

## Foreword

The 15th Symposium on Polar Meteorology and Glaciology sponsored by the National Institute of Polar Research was held on July 8–9, 1992. The symposium reported on continuing efforts of Japanese polar meteorologists, glaciologists and physical oceanographers. The research areas covered by this symposium were: atmospheric constituents, ozone, atmospheric circulation and climate, ice sheet and snow cover, ice core, snow and ice crystals, sea ice and physical oceanography, meteorological and glaciological observations, remote sensing, instrumentation and polar region engineering. Much of the topics were related to the outcome of major research programs of the Antarctic Climate Research (ACR) in 1987–1992 carried out by the Japanese Antarctic Research Expedition and some topics on Arctic glaciological and oceanographical research.

A total of 74 papers were presented at the symposium and the present volume contains 10 full-length papers and 30 abstracts which will be published in appropriate journals. Full-length papers were refereed and are arranged in the order of scientific areas of meteorology, glaciology and physical oceanography.

It is hoped that this volume will contribute to the progress of research on the polar atmosphere, cryosphere and hydrosphere. Our sincere thanks are due to all of the contributors and referees who have readily cooperated to bring about this proceedings.

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