

Precise distribution of seismic intensity in Morioka area by questionnaire survey-Results for Off-Miyagi earthquake-

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A vibration characteristic for strong motions of earthquakes depends on not only the source but also subsurface geological structures. To clarify the vibration characteristics at Morioka area of Iwate Prefecture, the survey of seismic intensity was done using questionnaires for Off-Miyagi earthquake occurred at May 26, 2003. JMA reported that the seismic intensity at Morioka City were five weak for Off-Miyagi earthquake, 2003. However, previous studies had reported that the seismic intensity varied within the narrow area of Morioka area (Yamamoto et al., 1996).

The questionnaire revised by Ohta et al. (1998) was used for seismic intensity determination. More than 15,000 questionnaires were distributed for parents of students of 47 elementary schools of Morioka City and Takizawa Village. The seismic intensities estimated from questionnaires were averaged for 250m square meshes to clarify the distribution of seismic intensity for Morioka City and Takizawa Village. To avoid differences among individuals for questionnaire survey, the effective mesh where the number of the questionnaire was more than three was used for analysis. The number of the effective mesh was 967. The average seismic intensity was 4.4. As a result, it was revealed that the seismic intensity at the north to west area was large, and the one at the east to south area was small. The results show that the vibration characteristics depend on subsurface geological structure for the strong motions of Off-Miyagi earthquake.