



Conspicuous features and their indications for the evolution in the Styrian Basin

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We present a digital map of the Alpine Orogen – Pannonian Basin transition zone, in the region of the Styrian Basin, in which we correlate marker horizons across the transition zone in elevation and time. The Styrian Basin was inverted about 7 my ago and is currently characterised by a hilly landscape between 200 and 600 m in elevation. In the bounding orogen, mountains rapidly rise to 2200 m asl. A series of conspicuous features in the basin (including asymmetric valley shapes and parallel orientation of drainages in discretely defined zones of the basin) indicate that the region experienced a complicated uplift history during the inversion of the basin margin. The aim of the map is to understand the relative importance of erosion driven incision and tectonic uplift in the shaping of the surface morphology in the transition zone. Documenting the relative length scales of these two processes will ultimately help us to understand the mechanics governing the basin inversion. As marker horizons we use coeval fluvial terraces, top surfaces of shallow marine deposits in the basin and caves. This contribution is very much a progress report of a study in its early stages. Currently we use existing maps, preliminary dating of cosmogenic nuclei from some caves and unpublished information. Further work will use low temperature geochronology, morphological mapping and numerical landform modelling to constrain the uplift history in space and absolute time.