ones, produced by deformations of opposite kinematics. Moreover, it is impossible to assess the amount of strain accomplished by particular deformational processes: dynamic recrystallisation and recovery, pressure - solution, microboudinage, slip on {001} phyllosilicates crystallographic planes and grain-boundary sliding. This variety of deformation mechanisms could be responsible for ambiguous and unreadable quartz c-axes microfabrics.

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Thermal State of the Bohemian Massif

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Terrestrial heat flow (HF), defined as a product of temperature gradient and thermal conductivity, is a measure of the amount of heat transferred from deeper portions of the earth's crust to the surface. 136 HF values determined in the Bohemian Massif (BM) form a basis for description of main thermal characteristics of this tectonic unit: the mean HF 67±24 $mW \cdot m^{-2}$ is consistent with Variscan age of the Bohemian Massif. Low HF (40±14 $mW \cdot m^{-2}$) has been recorded in the stable central-southern part (Moldanubian block), HF maxima (> 80 $mW.m^{-2}$) are situated in tectonically active zones at the north and west (Ohře graben and Bohemian Cretaceous Basin). Surface HF together with information on heat production and thermal conductivity distribution in the crust (both derived from seismic data) were used for modelling a temperature field in the crust and upper mantle. Temperature at MOHO ranges from less then 400°C in the Moldanubian segment to about 650°C in the two mobile zones. Depth to the base of the lithosphere inferred from thermal data is biggest bellow the Moldanubian zone (120-140 km) and attains only ~ 80 km below the northern and western part of BM. All models of crustal temperatures were based on the assumption of a steady state thermal regime. However, this needs not to be valid in the surroundings of the Ohře graben which is affected by Tertiary volcanism. A broad variety of models were compiled from geological data and used to asses the effect of volcanic activity on the present thermal state. Most of them suggest that the transient component of temperature field degraded below noise level by now.

Geochemistry and Petrology of the Early Palaeozoic Železný Brod Volcanic Complex (W Sudetes, Bohemian Massif): Geodynamic Interpretations

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The crystalline rock sequence of the Železný Brod region is situated in the SE margin of the Krkonoše-Jizera crystalline unit, constituting the W part of the W Sudetes (NE Bohemian Massif). The low-grade metamorphosed metavolcanics are present in abundance there, dominated by mafic rocks (subaquatic lavas, tuffs and tuffites); felsic metavolcanics as well as their pyroclastic equivalents are rather subordinate. The metavolcanic rocks are associated with small bodies of metadiabases-metagabbros and metagranitoids. Several thin intrusive bodies of the serpentinised ultrabasites are also known there.