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The Cryosphere Discussions

Interactive comment on "Isotope hydrological studies on the perennial ice deposit of Saarhalle, Mammuthöhle, Dachstein Mts, Austria" *by* Z. Kern et al.

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Original Short comment: The authors should get in contact with Lukas Plan at the KHA who recently successfully dated organic matter in Feenpalast. Although not directly connected to Saarhalle, this information would fit to the paper.

Author's response: Thanks to Michael Behm for this short comment. We have contacted with Lukas Plan as suggested. We got the information that he found two pieces of wood in the deeper lying ice block between Saarhalle and Feenpalast and these are submitted for dating however results have not been published yet.

On the other hand, some radiocarbon dating has been established from a wood rem-

nant found at the base of Feenpalast's ice block c. ten years ago (Mais and Pavuza, 2000). The sample (GrA-14417) gave 695$\pm$35 14C BP yr age. When this date was recalibrated on the most recent calibration dataset (intcal09, Reimer et al. 2009) the calibration provided two separate intervals for the two-sigma range (1259-1352 cal AD, 68.3%, and 1318-1390 cal AD 27.1%).

We will mention these information in the expanded site description section as earlier dating result from ice deposits of the Mammuthöhle-system. However, we remark that this date might have little relevance to the age of Saarhalle ice block and we expect even greater discrepancies between the aforesaid two on-going dates and the remote and deeper lying Saarhalle-ice body. In addition we remark, that nobody could found macroscopic organic material near or at the base of the Saarhalle so far. So we might have to melt ice to get the needed 200 μg of dispersed organic material to test the radiocarbon dating of the Saarhalle ice. However it is really a great challenge (see May et al. this issue).

References: Mais von K. and Pavuza R.: Hinweise zu Höhlenklima und Höhleis in der Dachstein Mammuthöhle (Oberösterreich), Die Höhle, 51/4, 121-125, 2000

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