

Earth Syst. Sci. Data Discuss., referee comment RC2
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Comment on essd-2022-3

Anonymous Referee #2

Referee comment on "Isotopic measurements in water vapor, precipitation, and seawater during EUREC⁴A" by Adriana Bailey et al., Earth Syst. Sci. Data Discuss.,
<https://doi.org/10.5194/essd-2022-3-RC2>, 2022

The manuscript presents the data collected during the EURAC4A-iso measurements, a sub-part of the EURA4C field campaign dedicated to isotopic measurements.

I find this manuscript very well written, with clear depictions of the various isotopic measurements. I do not have strong concerns about this manuscript, and believe that this manuscript could be published after the really minor comments below have been taken into consideration.

Remark : the unit "nmi" is used for distance, but is non-SI. A SI unit should be used.

Line 85-90 : I do not understand how isotope ratios can help differentiate boundary layer air and free tropospheric air. It seems to be a shortcut, but this shortcut is not straightforward. Please explain.

Lines 660-665 : Does this part refers to Figures 9 and 10 ? The titles of these 2 figures (9 and 10) only states "campaign-mean (...)". The 3 vessels (Atalante, Meteor and Brown) didn't have the same legs, so I wonder how campaign-means can be reasonably used to look at the consistency between the measurements : there are differences in the length of the measurement period, and there are differences in the areas that have been sampled. Can you comment ?

Note : Figure 10 is not referenced in the text.

Figure 13: the unit of dD is missing.