

## Timing of mylonitization in the Hatagawa Fault Zone

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Two types of mylonite are distributed in the Hatagawa Fault Zone (HFZ), NE Japan. One is a mylonite with microstructure A, and the other is a mylonite with microstructure B. Based on the two feldspar thermometry, deformation temperature of mylonite with microstructure A is lower than that of mylonite with microstructure B (Shigematsu & Yamagishi, 2002; Shigematsu et al., in press). K-Ar ages and fission track ages of mylonites in the HFZ were measured to examine the deformation ages between mylonite with microstructure A and B. Distance from the area where the microstructure is characteristically A to the area where the microstructure B is B is less than five hundred meters, and the temperatures difference of approximately 100 deg.C for deformation is expected (Shigematsu et al., in press). K-Ar ages of hornblende and biotite from the samples of mylonite with microstructure A and B along the Ukedo River are almost same. These indicates that mylonite with microstructure A was formed later than mylonite with microstructure B. Fission track ages of zircon from the samples of mylonite with microstructure A and B along the Ukedo River are older than those of the samples from other areas. This suggests that the rocks along the Ukedo River cooled down rapidly rather than other areas.