

## The Italian Volcano Observatories and Research Infrastructures (INGV)

### 1. Infrastructure offered for the first call

<b>Name and acronym of RI</b>	<b>Name:</b> Istituto Nazionale di Geofisica e Vulcanologia – Sezione di Palermo
	<b>Acronym:</b> INGV Palermo Branch
<b>Main contact person</b>	<b>Name:</b> Fausto Grassa
	<b>Email:</b> <a href="mailto:fausto.grassa@ingv.it">fausto.grassa@ingv.it</a>
<b>List of individual installations</b>	<ol style="list-style-type: none"> <li>1. Laboratory of Geochemistry</li> <li>2. Pool of mobile instruments</li> <li>3. “M. Carapezza” Volcanological Centre</li> </ol>

### 2. Information of the installations and facilities offered for the first call

<b>Name of the installation</b>	1. Laboratory of Geochemistry
<b>Contact person</b>	Name: Fausto Grassa
	Email: <a href="mailto:fausto.grassa@ingv.it">fausto.grassa@ingv.it</a>
<b>Location</b>	Address: via Ugo La Malfa, 153, 90146, Palermo
	Country: Italy
<b>Description of the installation and facilities</b>	<p>Laboratory of geochemistry includes:</p> <ul style="list-style-type: none"> <li>– laboratories for sample (liquid, gas and rocks) preparation and sample analysis (ion and gas chromatography, ICP-OS/ICP-MS; IRMS for the determination C, H, O, N stable isotopes in water, solids and gas, Noble gases (He, Ne, and Ar) abundance and isotopes in solids, water and gas, laser ablation coupled with ICP-MS).</li> <li>– A mechanical workshop equipped with several machines (CNC milling and turning, several welding systems, sheet metal bender and many others) for technical support of field equipment.</li> <li>– An electronic laboratory equipped with oscilloscopes, functions generators, prototyping tools for electronic boards and other devices for testing and calibration of instruments, maintenance of electronic devices and charging of batteries.</li> </ul>
<b>Scientific support offered</b>	Training for the use of the installation: Offered. A health/life insurance is mandatory to access this installation.
	Duration of the training course: 3 hrs.
	Number of scientists supporting the activity: 1.
	Type of scientific support: Supervision of highly specialized personnel.
<b>Technical support offered</b>	Training for the use of the installation: Offered.

	Duration of the training course: 5 hrs.
	Number of technicians supporting the activity: 1.
	Type of technical support: Logistic support for field trip including vehicles driving and fieldwork support.
<b>Safety</b>	Training offered: Yes. A health/life insurance is mandatory to access this installation.
	Duration of the safety training course: 2 hrs.
	Safety equipment provided: Personal protective equipment (overalls, protective gloves, masks and filters).
<b>Available accommodation facilities at infrastructure or nearby</b>	Some B&Bs and hotels nearby (< 2km).
<b>Available space/electricity/internet connection access for external users</b>	230V-50Hz power sockets type F and L/free wifi.

<b>Name of the installation</b>	<b>2. Pool of mobile instruments</b>
<b>Contact person</b>	Name: Giorgio Capasso
	Email: <a href="mailto:giorgio.capasso@ingv.it">giorgio.capasso@ingv.it</a>
<b>Location</b>	Address: via Ugo La Malfa, 153, 90146, Palermo
	Country: Italy
<b>Description of the installation and facilities</b>	Pool of mobile instruments includes soil CO <sub>2</sub> fluxmeters (accumulation chamber and soil probe method), thermocouples, multigas stations, gas sensors, laser-based isotope analyzers for the determination of H and O in water and C-isotopes of CO <sub>2</sub> and CH <sub>4</sub> , $\mu$ -GC, drones, GPS, anemometer, thermal cameras, tunable lasers (for CO <sub>2</sub> and H <sub>2</sub> S).
<b>Scientific support offered</b>	Training for the use of the installation: Offered.
	Duration of the training course: 3 hrs.
	Number of scientists supporting the activity: 1.
	Type of scientific support: Supervision of highly specialized personnel.
<b>Technical support offered</b>	Training for the use of the installation: Offered.
	Duration of the training course: up to 5 hrs.
	Number of technicians supporting the activity: 1.
	Type of technical support: Logistic support for field trip including vehicles driving and fieldwork support.
<b>Safety</b>	Training offered: Yes. A health/life insurance is mandatory to access this installation.
	Duration of the safety training course: 2 hrs.

