

To avoid unnecessary duplication, I will restrict my comments to aspects not mentioned by referees #2 and #3 yet.

1. The "large volume" aspect needs to be specified – clearly it refers to large volumes of air. Given that only the $^{34}\text{S}/^{32}\text{S}$ ratio could be analysed successfully, the title of the paper should be changed to "Large volume sampling system for measuring the $^{34}\text{S}/^{32}\text{S}$ isotope ratio of atmospheric carbonyl sulfide", or something along these lines.
2. Section 2.4.1 should be renumbered 2.4 and renamed "Determination of the OCS concentration".
3. Section 2.4.2 should be renumbered 2.5 and renamed "Determination of the sulfur isotopic composition of OCS".
4. Table 2: You should include the results for the sulfur isotope deltas of samples A, F, G and H in the left hand column of this table, for ease of reference. Possibly, you could also present them in a separate table, given that sample G was analysed by Hattori et al. (2015) already, but gave a different result.
5. Table 2: Given that samples B, C and D all seem to have drifted with respect to the reference sample A, how did you ensure that the composition of sample A itself has not changed compared to the previous 2015 paper?
6. 5/31: One could hypothesise that samples F, G and H all started out at the same initial OCS mole fraction and isotope ratio. Adopting this hypothesis, could you please include a plot of their isotope deltas vs. the natural logarithm of the "residual" OCS fraction (i.e. a Rayleigh fractionation plot) to check whether the apparent OCS loss in the cylinders follows a common fractionation constant ϵ ?
7. 7/26: Please describe in detail how you introduced these aliquots of sample B?
8. 8/27: The m/z 33 interference could also be due to NF^+ (e.g. from NF_3).
9. 11/25: Please state the precision achieved for OCS analysis in this earlier paper.
10. 22/9: The precision achieved for sample B is not meaningful for these air samples. Please replace the error bars with a more suitable estimate of the precision for an actual air sample.
11. Referee #2 commented on the use of parentheses in your manuscript. The notation " $(x \pm s_x) \%$ " (and similar) follows in fact international guidelines on the SI such as NIST Special Publication 811 2008 Edition "Guide for the Use of the International System of Units (SI)" and the IUPAC Green Book, 3rd edition, p. 151 (section 8.1, example 2; http://www.iupac.org/fileadmin/user_upload/publications/e-resources/ONLINE-IUPAC-GB3-2ndPrinting-Online-Sep2012.pdf). As the journal advocates the use of the SI, no change is necessary.

Technical corrections

- 2/4: Brühl et al.
- 2/11: S equivalents
- 2/17: $\text{O}(^3\text{P})$ – spin states are not written in italics
- 3/24: compartments

- 3/25 & various occurrences elsewhere: Sulfinert
- 5/30: Samples F, G and H
- 7/23: Add full-stop after system and start new sentence "We sequentially ..."
- 7/25: dependence
- 7/31 & 32: Replace full stop after σ with "uncertainty: "
- 8/26 to 8/28: Remove colon (:) after m/z (e.g. m/z 32)
- 9/5: USA
- 11/5: proofed -> showed