

## **ISOSTATIC STUDIES IN THE HELLENIDES**

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A detailed gravity database has been compiled and verified and combined with a new 2 km grid of point topographic heights. Both extend over a region 900 by 700 km, covering Greece, the southernmost part of the Balkan Peninsula, the Aegean and adjacent marine regions. The two dimensional isostatic admittance has been computed for the wavelength range 4 to 900 km. Variation in crustal thickness dominates the longwavelength admittance contributions so that the part of the gravity field which is predictable from the topographic load enables the Moho depth to be mapped. This technique gives estimates of crustal stretching beta factors which, within the Aegean, reach a maximum in an east west trending region of the Sea of Crete. The long wavelength parts of the gravity components which do not correlate with the load show a simple dipolar anomaly parallel to the Hellenic trench and characterize the arching and subducting slab. The isostatic admittance appears to be remarkably successful in separating contributions from the slab and crustal thinning. A detailed model of crustal thickness is presented, although the model used may be inappropriate in the fore-arc region. There is no evidence for remnants of former subduction zones.

## **GEOLOGICAL STRUCTURE OF THE BROAD AREA OF FALAKRO MOUNTAIN AND TECTONIC RELATIONSHIPS BETWEEN W. RHODOPE ZONE AND SERBOMACEDONIAN MASSIF**

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The broad area of the Falakro mountain is mainly composed of metamorphic and magmatic rocks, covered in part by Neogene and Quaternary sediments. The metamorphic rocks are subdivided into three lithologic units:

1. Unit of orthogneisses with a thickness >2.000 m. It represents the pre-Alpine basement consisting of leucocratic muscovite gneisses, biotite gneisses - both as augen gneisses - and migmatites.