

## Response letter to referees

We thank the reviewer for the provided feedback. Please find below our point-by-point responses (marked in blue).

### **Reviewer 1:**

Dear authors. After carefully reading your article ‘Volcanic stratospheric sulfur injections and aerosol optical depth during the Holocene (past 11,500 years) from a bipolar ice core array’ I have some minor revisions that should be corrected before publishing.

**Reply:** We would like to thank the referee for their thorough and critical review of the manuscript. We have addressed the referee’s comments one by one below and revised our paper based on their suggestions.

#### **1. Spelling mistakes and form**

Line: 107/108 kg m<sup>-2</sup>yr<sup>-1</sup> should be in one line

Line 122 / 197: I would suggest to delete ‘elsewhere’ and just mention the references.

Line 288 / 302: Replace ‘&’ by ‘and’

Line 390: Check the brackets

Line 767: Two times ‘as far’

**Reply:** We have corrected these mistakes.

Line 793: Will be posted at ‘XXX’?

**Reply:** Now corrected. Future revisions will also be posted at PANGAEA.

#### **General:**

Make sure you have either a space or no space between a number and ‘%’.

Make sure you have a ‘.’ or ‘,’ for number higher than thousand or not (e. g. line 17 ‘11500’ compared to line 32 ‘2,500’)

**Reply:** We have reformatted all relevant data following the guidelines and house standards defined by the journal. Thanks for catching these inconsistencies.

#### **Content**

In general it is good and clear written. It is easy to understand for the reader. However, there are many abbreviations, and I wonder if there is a possibility to use them a bit less. Also some of the abbreviation might be clear for you and scientists that are very familiar with this topic, but not for others. E. g. TgS: Hence I would suggest to either explain them ones, or to maybe add a table that summarizes them.

**Reply:** We agree with the referee that clarifications are needed. In our revision we will try to keep the use of abbreviations at a minimum and carefully evaluate if it is necessary to spell them out the first time they are used. If it helps the readability of the paper, we are also happy to follow the reviewer’s advice and summarize all technical terms and abbreviations in an attached table.