

A first compressional phase (f_1), with σ_1 trending ENE-WSW. It was active during middle-late Miocene times. It could be considered as a late Alpidic phase and tentatively correlated to the active and coeval tectogenesis of the external Hellenides.

The second phase (f_2), clearly recognized by the structural analysis, is characterized by an extension (σ_3) trending nearly NE-SW. It was probably active during late Miocene-Pliocene and reactivated older alpidic structures, mainly trending NW-SE. This phase contributed to the evolution of the western Karditsa Basin, generated the eastern Larissa Basin and, consequently, the Central Hills were formed.

The third tectonic phase (f_3) which affected the study area is still extensional but with the σ_3 trending between N-S and NNE-SSW. As it is well proved by the active seismicity of the area, the upper temporal limit is open; while, in the Upper Pleistocene deposits exists evidence of syn-sedimentary tectonic structures belonging to this phase.

The tectonic evolution of Thessaly during Miocene to present is also briefly discussed and a new detailed map of the stress pattern is presented.

THE STATE OF THE TECTONIC STRESSES IN THE AREA OF THE EASTERN CORINTH GULF EARTHQUAKES OF FEBRUARY – MARCH 1981

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On February and March 1981 the easternmost part of the Gulf of Corinth suffered damaging seismic activity. During the three major earthquakes of magnitudes M_s 6.7, 6.4 and 6.4 normal fresh faulting appeared on land. Surface breaks with a northward-dipping slip vector were noticed on the southern side of the Gulf following the first and second shock and other such with a southward dip appeared later on the northern side of the Gulf, as a result of the March 4 shock.

In this paper a mean state of stress have been computed by the slip vector measured on a) recent neotectonic faults, b) reactivated faults and c) seismic faults provided from focal mechanisms. A notable feature of these analyses is that the tensional directions σ_3 deduced from the deviatoric tensors computed by all the faults are nearly the same.

Furthermore, the mean tectonic stresses tensor have been computed by the faults provided from focal mechanisms and the depth of the three main shocks and 18 aftershocks. This tensor has a main tensional component of 0.45 kbars on direction that is near the σ_3 directions of all deviatoric tensors.

After all those, security coefficients for all the faults have been computed and analogous diagrams have been made.