

## Weekly report

Institut de physique du globe de Paris

## Observatoire volcanologique et sismologique de Martinique

## Activity of Mount Pelée

Saint-Pierre, October 10, 2025, 18:00 local time (GMT-4)

Volcanic activity has remained high this week, with **2666 volcanic earthquakes** observed.

Between October 3, 2025 at 16:00 (UTC) and October 10, 2025 at 16:00 (UTC), the OVSM has recorded:

- **2588 shallow volcano-tectonic** type earthquakes. Among them, at least 237 had a magnitude (duration magnitude  $M_d$  or local magnitude  $M_{lv}$ ) greater than 0.5, 43 had a magnitude greater than 1, and 2 had a magnitude greater than 2. The largest had a magnitude  $M_{lv} = 2.49$ . The others were of lower energy. These earthquakes are located at depths between 0.9 and 4.7 km below the summit of the volcano, as was the case during the previous week. A significant number of them originate from well-known seismically active zones at Mount Pelée, located between 1.0 and 1.4 km below the summit of the volcano. Superficial volcano-tectonic seismicity is associated with micro-fracturing in the volcanic edifice related to the overall reactivation of the volcano observed since 2019.
- **49 shallow hybrid** type and **29 shallow long-period** type earthquakes. Among them, at least 9 have a local magnitude ( $M_{lv}$ ) greater than 0.5, and 4 have a magnitude greater than 1. The largest has a magnitude  $M_{lv} = 1.35$ . The others are of lower energy. These earthquakes are located in the same areas as the shallow volcano-tectonic earthquakes. The seismic signals of these types of earthquakes are enriched in (or contain only) low frequencies and are associated with the circulation of fluids (gas, hydrothermal fluids) in the volcanic edifice.

No earthquake was confirmed as felt by the population. However, several volcanic earthquakes have a magnitude close to that of earthquakes that could be felt by hikers on Mount Pelée.

The week before, the OVSM had recorded **2585 earthquakes** of volcanic origin. As of October 10, and during the last 4 weeks, the OVSM recorded a total of 8169 volcanic earthquakes, and an average of **2042 to 2043 volcanic earthquakes** per week.

During phases of volcanic unrest on volcanoes similar to Mount Pelée, it is usual to observe seismic activity variable in intensity and frequency, which can evolve rapidly but also cease quickly without any major evolution of the system.

Deformations of the edifice are very weak and, to date, show no marked inflation of the summit area or evidence of deformations associated with deeper sources. There is currently no evidence of fumarolic activity on Mount Pelée.

The probability of eruptive activity in the short term remains low. However, given all the observations collected since the end of 2018 and their nature, and based on the recent observations of the OVSM-IPGP, we cannot exclude a medium- term evolution of the situation (weeks, months).



For more details on longer-term observations and interpretations of volcanic activity, please refer to the monthly bulletins of the OVSM. The September 2025 monthly bulletin will be published in the coming days.

The alert level, in accordance with the provisions planned by the authorities, is currently YELLOW: vigilance

The Director's office of OVSM-IPGP.

### Informations

The data in this report are preliminary and subject to change depending on their subsequent analysis.

The reports of OVSM-IPGP, including detailed monthly bulletins, are available at <https://www.ipgp.fr/observation/ovs/ovsm/>.

You can also find us on our [Bluesky](#) et [Facebook](#) accounts. Locations of volcano-tectonic and tectonic earthquakes

determined by the OVSM-IPGP are available in real-time at <https://renass.unistra.fr/fr/zones/les-antilles/>.

To receive the weekly report by email, simply request it at: [infos@ovmp.martinique.univ-ag.fr](mailto:infos@ovmp.martinique.univ-ag.fr)

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