Foreword

The Fourth Symposium on Polar Meteorology and Glaciology was held on 20–22 January 1982 at the National Institute of Polar Research. The symposium reported on continuing efforts of Japanese polar meteorologists, glaciologists and physical oceanographers. The symposium was planned to present the outcome of on-going research programme of the Japanese Polar Experiments in the Antarctic (POLEX-South in 1979–1981) by the Japanese Antarctic Research Expedition and at home laboratories. On the other hand, it has been planned to carry out earth science research in the east Queen Maud Land and to contribute to the research of the Antarctic middle atmosphere in conjunction with an internationally coordinated Middle Atmosphere Programme (MAP). Thus the present symposium reflects the progress of implementation of these research programmes which will be started in 1982.

The main topics of the symposium were: atmospheric radiation, surface boundary layer, atmospheric circulation, atmospheric constituents, cloud physics, oxygen isotopes, glaciology, sea ice and oceanography, and applied glaciology. A total of 47 papers were presented at the symposium and the present volume consists of 25 full papers and 22 extended abstracts. These papers were arranged in the order of scientific areas of meteorology, glaciology, sea ice and oceanography, applied glaciology, and MAP-oriented subjects.

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

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