Authors' response to the interactive comment by Anonymous Referee #2
on "Technical Note: Evaluation of a low-cost evaporation protection method for portable water samplers"
by Jana von Freyberg et al.

General comments

The manuscript entitled 'Evaluation of a low-cost evaporation protection method for portable water samplers' by von Freyberg et al. describes the development of a robust and inexpensive method for an evaporation reduction method for automatic water samplers that are often used in hydrology. In order to evaluate their developed setup, laboratory and field tests were conducted to simulate extremely dry and warm conditions, to test for vapor transfer between samples and to quantify the isotopic change during 3-week storage periods. It could be shown that the method efficiently protects the collected water samples from undergoing isotopic changes due to evaporative fractionation and vapor mixing and that the protection method significantly reduced isotopic fractionation over the 3-week periods under ambient climatic conditions in the field. The manuscript is well structured and nicely written. The topic of this promising approach fits well to the scope of the journal and appears to be of interest for isotope hydrologists. Most of my editing comments match those of Referee 1 and have already been addressed by the authors; therefore I only suggest minor revisions prior to acceptance and publication in Hydrology and Earth System Sciences.

We thank the anonymous referee for the positive evaluation of our manuscript. We address his/her two specific comments below (in blue bold font).

Specific comments

Introduction, L. 45-47: I suggest mentioning styrofoam beads as an additional mechanical protection method, because this is commonly used as an evaporation protection method in ISCO-bottles.

We will add the Styrofoam beads to the introduction: "Alternative mechanical evaporation protection modifications have been suggested, like *covering the water surface with Styrofoam beads (Angermann et al., 2017)* or placing a table tennis ball in the collection funnel…"

L. 75, 81, 84: Please consider replacing 'Our…' by 'The…:' at the beginning of these sentences, otherwise it sounds a bit like the conclusion section.

In the revised manuscript, we will change "our evaporation protection" to "*the* presented evaporation protection" (line 75), "our setup" to "*the described system*" (line 81, sentence changed from original based on comments from Referee #1), and "our design" to "*the presented* design" (line 81).

References:

Angermann, L., Jackisch, C., Allroggen, N., Sprenger, M., Zehe, E., Tronicke, J., Weiler, M., Blume, T., 2017. Form and function in hillslope hydrology: characterization of subsurface flow based on response observations. Hydrol. Earth Syst. Sci. 21, 3727–3748. http://dx.doi.org/10.5194/hess-21-3727-2017.