

The authors provided detailed responses to the review and the manuscript has been significantly improved. However, the revised manuscript requires minor revision before publication. Overall, references to previous work are used excessively. The addition of short descriptive sentences would be appreciated to improve the reading quality of the document. In addition, a thorough proofreading is recommended for typos and wording.

Abstract

- Line 30: $\delta^{18}\text{O}$ needs to be defined. The short summary, the abstract and the main text are distinct elements where each abbreviation/symbol must be defined independently.

Intro

- Line 89-90 : an OFCEAS reference should be placed here
- Line 95: “classical” is not appropriate. IRMS should be defined.

Material and methods

A couple of pages are not necessary to give a little more detail on the basic operation of your instrument. On the other hand, and as also notified by the second reviewer, the addition of a schematic diagram, a setup photo and dimensional specifications will certainly help the reader to get a better idea of your new analyzer.

- Line 120 : A reference for spectral fitting is missing here.
- Line 168 : “sccm” must be defined
- Line 173-175 : This sentence needs rewording.
- Line 178 : “well-known” is not needed and the reference to Gordon et al. 2022 should be given.
- Line 191 : “by about the abundance ratio” not exactly, it also depends on the intensity of the transition
- Line 226 : For ease of comparison, the 1 sigma standard deviation of the cavity mode position fluctuation should be indicated. In addition, a graph showing the stability would be valuable for the paper (see Lechevallier et al. 2019).
- Line 295 : ‰, not in ppm
- Line 296 : The bottom subchart in scatter and line could be nice for a clearer view. The label axes should be colored. Why do the uncertainties appear in Figure 3 and not here?
- Line 306 : $\delta^{18}\text{O}(\text{O}_2)$ should be used instead of “delta”.
- Line 315: A multiplication symbol should be used between 1.5 and 10^{-3}
- Section 3.2 : The data on which this section is based are missing but necessary. Please include a graph with these data in the revised manuscript.
- Line 338 : “was expected as is usual in all spectroscopic measurements”. This sentence needs references and rewording.
- Line 346 : Uncertainties on O_2 mixing ratios should be indicated.
- Line 415: What is configuration 2?
- Line 426 : Quality parameters for the linear regression should be presented.