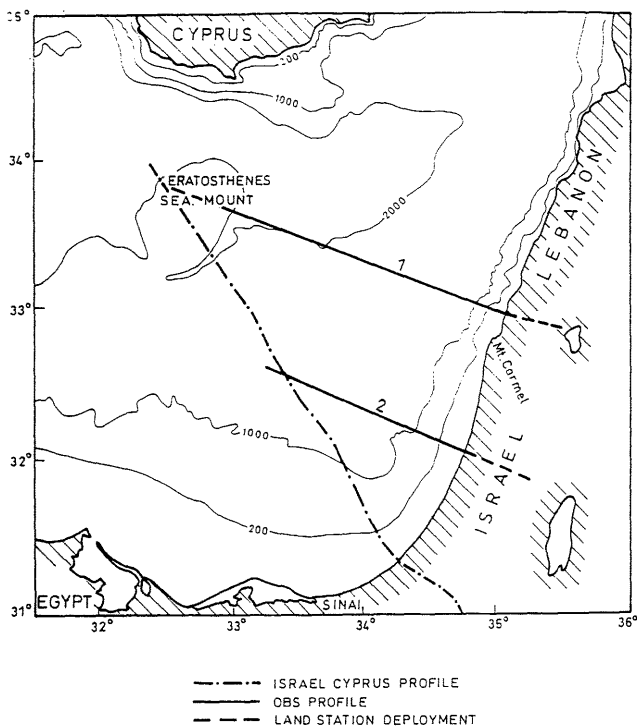


A Seismic Study of the Levantine Margin and Basin

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Previous geophysical studies indicate the presence of a fossil oceanic crust overlain by a thick sequence of sediments in part of the Levantine basin. Further, an examination of geophysical data shows that there are differences in the nature and structure of the crust north and south of the Carmel block in northern Israel.



In order to confirm these indications a combined onshore-offshore seismic study was undertaken by the Department of Geophysics, Tel Aviv University and the Institute of Geophysics, Hamburg University which was funded by the German-Israeli Foundation for Scientific Research and Development.

The study comprised two profiles, one across Lower Galilee, extending to Mt. Eratosthenes offshore and the other extending from west of Jerusalem extending west to some 180 km offshore. Data acquisition was based on OBSs offshore and mobile land stations onshore. Energy sources were airgun shots offshore, augmented by two large explosive shots per profile and by quarry blasts onshore.

The data which were recorded on analog tapes were digitized and plotted on to record sections. While the evaluation of the data is still underway, preliminary evaluation confirms the presence of a continental crust under Mt. Eratosthenes. It also confirms the position of the continental to oceanic crust and brings new information regarding the thickness, structure and nature of the sedimentary cover.