

## Preface

The International Conference on Cosmic Rays and the Earth Storm held in Kyoto from the 4th to the 15th of September 1961, is the combined meeting of the International Symposium on the Earth Storm and the International Conference on Cosmic Rays. The former is an IUGG symposium sponsored also by IAU, URSI and IUPAP, while the latter is the seventh meeting of the Cosmic Ray Commission under IUPAP. On account of the recent increasing interest in physics of the interplanetary space, the Organizing Committee established in the Science Council of Japan for these two international meetings arranged to have the joint sessions of these international conferences, in order to have effective discussion on the problems relating to space physics. The historical background for the Kyoto Conference is introduced in the opening address by Prof. M. Hasegawa, Chairman of the Organizing Committee, in Part I of this Proceedings.

According to general requirement for international conference and for the convenience of many research workers all over the world, the Organizing Committee planned to publish the Proceedings of the International Conference on Cosmic Rays and the Earth Storm as early as possible. Since a number of new results were presented at this meeting, a prompt issue of the proceedings is highly desirable. The Physical Society of Japan kindly offered to help the Organizing Committee in publishing the proceedings in an appropriate form.

For compiling a great number of important and interesting papers presented at the international conference, the proceedings are conveniently separated into three parts in the same way as adopted for the practical arrangement of the conference itself. The division and the items included are as follows:

**Part I: International Symposium on the Earth Storm.**

Opening Session, Morphology of Magnetic Storms, Disturbances in Polar Regions, Theory of Magnetic Storms and Aurorae, Aurora and Airglow including Auroral X-Rays, Ionospheric Disturbances, Summary of the Disturbances in the Ionospheric Regions.

**Part II: Joint Sessions of the International Symposium on the Earth Storm and the International Conference on Cosmic Rays.**

Hydromagnetics, Geomagnetic Rapid Variation, Whistler and VLF Emission, Radiation Belts, Solar Radiation (Electromagnetic Wave, Particles), Cosmic-Ray Modulation, Interplanetary Plasma, Synthetic Theory of the Earth Storms.

**Part III: International Conference on Cosmic Rays.**

Composition, Primaries, Origin, Extensive Air Showers, Mu-Mesons, Jet Showers, High Energy Theory, Future Prospect, Astrophysics.

The Organizing Committee is very grateful to the sponsoring International Organizations, the Science Council of Japan and Industrial and Commercial Organizations in Japan for their financial support. In publishing the proceedings, the cooperation of the individual contributors is greatly appreciated. The editors wish to express their appreciation to chairmen and secretaries for their collaboration in the editorial work.

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The Editors

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