

Signal Character Analysis of Lightning in Nuclear Explosion Infrasound Detection

This paper analyzes the characteristics of interference event in the infrasound detection of nuclear explosion. After data preprocessing, such as mean removal, atmospheric disturbance removal, filtering and normalization, etc., the infrasound signal characteristics of lightning, chemical explosion and satellite launch event are analyzed through spectrum and statistical methods. Finally, spectrum characteristics of interference event infrasound signal are obtained according to statistical conclusions. The analysis results show that the acquired infrasound signal characteristics of lightning, chemical explosion and satellite launch event are different from those of nuclear explosion, and this characteristic value can be used as one of the feature vectors of nuclear explosion infrasound detection and recognition.

Primary author: TENG, Jun (Institute of Applied Physics and Computational Mathematics)

Presenter: TENG, Jun (Institute of Applied Physics and Computational Mathematics)

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