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Fault structure of the central part of the Nukumi fault, the 1891 Nobi earthquake fault system: Preliminary report

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The 1891 Nobi earthquake broke three distinct structural segments: the Nukumi, Neodani and Umehara faults. In order to clarify the distinctive structural features of fault step-over through which ruptures passed, we performed morphological and structural analyses based on geological survey of the central part of the Nukumi fault.
Geological observation suggests that the Nukumi fault is southwest-dipping and a positive flower structure is formed in the restraining step-over between the Nukumi and Neodani faults. This study reveals that the step-over length of the 1891 fault rupture is more than about 2 km. It may be inferred that the fault structure (flower structure) in a step-over and step-over length are important factors in the propagation of earthquake ruptures.