	Safety equipment provided: Personal protective equipment (overalls, gloves, masks and filters).
<b>Available accommodation facilities at infrastructure or nearby</b>	Some B&Bs and hotels nearby (< 2km).
<b>Available space/electricity/internet connection access for external users</b>	230V-50Hz power sockets type F and L/free wifi.

<b>Name of the installation</b>	<b>3. “M. Carapezza” Volcanological Centre</b>
<b>Contact person</b>	Name: Paolo Madonia
	Email: <a href="mailto:paolo.madonia@ingv.it">paolo.madonia@ingv.it</a>
<b>Location</b>	Address: via Porto ponente, Vulcano Island, Messina
	Country: Italy
<b>Detailed description of the installation</b>	“Marcello Carapezza” Volcanological Centre is a building with an extension of about 250 m <sup>2</sup> consisting of a meeting room, a small geochemistry lab, an office, a kitchen, lodgings able to host up to 8 people, a warehouse and an exhibition area. It is located at a distance of less than 2 km from the “La Fossa” crater area and near the hydrothermal vents. Therefore it is suitable for a small team as a base field works on the volcano as well as for experiments.
<b>Technical support offered</b>	Training for the use of the installation: Offered.
	Duration of the training course: Up to 2 hrs.
	Number of technicians supporting the activity: 2.
	Type of technical support: Logistic support for field trip including vehicles driving and fieldwork support.
<b>Safety</b>	Training offered: Yes. A health/life insurance is mandatory to access this installation.
	Duration of the safety training course: 2 hrs.
	Safety equipment provided: Personal protective equipment (overalls, gloves, masks and filters).
<b>Available accommodation facilities at infrastructure or nearby</b>	Accommodation for 6-8 people. Many B&Bs and hotels nearby (< 1 km) especially during summertime.
<b>Available space/electricity/internet connection access for external users</b>	230V-50Hz power sockets type F and L/free wifi.

### 3. Access modalities and call parameters of the services offered only for the first call

Installation	Accesses per call (in unit)	Max n. of users per project	Max n. of projects per call
1. Lab. Geochemistry	5 working days	1	2
2. Pool of mobile instruments	5 working days	2	1
3. "M. Carapezza" Volcanological Centre	5 working days	3	2

Please note that for 'working day' is intended a day from Monday to Friday excluding feast days.

### 4. Financial support offered to the users

Installation	Max reimbursable travel cost (in euro)	Max reimbursable daily subsistence cost (in euro)
1. Lab. Geochemistry	700	120
2. Pool of mobile instruments	700	120
3. "M. Carapezza" Volcanological Centre	700	500**

\*\*€500 is not the daily subsistence costs as reported for the other items (i.e. calculated over all the number of accesses), in fact, the accommodation is considered for only two nights (the rest of the stay is in the observatory).

### 5. Risk management

- a. **Expected conditions that can make the installations unavailable/inaccessible:** For the Laboratory of geochemistry - unexpected failure due to technical difficulty. For the Pool of mobile instruments - unexpected failure due to technical difficulty, volcanic activity, and bad weather conditions. For the "Marcello Carapezza" Volcanological Centre - unexpected failure of technical installations, unrest of volcanic activity, bad weather conditions.
- b. **Functionality of the installations offered, before the access:** For the Laboratory of geochemistry - periodic maintenance. For the Pool of mobile instruments - periodic maintenance of the instruments/equipment. For the "Marcello Carapezza" Volcanological Centre - periodic maintenance of technical installations.
- c. **Conditions to re-schedule the access to the same installation due to force majeure:** For the Laboratory of geochemistry – instrument fixing. For the Pool of mobile instruments – instrument fixing, ceased volcanic activity, and normal weather conditions. For the "Marcello Carapezza" Volcanological Centre - restoring of technical installations, ceased volcanic activity, and normal weather conditions.