



About active geophysical monitoring

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Methods of active geophysical monitoring (AGM) are widely used for researching of different hazards (earthquakes, landslips, karsts and so). Some methodical features of AGM are discussed in that work.

In opinion of the writers, the technique of AGM should content to the following main requirements.

1. Time and space small variations of geophysical parameters instead of the absolute values are measured. Most important changes are not scalar, but vector changes in initial fields because they reflect the processes of the origin and development of discontinuities.
2. There are two main ways of AGM - geoelectrical and seismic. In this case investigated environment is an channel of connection between an insertion point of an exploring signal and dots of reception of response. But the rocks not only transmit, but also convert energy.

The analysis of time-space variations of a transfer function will give the new information on environment (seismo-electrical AGM, for example).

3. It is expedient to use a resonance properties of environment – converter of energy. It will considerably augment sensitivity of AGM. The greatest sensitivity is reached at self-oscillations.

These principles of AGM have been realized in seismically active and landslide regions and at different laboratory experiments. The results are presented.

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