ferred to sinistral strike-slip faulting along the western seg­ment of the ISAM-fault which follows the Inn valley east of Innsbruck. North of Kufstein the fault system bends for 20 km from a NE- to ENE-direction heading towards Salzburg. Increased deformation in the bend zone caused thrusting of Triassic carbonates of the Kaiserergebirge over Oligocene sediments which are commonly captured in the course of the fault system. North of the bend zone a array of NNE-trending sinistral faults branches off from the main system. East of the bend zone, the fault separates the Tirolic and Bajuvaric nappe system of the NCA. Near Salzburg, the fault reaches the northern margin of the NCA and follows the floor thrust of the NCA before entering the Flysch units. Deformation there is partitioned into sinistral faulting on ENE-trending strike-slip faults and NE-directed thrusting. The Bajuvaric nappe system disappears over a distance of c. 150 km. A large part of this disappearance can be attributed to oblique sinistral movement along the ISAM-fault which offsets the thrust boundary between the Bajuvaric and Tirolic nappes. The continuation of the fault system in the Flysch zone is locally covered by NE-directed out-of-sequence reactiva­tions of the floor thrust of the NCA. Several off-branching splay faults offset the Flysch floor thrust onto the Molasse. Finally, the main fault segment offsets the Flysch/Molasse boundary SW of Steyr for at least 20 km. East of Steyr, the sinistral ISAM-strike-slip fault merges into the sole thrust of the subalpine Molasse causing NNE-directed thrust move­ments.

The results of the deep magnetotelluric sounding on the profile crossing TT line in the south-east Poland

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Twelve deep electromagnetic sounding has been carried out at 500 km long profile running from Pannonian Basin (Hungary), crossing Carpathian Arc to East European Platform (Ukraine). Five electromagnetic components have been recorded simultaneously in eight points in 1995, and supplemented in the remaining points in 1997. Period range was 5–10000s. The inductor vectors and apparent resistivity curves were calculated in large range of periods. The interpreta­tion, based on 2-D numerical modelling, suggests the presence of the good conductors beneath the Pannonian Basin, Carpathian Range and at the marginal zone of the East European Platform. Between the latter two there probably exists the deep rooted fault. We also have made the attempt to estimate the resistivity distri­bution deeper in the mantle. We found out that below the Pannonian Basin the good conductor (astenosphere) seems to be at a depth of about 60 km, while on the north part of our profile the depth of the good conductor can be estimated as 150 km.

Preliminary case for PANCARDI mantle extrusion

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Dispersed volcanic centers appeared over much of Eu­rasia, including central and eastern Europe, following the closure of Neotethys (65–45 Ma). Although widespread, this activity is distinct from that producing continental flood basalts or other large igneous provinces — exhibiting signifi­cantly lower rates of eruption and melt production, dispersal of eruptive centers, and an apparent lack of deep-rooted plumes. It is also associated with transtensional lithosphere structures (rifts and conjugate strike-slip components) inter­preted as extrusion effects of continental plate collisions.

Europe, Asia Minor, and the east Asia-western Pacific region appear to share several common features, e.g. massi­ve tectonic extrusion due to (respectively) African, Arabian, and Indian collisions, basalt magmatism associated with extrusion lobes and east-directed slab rollback, high-K shos­bonites erupted at transtensional, extinct or near-extinct subduction zones, isotopic mixing patterns suggesting ast­henospheric entrainment of delaminated or convection-cyc­led lithosphere, and melt volumes and asthenospheric potential temperatures exceeding those expected during cold lithosphere extension. Less well-defined are shallow mantle thermal ano­malies that appear to match magmatic and isotopic provinciality, e.g. beneath Europe and the Mediterranean, eastern Anatolia, and southeast Asia and west Pacific back-arc basins. Together, these characteristics pose fundamental que­sions concerning the behaviour of Tethyan asthenosphere. Is the latter mobilized by colliding continents and if so, to what extent are more distal plate and subduction system topologies coupled to the asthenosphere motion? Collision­induced asthenosphere extrusion could explain anomalous magmatism and slab rollback, and allow for chemical and thermal interaction with thickened lithospheric substrate. A preliminary attempt to address these questions is made by comparison of magmatism and lithosphere kinematics be­tween PANCARDI and southeast Asia extrusion lobes.