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## A large-scale detachment system in the central Eastern Alps (Upper Austroalpine Unit, Austria)

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Based on new structural field data and Raman micro-spectroscopy on carbonaceous material a major detachment juxtaposing Drauzug-Gurktal Nappe System (DGN) against the transgressive Permo-Mesozoic cover sequence of the Ötztal-Bundschuh Nappe System (BN, Stangalm Mesozoic s. str.) in the area SE of Flattnitz (Carinthia, Austria). An Eo-alpine top-SE kinematic has been identified.

The hanging wall unit comprise lithologies of the DGN phyllites, conglomerates and graphite schists (Stolzalpe nappe), which have experienced only low grade greenschist deformation. Raman constrains  $350^{\circ}\text{C}\pm 40^{\circ}\text{C}$ .

The footwall unit consists of dolomitic ultra-mylonites, calcitic marble mylonites, meta-conglomerates and quartzites (Stangalm Mesozoic and Kuster nappe), which have experienced at least four main deformation phases. The oldest structures (D1) corresponding to Eo-Alpine nappe stacking are overprinted by (D2) isoclinal recumbent folds with E-W oriented shallow dipping fold axis and an axial plane schistosity, dipping shallowly to WSW. Ductile to brittle-ductile top to the E shearing (D3) is indicated by ESE-trending stretching lineation, C-type shear bands, stylolites, crystal- and shape preferred orientations of mineral grains. Late brittle deformation (D4) is recorded in steep joint sets with dip-directions to NW. Raman constrains  $480^{\circ}\text{C}\pm 40^{\circ}\text{C}$ .

The detachment zone comprises a complicate zone of high strain including units from DGN folded together within the Stangalm Mesozoic, which have experienced the same deformation as the BN.