



Damage Investigation of Surroundings of the Seismic Stations in the 2009 Suruga Bay Earthquake and Correspondence of Damage to Buildings with Strong Ground Motions

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ABSTRACT : We carried out damage investigation around the seismic stations where high JMA seismic intensity scales were recorded in the 2009 Suruga Bay Earthquake. We found some minor damage such as small damage to the wall or damaged roof tiles, but heavy damage to buildings was not found around all the seismic stations. However, we found many wooden houses with damaged roof tiles. We investigated the correspondence of strong ground motions with damage to buildings. Very short period below 0.5 sec. was dominated in most strong ground motions and the 1-2 sec. response which has close relationship with heavy damage to buildings was small, therefore, heavy damage to buildings was not found in spite of high JMA seismic intensity scale. We gathered quantitative data of damaged roof tiles and investigated relationship between the period region of strong ground motions and damaged roof tiles. We found that the period of about 0.5sec. of strong ground motions had close correlation with damage to roof tiles.

Key Words: The 2009 Suruga Bay Earthquake, earthquake damage investigation, strong ground motion characteristics, JMA seismic intensity scale, seismic station