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Post-Paleogene (post-Middle Eocene-pre-Miocene) Geodynamic evolution of the Upper Cretaceous-Paleogene Basins in Central Anatolia, Turkey

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Central Anatolia is one of the key areas on the evolution of Cretaceous-Paleogene Tethys where stratigraphy of the region is well studied. However not well linked with tectonics. The so-called “Ankara Mélange” belt (AOM) and the basins on top are important elements in the understanding of the İzmir-Ankara-Erzincan suture belt (İAES) evolution in Anatolia (Turkey) and in the evolution of Tethys in minor Asia (Turkey).
Some of the basins are directly situated on top of the tectonic slices of the accretionary prism (IAES). However, some are not tectonically well explained as in the case of Haymana basin. The southern continental fragments (eg. Kütahya-Bolkardağ and Kırşehir blocks from Gondwana) are approaching to northern continents (Pontides of Lauriasia) where basins like Haymana, Alçı, Kırıkkale and Orhaniye extensional basins are evolved in between the closing margins of two continents. Haymana basin is an extensional basin developed under contractional regime on top of both northward subducting oceanic fragments and an approaching fragments of southern continents.
Paleogene (end of Eocene) is the time where the Seas were retreated to S-SE Anatolia leaving a continental setting in Anatolia during Oligocene-Miocene. The slip data gathered from the faults cross-cutting the Paleogene Units and the fabric from Cretaceous mélanges depicts a NNW-SSE to NNE-SSW compressional stress regime operated during post-Eocene-pre-Miocene period. Lately the slip surfaces were overprinted by post-Pliocene normal faulting.
Key words: fault slip data, Paleogene, NNW-SSE compression, Anatolia.