

THE CHALLENGES INVOLVED IN DEVELOPING A POWER SUPPLY, COMMUNICATION SYSTEM AND DRIVE UNIT FOR A DEEP ICE CORE DRILLING RIG.

Wednesday 17 September 2025 10:05 (20 minutes)

This presentation will provide a comprehensive overview of the development process of the power train and drive chain of a deep ice core drill, with particular emphasis on the challenges encountered during the project.

The covered deep ice coring drill system is of the type of the commonly used cable-suspended electro-mechanical ice-core drill. In such systems, the electrical power and communication are distributed through the conductors inside the winch cable. The intended drive chain was a brush- and gearless motor.

Primary author: HÜTHER, Matthias (Alfred-Wegener-Institute Helmholtz Center for Polar and Marine Research)

Co-authors: BROY, Benjamin (AWI Bremerhaven); Prof. WILHELMS, Frank (Alfred-Wegener-Institut Helmholtz-Zentrum für Polar- und Meeresforschung)

Presenter: HÜTHER, Matthias (Alfred-Wegener-Institute Helmholtz Center for Polar and Marine Research)

Session Classification: Oral sessions

Track Classification: Mechanical Ice drilling