

Earthquake Observation and Data Management Systems Used at KOERI

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Abstract

Before 2000, KOERI Seismic Network had short period single component sensors which were mainly located in the western part of Turkey. After the big earthquakes in 1999, KOERI had several initiatives using financial support from the Government, various projects and its own resources in order to deploy a broadband network for accurate monitoring the earthquake activity in Turkey and surrounding regions with a lower magnitude threshold. The satellite communication technology was first utilized in 2004 for data transmission and currently all our 96 BB stations uses this technology. With the increase of seismic stations, the number of events recorded in and around Turkey has doubled and the location accuracy and magnitude determination has improved significantly.

KOERI is disseminating earthquake parameters to the public and relevant seismological centers by fax and internet channels both at national and international level. For earthquakes $M > 3.0$, earthquake parameters are also sent via SMS to the end users ASAP.

KOERI's aim is to improve the location and magnitude determinations for all earthquakes $M > 3.0$ in a more efficient and accurate manner within internationally recognized residual standards at any location in Turkey by the end of 2010. For this purpose, the number of broadband stations required and planned to be installed is 100.

KOERI is using Earthworm software for temporary storage and event detection, and has its own data analysis software zSacWin for earthquake analysis and parametric data dissemination. GFZ software SeisComp3 has also been installed at NEMC (National Earthquake Monitoring Center) and is currently operational.