

We would like to sincerely thank you for your careful reading of our manuscript and for your thoughtful and constructive comments. We are pleased to know that you found the scientific approach and presentation satisfactory.

Below, we address each of your specific suggestions aimed at improving the clarity and completeness of the paper. We appreciate your input and have made revisions accordingly.

SPECIFIC COMMENTS

Referee comment 1:

It may be helpful to describe more the equation for F_v or provide a citation (Line 129). I think it refers to F that is formed by X , Y , and Z from the vector magnetometer. Following the equation for F_v , something could be said such as, “where x , y , and z are recorded by the observatory’s vector magnetometer, and F_s , which is recorded by an absolute scalar field magnetometer like a proton or Overhauser magnetometer. “

Reply:

Thank you for the suggestion. The text around line 129 now reads as follows. When reviewing 1-min data time series, the visual assessment of the magnetic field recordings is a key step to detect discrepancies between F ($F = \sqrt{X^2 + Y^2 + Z^2}$) and S , where X , Y , and Z are recorded by the observatory’s vector magnetometer, and S , which is recorded by an absolute scalar field magnetometer like a proton or Overhauser magnetometer.

Referee comment 2:

From Lines 108 and 109, I do not know if those are required or optional elements. Maybe it could be mentioned if they are optional, as well as what would be in the country read me file.

Reply:

It's true that one might wonder whether these files are required or simply recommended. INTERMAGNET continues to collect them from observatories, which is relatively easy when all observatories in a given country are managed by the same parent institution. In this article, however, we prefer not to go into this topic in detail.

Referee comment 3:

May be helpful to include citations around Line 121 regarding K values or description of the term.

Reply:

A citation has been added to the local K index and the K_9 -limit:

Menvielle, M., & Berthelier, A. (1991). The K -derived planetary indices: Description and availability. *Reviews of Geophysics*, 29(3), 415–432. <https://doi.org/10.1029/91RG00994>

Referee comment 4:

May be helpful to include citations around Line 121 regarding K values or description of the term.

Reply:

A citation has been added to the local K index and the K9-limit:

Menvielle, M., & Berthelier, A. (1991). The K-derived planetary indices: Description and availability. *Reviews of Geophysics*, 29(3), 415–432. <https://doi.org/10.1029/91RG00994>

Referee comment 5:

The paper has several enlightening statements such as that found in line 95 (related to the incredibly beneficial exchange of ideas) or line 39 (encouraging use of backup data when available), and lines 60-70 which explain the value of baseline plots and how they may be affected. It may be a nice place to further elaborate upon, or cite where to find, the criteria of what is considered the best, and/ or what is acceptable, when analysing the differences between baselines and data.

Reply:

Thank you for your kind comments. As for the suggestion to expand on the topic of baselines, this is indeed quite a broad subject, and it would be difficult to cover it in more detail within the scope of this article. We believe it would be better suited for a separate publication. For that reason, we have added a sentence with a reference to the IAGA Guide (Jankowski, J., and C. Sucksdorff, 1996, Guide for Magnetic Measurements and Observatory Practice, Int. Assoc. of Geomagn. and Aeron., Warsaw), where this topic is addressed in several places. The added sentence reads as follows:

"A guide published by IAGA includes numerous references to the evaluation of baselines and their role in observatory practice (Jankowski and Sucksdorff, 1996)."

TECHNICAL CORRECTIONS

Line 33: Suggestion for sentence rearrangement: "Their low latency offers rapid availability, however they are not yet fully calibrated.."

Reply: has been corrected

Line 33: Suggestion to add 'purposes' after 'operational monitoring'

Reply: has been corrected

Line 42: Capitalization of the word 'provided'

Reply: has been corrected

Line 43: Replace the comma after the word 'recording' by a period.

Reply: has been corrected

Line 74: Remove extra parenthesis in “..the Technical Manual ((St-Louis et al., 2020),”

Reply: has been corrected

Line 80: Capitalization of ‘data’ in “Definitive data”

Reply: has been corrected

Line 81: Remove ‘s’ from “volunteers” such that it reads “volunteer experts” or switch the words around: “expert volunteers”.

Reply: has been corrected

Line 86: Remove the space between ‘but also includes’ and the colon. The sentence could also be written,

“The review process extends beyond analyzing the time series of geomagnetic field components, and also includes:

or

“The review process extends beyond the analysis of the time series of geomagnetic field components, and also includes:”

or

“The review process extends beyond analyzing the time series of geomagnetic field components. It also includes: ”

Reply: We followed the first suggestion.

Line 126: Remove the ‘s’ from the word ‘appears’.

Reply: has been corrected

Line 130: Capitalize the ‘o’ in ‘overhauser magntoemter’ and check spelling of magnetometer.

Reply: has been corrected

Line 130: Suggestion for sentence rearrangement: “In addition, visual comparisons of the time series of a given observatory with those from neighboring observatories often provide valuable insights.”

Reply: We used the suggestion. Thank you.

Line 136: Remove comma after link (“..._dois,”)

Reply: has been corrected

Line 137: Suggestion for sentence rearrangement: “Dating back to 1991, it contains the most recent data updates for the entire INTERMAGNET network, along with time series, baselines, K indices,...”

Reply: We used the suggestion. Thank you.

Line 140: Replace ‘has’ with ‘have’ (“...various software tools have been developed...”)

Reply: has been corrected

Line 143: Remove the space between the link and the comma (“...html ,”)

Reply: has been corrected

Line 181: Suggestion of adding the word ‘to’ between ‘leading’ and ‘the’, and remove the word ‘a’ between ‘of’ and ‘condensed’, i.e.: “...leading to the elaboration of condensed, standardised guidelines..” Or, “ Volunteers from the Data Checking Task Team (DCTT) are adopting improved workflows which lead the elaboration of condensed, standardised guidelines..”

Reply: We used the suggestion (option 2). Thank you.