

## Weekly report

Institut de physique du globe de Paris

Observatoire volcanologique et sismologique de Martinique

### Activity of Mount Pelée

Saint-Pierre, September 5, 2025, 16:30 local time (GMT-4)

Volcanic activity has increased this week, with **517 volcanic earthquakes** observed.

Between August 29, 2025 at 16:00 (UTC) and September 5, 2025 at 16:00 (UTC), the OVSM has recorded:

- **506 volcano-tectonic** type earthquakes. Among them, 14 have a duration magnitude greater than  $M_d = 0.5$ , with the largest having a magnitude of  $M_d = 0.8$ . The others are of lower energy. These earthquakes were clearly identified as originating from one of the well-known seismically active zones on 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 late 2018.
- **6 shallow hybrid** type earthquakes, with a maximum local magnitude  $M_{lv} = 1.05$ , located approximately 1 km below the domes of Mount Pelée in the same area as the volcano-tectonic earthquakes. Hybrid seismic signals are enriched in low frequencies and are associated with the circulation of fluids (gas, hydrothermal fluids) in the volcanic edifice.
- **5 deep long-period** type earthquakes, 4 of which were located in the vicinity of Mount Pelée. Their local magnitude ranged from  $M_{lv} = 0.5$  to  $M_{lv} = 0.9$ . Three of these earthquakes occurred at depths between 18 and 29 km, and one was preliminary located at a depth of 10 km. Deep long-period earthquakes are characterized by signals that contain only low frequencies and are associated with the circulation of magmatic fluids deep within the Mount Pelée volcanic system.

No earthquake was felt by the population.

The week before, the OVSM had recorded **369 earthquakes** of volcanic origin. As of September 5, and during the last 4 weeks, the OVSM recorded a total of 1763 volcanic earthquakes, and an average of **440 to 441 volcanic earthquakes** per week.

During phases of volcanic unrest on volcanoes similar to Mount Pelée, it is usual to observe seismic activity that varies over time in intensity and frequency.

For more details on longer-term observations and interpretations of volcanic activity, please refer to the monthly bulletins of the OVSM.

The alert level 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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