

SCG062-P10

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## Strong Ground Motion Validation for the 1828 Sanjo Earthquake (2)

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The strain concentrated belts have been suffered from a number of earthquake disasters in history. For example, the 2004 Niigata-ken Chuetsu earthquake is still fresh in our mind. It is important to evaluate future earthquakes and their ground motions toward the seismic hazard assessment in this area. As a first step, we attempted to reconstruction of the seismic intensity of the 1828 Sanjo earthquake to understand the characteristics of the earthquakes occurred in the strain concentrated belts.

In our previous study [Ishise et al., 2010], we assumed the southeast-dipping fault plane based on the seismic profiles [MEXT, 2008] and estimated distribution of the seismic intensity at the ground surface using the attenuation relationship [Si and Miodorikawa, 1999]. Although the predicted intensity roughly explained the historical seismic intensities, and the fault plane was located outside of the hypocenters of the target event suggested by a number of historical earthquake studies [e.g., Usami, 2003; Matsu'ura et al., 2006]. In this study, therefore, we set an alternative fault plane almost conjugate to that of Ishise et al. [2010], and calculated distribution of the seismic intensity based at the ground surface based on the attenuation relationship.

As a result, the predicted surface intensity satisfies both the distribution pattern and the value of the intensity reported by a number of historical earthquake studies [e.g., Tomita et al., 1986; Matsu'ura et al., 2006; MEXT, 2008]. Moreover, the northwest-dipping fault plane assumed in this study includes the reported hypocenters and dips same direction as adjacent active faults. This means maybe the alternative fault model is more likely than previous southeast-dipping fault model.

Keywords: The 1828 Sanjo earthquake, strong ground motion prediction, the strain concentrated belts