In contrast, $^{40}Ar/^{39}Ar$ muscovite ages record various stages of post-metamorphic cooling after accretation within the EA and WC. These ages vary with present tectonic level within the Alpine nappe edifice. These stages include: (1) ages between 420 - 380 Ma postdated by pegmatites with c. 380 - 370 Ma; (2) an age group within pressure-dominated rocks with >375 Ma; (3) a group within 340 - 330 Ma which is related to similar ages within the BM; and, (4) a group with 320-310 Ma which occurs within high tectonic levels of the EA and which apparently covers the entire SC.

We interpret these 'age' provinces to record a succession of post-metamorphic cooling events after distinctly aged accretion events along the southern margin of the Variscides. These tectonothermal events are compatible with the stratigraphy of investigated units. Mineral muscovite and whole rock ages between c. 290 and 280 Ma from mylonites along steep shear zones record similarly-aged Permian shearing within the BM and SC.

In conclusion, both the extra-Alpine Variscides as recorded within the Bohemian Massif and the basement within the Alpine-Carpathian belt similarly record a linkage of these units to Cadomian/Baikalian/Pan-African units between Africa and the southern margin of Eurasia, along which a number of distinct tectonic units were accreted between c. 420 Ma. Final continent-continent collision apparently occurred between 340 and 320 Ma followed by regional uplift and cooling through 350 °C not later than 310 Ma. Both the Variscides and the Alpine belt were overprinted by intra-continental shear zones within the dextral wrench belt which developed between Africa and southern Laurussia.

THE CRYSTALLINE BASEMENT OF THE MOLASSE ZONE IN NORTHERN LOWER AUSTRIA

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The Molasse zone east of the Moravian Zone in northern lower Austria has been penetrated by many borehols. They were drilled by the ÖMV and several entered into the crystalline basement which can be considered as the southern continuation of the Brunovistulicum according to DUDEK (1980). The crystalline cores of these drillholes were made accessible for studying by the courtesy of the ÖMV.

Several groups of rock types could be distinguished: Granodiorites and granites form in the northeastern most part a coherent area. It can be considered as a continuation of the Brno Pluton towards the south. The area of the granitoids is marked by the drillholes: Altprerau, Wulzeshofen, Mailberg, Stronegg and Staatz. The granitoids are mostly heavily weathered biotite bearing granites with a strong

carbonatisation. Some granites are highly deformed (Mailberg, Wulzeshofen) probably caused by the Mailberg fault. West and south of this area metapelites to metagreywackes prevail. The rocks consist of quartz, white mica, chlorite, plagioclase, kalifeldspar, biotite, staurolite, garnet, and rarely kyanite. The abundance of ore minerals is high. In some drillholes metatuffs with quartz, biotite, amphibole, plagioclase, clinozoisite, and minor muscovite were found.

The metamorphism of the sequence ranges from the upper greenschists to amphibolite facies as evidenced by the occurrence of biotite, staurolite, and garnet. This older metamorphism is overprinted by a low grade greenschists facies event. The metapelites and metagreywackes might be considered as a metasedimentary sequence closely associated with the Brno Pluton, thus being a part of the Brunovistulicum. There is a striking lithological similarity of these metasediments with those of the Therasburg formation in the Moravian zone. This argues for a close primary connection at least of the deeper part of the Moravian zone with the Brunovistulicum.

GEOCHEMICAL AND ISOTOPICAL INVESTIGATIONS OF GNEISSES IN THE CENTRAL TAUERN WINDOW (AUSTRIA)

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Several gneisses from the Felbertal tungsten deposit and its vicinity have been analysed. Most of these gneisses are reliably dated by U-Pb in zircons.
Scheelite-rich quartzitic rocks with Lower Paleozoic/Precambrian (545 Ma) ages, muscovite-microcline gneisses (K1 and K3 with ages around 334 Ma), undated K2-gneisses as well as Granatspitz-Central gneisses (280 - 325 Ma) were investigated in the εNd-εSr-evolution diagram combined with their REE and LIL-elements pattern. The first three rock types represent characteristic host rocks within the scheelite deposit.

REE-patterns of the K1- and K3-gneisses (in total 21 analyses) fit patterns from monzogranites and syenogranites with small to moderate, negative Eu-anomalies (total amount of REE between 44 and 300 ppm). The samples taken from K2 show less or no Eu-anomaly. Patterns of the scheelite-rich quartzitic rocks are characterized by low REE-contents and by HREE-depletion. The LIL-elements patterns of these three rock types show differences analogous to the REE-patterns.

In the ε^t_{CHUR}Nd-ε^t_{UR}Sr-evolution diagram (assumed age for correction: t = 300 Ma) the geochemical differences between K1/K3, K2 and the Central gneisses are supported by isotopical data. The samples, except from the K2-ore body, show