

Minor Revision

Topical Editor Decision: Publish subject to technical corrections (20 Sep 2020) by Margit Haberreiter

Comments to the Author:

Dear authors, I am delighted to inform you that your manuscript "An Early Mid Latitude Aurora Observed by Rozier (Beausejour, 1780)" is accepted for publication in *Annales Geophysicae*.

However, may I ask you to address the following editorial remarks:

R1: Section 2 Methodology

At the beginning and end of the section:

Line 55/56: there are two lines with numbers " 1. , 2. ". Please delete those.

Seme in Lines 77/78

A: done

R1: Section 2.1 is empty; number should be deleted and subsequent numbering corrected accordingly.

A: done

R1: Section 3 Analysis of the Observation

For better readability, I recommend to put the the titles of the paragraphs (Hour of observation and sun depression angle; Shape;; etc) in bold font (not underlined).

A: done

R1: Paragraph Moon: "whether" -> "Whether"

A: done

R1: References:

- Domínguez-Castro, F., Vaquero, J.M., Bertolin, C., Gallego, M. C., De la Guia, C. and Camuffo, D. : Aurorae observed by

Giuseppe Toaldo in Padua (1766-1797), *J. Space Weather Spac .*, 6, A21, doi: 10.1051/290swsc/2016016, 2016.

Please delete space after "Camuffo, D." and before ":"

A: done

R1: - HORIZONS Web-interface of the American National Aeronautics and Space Administration (NASA)

(https://ssd.jpl.nasa.gov/horizons.cgi?s_type=1#top). Visited 11th August 2020

The reference to the "HORIZONS Web-interface" would be better suited in the acknowledgement section. Also, the date when the webpage was visited ("Visited 11th August 2020") should not be mentioned. if there are subsequent data versions, the version could be mentioned.

A: done

R1: - Library of Congress Prints and Photographs Division Washington, D.C. 20540 USA DIGITAL ID: (digital file from original

print) <http://loc.gov/pictures/resource/ppmsca.02227/> (accessed 06/01/ 2020) -> Please remove "accessed 06/01/ 2020)"

A: done

R1: - SILSO, World Data Center - Sunspot Number and Long-term Solar Observations, Royal Observatory of Belgium, on-line

Sunspot Number catalogue: <http://www.sidc.be/SILSO/>, 'year(s)-of-data' -> the link does not seem to work. Please enter correct link. The addition " 'year(s)-of-data' " should be removed.

A: corrected

R1: Line 395 is empty -> Pleae remove.

A: done

R1: General comments on the Figures: The text of the figure captions should not be in bold font. The title of the y-axes should be shortened (further details see below).

A: corrected

R1: Figure 1: The text of the figure captions should not be in bold font. The figure seems cut on the right-hand side. The reference to Google Books is not necessary, as the correct reference is already given.

A: corrected

R1: Figure 2: The title of the x-axis is rather Time (year) than "Date" (as day and month is not given)

A: corrected

R1: Figure 2: Left y-axis: Geomagnetic Latitude variations -> also give units: (deg); The title of the right y-axis "Yearly total Auroral Observations" -> "Number of Auroras"; the full meaning should be clearly given in the figure caption.

A: corrected

R1: Figure 3: Left y-title: "Yearly Total Sunspot Number"-> "Sunspot Number" (details should be given in the figure caption)

Figure 3: Right y-title: "Number of days with solar observations" -> "number of days";

A: corrected

R1: Figure 3: Two references seem a lot for the figure. If the figure is not adopted from a publication, a reference is not needed in the figure caption. The details of the data used should be explained in the text along with the appropriate references. In Figure 3 (and Figure 4) it is then sufficient to just use "SILSO-WDC sunspot number"

A: done

R1: Figure 4: The references to "(Dominguez-Castro et al., 2016; Vaquero et al. 2016)" as the data set should be/is already introduced in the main text and references here accordingly.

Generally, the text of the Figure captions does not need to be in bold font.

A: corrected