Foreword

The Eleventh Symposium on Antarctic Geosciences sponsored by the National Institute of Polar Research was held on November 8 and 9, 1990. A total of 35 papers were read at the Symposium, as shown in the program on the last page of this volume.

The present volume consists of 15 full-length papers and 10 abstracts contributed from presentations at the Eleventh Symposium. Full-length papers are arranged in the order of scientific fields of solid earth geophysics, geomorphology and geology, according to usual form applied to this series. Topics in solid earth geophysics concern with seismic activities, mean sea level observation, magnetic anomaly and paleomagnetic studies, volcanic and seismic activities of Mt. Erebus, and new method for future explosion seismology. Geomorphological studies are related to glacial history of the inland mountains and development of submarine topography. Geological science includes geochemistry of high-grade metamorphic rocks, geochronology of igneous and metamorphic rocks and cumulate inclusions in late Cenozoic volcanics. These topics reflect the present wide range of Japanese activities in the field of earth sciences. We hope that an annual Symposium of Geosciences at NIPR would become a firm step towards the promotion of Antarctic earth sciences.

Editorial Board of This Volume Editor-in-Chief: Yoshio Yoshida

Editors: Minoru Funaki Yoshikuni Hiroi Katsutada Kaminuma

Kiichi Moriwaki Yoichi Motoyoshi Jiro Segawa Kazuo Shibuya Kazuyuki Shiraishi Tetsuya Torii

Torao Yoshikawa