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MAGM-5: Metamorfismo en la corteza

The Gondwanide basement of Bariloche (Argentina) revisited

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The igneous-metamorphic basement that crops out in the Bariloche region of Argentina represents one of the key exposures of the Upper Paleozoic Gondwanide orogen in northern Patagonia. These basement rocks were correlated with the Colohuincul Complex, exposed further north, and consist mainly of paragneisses and schists and minor intercalations of metabasites, felsic orthogneisses, metarhyolites and foliated intrusions (Dalla Salda *et al.*, 1991). Structural and microstructural observations were presented by Dalla Salda *et al.* (1991) and García-Sansegunado *et al.* (2009), whereas first P-T calculations and EMP Th-U-Pb monazite ages of ca. 392 and 350 Ma were reported by Martínez *et al.* (2012). In this contribution, new structural, microstructural, thermobarometric and EMP Th-U-Pb monazite data are integrated in order to provide a reconstruction of the P-T-D-t (pressure-temperature-deformation-time) path of the Gondwanide basement in the study area. Detailed structural and microstructural data were collected in different basement blocks, exposed between the eastern flank of the mount Tronador and the Challhuaco hill. In the latter, thermobarometric and EMP Th-U-Pb monazite data were obtained as well. Results indicate the presence of a ubiquitous NNW- to WNW-striking S2 axial plane metamorphic foliation, associated with tight to isoclinal meter- to decameter-scale folding. Relics of a previous S1 foliation are only microscopically observed within microlithons of S2, whereas post-S2 fabrics include open folds, kink bands, and shear zones that overprint all previous fabrics (García-Sansegunado *et al.*, 2009). On the other hand, thermobarometric data indicate maximum amphibolite facies conditions for rocks of the Challhuaco hill, constrained to the Carboniferous by EMP Th-U-Pb monazite ages. Results suggest significant differences with the type locality of the Colohuincul Complex, thus preventing from correlations with the latter. Likewise, basement exposures in the Bariloche region do not seem to record a single tectonometamorphic history, most probably due to block segmentation resulting from both Upper Paleozoic and Meso- to Cenozoic tectonic events. Instead, basement blocks seem to record different parts of the Paleozoic tectonometamorphic evolution. References Dalla Salda *et al.*, 1991. *Rev. Asoc. Geol. Argentina* 46, 263-276. García-Sansegunado *et al.*, 2009. *Int. J. Earth Sci.* 98, 1599-1608. Martínez *et al.*, 2012. *Int. Geol. Rev.* 54, 472-490.