

Interactive comment on “Heavy ozone enrichments from MIPAS limb emission spectra” by C. Piccolo et al.

J. Kaiser (Editor)

j.kaiser@uea.ac.uk

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Please eliminate the notation "50O3" and "49O3" isotopomers. The notation with an upper left superscript indicating the mass of the entity may only be used for atoms, not molecules. In other words, "50O3" would refer to a molecule made up of three 50O atoms (a non-existent species with 8 protons and 42 neutrons). You could use $^{18}\text{O}^{16}\text{O}_2$ and $^{17}\text{O}^{16}\text{O}_2$ instead.

Please make the following correction to avoid ambiguities: Where the word "enrichment" is used to designate the physical quantity δ , please replace it by the correct name for δ , i.e. "relative isotope ratio difference". However, where the word "enrichment" refers to the process of concentrating heavier isotopes, it may still be used.

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Equation 1 is incorrect. Please write either $\delta/\% = 100 (R/R_0 - 1)$ or $\delta = 100 \% (R/R_0 - 1)$ or, eliminating % symbols altogether, $\delta = R/R_0 - 1$.

The international water standard is actually VSMOW (or, now, VSMOW2), i.e. Vienna Standard Mean Ocean Water, not SMOW.

p. 25129, l. 29: The relative isotope ratio difference between atmospheric O₂ and VSMOW needs updating: $\delta^{17}\text{O} = 12.08 \text{ ‰}$ and $\delta^{18}\text{O} = 23.88 \text{ ‰}$ (Barkan E, Luz B (2005) High precision measurements of $^{17}\text{O}/^{16}\text{O}$ and $^{18}\text{O}/^{16}\text{O}$ ratios in H₂O. Rapid Commun Mass Spectrom 19, 3737-3742).

p. 25131, l. 12: The reference is inappropriate. Please replace it.

Interactive comment on Atmos. Chem. Phys. Discuss., 9, 25127, 2009.

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