

## ***Interactive comment on “Joint analysis of the magnetic field and Total Gradient Intensity in Central Europe” by Maurizio Milano et al.***

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I generally like the paper and consider this study of broad interest as it addresses a controversy in the geomagnetic community. I suggest a few small changes to broaden its appeal as the authors sometime get lost in the (geological) details, but from the introduction I would have expected a more detailed discussion of the pros and cons of aeromagnetic and satellite models for study this region.

page 4, line 7: no ending for sentence

page 4, line 4: KTB was not a deep seismic profile. These were the DEKORP profiles. KTB was the deep drilling for which as well seismic studies have been carried out.

page 4, line 20: Korja & Heikkinnen, 2005: This is a study on the deep (Svecofennian)

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part of Europe, not the shallow one as stated here.

Figure 3: I would suggest to delete the decimal points and to use an even spaced colour scale.

page 8, line 20ff: Could you please add the depths at which the sources are placed.

page 9, line 16: At which depth are the 19 sources placed? And is the regional field a consequence of the orientation of the inducing field or how does it relate to the sources?

page 11, line 9: Maybe show an intermediate model with constant magnetisation to demonstrate the effect of geometry only

Section 5.1-5.3 I find this discussion to be a bit odd and lengthy. Your main discussion was the origin of the magnetic anomaly over the TESZ, so why here you add a very detailed discussion of (all) European anomalies? I think this part could be shortened for clarity and to increase the appeal of the paper for its readers.

page 20, line 20: What about differences between EMMP and MF7? I miss a more detailed discussion how the source geometry results in the field and a specific discussion of the spectral content of MF7 vs. EMMP. I think a lot of people use MF7 and here you could demonstrate its pros and cons in interpretation a large scale anomaly as observed in central Europe. I would prefer such a discussion in comparison to the discussion of local anomalies in the text.

Page 20, line 25: data are available from GETECH, not near GETECH

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Interactive comment on Solid Earth Discuss., <https://doi.org/10.5194/se-2019-40>, 2019.

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