

the Influence of Atmospheric Conditions on Ambient Seismic Noise

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Ambient seismic noise (ASN) is defined as small vibrations recorded throughout the Earth's surface. The generating noise sources are classified into anthropogenic sources (<1 s) and natural sources (>1 s). In this study, we used data from the Romanian Seismic Network (RSN) stations, operated by the National Institute for Earth Physics (NIEP) and we analysed the influence of atmospheric parameters on the ASN level. A long term evolution of seismic noise emphasized a drop-off in the noise level in 1-2 s period band interval at most of RSN broadband stations in the second half of October 2019. We also observed a good correlation between the increase of the noise level and the increase of the wind speed for the 0.5-0.05 s period band interval. In this paper, the atmospheric data are provided by the NIEP's weather stations collocated with seismic stations.

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Promotional text

Noise investigations at seismic stations should be performed regularly to understand the quality of seismological data better. The results from this study are important to understand how weather conditions contribute to the ASN behavior at the RSN seismic stations.

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