

1–11 Antarctic subglacial drilling rig: Part I. General concept and drilling shelter structure

Pavel Talalay, Youhong Sun, Xiaopeng Fan, Nan Zhang, Pinlu Cao, Rusheng Wang, Alexey Markov, Xingchen Li, Yang Yang, Mikhail Sysoev, Yongwen Liu, Yunchen Liu, Wei Wu and Da Gong

12–22 Antarctic subglacial drilling rig: Part II. Ice and Bedrock Electromechanical Drill (IBED)

Pavel Talalay, Xingchen Li, Nan Zhang, Xiaopeng Fan, Youhong Sun, Pinlu Cao, Rusheng Wang, Yang Yang, Yongwen Liu, Yunchen Liu, Wei Wu, Cheng Yang, Jialin Hong, Da Gong, Han Zhang, Xiao Li, Yunwang Chen, An Liu and Yazhou Li

23 Antarctic subglacial drilling rig: Part II. Ice and Bedrock Electromechanical Drill (IBED) – CORRIGENDUM

Pavel Talalay, Xingchen Li, Nan Zhang, Xiaopeng Fan, Youhong Sun, Pinlu Cao, Rusheng Wang, Yang Yang, Yongwen Liu, Yunchen Liu, Wei Wu, Cheng Yang, Jialin Hong, Da Gong, Han Zhang, Xiao Li, Yunwang Chen, An Liu and Yazhou Li

24–33 Antarctic subglacial drilling rig: Part III. Drilling auxiliaries and environmental measures

Xiaopeng Fan, Pavel Talalay, Youhong Sun, Xingchen Li, Nan Zhang, Alexey Markov, Yang Yang, Pinlu Cao, Rusheng Wang, Yongwen Liu, Yunchen Liu, Ting Wang, Wei Wu, Cheng Yang, Jialin Hong, Da Gong, Han Zhang, Mikhail Sysoev, Xiao Li, An Liu and Yazhou Li

34–45 Antarctic subglacial drilling rig: Part IV. Electrical and electronic control system

Nan Zhang, Pavel Talalay, Jingbiao Liu, Xiaopeng Fan, Qingpeng Kong, Haibin Yu, Yunchen Liu, Benkun Liu, Da Gong, Xingchen Li, Wei Wu, Jialin Hong and Mikhail Sysoev

46–52 Design and analysis of deepwater tension sensors for ice drill application

Jianguang Shi, Shengmiao Huang, Binyan Wang, Chong Li, Shilin Peng, Youhong Sun, Pavel Talalay and Haibin Yu

53–66 Agile Sub-Ice Geological (ASIG) Drill development and Pirrit Hills field project

Tanner Kuhl, Chris Gibson, Jay Johnson, Grant Boeckmann, Elliot Moravec and Kristina Slawny

67–74 Optimization of hot-water ice-coring drills

An Liu, Rusheng Wang, Yang Yang, Liang Wang, Xiao Li, Yazhou Li and Pavel Talalay

75–88 Drilling operations for the South Pole Ice Core (SPICEcore) project

Jay A. Johnson, Tanner Kuhl, Grant Boeckmann, Chris Gibson, Joshua Jetson, Zachary Meulemans, Kristina Slawny and Joseph M. Souney

89–98 The Autonomous Pinger Unit of the Acoustic Navigation Network in EnEx-RANGE: an autonomous in-ice melting probe with acoustic instrumentation

Lars Steffen Weinstock, Simon Zierke, Dmitry Eliseev, Peter Linder, Cornelius Vollbrecht, Dirk Heinen and Christopher Wiebusch

99–108 RAM-2 Drill system development: an upgrade of the Rapid Air Movement Drill

Christopher Gibson, Grant Boeckmann, Zachary Meulemans, Tanner Kuhl, Jim Koehler, Jay Johnson and Kristina Slawny

109–117 Adaptation of the Winkie Drill for subglacial bedrock sampling

Grant V. Boeckmann, Chris J. Gibson, Tanner W. Kuhl, Elliot Moravec, Jay A. Johnson, Zack Meulemans and Kristina Slawny

118–130 Core handling, transportation and processing for the South Pole ice core (SPICEcore) project

Joseph M. Souney, Mark S. Twickler, Murat Aydin, Eric J. Steig, T. J. Fudge, Leah V. Street, Melinda R. Nicewonger, Emma C. Kahle, Jay A. Johnson, Tanner W. Kuhl, Kimberly A. Casey, John M. Fegyveresi, Richard M. Nunn and Geoffrey M. Hargreaves

131–142 The SUBGLACIOR drilling probe: hydraulic considerations

O. Alemany, P. Talalay, P. Boissonneau, J. Chappellaz, J. F. Chemin, R. Duphil, E. Lefebvre, L. Piard, P. Possenti and J. Triest

143–156 Perspectives for development of ice drilling technology: continuation of the discussion

P. G. Talalay and J. Hong

157–165 Shallow hot-point drill system for active layer temperature measurement along Zhongshan–Dome A traverse, Antarctica

Yazhou Li, Xiaopeng Fan, Pavel G. Talalay, Yinke Dou, Siyu Lu, Shichang Kang, Xiao Li and Jialin Hong

166–170 Avoiding slush for hot-point drilling of glacier boreholes

Benjamin H. Hills, Dale P. Winebrenner, W. T. Elam and Paul M. S. Kintner

171–174 An efficient melting probe for glacial research

Dirk Heinen, Peter Linder, Simon Zierke and Christopher Wiebusch

175–178 Hot water drilling in the firn layer of Greenland's percolation zone

Neil Humphrey, Joel Harper and Toby Meierbachtol

Published for the International Glaciological Society, Cambridge, UK

Front cover
Drilling shallow ice cores under a
full moon and northern lights at
Storbreen, Disko Island, Greenland,
April 2018.
Picture: Bo Elberling.

Cambridge Core
For further information about this journal
please go to the journal website at:
cambridge.org/aog



MIX
Paper from
responsible sources
FSC® C007785

