



Press release

Earthquakes in Switzerland in 2016: an overview

In 2016, 31 earthquakes with magnitudes of 2.5 or greater occurred in Switzerland and neighbouring countries, making it an above-average year in terms of the number of felt seismic events there. This fact is also reflected in the overall number of quakes registered by the Swiss Seismological Service at ETH Zurich, since the total of roughly 880 is slightly higher than the average from previous years.

October was a particularly active month for earthquakes in Switzerland. One of them, occurring in Leukerbad in the canton of Valais on 24 October, turned out to be the strongest earthquake of 2016. With a magnitude of 4.1, it was felt in large parts of Switzerland. Quakes as strong as this tend to occur every one to three years. The last comparable seismic event occurred near Sargans in 2013. More clearly felt earthquakes, occurred that same month, namely on 1 October on the border with France, west of Vallorcine (magnitude 3.4), and on 7 October close to Juf, in the canton of Grisons (magnitude 3.9).

Other earthquakes felt by numerous people included one that occurred to the southwest of Saint-Gingolph, on the shore of Lake Geneva, on 22 December (magnitude 3.4) and a weaker, shallow quake (magnitude 2.2) beneath the town centre in Solothurn on 20 August. A few people also felt some of the events associated with the series of serious earthquakes in central Italy, which claimed more than 300 lives. On average, similarly powerful earthquakes hit Switzerland every 50 to 150 years.

At 31, the number of quakes with a magnitude of 2.5 or more is clearly above the long-term average that has applied for the last 41 years. On average, 23 such potentially perceptible earthquakes take place in Switzerland every year. Altogether, some 880 seismic events were recorded in Switzerland and neighbouring countries in 2016. Fluctuations in the long-term average of earthquake frequencies are normal and do not permit any statements about future seismicity in Switzerland. In 2016, as in other years, most seismic activity was recorded in Valais, the canton of Grisons and along the northern edge of the Alps.

Like in previous years, several earthquake swarms were recorded in 2016. One of the most active sequences occurred northeast of Sion, with three clearly felt seismic events in May, June and November. All in all, more than 80 events were registered. The largest quake took place on 24 June, reaching a magnitude of 3.2. An earthquake swarm hit the same area in 2015. Both swarms probably have to do with a fault line on the northern edge of the Rhone Valley. In addition, the Swiss Seismological Service detected a sequence of more than 50 clearly perceptible quakes on the German-Swiss border area, northeast of Thayngen. Earthquake swarms are usually characterised by the absence of a pronounced main quake. The strongest quake often occurs midway through or towards the end of the quake sequence. Earthquake swarms can extend over a period ranging from a few hours to several months or even years.

The Swiss Seismological Service (SED) at ETH Zurich is the federal agency responsible for monitoring earthquakes in Switzerland and its neighboring countries and for assessing Switzerland's seismic hazard. When an earthquake happens, the SED informs the public, authorities, and the media about the earthquake's location, magnitude, and possible consequences. The activities of the SED are integrated in the federal action plan for earthquake precaution.