

Acoustic Sensing: A Step Towards the Standardization

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Distributed acoustic sensing (DAS) is experiencing an exponential growth. Although some difficulties in applying this technology to solve some problems of seismology have been encountered, however the main obstacle is insufficient metrological assurance. For each virtual sensor (channel), a lot more work is required in determining its positioning, orientation, transfer function and self-noise, etc. Part of the metrological characteristics can be estimated in advance if you know the type of cable, the depth and method of its laying, the type of soil and its compaction and local conditions. A library of publications on the influence of these parameters on the metrological characteristics is needed. For specifying other characteristics it is possible to develop simplified evaluation methods that, with sufficient accuracy, will allow the use of DAS. Currently, a lot of work is being carried out using DAS, its comparison with traditional seismic sensors and study of individual metrological characteristics. Each such study has an undoubted value, because it adds a new brick to the DAS. In this work, we describe some of the principles and considerations that we used in designing of the experiments.

Promotional text

In this work, we describe some of the principles and considerations that we used in designing distributed acoustic sensing experiments.

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