Active tectonics in Shinjo - Yamagata active faults zone

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Many active faults and folds without histrical record of earthquakes are densly distributed in the Shinjo Basin and on the west margin of the Yamagata Basin, central Tohoku district. To clarify an active tectonic setting and structure of these areas, we investigated detail features of fault and fold morphorogy by interpretation of aerial photographs and contour maps. In the central portion of the Shinjo Basin, acitve folding with an east-dipping thursting have dominantly occured horizontal crustal shortening, in contrast with mainly west-dipping thrusting in the nortern and southern portions of the Shinjo basin

Several levels of fluvial terraces are widely distributed in Shinjo Basin and its vicinities. They are classified into Higher terraces group, Middle terraces group and Lower terraces group, respectively. Many tephras as time markers are also bearing in this study area. They are namely Ikezuki tephra of 250ka, Shimoyamazato tephra of 210-170ka, Sodehara II tephra of 130ka, SK of 100ka, and Hj-Kth of 90ka, AT of 25ka and Hj-Ob of 10ka. Based on tephrochronology in this study area, the formative ages of fluvial terrace are determined as follows; Higher terraces group: MIS 6 and 7, Middle terrace group: MIS 5 and Lower terrace group: MIS 2 and post Glacial Age.