

**Optional:**

Hiking poles

Gaiters

First Aid kit and personal medication

Binoculars

**What you don't need**

You don't need a big backpack for hiking, it is better to walk lightweight. All your personal stuff and luggages will be stored on the bus during the day.

**Difficulty, health and fitness**

This excursion is physically demanding and participants should have a good level of fitness (about 5h hiking are foreseen during each day, most often between altitudes of 2000 and 3000 meters).

For your own safety, please advise us in advance of any health particular condition such as asthma, diabetes, etc.

**Program adaptation:**

The field trip will take place by any weather conditions. In case of very bad weather, the program will be adapted accordingly.