



Station velocities from a permanent GNSS network in the Eastern Alps

Matthias Madzak (1), Philipp Mitterschiffthaler (1), Günter Stangl (1,2)

(1) Federal Office of Metrology and Surveying, Vienna, Austria, (2) Austrian Academy of Sciences, Space Research Institute, Satellite Geodesy, Graz, Austria

The APOS network of permanent GNSS stations consists of more than 80 sites covering the Austrian territory and its surrounding area. A comprehensive analysis of this network is performed and station velocities are derived using the Bernese GNSS Software. Coordinate time series from satellite system offer the possibility to study the geophysical setting in that region. The results indicate a NE-migration of the boundary zone between the Eastern Alps and Pannonian Basin, probably indirectly caused by the Adriatic Microplate as well as a slight northern migration of the Alpine Zone, probably caused directly by the Adriatic Microplate, ending in the Northern Alpine foreland. A minor up movement of the Alpine Zone, possibly caused by post-glacial uplift, and slight sinking in the forelands, potentially caused by water reduction in the ground of sediments, can be identified.