



Data Analysis of Seismic Sequence in Central Italy in 2016 using CTBTO-International Monitoring System

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The seismic network that forms the International Monitoring System (IMS) of the Comprehensive Nuclear-test-ban Treaty Organization (CTBTO) will ultimately consist of 170 seismic stations (50 primary and 120 auxiliary) in 76 countries around the world. The Network is still under the development, but currently more than 80% of the network is in operation. The objective of seismic monitoring is to detect and locate underground nuclear explosions. However, the data from the IMS also can be widely used for scientific and civil purposes.

In this study we present the results of data analysis of the seismic sequence in 2016 in Central Italy. Several hundred earthquakes were recorded for this sequence by the seismic stations of the IMS. All events were accurately located the analysts of the International Data Centre (IDC) of the CTBTO. In this study we will present the epicentral and magnitude distribution, station recordings and teleseismic phases as obtained from the Reviewed Event Bulletin (REB).

We will also present a comparison of the database of the IDC with the databases of the European-Mediterranean Seismological Centre (EMSC) and U.S. Geological Survey (USGS).

Present work shows that IMS data can be used for earthquake sequence analyses and can play an important role in seismological research.