Paradiso Massif, the Upper Pennine nappes, the Monte Rosa Massif, and the Dent Blanche complex. The older subgroup of the Tertiary zircons (40 Ma) may have been supplied by metamorphic and migmatitic rocks affected by an Eocene high-temperature phase.

A Late Cretaceous age cluster (~ 70–60 Ma) is related to cooling after the main Austroalpine metamorphic event at 110–100 Ma. Most of the recently exposed Austroalpine nappe complex displays mica cooling ages and zircon FT ages between 95–70 Ma and 99–55 Ma, respectively.

Finally, an ill-defined Jurassic age cluster, with a mean in Late Jurassic times, is related to rift-shoulder heating of the Austroalpine/South-Alpine crystalline basement due to rifting of the Pennine oceanic domain. Presently, the Silvretta nappe complex, situated at the western termination of the Austroalpine realm, and the South-Alpine basement west of the Canavese Line, display similar zircon FT ages. Therefore, a westward continuation of the Silvretta complex prior to deep Neogene erosion is suggested.

TRANSALP: Struktur von Kruste und Oberem Mantel in den Ostalpen

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P nach *S* konvertierte Wellen werden benutzt, um Geschwindigkeitsdiskontinuitäten im Untergrund abzubilden (*receiver function method*). Der Schwerpunkt liegt auf der Geometrie und Tiefenlage der Kruste-Mantelgrenze. Die Europäische Moho taucht unter den Ostalpen auf ca. 55-60km ab, wobei die maximale Tiefe südlich des Tauernfensters erreicht wird. Der Übergang zur Adriatischen Moho ist steil, ein vertikaler Versatz von 15km wird auf einer Distanz von weniger als 40km realisiert.

Die Polarisationsanalyse von *SKS* Phasen ermöglicht die Bestimmung der sogenannten *splitting parameter:* die Richtung der schnellen Achse ϕ und die Verzögerungszeit δt. Gemeinsam charakterisieren sie die Anisotropieeigenschaften des Oberen Mantels. Entlang der TRANSALP Linie sind die Werte von δt hoch (im Mittel 1.3 s), die Richtung der schnellen Achse beträgt ca. 65°-70°N und ist damit annähernd parallel zum Streichen des Orogens. Dies deutet darauf hin, dass die Anisotropie eng mit dem transpressiven Spannungsfeld während der Alpenorogenese verbunden ist.

Texture analysis within high-pressure units – constraints for the mechanisms of the exhumation of high-pressure rocks in the Alps

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Crystallographic Preferred Orientations (CPOs) (textures), especially of quartz and calcite, within tectonites are used by numerous (structural) geologists routinely, generally in terms of shear criteria and „geothermometer".

The evaluation of CPOs combined with microstructural studies are some of the the most important tools to get information on the deformational evolution and the rheology of shear zones, and of deformation and recrystallization mechanisms operating in naturally deformed rocks. CPOs within tectonites allow the evaluation of various factors (e.g., strain geometry, finite strain, temperature, strain rate) that have been operating during deformation of the crystal lattice, and bear information on the deformation history of shear zones. In this study we would like to demonstrate how the analysis of textures can be applied to the reconstruction of the exhumation of high-pressure units in the Alps. Two case studies will be presented.

Quartz textures have been investigated along a south-north oriented section across the Plattengneis of the Koralm Complex (Eastern Alps). The Plattengneis forms an important shear zone within the Austroalpine nappe complex of the Eastern Alps, which has developed during the Cretaceous evolution of the Alpine orogen. The quartz c-axes form small circle distributions in the southernmost parts of the Koralm Complex, which represent the uppermost structural level of the Plattengneis. Further to the North two maxima between the Y and Z directions of the finite strain can be