

Repetition of surface faulting on the active faults along the western margin of the Nagano basin

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We discuss repetition patterns of recent surface faulting on the active faults along the western margin of the Nagano basin, based on tectonic geomorphological and paleoseismological investigations. We conducted careful description of several-meters-scale tectonic landforms and topographic longitudinal profiling at five sites, three of which are located on the northern segment, one located on the central segment, and the other one located on the southern segment. Based on these investigations, the amount of offset at individual sites along all the segments was almost the same during the latest and penultimate surface faulting. In addition, we compiled and re-interpreted all the data about the timing of recent surface faulting on each segment, including Sugito et al. (2005, 2006), and concluded that the penultimate event on the northern to central segments and on the southern segment had occurred between AD688 and AD1164 and between BC354 and AD1646, respectively. Consequently, we suggest that the repetition pattern of the latest two surface faulting is consistent with the characteristic earthquake model or cascade model.