

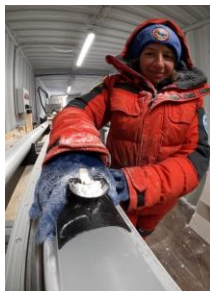
A SIMPLE APPROACH TO FIELD SAMPLING ICE CORES FOR STABLE WATER ISOTOPE ANALYSIS

Vasileios Gkinis¹, Julien Westhoff¹, Grant Vernon Boeckmann¹, Iben Koldtoft¹, Johannes Lemburg², Dorte Dahl Jensen¹

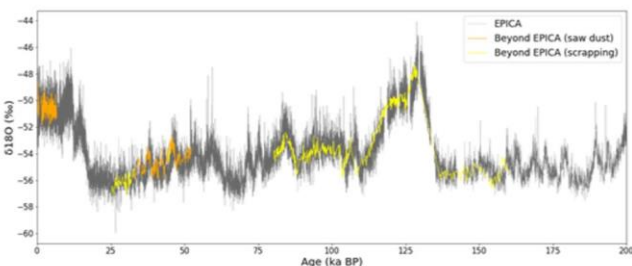
¹ Niels Bohr Institute, University of Copenhagen, Copenhagen, Denmark

² Alfred Wegener Institute for Polar and Marine Research, Bremerhaven, Germany

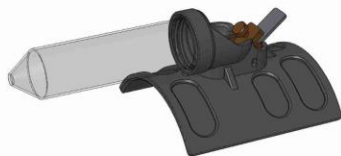
We built a simple 3d printed frame around a brass violin plane by Herdim with a blade width of 12 mm and a flat sole. The tool allows for various blade shapes (flat, toothed, arched). The design incorporates a standard vial thread that allows a seamless transfer of the ice scrapings.



The violin plane allows for easy sampling in cold temperatures. It has been used successfully in the field at Little Dome C (2023-24, 2024-25, at EastGRIP (2024) and at the Müller ice core project (2025). At LDC the sample produced were analyzed in the field with a CRDS instrument



The technique allows for finer resolution. Isotope analysis results indicate no fractionation effects in contrast with enriched values measured on the swiss saw dust. More analysis required here.



Dictum S/Ns: 702569, 702403, 702503, 702703



UNIVERSITY OF
COPENHAGEN