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Events energy estimation based on Seismic Data.

Thursday, 27 June 2019 17:00 (15 minutes)

The estimation of the released event energy is part of the Comprehensive Nuclear-Test Ban Treaty organization analysis. For events occurring underwater and underground the methods for energy estimation are well developed. However, for atmospheric events the accuracy of the methods which rely on data recorded by infrasound stations is not good enough. In the past few years the passage of energy between earth, ocean an the atmosphere is investigated. It is shown that underground events are recorded by infrasound stations and atmospheric events by seismic stations. The use of the seismic records for estimating the atmospheric event energy release seems promising as it reduce the dependency on the varying atmosphere. In the fifties of the twentieth century, there were theoretical works on the energy transfer between the atmosphere and the earth. But, as the monitoring networks were undeveloped, the number of observations to support the calculation was limited. In this work, we investigate, using the data recorded by the International Monitoring System, if more reliable energy estimation of an atmospheric event, can be achieved based on seismic data.

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