Kinematic model of intraoceanic thrusting based on the observation of metamorphic sole of the Oman Mountains

Toshiaki Masuda[1], Yohei Yamaura[1], Shusaku Mizokami[2], Yasuo Kugimiya[1]

[1] Inst. of Geosciences, Shizuoka Univ., [2] Inst. Geosciences, Shizuoka Univ.

Metamorphic sole is cosidered to have been produced during the intraoceanic thrusting of hot mantle peridotites, the protoliths being basalts and cherts accumulated on the oceanic crust. We surveyed the metamorphic sole of the Wadi Tayin area in the NE Oman Mountains, and analysed intensity of the mineral lineations in the amphibolites. We obtained preliminary results that the intensity is stronger in the higher grade amphibolites close to the intraoceanic thrusting plane: this result is not expected in the usual shear zone models. We need a new model that can explain such mineral lineations.

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