Contribution ID: **68** Type: **Poster**

Side-wall ice corer

Monday 30 September 2019 17:40 (4 minutes)

In order to obtain short additional core samples from intervals of specific interest (tephra layers, basal ice, shearing zones, etc.), the simple wireline side-wall thermal coring system is proposed. The corer includes driven unit, bendable core barrel, and thermal coring head. The side-wall coring system can be precisely positioned in the zone of interest. To this end, it can be equipped with an optical televiewer or laser dust logger that, combined with core inspection from the parent hole, will fit the sample into an existing stratigraphy. The first prototype of the corer is intended to work in dry parent hole with diameter of 130-135 mm, but future modification will allow to recover samples from the wet boreholes as well. Of course, the system is designed to acquire a smaller core sample than is possible with the replicate coring drill: the inner and outer diameter of the drill head are 30 and 40 mm, respectively, and the expected depth of the side-wall hole is up to 0.4-0.5 m. Nevertheless, we believe that the retrieved ice core samples are suitable for different studies. In this presentation, we present first testing results of thermal head and bendable core barrel.

Authors: Prof. TALALAY, Pavel (Jilin University); Mr WEI, Xianzhe (Jilin University, Polar Research Center); Dr FAN, Xiaopeng (Polar Research Center, Jilin University, Changchun, China); Mr LI , Yazhou (Jilin University, Polar Research Center)

Presenter: Prof. TALALAY, Pavel (Jilin University)

Session Classification: Session 2