

General list of amendments

Line 11:

The word ‘solar’ changed to lowercase.

Line 23:

K is given italics.

Line 48:

We have replaced the transliteration version in the text with ‘**Severnyj Polyus**’ and the abbreviations **SP** to **NP**. We have also replaced the term ‘romanized’ with ‘**transcribed Cyrillic to Latin**’.

Lines 71–73:

The sentence was changed to:

“To quantify geomagnetic disturbances caused by the interaction of solar corpuscular radiation with the magnetosphere, processes in the magnetosphere itself, the interaction of the magnetosphere and the ionosphere, as well as processes in the ionosphere itself, the geomagnetic community widely uses geomagnetic activity indices (Lincoln, 1967)”.

Line 89:

We moved the reference to the Figure 2 from line 83 to line 89.

Line 102:

We have replaced **relative to** with **minus**.

Line 103:

Reference to the Figure 3 moved to line 103.

Line 110:

Reference to the new Figure 4 added to line 110.

Lines 125–132:

We have added the following text to the article (line 125–127): “This fact is described in articles (Bartels et al., 1939; Lincoln, 1967). For observatories established after 1938, the lower limit of the amplitude for $K = 9$ is chosen in consultation with the working group on geomagnetic activity indices IAGA (before 1954 IATME) (Lincoln, 1967)”.

We have added the following text (lines 127–132):

“An event with $K \leq 2$ is quiet, $K = 2-3$ is slightly disturbed, $K = 4$ is disturbed, $K = 5-6$ is a magnetic storm, and $K \geq 7$ is a large magnetic storm. This version of the classification is published on the Paratunka Observatory website <http://www.ikir.ru/ru/Departments/Paratunka/lfg/txt/k-index-doc.html>.

Another classification is given in the work (Menviell et al., 2011): “The modern consensus is that $K = 0-2$ correspond to periods of magnetic quietness; $K = 3-5$ correspond to periods of moderate geomagnetic activity; $K = 6-9$ correspond to periods of intense to very intense geomagnetic activity”.

We added the corresponding reference (**line 296**):

Menvielle, M., Iyemori, T., Marchaudon, A., Nosé, M.: Geomagnetic Indices, in Geomagnetic Observations and Models (eds. M. Manda, M. Korte), IAGA Special Sopron Book Series 5, Springer Science+Business Media B.V., 183-228, doi:10.1007/978-90-481-9858-0_8, 2011.

Line 151:

The figure number changed to **Fig. 5a**.

Line 152:

The figure number changed to **Fig. 5b**.

Line 153:

The figure number changed to **Fig. 6**.

Line 153:

We used the word ‘**determinations**’.

Line 168:

The figure number changed to **Fig. 7**.

Line 172:

We added the code for observatory ‘Vostok’ – ‘**VOS**’.

Lines 173–175:

We added a short explanation for the reference to Figure 8:

“As an example, Fig. 8 shows the plots of K index daily mean values for the period 1958–1992 for three observatories – Heiss Island (HIS), Irkutsk (IRT), and Vostok (VOS)”.

Line 204:

We changed the phrase to “...language and ASCII-Text-files for data storage”.

Figure 3 caption: Please mention in the figure caption the quiet curve shown in panel (c)

We have added to the Fig. 4 (formerly 3c) caption explanation that the quiet curve is quiet daily variation S_q .

Lines 296–298:

We added the reference:

Menvielle, M., Iyemori, T., Marchaudon, A., Nosé, M.: Geomagnetic Indices, in Geomagnetic Observations and Models (eds. M. Manda, M. Korte), IAGA Special Sopron Book Series 5, Springer Science+Business Media B.V., 183-228, doi:10.1007/978-90-481-9858-0_8, 2011.

Line 325, Table 2

We have removed lines 3 and 7 from Table 2.

Line 335 and Figure 3

We enlarged copies of magnetograms (Fig. 3a, 3b) and inserted b).

Line 340 and Figure 4

Former Figure 3c was removed as a separate figure under number 4. The link to (Fig. 4) was moved to line 110, where the process of manually determining the index is described. We have made a more detailed caption to fig. 4.

Line 341:

Number of the figure changed from 4 to 5 in the caption.

Line 346–348 and Figure 6

We replaced Figure 6 (formerly 5) with another one with indication of K_9 limit.

Number of the figure changed from 5 to 6 in the caption. The month changed to ‘July 1990’. The date of last access updated.

Line 350:

Number of the figure changed from 6 to 7 in the caption.

Lines 352–353

We plotted K index daily mean values for the period 1958–1992 for three observatories: Heiss Island (HIS), Irkutsk (IRT), and Vostok (VOS). This plot is added as figure 8.