

Identification of tectonic landform using digital stereoscopic topographic map and satellite image data

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In order to delineate the geomorphic features in and around the active fault zone, the Kitakami Lowland and Itoigawa-Shizuoka tectonic line, digital stereoscopic topographic map and satellite image data were combined. The main image involved in this study was (1) digital stereoscopic slope map (DSSM) and (2) ALOS image. The DSSM shows geomorphic line and surface of fluvial terraces, so it shows the distribution of the old terraces and the development of the erosional scarps around the fault zone. 3D display of the scarps and surfaces suggest that geomorphic features change in dip and strike direction of the active fault zone. The detailed image (1/50,000) shows fault scarp across erosional scarps.

Keywords: Kitakami Lowland, Itoigawa-Shizuoka tectonic line, digital stereoscopic slope map, scarp, active fault