Preface

On the occasion of the successful launch of the Japanese science satellite, EXOS-D (Akebono, the dawn), for the exploration of the region of the auroral particle acceleration, and with additional studies on the polar cap region as well as on the plasmasphere, this special issue of the Journal of Geomagnetism and Geoelectricity covers not only the instrumentation on board the EXOS-D satellite but also gives an initial report on the important results achieved so far; new discoveries have especially been included. Therefore, the present issue was intended as the historical milestone of the field of solar terrestrial physics made possible by the development of new satellite observation, especially those relating to the STEP project (Solar Terrestrial Energy Program) planned for 1990 to 1995 by the ICSU body, SCOSTEP (Science Committee on Solar Terrestrial Physics).

The present issue includes 11 papers reporting on eight scientific experiments such as on electric field detector (EFD), magnetic field detector (MGF), very low frequency plasma wave detector (VLF), high frequency plasma wave detectors and sounders (PWS), low energetic particle detector (LEP), suprathermal ion mass-spectrometer (SMS), plasma temperature and low energy detector (TED) and on auroral television camera for UV and visible light (ATV); in addition, a paper on the operation and data handling system of the satellite is also included.

The editor is very grateful to Drs. J. L. Burch, M. Hayakawa, R. E. Horita, T. Kitamura, N. Matsuura, Y. Ohmura, T. A. Potemra, T. Watanabe, K. Yumoto and to all the other reviewers who devoted important research time to evaluate the papers presented in this special issue.

March 10, 1990

Hiroshi Oya
Editor of the special issue
for the Akebono (EXOS-D) satellite