



Soil gas radon measurements around Mt. Etna volcano in terms of evaluation of geodynamic events

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Soil gas radon measurements were performed continuously in the east flank of Mt. Etna since July 2015 volcano in order to correlate soil gas radon anomalies with local geodynamic processes. Both volcanic activity and seismic monitoring have been carried out by means of seismic stations and video-cameras located around the volcano, while the evaluation of radon data has been done using basic statistics and signal processing methods. Preliminary analysis of data seems to indicate a clear correlation between soil gas radon variations and volcanic activity of Mt. Etna, being the November 2015 and May 2016 eruptions preceded by marked anomalous variations (mainly decreases) of radon levels in all monitoring stations. Further anomalies have been recognized since November 2016, which may suggest new arrival of fresh magma into the volcano, possibly leading to future eruptions.