

## Investigation on earthquake damage in the Near-Surface-Fault area during the 2014 Northern Nagano Prefecture earthquake

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On 22 Nov., 2014, an earthquake of  $M_{JMA}6.7$  ( $M_W6.2$ ) occurred in Hakuba village, Nagano Prefecture. During the earthquake, traces of surface fault are observed in the source region in Hakuba and Otani villages, and heavy building damages are report in Horinouchi, Hakuba Village.

In this study, in order to study the damages in the near field area, we carry out an investigation for the damage in the near-surface-fault-area, on 26 and 27, Nov., 2014, just after the earthquake. The main methods used in the investigation are interviews and photography. As a result, the earthquake damage in the vicinity of the surface fault are generally not significant. In particular, in the vicinity of largest surface fault in Shiojima area, Hakuba Village, there are no significant damage observed even for the block fence.

However, since there are significant damage observed in the Horinouchi area, Hakuba Village, it is planned to perform measurements of micro tremor to check if there are differences in site effects between the damaged non-damaged near-filed area.

Keywords: Surface fault, Damage, Site effect, Northern Nagano-ken earthquake