

## ***Interactive comment on “The combined processing of geomagnetic intensity vector projections and absolute magnitude measurements” by Victor G. Getmanov et al.***

### **Anonymous Referee #2**

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The manuscript “The combined processing of geomagnetic intensity vector projections and absolute magnitude measurements” by Victor G. Getmanov et al. provides an interesting method to reconstruct a continuous function from measured data. The paper describe a 2-stage algorithm. In the first-stage, data is structured in subsets called “sliding intervals” and fitted to some functional within that interval. In the second-stage, the different fitted functions for the same data are averaged using some weights that take into account the number of sliding intervals where every data appears. This algorithm has analytical solution for piecewise constant functions. The model is tested with two different sources of data. They use model data with gaussian noise as a first stage. For the second test, the use geomagnetic measurements from the INTERMAG-

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NET observatory MBO (Mbour, Senegal). Finally they perform an error estimation for the algorithm, obtaining that the second-stage of the algorithm decrease the first-stage RMS errors approximately in a 60-80%.

The work described contains an original statement of the problem and a completely new approach to the digital processing of measurements and results highly interesting for the audience.

At the beginning of the third page, line 2, there must be a typo or some missing text since is written: “[...]normally distributed random values with zero mathematical expectations and variances.” Since variance cannot be zero, this should be corrected.

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https://doi.org/10.5194/gi-2018-31, 2018.

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