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## The Sankt Leonhard nappe: HP-UHT metamorphic rocks within the Gföhl Nappe System, where and how to draw the nappe boundary

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The Sankt Leonhard Nappe in Lower Austria, Austria, represents high-pressure (HP), ultrahigh-temperature (UHT) lithologies within the Gföhl Nappe System in the Moldanubian Superunit. It mainly consists of ultramylonitic felsic garnet+kyanite-bearing granulites, occasionally associated with mafic garnet+clinopyroxene-bearing granulites. Ultramafic rocks, i.e. serpentized peridotite, occur only subordinately. These lithologies and their contact to the underlying nappe within the Gföhl Nappe System are particularly well exposed in the Bründlleiten south of the Kamp River close to the village Wanzenau. So far, however, research attention was mostly given to the felsic granulites, while adjacent lithologies are less studied in respect to their HP-UHT metamorphism. As a result, the boundary of the Sankt Leonhard Nappe remains ambiguous. Here, we attempt to define the Sankt Leonhard Nappe and its lithological content through comprehensive geological mapping and the study of thin sections.

The granulite body and its associated ultramafic rocks are surrounded by garnet-clinopyroxene amphibolites. Two types are distinguished; amphibolites in the immediate vicinity of the granulite body are mylonitic, dense, and bronze-coloured due to brown hornblende. This indicates higher-grade metamorphic conditions than the adjacent well-foliated, green amphibolites of the underlying nappe within the Gföhl Nappe System. In contact with syntectonic intrusions of quartz-syenite, the latter amphibolite type also shows an initially migmatic character. This so-called Wolfshof intrusion does not affect the Sankt Leonhard Nappe. It occurs at its base within the underlying nappe of the Gföhl Nappe System. In general, an increasing deformation gradient can be observed towards the nappe boundary in direction of the hanging wall. While these observations signal a change in metamorphic conditions within a short distance, an E-W orientated lineation predominates the whole area around the nappe boundary suggesting a wider-reaching structural influence of the emplacement of the Sankt Leonhard Nappe.

**Session:** *Pangeo workshop: Earth's Spheres (Crust, Mantle & Core)*

**Keywords:** *Moldanubian Superunit, Sankt Leonhard Nappe, HP-UHT metamorphism*