Structural investigations of the W termination of the ‘Schneeberg Zug’ — Austroalpine Unit, Southern Tyrol: Results from a crustal scale shear zone. 

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The Austroalpine microplate traces the Alpine collision event between the Africa-related southern Alpine realm and the European continent. The southern margin of this microplate, the basement to the north of Meran (including Texel unit and Schneeberg Zug) is characterized by regional eo-Alpine high-pressure metamorphism (Hoinkes & Thöni, 1987). PT conditions decrease from SE (Texel unit) to the pre-alpine basement in the NW. The HP Rocks were exhumed within a ca. 15 km broad SW-NE-striking, NW-dipping high strain zone (Sölva et al. 2001). The high-pressure Texel crystalline is tectonically underlain by the Campo unit in the south and overlain by the Ötztal-Stubai Basement in the north (west). The Schneeberg Zug forms an up to 5 km thick shear zone at its base, representing the study area. It shows normal-sense kinematics and separates pre-Alpine basement rocks in the hanging wall from high-pressure rocks in the footwall, the Texel unit. These were emplaced on top of pre-Alpine basement rocks (Campo unit) by an eo-Alpine ductile thrust. Lithologically the western termination of the Schneeberg Zug comprises characteristic garnet micaschists, mar-
which started at high grade conditions homogenously distributed over the whole shear zone. With decreasing temperature conditions the deformation progressively partitioned into distinct shear zones.

References


Hoinkes G & Thöni M (1987) New findings of eclogites within the eo-Alpine amphibolite grade area of the Ötztal basement. Terra Cognita 7(96)

