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## **Seismic noise measures for underground gw detection. Experience from the Matra site**

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The selection of sites for underground gravitational wave detectors based on spectral and cumulative characterization of the low frequency seismic noise. The evaluation of the collected long term seismological data in the Mátra Gravitational and Geophysical Laboratory revealed several drawbacks of the previously established characteristics. Here we demonstrate the problematic aspects of the recent measures and suggest more robust and more reliable methodology. Our recommendations are the use of median of the data instead of the mode in the spectral characterization and the modification of the frequency limits of the cumulative noise measures.

**Primary author:** VÁN, Peter (MTA Wigner RCP)

**Presenter:** VÁN, Peter (MTA Wigner RCP)

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