

**NEW Rb-Sr DATA FROM PERMIAN META-PEGMATITES IN THE
AUSTROALPINE MATSCH UNIT**

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Pegmatites of Permo-Triassic age are widespread in the Austroalpine basement of the Eastern Alps (SCHUSTER et al., 2001). Sm-Nd garnet ages from meta-pegmatites of the Austroalpine Matsch Unit in the range of 263–280 Ma were interpreted to date pegmatite emplacement (HABLER et al., 2009). During the Cretaceous, the meta-pegmatites were deformed at the greenschist–amphibolite facies transition (HABLER et al., 2009), locally producing mylonites with fabric gradients at the cm- to m-scale.

We investigate the relation between Cretaceous deformation and the behaviour of the Rb-Sr system in muscovite clasts in Permian meta-pegmatites. Primary, cm-sized muscovites show a range of deformation-related microstructures, such as kinks, fractures, folds, micro-shearzones and undulous extinction. Rb-Sr muscovite–whole rock ages of coarse-grained fractions range at 240–262 Ma in weakly deformed samples. They are interpreted as minimum ages of Permian cooling below *c.* 550 °C. In mylonitic meta-pegmatites the Rb-Sr muscovite ages of coarse-grained fractions scatter widely at 249–172 Ma, reflecting an influence of Alpine deformation and/or fluid flow during the Cretaceous.

The new data imply that deformation, supposedly in combination with fluid activity, has affected the Rb-Sr systematics of muscovite clasts in Permian meta-pegmatites, while Permian cooling ages can still be obtained from weakly deformed samples.

HABLER, G., THÖNI, M., GRASEMANN, B. (2009): *Miner. Petrol.*, 97, 149-171.

SCHUSTER, R., SCHARBERT, S., ABART, R., FRANK, W. (2001): *Mitt. Ges. Geol. Bergb. Stud.*, 45, 111-141.