



## **Seismological monitoring of Campi Flegrei caldera.**

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Campi Flegrei is an active volcanic area posing a serious threat over Naples. Half of the city lies inside the caldera rim. The volcano has shown in the last 30 years different episodes of unrest, the most recent is still ongoing. For this reason the monitoring of this volcano is a fundamental task. The current seismic network consists of 8 short period and 5 broadband stations. The seismic monitoring is complemented by 2 infrasonic sensors and 3 dilatometers. The recent seismicity has been characterized by swarms of volcano-tectonic and long-period events. The network geometry allows an accurate location of VT events with a detection threshold of magnitudes less than 1.0. Some VT events have been recorded also by the infrasonic sensors showing interesting similarities. LP events have been recorded by both short period and broadband stations. The polarization analysis performed over the broadband recordings is an important tool for the real time detection of such events, related to the dynamics of the hydrothermal system. The ongoing developments consist in a progressive increasing of the number of broadband digital stations and infrasonic sensors, in improving the accuracy of hypocenter locations by using a 3D velocity model and in the implementation of new automatic techniques aimed at the detection, classification and analysis of seismic events.