



U-Pb (LA-PIMMS) AGES OF INHERITED ZIRCONS FROM EARLY PALAEOZOIC GRANITOIDS OF THE W SUDETES, N BOHEMIAN MASSIF, CENTRAL EUROPE: IMPLICATIONS FOR NEOPROTEROZOIC CONTINENTAL RECONSTRUCTIONS

Q.G. Crowley (1), **F. Patocka** (2), **V. Kachlík** (3)

(1) NERC Isotope Geoscience Laboratory, Keyworth, Nottingham, NG12 5GG, UK, (2) Institute of Geology, Academy of Sciences of the Czech Republic, 165 00 Prague 6, Czech Republic, (3) Institute of Geology and Palaeontology, Faculty of Science, Charles University, Albertov 6, 128 43 Praha 2, Czech Republic (qcrowley@bgs.ac.uk/Fax: +44-115-9363302)

A U-Pb laser ablation plasma ionisation multi-collector mass spectrometry (LA-PIMMS) geochronological study of zircons from early Palaeozoic (meta)granitoids of the Czech W Sudetes (E Saxothuringian Zone), NW Bohemian Massif, was carried out in order to determine the range of inherited age spectra preserved in these lithologies. Backscattered SEM images indicate that many zircons have distinct cores and rims. The majority of inherited zircon components yield concordant U-Pb ages that fall into the following age ranges: (1) 520-770 Ma, (2) 1.9-2.2 Ga and (3) ca. 3.0 Ga. These three age populations are typical of the W African Craton and the Armorican Terrane Assemblage of Europe. The age spectra correspond to Cadomian, Birimian / Icartian / Eburnean / Burkinian and Leonian events respectively. Some previous Pb-Pb zircon and whole rock Nd studies of similar lithologies from the W Sudetes (e.g. Hegner Kröner, 2000) have attributed the presence of Mesoproterozoic $^{207}\text{Pb}/^{206}\text{Pb}$ ages to a peri-Amazonian provenance. Although some zircons from this study have yielded apparent Mesoproterozoic ages, they are discordant and can be resolved into early Palaeozoic to Neoproterozoic lower intercept and Palaeoproterozoic to Archaean upper intercept components. This unequivocally proves that an inherited Grenvillian

component does not exist in these lithologies. We therefore favour derivation of the Saxothuringian zone and associated members of the Armorican Terrane Assemblage from a W African Craton Gondwanan setting.

References: Hegner, E, Kröner, A. 2000. Review of Nd data and xenocrystic and detrital ages from the pre-Variscan basement in the Eastern Bohemian Massif: speculations on palinspastic reconstructions. *In*: Franke, W., Altherr, R., Haak, V. Oncken, O. (eds.), *Orogenic Processes : Quantification and Modelling in the Variscan Belt of Central Europe* Geological Society of London Special Publication, 179, 113-129.