

## Foreword

The 18th Symposium on Polar Meteorology and Glaciology sponsored by the National Institute of Polar Research was held on July 18–19, 1995. The symposium reported on continuing efforts of Japanese polar meteorologists, glaciologists and physical oceanographers. The research areas covered by this symposium were meteorological and glaciological observations, remote sensing, instrumentation and polar region engineering as well as modeling, dynamics related to polar regions.

Much of topics were related to the outcome of major research programs of the Antarctic Atmospheric Chemistry (1993–) and Deep Ice Coring Project at Dome Fuji (1992–) carried out by the Japanese Antarctic Research Expedition.

A total of 67 papers were presented at the symposium and the present volume contains 14 full-length papers and 21 abstracts. Full-length papers were refereed and arranged in the order of scientific areas of glaciology, meteorology and physical oceanography. It is hoped that this volume will contribute to the progress of research on the polar cryosphere, atmosphere and hydrosphere.

Our sincere thanks are due to all of the contributors and referees who have readily cooperated in publishing the proceedings. We also thank Ms. T. TOMINAGA and Ms. M. TANIGAWA as well as the staffs of glaciological section and the publication officers at the Library of the Polar Institute for their arrangement of the symposium and the publication of the proceedings.

### Editorial Board of This Volume

Editor-in-Chief: OKITSUGU WATANABE

Executive Editor: TERUO FURUKAWA

Editors: SHUN'ICHI KOBAYASHI

YOSHIYUKI FUJII

MAKOTO WADA

SHUKI USHIO

SHINJI MORIMOTO

HIROMU SHIMIZU

TAKASHI YAMANOUCHI

KOKICHI KAMIYAMA

NAOHICO HIRASAWA

NOBUO ONO

HAJIME ITO

HIDEAKI MOTOYAMA

GEN HASHIDA