Two nappes in the Austrian part of the Moravian Superunit

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The Moravian Superunit represents the external part of the Variscan Orogen in Central Europe. Since Suess (1912) identified this superunit in the Thaya and Svratka tectonic windows along the eastern margin of the Moldanubian Superunit, its internal tectonic structure has been debated. Whereas Suess did not consider any tectonic subdivision for the Moravian Superunit, a tectonic concept with two nappes and a parautochthonous unit eventually arose for the Thaya Window (Tollmann 1983, Stípská et al. 1999, Neubauer – Handler 2000). There, the Moravian Superunit would be subdivided into an upper nappe composed mainly of Bittesch orthogneiss, a middle nappe with the ultramylonitic Weitersfeld orthogneiss and a parautochthonous unit represented by the "Thaya Batholith", lithologically related to the Brno Massif. Other models with two (Roetzel – Fuchs 1999) or four nappes (Fritz et al. 1996) were also proposed.

In this contribution, we present a new tectonic nomenclature based on mapping in the Austrian part of the Thaya Window (Austrian geological map sheet 21 Horn). In addition to local ductile and brittle-ductile shear zones, only one major regional thrust with a top-to-NNE kinematic runs through the Thaya Window. This indicates that a nomenclature with only two nappes is needed in the Austrian part of the Thaya Window: the redefined Pleißing and the newly defined Pulkau nappes, respectively. The Moldanubian Thrust forms the hanging wall of the Pleißing Nappe. The ultramylonitic Weitersfeld orthogneiss and the proto- to ultramylonitic Sachsendorf orthogneiss mark their bases in the central part of the Thaya Window and at its southern end respectively. Because there is no continuous shear zone at the base of the Bittesch orthogneiss, this lithological unit is an integral part of the Pleißing Nappe, which contains additionally granodioritic orthogneiss, mica schist, paragneiss, quartzite, calcitic marble, calc-silicate rock and the Weitersfeld orthogneiss, as sheared part of the Cadomian Thaya Batholith. The lower Pulkau Nappe is cut by the Diendorf–Boskovice Fault System in the east and overlain by the Pleißing Nappe in the west. It is composed of variably deformed granitoids and granodioritic orthogneiss from the Cadomian Thaya Batholith, mica schist, paragneiss, quartzite and minor calc-silicate rock. It is similar to the core of the Svratka Window.

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