

Structural geology of Jushi-Kuroya Fault and the neighboring area, eastern margin of Chichibu basin

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Jushi-Kuroya fault is part of the N-S trending fault system which shifts Median Tectonic Line in the northern Kanto Mountain. At the Chichibu basin, it is the boundary between the Sanbagawa Belt (east) and Chichibumachi group (west) at Miocene. WNW-ESE trending fold are developed in the northern Kanto Mountains, however the Sanbagawa Belt at study area in eastern margin of Chichibu basin is developed the folds of N-S trend along fault, and there are different from surrounding folds. The faulting has more than three stages, but the age of stage 1 is unknown, stage 2 (15Ma) is right-lateral strike-slip (Takahashi, 1992), stage 3 (0.4Ma) is dip-slip (Honma, 2000).

At the Sanbagawa Belt, the attitude of crystalline schist were surveyed the relationship between the distance from the fault and the change in strike and dip. The Sanbagawa Belt was divided into the northern part the middle part and the southern part by the changing to attitude. The northern part and middle part are distributed over the north side from E-W fault. Moreover, composition, grain size, roundness, sphericity, and attitude of conglomerates and mode measurement of sandstone were measured for restoration of the hinterland exposed by fault activity at Miocene.

The geological surveys for the Chichibumachi Formation in Chichibu basin is carried out, the folds were difference between the northern part and the southern part of the E-W fault. Therefore, at latest fault activation (0.4Ma), Jushi-Kuroya fault moved mainly in the northern area, and the southern area had not moved, or had moved a little. In the existing studies, the E-W fault had cut the N-S fault, but the N-S fault had cut the E-W fault. Consequently, The E-W fault shifted at same time or thereafter, when strike-slip movement (15Ma) of Jushi-Kuroya fault and the fault moved as dip-slip (0.4Ma) after that.

The Pre-Neogene distributes the Chichibu Terrane slightly to the east from the fault, but most of the Sanbagawa Belt at the present. However, at Miocene, according to the distribution of conglomerate in the Chichibumachi Formation, the Chichibu Terrane had distributed widely than at the present, granitic rocks had exposed to a small part, and Sanbagawa Belt stretched widely.