

**Review 1:**

In your response to my first general review point you cite a range of references as having used data from Picarro isotopic instruments. Please check where you have cited these in the manuscript and that what you are saying is correct, because Menoud et al. (2022) focusses on samples measured by IRMS (the isotope Picarro used on ground surveys was mostly for the mole fraction measurements, not for the isotopic signatures). Additionally al-Shalan et al. (2022) did not make any measurements on an isotope Picarro and all samples were collected in bags for laboratory IRMS analysis. The Lu et al (2022) paper mentions that an isotopic Picarro was used temporarily due to failure of other instruments, mostly for mole fraction measurements, but the isotopic interpretation is based around the many bag samples that were sent to 2 IRMS labs for analysis. Therefore only 3 of the 5 papers focus on the use and interpretation of isotope Picarro measurements.

R: Many thanks for the reviewer to point out this imprecise description. We have now checked these citations in the final revision and have additionally referred our Picarro measurements to the work conducted with Picarro instruments (Line 201-203 in TC version).

Please check the new sections again, as there are a few places where sentences do not make complete sense the ways they are currently written.

R: Thanks for the suggestion. We have carefully gone through the whole manuscript again.

**Reviewer 2:**

The paper has been extensively revised and is now much more complete. As it contains a great deal of very useful isotopic information for regional and global studies it should be encouraged to publication.

Line 512/513 should probably focus primarily on Michel et al 2024, as should line 579, rather than prioritising these older papers.

Overall, the paper is much better and should be published.

R: We appreciate the reviewer's suggestion. As for Line 512-513, we have updated the new citation (Line 518 in TC version).