Answers to referee's comments to the manuscript: amt-2022-280 'Characterizing the automatic radon flux Transfer Standard system Autoflux: laboratory calibration and field experiments'

## Comment on amt-2022-280', Anonymous Referee #1

The manuscript "Characterizing the automatic radon flux Transfer Standard system Autoflux: laboratory calibration and field experiments" porposes a new standard method for radon flux calibration which is an important contribution for those who works in this field mainly due to the lack of standardization. Writing is of good quality and provide sufficente data for those who wants to implement this metodoloy in their on laboratories.

We thank the referee for his/her time and we will introduce the comments and/suggestions as suggested.

I consider that just minor revisions of the manuscript are necessary for the publication

L396 - A typical measurement result is shown in Figure S10 – in fact is Figure S8

It has been changed as suggested, now is Figure S5.

L438 - Figure S8 of the supplementary - in fact is Figure S9

It has been changed as suggested, now is Figure S6.

L484 - Figure S13 shows the three main volumes - in fact is Figure S11

It has been changed as suggested, now is Figure S8.

Although discussed in the item 3.4 my main concern is due to the fact that all experiments were done with high Rn activity concentrations, which will not be found in environmental studies and I agree that more studies must be made in order to verify the validity of the proposed model.

The reviewer is right. As it has been reported into the conclusion section too the results obtained within this first study need now to be confirmed using an exhalation bed more similar to standard soils.

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