

THE MCS PRISMED CRUISE, PART 2 : THE INNER MEDITERRANEAN RIDGE, THE HELLENIC TRENCH AND MARGIN

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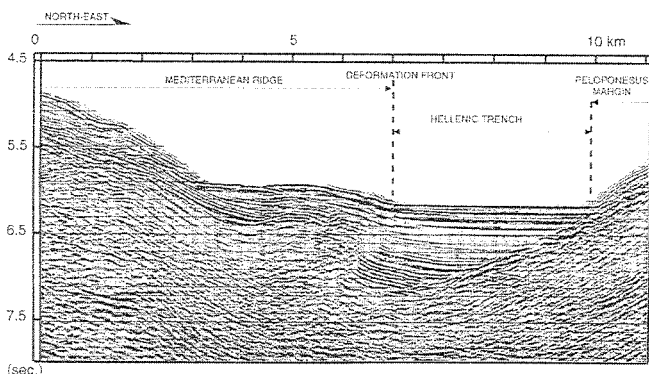
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The multichannel seismic reflection survey Prismed (March 1993) has yielded new data on the geological structures of the northern Mediterranean Ridge (M.R.) and of its contacts with the Hellenic trench and bordering Aegean margin. These areas are of major interest to study the transition between extensional and compressional regimes.

1 - Off Peloponnesus, the M.R. contains a thick, likely Messinian, basin affected by gentle folding and reverse faulting ; only few deformations are detected within the Plioquaternary cover. In opposition the contact between the M.R. and the bordering Matapan trench is characterized by reverse faulting and compressional deformations involving recent sedimentation. We interpret these features as evidences of transpressional activity related to dextral strike slip motion at the boundary between the trench and the M.R. In the area the continental margin is cut by extensional faulting that has likely reactivated previous thrust zones.

2 - South of Crete, the margin is cut into a series of imbricated and tilted blocks resulting in fan-shaped basins only covered by thin, unconformable plioquaternary sediments. There, the M.R. appears bounded by northward directed thrust zones ; however the 3000 meters deep trench represents the northern limit of major gravitational sliding over parts of the lower continental margin.

3 - Finally, south-east of Crete the Hellenic trench system divides into two branches ; the northern Pliny trench may correspond to an echelon strike slip reactivated former major thrusts across continental margin blocks ; the southern Strabo trench represents the northern limit of M.R. related sedimentary sliding.



The M. R inner deformation front facing the Peloponnesus margins