Earthquake Database of Japan University Seismic Observatory Networks

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The Earthquake Prediction Project in Japan started from 1965 and promoted the development of seismic observation networks of Japan National University: Hokkaido University, Hirosaki University, Tohoku University, University of Tokyo, Nagoya University, Kyoto University, Kochi University, Kyushu University and Kagoshima University. These seismic networks have been accumulating a mass of data of earthquake activity in and around the Japan arc. The Coordination Committee for Earthquake Prediction Research in Universities, University of Tokyo, and the Headquarters for Earthquake Research Promotion, MEXT, Japan, set up a committee to compile a database of earthquake data obtained from those National University networks. This database contains the data of hypocenters and arrival times of earthquakes occurring from 1975 to 2000. The total number of earthquakes is about 1,556,000. More than 16,770,000 phase data are also included in this database. Since seismic waveform data of marginal stations are exchanged among the adjacent seismic networks, the arrival times of those stations may be reported from plural networks. In order to determine more precise hypocenters, the database committee merged all of the University network data and excluded redundant phase data. Hypocenters of relatively large earthquakes were determined by using not only the merged University network data but also the Japan Meteorological Agency network data. It needs further consideration about seismic wave speed models for the calculation of hypocenters in the whole region of the Japan arc. We tried to determine hypocenters of all earthquakes in 1998 preliminarily, and 70 % of 122,400 earthquakes were located precisely. This database will be established and will contain the unified (relocated) hypocenters.