Ma (Dudek et al., 2000). The ages ~ 340 Ma were reported from durbachites in Austria as well (Kloetzli and Parrish, 1996). Rb-Sr study (Lorenc, 1998) didn't allow unequivocal geochronological interpretation, indicating an important role of magma mixing in the formation of these granitoids. The very complex U-Pb and Rb-Sr systematics (Scharbert and Veselá, 1990) are typical of durbachites from the eastern Moldanubicum too.

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Palaeomagnetism and its Applications to Tectonics – a Brief Outlook

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A primary objective of palaeomagnetic studies was to obtain a record of past configurations of the geomagnetic field. Extensive studies in early 50s on natural remanent magnetisation (NRM) recorded in the Icelandic lavas led to one of the most astonishing discovery in geophysics that geomagnetic field inverted its polarity in geologic time-scale. This facilitated an understanding of a nature of observed magnetic anomalies of the oceanic floor and triggered a sea-floor spreading concept, as well as a new discipline of magnetostrtigraphy. Parallel outcome of palaeomagnetic research was a concept of a palaeomagnetic pole, that, proving mobility of the continents in the geological past, made a basis for a plate tectonic theory.

These two most important contributions of palaeomagnetism to the Earth sciences do not exhaust variety of geologic applications. Tectonics can particularly benefits from palaeomagnetic outcomes. Using either palaeomagnetic direction-space or paleopole-space approaches, one can analyse vertical-axis and latitudinal motions of continents and/or tectonostratigraphic terranes. Deciphering relative movements of colliding blocks makes it possible to reconstruct a sense of shearing and a magnitude of associated rotations. Structural and palaeomagnetic data, if analysed collaboratively, enable determination of an Eulerian pole of rotation, contributing therefore to a quantification of relative block movements. Furthermore, palaeomagnetism can set up a time constraints on folding event(s), while anisotropy of magnetic susceptibility enables reconstruction of a palaeo-stress pattern.

Certainly, a fundamental for these applications is a quality of palaeomagnetic data, that depend on type of rock and its geological history. This does not mean, however, that only primary magnetisation is of the main concern in palaeomagnetic analysis. Secondary components of NRM, acquired due to metamorphic processes and often considered unwanted palaeomagnetic signature, may sometimes help in unravelling of a tectonic evolution. Equally important in a reliable interpretation of a palaeomagnetic record are tectonic data, particularly these related to a structural coherence of rocks in question and a paleohorizontal of plutonic rocks.

Strain Distribution and Fabric Development Modelled in Active and Ancient Transpressive Zones

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Transpressional models in general assume that a weak and deformable zone bounded by the rigid walls of adjacent lithosphere is progressively shortened in the course of convergence. In order to answer a question whether the measured internal (microscopic) parameters of ancient transpressional zones (e.g. orientation of lineation and foliation, K and D values) may be used to estimate the initial external (macroscopic) parameters (ratio of convergence velocity/initial width of zone = Rvd, rigid floor depth of transpressional zone = RFD and an angle of convergence = α) we developed the strain map, where isolines