



OVSM - IPGP – Friday 1st of October 2021 – 12h (local time, UTC-4h)

Weekly report on the activity of la Montagne Pelée

September 24 to October 1, 2021

Between September 24, 2021 4 p.m. (UTC) and October 1, 2021 4 p.m. (UTC), the OVSM recorded at least **44** volcano-tectonic earthquakes of magnitude less than or equal to 0.9. These earthquakes of low energy were located inside the volcanic edifice between 3.3 km and 0.7 km beneath the surface. This superficial volcano-tectonic seismicity is associated with micro-fracturing in the volcanic edifice. During the reporting period, OVSM also recorded one hybrid-type earthquake. This signal, containing low frequencies, is associated with the presence of fluids (gas, hydrothermal waters) within the volcanic edifice. None of these earthquakes were felt by the population.

An area of underwater gas emission is observed at shallow depths between St Pierre and the Prêcheur. This kind of phenomena is common at submarine volcanic sites, active or not, for example in Dominica or Italy. The IPGP is currently organizing field surveys to map this area of gas emissions and sampling of these fluids in order to constrain the origin of the degassing and to evaluate its possible relationship with the hydrothermal system of Mount Pelée. This new site is monitored regularly by the OSVM who is measuring different physico-chemical parameters. The analyses underway by the OVSM IPGP will determine the possible relationship of this underwater degassing with the unrest recorded at Mount Pelée by the observatory since 2019.

A main zone of strongly degraded, browned and dead vegetation is still observed on the southwest flank of Montagne Pelée, between the upper Claire River and the Chaude River, above their confluence.

The reports of OVSM-IPGP are available at <http://www.ipgp.fr/fr/ovsm/actualites-communiques-publics-de-lovsm>. You can also find us on our Facebook and Twitter 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/>.

The alert level remains YELLOW: vigilance.

The Director's office of OVSM IPGP.