



Active tectonics at the Eastern end of the Alps: The Alps are certainly not “dead” at all

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In the literature many contributions have recently claimed that: “the Alps are tectonically dead”. Much of this work has followed the recognition that the central part of the Alps appears to have changed their tectonic regime since the Miocene and deformation has propagated into the foreland. The inactivity of the Central Alps comes to no surprise, as the geophysical community has long established that the (counter clockwise) rotation pole of the Adriatic plate relative to Europe is due south of the central Alps near Torino implying zero convergence in the Central Alps to north of it. Conversely, this rotation pole implies north-south extension in the western Alps and north-south convergence east of the rotation pole in the Eastern Alps. In the Eastern Alps, seismology, active tectonics and recent uplift patterns show indeed that this region is currently highly active.

In this contribution we defend the tectonic activity in the Eastern Alps against a growing body of opinion that the Alps are tectonically dead. For this we present two aspects: First we summarise our preliminary studies from the past including (i) cosmogenic burial ages suggesting up to 700 m of surface uplift within the last 4 my (ii) U/He age suggesting massive exhumation within the last 10 my (iii) morphometric studies showing substantial uplift of fluvial terraces. Secondly, we present our working groups plan to tackle this subject within the current TOPO-ALPS initiative