

An improvement of JMA's earthquake catalogs

SHOJI, Tetsuya^{1*} ; KATAYAMA, Hiroaki¹ ; TAMARIBUCHI, Koji¹ ; MORIWAKI, Ken¹ ; HASHIMOTO, Tetsuo¹

¹Japan Meteorological Agency

Based on measures of The Headquarters for Earthquake Research Promotion, Japan Meteorological Agency(JMA) is collecting the data of the high-sensitivity seismographs nationwide, performs the processing of hypocenter determination centrally, etc, and publishes the result as the earthquake catalogs.

In current earthquake catalogs, we post things that meet certain criteria as a result of scrutiny. However, after The 2011 off the Pacific coast of Tohoku Earthquake, in the aftershock area, although aftershock activity has been reduced, seismic activity is located in the lively situation in comparison with the previous, so we are processing by raising the lower limit of the magnitude of the earthquake to be processed. Therefore, some earthquake, like an earthquake that has not enough accuracy or smaller than processing limit, are not listed in the earthquake catalog. In addition, by the deployment of seismic network of sea waters that are planning in future, improvement of earthquake detection level is expected to in the waters, and number of earthquakes to be processed is expected to increase than ever. So it is necessary to conduct more effective and more efficient treatment than ever from now on.

Against the backdrop of these things, under the Earthquake Research Committee, an examine for improvement for the way of earthquake catalogs was performed in 2013 fiscal year, and summarized reports that shows three directions, 1) to maintain the earthquake detection capability, 2) to post all of the earthquakes detected to the earthquake catalogs, 3) to perform the quality management with a stage to accuracy.

Based on this report, Japan Meteorological Agency is planning to improve and change the hypocenter determination process, taking advantage of automatic picking processing, for example.

Here, I will introduce the changes of the earthquake catalogs from present to next.

Keywords: Earthquake Catalog