

method of decomposition of infrasonic signals from pulsed sources

The proposed method is based on the decomposition of infrasonic signals from pulsed sources. The recorded infrasonic signal is decomposed on a sequence of the acoustic pulses having the forms of U and N waves. Each U and N wave corresponds to the reflection of sound from the atmospheric inhomogeneities at different altitudes in the atmosphere. By determining the time intervals between such waves it is possible to determine the vertical gradients of the effective sound speed at different altitudes in the atmosphere. The vertical profiles of the vertical gradients of the effective sound velocity in the atmosphere by using infrasound signals recorded from different pulsed sources are obtained. The obtained data are interpreted with the theory of fine structure formation in the upper atmosphere.

Primary author: KULICHKOV, Sergey (A.M. Obukhov Institute of Atmospheric Physics, Russian Academy of Sciences)

Presenter: KULICHKOV, Sergey (A.M. Obukhov Institute of Atmospheric Physics, Russian Academy of Sciences)

Track Classification: 4. Infrasound Modelling and Network Performance