

Interactive comment on “Automatic parameterization for magnetometer zero offset determination” by M. A. Pudney et al.

Anonymous Referee #1

Received and published: 14 June 2012

The authors have written an interesting and clearly structured paper about the offset determination of magnetic field data measured in space. Although the paper deals mainly in discussing the methods of Leinweber et al. 2008 I recommend the publication of the paper. The authors applied the mentioned methods successfully and created some new recipes on the base of that methods. Using these new procedures in combination with statistical analyses, a powerful tools was developed to improve the magnetic field data quality of satellite data.

Nevertheless there are some minor issues listed below, which have to be improved before publication:

* page 248, line 2: "fast" should be deleted. And something like "and possibly transient filed jumps due to payload or satellite subsystem activities" should be added here.

Full Screen / Esc

Printer-friendly Version

Interactive Discussion

Discussion Paper



Interactive
Comment

* page 248, line 3: "offset" should be deleted. Reason: a "residual field" is a real field which is not compensated, e.g. a spacecraft field. An "offset" is a property of an instrument or a sensor, causing the instrument to display a non zero value while the real measured entity equals zero. But a "residual field offset" is a term which does not make sense in any case as two entities have been mixed which should be clearly separated.

* page 248, line 29: It is not exactly clear what is meant by "minimum compressional standard deviation" especially in comparison to "compressional variance of the magnetic field" Please give exact mathematical definitions. This entity is one of the key entities of the paper/discussion, therefore more details are needed here to help the common readership.

* In Fig 1&2 the positive and negative field modulus B_{mag} is plotted. Please indicate in the Figure legend that this is $\pm B_{mag}$, not only B_{mag} .

Interactive comment on Geosci. Instrum. Method. Data Syst. Discuss., 2, 245, 2012.

[Full Screen / Esc](#)[Printer-friendly Version](#)[Interactive Discussion](#)[Discussion Paper](#)