

## **Coupe tectonique horizontale des Alpes centrales**

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A horizontal tectonic section of the Central Alps (Switzerland and Italy) has been constructed at 2000m above sea level. One of the aims of this work was to unravel the structural complications of the Alps in order to prepare a convenient base for the interpretation of the Western seismic profiles of the Swiss NFP 20 seismic program.

The section has been constructed by projection of tectonic limits along their dips and along the plunges of fold axes.

Axial traces of large folds allow the reader to distinguish older structures formed during the lower Tertiary phases of nappe emplacement from younger back folds mainly related to Argand's Insubric phase. It is important to note that most of these nappes are large recumbant folds, with normal and inverse limbs generated by ductile deformation at a deep level (about 7 - 30 km) in the Tertiary Alpine collision zone. Thrust nappes also occur in the Austroalpine (e.g., Dent Blanche) and more rarely in the Penninic (Zone Houillère) and the Helvetic (e.g., Diablerets nappe) domaines.

The movements of the Rhône - Simplon line (Bearth's Simplon line) and of the Canavese line are related to upper Tertiary colder and more brittle deformation.

The kinematics of the Rawil depression and the Aiguilles Rouges - Mont Blanc, Gastern - Aar and Toce dome structures are discussed. These structures result from a long and complex evolution during the whole Tertiary orogeny.