The vast majority of the Variscan Central Bohemian Plutonic Complex (Bohemian Massif) is made up of the oldest, calc-alkaline (Sázava) and high-K calc-alkaline (Blatná) igneous suites. The Sázava suite is formed by Amph–Bt tonalites, (quartz-) diorites and trondhjemites, with associated Amph ± Cpx gabbros. The age of the tonalite is 354.1 ± 3.5 Ma (U–Pb Zrn: Janousek et al. 2004). The Kozárovice and Blatná Amph–Bt to Bt granodiorites are typical of the Blatná suite, together with minor intrusions of K-rich Cpx- and Amph-bearing quartz monzonites–monzogabbros. The new SHRIMP U–Pb Zrn dating produced indistinguishable ages of 346.1 ± 1.6 Ma (2 sigma) and 346.7 ± 1.6 Ma for the Kozárovice and Blatná granodiorites, respectively, the former with a small proportion of inherited cores c. 610 Ma and 2.1 Ga old.

The early calc-alkaline intrusions (Sázava suite) were emplaced into the upper crust of the Teplá-Barrandian Unit during regional transpression. Later, multiple magmatic to sub-solidus fabrics of the younger Blatná suite recorded both regional transpression and the onset of exhumation of mid-crustal orogenic root (Moldanubian Unit). For both suites, textural and mineralogical features, chemistry and Sr-Nd isotopes suggest a prime role for magma mixing with mantle-derived magmas. In the Sázava suite, their composition was close to CHUR (EpsNd(354) ~ +1), but the monzogabbros of the Blatná suite were derived from enriched mantle domains (EpsNd(347) ~ -3). The new geochronological data provide a time bracket for this principal switch in geodynamic setting and sources of the granitic magmas in the Late Devonian–Early Carboniferous magmatic arc.
Primary authors: Dr. JANOUSEK, Vojtech (Czech Geological Survey, Klárov 3, 118 21 Prague 1, Czech Republic)

Co-authors: Dr. WIEGAND, Bettina (Department of Geological and Environmental Sciences Stanford University, 367 Panama Street, Stanford, CA 94305-2115, USA) ; Dr. ZAK, Jiri (Institute of Geology and Palaeontology, Charles University, Albertov 6, Prague 128 43, Czech Republic) ; Mr. ERBAN, Vojtech (Czech Geological Survey, Klárov 3, 118 21 Prague 1, Czech Republic)

Presenter: Dr. JANOUSEK, Vojtech (Czech Geological Survey, Klárov 3, 118 21 Prague 1, Czech Republic)

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