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Evaluation of Gravity and Magnetic Data of Eastern Mediterranean

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The Eastern Mediterranean neotectonics still comprises an active profile in our day. Especially, Crete island and its surrounding are under the influence of many tectonic concerns present in the region. With the movement of the Anatolian plate in the west direction along the North Anatolian fault zone as a result of the northward movement of the Arabian plate and the northward movement of the African plate in the South together govern a complicated tectonism in the region.

In this study, gravity and magnetic data of the Eastern Mediterranean have been together evaluated in which subduction zone, volcanic island arcs and pull apart basins take place. In the initial phase, in order to investigate the change in the crustal thickness of the area around Crete, the relation between free air anomaly and magnetic anonmalies has been examined. In the second step, by applying power spectrum and normalised full gradient method to the Bouguer gravity data of the region, the changes in the crustal thickness and also the horizontal and vertical structure transmissions have been investigated.

In the final part, the results obtained from previous stages have been evaluated together with the seismicity of the region.