Ergebnis (Parameter *Hangneigung, Wald, Straßen/Straßenböschungen, Exposition, Fließakkumulation, Vertikalwölbung* und *Wölbungsklassifikation)* bei den Testdaten 82,9 % der Massenbewegungen innerhalb von rutschungsgefährdeten Gebieten (Suszeptibilitäten > 0,5) aus. Hierbei zeigte sich, dass das Netz selbst (also Trainings-, Validierungs- und Testdaten) gute Ergebnisse lieferte, während es im Zuge der Regionalisierung zu einer deutlichen Verschlechterung des Ergebnisses kam. Diese Verschlechterung ist im Wesentlichen dadurch begründet, dass für die Variablen *Wald* und *Straßen/Straßenböschungen* bei den Trainings-, Validierungs- und Testdaten die kartierten Werte, bei den Regionalisierungsdaten hingegen die DKM herangezogen werden musste. Schließlich wurden noch INCA-Niederschlagsdaten (Haiden et al. 2007) des Ereignisses von 2005 in die Modellierung aufgenommen, da die Niederschlagsverteilung auch Einfluss auf die Massenbewegungsverteilung ausübte und dadurch andere Parameter (wie z.B. die Geologie) vermutlich überprägt wurden. Hierbei ergab ein Netzdurchlauf mit „worst case Szenario" (maximaler Niederschlag über das gesamte Untersuchungsgebiet angenommen) ein ähnliches Ergebnis wie eine Modellierung ohne Niederschlag. Daher können trotz des vorliegenden Datensatzes von nur *einem* Ereignis die erzielten Rutschunsganfälligkeitskarten als weitgehend allgemein gültig angesehen werden, soweit keine das Gebiet großflächig gliedernde Variable in die Modellierung eingeht.

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Petrology of high-grade metapelites from the Grünsee contact aureole in the Ortler-Campo Crystalline Complex (S-Tyrol, Italy)

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The contact aureole of this investigation is located at the rim of the Grünsee pluton near the Grünsee at the southern end of the Ulten Valley (South-Tyrol, Italy). In this area, a sequence of plutons ranging from Permian to the Tertiary (ca. 32 Ma) by dating monazites with the EMPA, intruded into the Peio Unit of the polymetamorphic basement of the Ortler-Campo Crystalline Complex. Within this contact aureole, diatexites and strongly metamorphosed hornfelses occur. Due to the intrusion of several different plutons, ranging from diorites to granites, no clear field relations concerning the shape and the mineral sequence as a function of distance within the contact aureole could be identified. In order to obtain the maximum *P-T* conditions of this contact metamorphic event, we sampled hornfels samples from the direct contact with the intrusives.

The intrusions are of calc-alkaline nature with low value of Ti (<1 wt.% TiO_2), corresponding to typical orogenic volcanic series developed from converging plate margin. The hornfelses contain the mineral assemblage garnet + cordierite + sillimanite/andalusite + biotite + spinel + anorthite + quartz ± K-feldspar. Garnet often shows replacement by spinel and cordierite. Occasionally andalusite and sillimanite occur within a thin section. Both have been identified using micro-Raman spectroscopy. Textural investigations reveal that the peak assemblage in the hornfelses is cordierite + spinel + sillimanite + anorthite + quartz.

Calculated *P-T* conditions of the granodioritic intrusive bodies, based upon the Al-in-hornblende barometer and the hornblende-plagioclase thermometer, yield crystallization *P-T* conditions of 0.33-0.58 GPa and 670-790°C. Thermobarometry in the hornfelses using the assemblage spinel + cordierite + quartz yields *P-T* conditions of 637 ± 95 °C and 0.49 ± 0.11 GPa. These data are in agreement with two-feldspar thermometry, which yielded 600-630°C at 0.5 GPa. The Ti-in biotite thermometer yielded slightly higher temperatures of 687 ± 11 °C. One aim of this investigation is the use of cordierite as a petrogenetic (T, aH_2O) indicator in these rocks. The Na-content of cordierite is a strong function of T and the Na contents of these cordierites indicate T of 656 ± 30 °C. These data are in agreement with pseudosections, which indicate an upper P-limit of ca. 0.45 GPa at T between 650-700°C as well as experimental investigations using natural starting materials from this area at 650°C and 0.3 GPa.

The Bavarian Forest basement: geochemistry and Sr-Nd isotope signature and implications for Bavarian granite sources

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The Bavarian Forest is part of the Moldanubian sector of the Bohemian Massif. It is dissected by a NW-SE dextral strike slip shear zone, the Pfahl zone, into the NE Hinterer Bayerische Wald (HBW) and the SW Vorderer Bayerische Wald (VBW). The Bavarian basement gneisses were overprinted by late-Variscan regional metamorphism (323-326 Ma, e.g., Kalt et al. 2000) and crustal anatexis (PT conditions: 800-850°C, 0.5-0.7 GPa, e.g. Kalt et al. 1999) and contemporaneously intruded by a large volume of granites.We have undertaken major and trace element and isotope geochemical investigations of the Bavarian basement gneisses and here present the major results. The HBW basement is composed of cordierite-gneisses, biotite-sillimanite gneisses and occurrences of mica- and garnet-schists and the VBW is marked by the para-anatectic rock group of pearl gneisses, diatexites and migmatites and occurrences of orthoanatexites. A greater proportion of HBW metamorphics is marked by low SiO_2 content (50-62 wt%), low CaO content (0.4-1.8 wt%), high peraluminous composition (ASI 1.6-2), high radiogenic $Sr_{325\ Ma}$ ratios (0.7114-0.7530) and low $\varepsilon Nd_{325\ Ma}$ values (-5.4 to -13.6), while most of the VBW metamorphics are characterized by relatively high SiO_2 content (60-74 wt%), high CaO content (1.2 -3.6 wt%) and low peraluminous members (ASI 1-1.4) and metaluminous (ASI 0.9-1) orthoanatexites in addition to less radiogenic $Sr_{325\ Ma}$ ratios (0.7046-0.7288) and higher $\varepsilon Nd_{325\ Ma}$ values (-1.9 to -12.8).Our data indicate great differences in basement composition between the VBW and the HBW, not only on the nature of the rock types, but also on their geochemical and isotopic compositions with geologically significant implications for the crustal evolution of the Bavarian basement. Geochemical and isotopic differences between granites on either side of the Bavarian Pfahl zone have been demonstrated with the suggestion that this could be a reflection of their crustal basement sources (e.g. Siebel et al. 2008).