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## Tools for monitoring the spatio-temporal evolution of seismic sequences: An application to the Azores triple junction

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In the last decades, the discovery of seismic signals other than those known as classical earthquakes have changed our understanding of the dynamic process of lithosphere fracturing with implications for seismic monitoring. These signals are hypothesized to be generated by slow slip on faults and/or by the motion of fluids in the crust. The earthquakes that occur in the Azores archipelago are thought to result from the interaction between a tectonic triple junction and a low-velocity (possibly hot) anomalous mantle. Although most of the seismic activity in this region is tectonic, there is also evidence of seismic activity related to hydrothermal and magmatic activity, which makes the Azores region a privileged natural observatory for studying different types of seismic signals. In this work we will then focus on the spatio-temporal evolution of the February 2018 seismic sequence which occurred in the island of São Miguel. We will carry out detection and preliminary location of seismic events using Lassie, an open-source software for earthquake detection. We will also perform waveform similarity and clustering analysis to understand the detailed spatio-temporal evolution of the crisis.

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