

Interactive comment on “Geometry of the Turkey-Arabia and Africa-Arabia plate boundaries in the latest Miocene to Mid-Pliocene: the role of the Malatya-Ovacık Fault Zone in eastern Turkey” by R. Westaway et al.

Anonymous Referee #2

Received and published: 30 November 2007

This new paper by Westway, Demir and Seyrek deals with plate boundary evolution from the Miocene-Pliocene to the present day configuration in eastern Turkey. This is an area of complex faulting and many different interpretations exist for the evolution and development of this key area. The authors base their work on field observations but the paper also discusses the implications to the bigger picture. The online supplementary data is good giving important background information to the area and also to the context of the research as well.

As such, this work is important for the understanding of this region but is of wider inter-

est in terms of continental plate tectonic processes. In addition, the text is well written and complex geometries are well explained leading the reader through the arguments; however, having said that there are still some flaws that need to be attended to prior to publication.

General Comments

The major flaw with this paper is the over reliance in this paper on the previous work of the authors, as more than a third of the cited references are self-citations. There needs to be a wider discussion on the tectonics of the area using a fuller range of sources.

Although, the online supplement discusses the different published models for the MOFZ, the main text simply states that the author's previous work has since been criticised. I feel that both of the different interpretations for the MOFZ need to be presented in the main paper in order for the reader to fully understand the new data.

In addition, I think the paper would benefit from the inclusion of a figure illustrating the proposed configuration of the plates for different time periods, this would help the reader understand and visualise the change in plate configuration much better than at present when all the information is crowded onto two location maps.

Minor points

P172; Line 11 - redefine DSFZ P180; Line 3 - Westaway et al. (2006) P180; Line 6 - Westaway et al. (2006) P180 line 9 - the Malatya Basin experienced transtension while... P182 line 6 - figure 1

Figures 1 & 2 I find it difficult on figures 1 and 2 to see the geological features mentioned as the geographical features (towns, rivers) are the more obvious. It would help if the geographical information was shown in less bold colours (grey and blue), with the geological features emphasized more in bolder colours.

Interactive comment on eEarth Discuss., 2, 169, 2007.