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PREFACE

Annals of Glaciology 62 (84 and 85) are themed issues about *Drilling Through the Ice*. Ice drills are crucial to access ice for climate research and for probing the internal structure and the basal environments of glaciers and ice sheets. Ice coring for studies of past and present climate has been valuable for trying to understand future climate and environmental changes and their potential societal impacts. Similarly, borehole logging and probing subglacial environments advances the understanding of glacier and ice sheet dynamics, including the contribution to past and future sea level changes. Emerging multi-disciplinary science and exploration related to ice drilling technology includes studies of subglacial biology, geology, hydrology, and geophysics, with potential analogues to extra-terrestrial frozen environments.

These issues contain papers submitted to the *Annals of Glaciology* largely from participants in the 8th International Workshop on Ice Drilling Technology, hosted by the University of Copenhagen, Denmark, 30 September – 3 October 2019. Recent advances in ice drilling technology discussed include developments of rapid access drills and probes, expanded and refined capabilities of electromechanical and thermal ice coring drill systems, hot water drilling, and replicate core drilling. Additionally, the community presented developments in ice core handling, borehole logging, and remote camp design and logistics.

The 8th International Workshop on Ice Drilling Technology and the peer-reviewed articles presented here continues the series of similarly themed compilations from previous workshops:

Ice-Core Drilling, 1976. Proceedings of a Symposium, University of Nebraska, Lincoln, 28-30 August 1974 (ed. J.F. Splettstoesser). University of Nebraska Press, Lincoln, 189pp.

Ice Drilling Technology, 1984. Proceedings of the Second International Symposium on Ice Drilling Technology, Calgary, Alberta, Canada, 30-31 August 1982 (ed. G. Holdsworth, K.C. Kuivinen, and J.H. Rand). CRREL Special Report, SR 84-34, 142pp.

Ice Core Drilling, 1989. Proceedings of the Third International Workshop on Ice Drilling Technology, Grenoble, France, 10-14 October 1988 (ed. C. Rado and D. Beaudoin), 204pp.

Ice Drilling Technology, 1994. Proceedings of the Fourth International Workshop on Ice Drilling Technology, Tokyo, 20–23 April 1993 (ed. O. Watanabe). Mem. Natl. Inst. Polar Res. Special Issue No. 49, 410pp.

Ice Drilling Technology, 2002. Proceedings of the Fifth International Workshop on Ice Drilling Technology, 30 October-1 November 2000, Nagaoka University of Technology, Nagaoka (ed. N. Azuma and Y. Fujii) Mem. Natl. Inst. Polar Res. Special Issue No. 56, 329pp.

Annals of Glaciology 47, 2007. Proceedings of the Sixth International Workshop on Ice Drilling Technology, 17–23 September 2006, US Fish and Wildlife Service National Conservation Training Center in Shepherdstown, West Virginia, 146pp.

Annals of Glaciology 55 (68), 2014. Proceedings of the Seventh International Workshop on Ice Drilling Technology, 9–13 September 2013, University of Wisconsin, Madison, Wisconsin, 366pp.

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Dorthe Dahl-Jensen, Steffen Bo Hansen, Trevor J. Popp and Pavel G. Talalay