

Replies to Reviewer #1

The Authors thank the reviewer for her/his helpful comments which increased the quality of our work. Here below we reported the reviewer's comments (in black) and our replies (in red).

SPECIFIC COMMENTS

1) In this paper is no information whether there was an attempt to obtain K9-limits for Duronia and Lampedusa from ISGI (International Service of Geomagnetic Indices). According to information on http://isgi.unistra.fr/isgi_refservice.php ISGI " has the responsibility of IAGA geomagnetic indices derivation and dissemination, and to ensure the homogeneity of the data series".

In the first version of the paper the authors had a private communication from colleagues who are connected with ISGI regarding the K9 value for Lampedusa observatory. In the revision process we indirectly obtained the K9 value for Duronia observatory. Both values are discussed in the revised version of the paper for corroborating our results (lines 265-267 in the revised manuscript).

2) In the paper "K9" or "K9 value" should be rather replaced with "K9-limit". The name "K9-limit" is closer to the idea of this parameter.

According to the #2 referee's suggestions the authors made use of L9 (this is how the parameter is traditionally named) instead of K9 in the revised manuscript.

TECHNICAL CORRECTIONS

Line 45: on <https://www.gfz-potsdam.de/en/kp-index/> we can see Lat=52deg4min (not 47.94deg)

We corrected the sentences also following the #2 reviewer's indications (lines 50-53, revised ms).

Line 55: should be Finnish Meteorological Institute (not Meteorolical)

Done: line 64 in the revised manuscript

Line 55: should be LRNS provided by Hermanus Magnetic Observatory, CISR, South Africa

Done: line 64 in the revised manuscript

Line 280: consider deleting "the" or write "that they"

Done: we used "that they" at line 300 in the revised manuscript

Line 289: should be 12b(89)

Done.

Line 303: Should be rather Geophysical Journal International

Done

Line 312: Should be 10.1029/2018GL078387

Done