

A History of the Asahi Tectonic Zone in Northeast Japan

-Northern Extension of the Median Tectonic Line-

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The Asahi Tectonic Zone is a wide mylonite belt in northeast Honshu, Japan. Constitutive rocks are Mesozoic sediments, "Late Mesozoic pyroclastics and granites. By three dimensional analysis of mylonitic rocks a history of the belt become clear. The following is some results.

1. The most strongly deformed zone didn't move from a original zone but tend to weaker corresponding to time.
2. Three dimensional analysis of moving senses on mylonitic rocks indicates one of the gravity sliding happened accompanying left-lateral shear. Rocks formed after the 3d stages explain left-lateral shear though the central part of strongly strained zone shows both left- and right-lateral senses.
3. The maximum strained zone becomes narrower with time. To relate this, deformation changed ductile to sub-brittle conditions as determined from recrystallized mineral association . Because the later stage plutonics intruded into shallower depth, this means the deformation field also became shallower. Then the Asahi Tectonic Zone may be formed during uplifting northern block in Late Mesozoic with igneous activities. In other wards, because of the zone exist near the boundary between the Northeast and the Southwest Japan, the movement occurred at the boundary of both Japan in here.
4. The Asahi Tectonic Zone might be connected the Tanakura Tectonic Zone and that is able to connect to the Median Tectonic Line in Southwest Japan in age, position and movement senses. Then I propose these three zones connected through a curvilinear plane where gravity sliding occurred in the inner zone of the plane.