

# THE STRIKE SLIP TECTONIC REGIME AT SOUTHERN AEGEAN SEA AS IMPLIED BY COMBINED MARINE GEOPHYSICAL SURVEY

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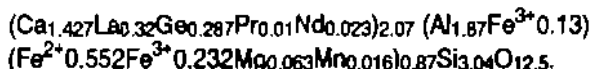
The processing and analysis of the data, acquired by a precise and dense marine geophysical survey at Southern Aegean sea, shed more light to the particular geometrical pattern of the tectonic deformation of the area. Its dominant feature seems to be a conjugation, of two shear zones sets striking NW-SE and NE-SW. The model, of a distribution of rhomb shaped "pull apart basins", has been applied in order to explain the characteristic local depressions, that comprise the Southern Aegean basin. In addition the construction of deterministic vertical cross section models, adjusted in gravity and magnetic profiles along the NE-SW direction, suggest the presence of compressional tectonic structures (active or non active?), at the southern borders of the basin.

## NON-METAMICT ALLANITE FROM SERIFOS ISLAND, CYCLADES (GREECE)

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Non-metamict allanite from the skarn on Serifos island Cyclades/Greece was studied optically, by x-ray diffraction - and microprobe analysis. The allanite is associated mainly with andradite as well as with epidote - albite. The mineral formula according to microprobe analysis is:



The lattice parameters are (A):  $a_0=8.905(1)$ ,  $b_0=5.699(1)$ ,  $c_0=10.131(2)$ ,  $\beta=114.97^\circ$ . density= $3.7772\text{g/cm}^3$ .

The crystal structure of allanite was refined by least square fitting by the "Rietveld" method and compared with this from literature. The crystal chemistry derived by the structure refinement is in good agreement with this of the microprobe analysis.

The distribution of iron and Rare Earth Elements is discussed.

The non-metamictic character of the Serifian allanite, as established in this study, is in good accordance with its genetic and spatial relationship to the very young granodiorite of Serifos, which is a part of the large lacolith of the ACM.