

An Estimation for Seismic Intensities of Iwate-hokubu earthquake(M6.8) on July 24, 2008

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A moderate-scale intermediate-depth earthquake with magnitude 6.8 on July 24, 2008, beneath the inland of Iwate Prefecture. The hypocenter located at a depth of 108 km at N 39.7 deg. E 141.7 deg. The maximum acceleration of 534 gal observed at K-net station (AOM012) in Hachinohe, and seismic intensity was lower 6 in JMA scale. Fortunately, no fatalities missing persons were reported, but 94 persons were injured during the earthquake in Aomori(after K.Satoh 2008). There was no heavy damage in Hachinohe city, but there was some structural damage in Hachinohe such as buckling of steel bracing in gymnasium of public school and falling down of acoustic board from ceiling in a public hall(Satou,Takita,etc.2008). In addition, serious damage was not reported and liquefaction was not seen, either.

A questionnaire survey was carried out to investigate the precise distribution of seismic intensities in Hachinohe city, at a time of this event. We delivered seven thousand questionnaire sheets to 73 nursery schools in order to investigate the distribution of seismic intensities and ground characteristics. Although 4000 questionnaire sheets were collected, but effective one were 3242. Intensities were widely distributed from 0 to lower 6 in JMA scale, the average intensity is upper 5. High intensity of upper 5 concentrated in residential area where is southern part of center of city.

We made up the map of seismic intensity distribution, and compared with the map of site amplification factors in Japan(Kubo, etc. Zisin2,56,1,2003).

Reference

Kubo,etc,Zisin(ii),56,No.1,pp21-37,2003

Report of investigation on the 2008 Iwate-hokubu Earthquake,Part 2,4.

<http://disaster.archi.tohoku.ac.jp//Saigai/wiki>