

## **Aegean Tectonics**

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The Aegean region concentrates all the major questions posed by the deformation of continents. Whether the continental lithosphere deforms by strongly localised strike-slip shear zones or in a more distributed manner is an acute debate in the case of the Aegean. The rheology of the continental lithosphere is thus strongly questioned here and no available model can simply explain why the deformation apparently became more localised in the Late Miocene- Early Pliocene when the North Anatolian Fault entered the Aegean Sea and started to interfere with the more distributed backarc extension that has shaped the Cyclades and the Menderes massif from the Oligocene to the Present. Extension in the Rhodope massif started in the Eocene, earlier than in the Aegean Sea and the causes are not yet clear. The Aegean crust is furthermore an assemblage of tectonic units that have experienced high pressure and low temperature conditions from the Eocene to the Miocene. These units have recorded the dynamics of the subduction channel and were then caught in the processes related to backarc extension. Sediments were deposited at various stages of this complex evolution, either in piggy-back basins within the Hellenides or in backarc basins in the Aegean Sea, the Rhodope or the Menderes. This evolution was ultimately controlled by the evolution of the African slab at depth and its interferences with rigid blocks carried by the displacement of plates at the surface. Slab retreat and tearing strongly influenced the dynamics of backarc extension as well as the location and chemistry of the magmatic arc, and the relative motion of the African, Eurasian, Anatolian and Arabian plates also played a major role. This session thus welcomes any communication dealing with the tectonic, metamorphic, magmatic and sedimentary evolution of the Aegean Sea and its periphery as well as new images of the deep structure of the crust and mantle that can contribute to unravel the question of the rheology of the lithosphere in this region and its variations through time.