

# Precise distribution of seismic intensity of Off-Miyagi Earthquake, 2003 in Morioka Area and Ofunato City by questionnaire survey

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A vibration characteristics 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.

The questionnaire revised by Ohta et al.(1998) was used for calculating seismic intensity. 16,697 questionnaires were distributed for parents of students of 50 elementary schools of Morioka City and Takizawa Village and Yahaba Town, and 3,387 were distributed for those of Ofunato City. The seismic intensities estimated from questionnaires were averaged for 250m square meshes to clarify the distribution of seismic intensity for Morioka City, Takizawa Village and Yahaba Town. 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 1045 for Morioka area, 212 for Ofunato City. The seismic intensities were ranging from 3.2 to 5.4, and the average was 4.5 at Morioka area, The seismic intensities were ranging from 6.4 to 4.1, and the average was 5.1 at Ofunato City. As a result, it was revealed that the seismic intensity at the north to west area of Morioka area was large, and the one at the east to south area was small. The results show that the vibration characteristics at Morioka area depend on subsurface geological structure for the strong motions of Off-Miyagi earthquake.