from thrust propagation with root zone of the Variscan nappe assembly to the south. (3) Lack of Variscan thermal overprint beneath the major thrust is explained by rapid uplift associated with formation of ramp anticlines during foreward nappe propagation. HT nappe assembly initiated in deep crustal levels in a thick-skinned tectonic style but subsequent uplift and exhumation of deep-crustal nappes changed the rheological behavior. Subsequently formed thrusts within the foreland progressively developed under LT conditions and thin-skinned tectonic style.

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$^{40}Ar/^{39}Ar$ MINERAL AGE CONTROL OF PRE-VARISCAN AND VARISCAN TECTONIC PROCESSES: THE ALPINE-CARPATHIAN BELT VERSUS THE BOHEMIAN MASSIF

DALLMEYER, R.D.[1], NEUBAUER, F.[2] & FRITZ, H.[3]

[1] Dept. of Geology, University of Georgia, Athens/GA 30 602, USA
[2] Dept. of Geology and Paleontology, University, Hellbrunner Str. 34, A-5020 Salzburg, Austria
[3] Dept. of Geology and Paleontology, University, Heinrichstr. 26, A-8010 Graz, Austria

$^{40}Ar/^{39}Ar$ mineral ages of muscovites and amphibole have been prepared from the southeastern Bohemian Massif (BM), and from basement units along a cross-section through all major Austroalpine units at the eastern margins of the Eastern Alps (EA), from the Western Carpathians (WC), and from a cross-section through the Southern Carpathians (SC). This contribution provides an overview on 'age' provinces and timing of pre-Variscan and Variscan tectonic processes based on these data. Preservation of Cadomian mineral ages within calc-alkaline magmatic suites within the Moravian unit (BM) and the Danubian basement (SC) display the importance of Cadomian subduction-related processes within the pre-Variscan basement which partly escaped Variscan tectonothermal overprint. Furthermore, consistent Cadomian ages of detrital muscovite within Ordovician sandstones argues for a similarly-aged Cadomian basement in the hinterland of the EA units.

Variscan tectonic processes cover a major time span between c. 420 and 280 Ma. Within the southeastern Bohemian Massif amphibole and muscovite $^{40}Ar/^{39}Ar$ indicate regionally consistent, rapid cooling from c. 500 to c. 350 °C between ca. 335 and 325 Ma. These ages relate to final emplacement of hot Modanubian tectonic units over the relatively cool Moravian units and final A-subduction of cold continental material.

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

DIRNHOFER, M., MAYER, R., HÖCK, V., MARSCHALLINGER, R. & LEICHMANN, J.

Institute of Geology and Paleontology, University of Salzburg

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