

GIS-based tectonic-geomorphological data set and its online release on the southern half of the ISTL active fault zone

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We have conducted tectonic-geomorphological investigations to contribute to the integrated research project for the Itoigawa-Shizuoka Tectonic Line fault zone sponsored by MEXT, Japan (2005-2009), for proposing a spatially dense and precise GIS-based data set that includes active fault distributions, amounts of vertical and lateral offset at each site, and distributions and ages of geomorphic surfaces along the whole fault zone. Our investigations are summarized as follows: (1) airphoto interpretation to identify active faults and geomorphic surfaces; (2) field surveys including pit excavation and drilling; (3) chronological investigations including tephra analyses and radiocarbon dating; (4) photogrammetrical analyses; and (5) LiDAR surveys. Based on the data set, we have inferred average slip rate distributions, and then estimated

distributions of net slip rates, coseismic net slip distributions, locations of subsurface asperities, and moment magnitudes associated with large earthquakes from the fault zone (Suzuki et al., this meeting, submitted). In addition, we have established an active fault information system 'Active Fault Information Station for the ISTL'. This WebGIS-based system provides geomorphic descriptions on fault identification and location accuracy of active fault traces at each site, in addition to the data set shown above. We released this system online on 25 August 2008 for the northern half of the ISTL (Hakuba-Chino) (Suzuki et al., 2009) (<http://danso.env.nagoya-u.ac.jp/istl-gis/>) (see the figure). The active fault information of the southern half (Chino-Kajikazawa) will be released in this March. We present here the information of the southern half of the fault zone, in addition to several points on the information of the northern half of the ISTL revised after its release.

- References

Suzuki, Y. et al., 2009, E-journal GEO (in Japanese with English abstract), 4, 1, 37-46.

Suzuki, Y. et al., Active Fault Research (in Japanese with English abstract), submitted.

- Notes



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