

## Foreword

This volume is the Proceedings of “the Fifth Symposium on Coordinated Observations of the Ionosphere and the Magnetosphere in the Polar Regions” which was held at the National Institute of Polar Research (NIPR) from January 25th through 27th, 1982. In the NIPR annual symposium, 72 scientific papers were presented mainly on the outcome of the Japanese polar research program in conjunction with the International Magnetospheric Study (IMS) and the Middle Atmosphere Program (MAP).

The 17 selected papers contained in the present volume may be classified into the following three groups: I) ULF-VLF emissions in the polar regions obtained by the ground-based and satellite observations (9 papers), II) Rapid fluctuations in the polar ionosphere (4 papers), III) Development of the observing instruments for balloon and rocket experiments in conjunction with MAP (4 papers). The 55 orally presented papers consisted of 6 papers on disturbances in the ionosphere and magnetosphere, 18 papers on VLF-ULF emissions in the polar regions, 9 papers on conjugacies of upper atmosphere phenomena and 22 papers on the MAP.

The Antarctic Middle Atmosphere (AMA) observation program is being conducted as a cooperative international research project in the period from 1982 to 1986. In this symposium, the practical future plans of AMA observations are also discussed with special emphasis on the development of instruments and the remote sensing techniques. It may thus be noted that some important papers are missing in this volume. It is desirable, therefore, that such papers will be re-presented in an extended form in the coming symposium.

It is hoped that this special issue of Memoirs of National Institute of Polar Research will be helpful to those who are interested in the ionospheric and magnetospheric disturbances in the polar regions and also to those who are concerned with Antarctica.

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