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Application of Small-Aperture Infrasonic Arrays in Geophysical Measuring Network of MCSM

Presently, the Main center of the special monitoring (MCSM) disposes two three-element small-aperture infrasonic arrays on Ukrainian territory that are located near Malin and Kamenets-Podol'skiy cities. The identification of seismic source in mine by infrasonic array can specify was it mining explosion or anthropogenic accident. The monitoring of large-scale atmospheric sources can also be as an example of intercommunication from the natural phenomena. Cyclonic activity generates microseismic noise in ground and microbaroms in atmosphere, which are registered by seismic and infrasonic sensors. The pictures from spacecraft and weathercharts serve as additional information. Microbaroms from North Atlantic which were registered by Ukrainian infrasonic arrays can be the example of registration. The sets of back azimuths on a source are extracted from both infrasonic arrays. The estimated distances to the source are varied within the limits of a 3000 – 3400 km. The trajectory of microbaroms motion was defined by theta-theta method. The mutual location of arrays is successful to get the acceptable estimations of location of source of microbaroms. For possibility to estimate signals from any direction, additional infrasonic arrays will be installing during 2013.

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