

Geosci. Instrum. Method. Data Syst. Discuss., referee comment RC1
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Comment on gi-2021-33

Anonymous Referee #1

Referee comment on "Leveling airborne geophysical data using a unidirectional variational model" by Qiong Zhang et al., Geosci. Instrum. Method. Data Syst. Discuss.,
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The quality of English language is very low, so in many cases it makes it difficult to understand what authors mean.

Introduction is too long and does not explain in clear form what is advantage of proposed method over existing variety of techniques.

There is complete misunderstanding what are the gradients. Gradients are measured in nT/m and not in nT as, for instance, in Figure 2. These incorrect terms are found all over the text.

In Figure 1 we see that x and y axes are horizontal axes of the survey area. However, in line 177 it is written that TVx anTVy are horizontal and vertical variations.

Given examples of levelling do not convince me of the advantage of the proposed method over existing ones.

Probably, modeled magnetic map with artificial anomalies and leveling errors would provide more persuasive arguments in the favor of suggested method.