

## Contents

SIEGERT, M. J., JAMIESON, S. S. R. & WHITE, D. Exploration of subsurface Antarctica: uncovering past changes and modern processes	1
SIEGERT, M. J. A 60-year international history of Antarctic subglacial lake exploration	7
FORSBERG, R., OLESEN, A. V., FERRACCIOLI, F., JORDAN, T. A., MATSUOKA, K., ZAKRAJSEK, A., GHIDELLA, M. & GREENBAUM, J. S. Exploring the Recovery Lakes region and interior Dronning Maud Land, East Antarctica, with airborne gravity, magnetic and radar measurements	23
BEEM, L. H., CAVITTE, M. G. P., BLANKENSHIP, D. D., CARTER, S. P., YOUNG, D. A., MULDOON, G. R., JACKSON, C. S. & SIEGERT, M. J. Ice-flow reorganization within the East Antarctic Ice Sheet deep interior	35
WHITE, D. A., BENNIKE, O., MELLES, M., BERG, S. & BINNIE, S. A. Was South Georgia covered by an ice cap during the Last Glacial Maximum?	49
CASAS, D., GARCÍA, M., BOHOYO, F., MALDONADO, A. & ERCILLA, G. The Gebra–Magia Complex: mass-transport processes reworking trough-mouth fans in the Central Bransfield Basin (Antarctica)	61
SWAIN, A. K. Bathymetry of Schirmacher lakes as a tool for geomorphological evolution studies	77
PANDEY, M., PANT, N. C., BISWAS, P., SHRIVASTAVA, P. K., JOSHI, S. & NAGI, N. Heavy mineral assemblage of marine sediments as an indicator of provenance and east antarctic ice sheet fluctuations	95
WRONA, T., WOLOVICK, M. J., FERRACCIOLI, F., CORR, H., JORDAN, T. & SIEGERT, M. J. Position and variability of complex structures in the central East Antarctic Ice Sheet	113
WANG, B., SUN, B., MARTIN, C., FERRACCIOLI, F., STEINHAGE, D., CUI, X. & SIEGERT, M. J. Summit of the East Antarctic Ice Sheet underlain by thick ice-crystal fabric layers linked to glacial–interglacial environmental change	131
TALALAY, P., SUN, Y., ZHAO, Y., LI, Y., CAO, P., MARKOV, A., XU, H., WANG, R., ZHANG, N., FAN, X., YANG, Y., SYSOEV, M., LIU, Y. & LIU, Y. Drilling project at Gamburtsev Subglacial Mountains, East Antarctica: recent progress and plans for the future	145
JEOFRY, H., ROSS, N., CORR, H. F. J., LI, J., GOGINENI, P. & SIEGERT, M. J. A deep subglacial embayment adjacent to the grounding line of Institute Ice Stream, West Antarctica	161
ROBERTS, J., GALTON-FENZI, B. K., PAOLO, F. S., DONNELLY, C., GWYTHYR, D. E., PADMAN, L., YOUNG, D., WARNER, R., GREENBAUM, J., FRICKER, H. A., PAYNE, A. J., CORNFORD, S., LE BROCC, A., VAN OMMEN, T., BLANKENSHIP, D. & SIEGERT, M. J. Ocean forced variability of Totten Glacier mass loss	175
ALEKHINA, I., EKAYKIN, A., MOSKVIN, A. & LIPENKOV, V. Chemical characteristics of the ice cores obtained after the first unsealing of subglacial Lake Vostok	187
SIEGERT, M. J., KULESSA, B., BOUGAMONT, M., CHRISTOFFERSEN, P., KEY, K., ANDERSEN, K. R., BOOTH, A. D. & SMITH, A. M. Antarctic subglacial groundwater: a concept paper on its measurement and potential influence on ice flow	197

GOODWIN, I. D., ROBERTS, J. L., ETHERIDGE, D. M., HELLSTROM, J., MOY, A. D., RIBO, M. & SMITH, A. M. Modern to Glacial age subglacial meltwater drainage at Law Dome, coastal East Antarctica from topography, sediments and jökulhlaup observations	215
VAN WYK DE VRIES, M., BINGHAM, R. G. & HEIN, A. S. A new volcanic province: an inventory of subglacial volcanoes in West Antarctica	231
Index	249