

International Conference on Cosmic Rays and the Earth Storm

Opening Session

9:00—11:00, September 4, 1961

Presided by Takeshi Nagata, Vice-chairman, Organizing Committee

Opening Address

Mankichi HASEGAWA

Chairman, Organizing Committee

Honourable Guests,

Ladies and Gentlemen:

It is a great honour for me to express, as Chairman of the Japanese Organizing Committee for the International Conference on Cosmic Rays and the Earth Storm, my hearty welcome to all the fellow participants, especially to those who have come a long way from various countries abroad to this old city of Kyoto to attend this Conference.

This Conference consists of the Earth Storm Symposium, the Conference on Cosmic Rays and the Joint Meetings of the two. The Earth Storm Symposium including magnetic storm, ionospheric storm and cosmic ray storm to be held in 1961 was first proposed at the IAGA meeting on the occasion of the IUGG General Assembly held at Toronto in 1957, which I had the honour to attend. It was then understood that the aim of the Symposium was to reap one of the best fruits of the observations to be carried out under the world-wide program of the International Geophysical Year by stimulating studies on this subject. The Symposium was formally approved to

be held in Kyoto by IUGG at the General Assembly in Helsinki in 1960.

Almost at the same time, the International Commission on Cosmic Rays (ICCR) of IUPAP decided that the conference on cosmic rays for 1961 be held in Japan. This conference on cosmic rays whose purpose is to discuss cosmic ray problems in general, has been held every two years, and the results achieved are considered to be of high value both in pure and in applied physics.

In this country, some of the cosmic ray researchers have for twenty years had joint meetings with geophysicists and astronomers concerned on problems of common interest, and these joint meetings, I am sure, have made very useful contributions to the research in the earth storm and in astrophysics as well as to the study of primary cosmic rays.

A cosmic ray particle should have in itself a record of its long travel through the cosmic space from the place of its birth. If we read this record, it would provide us with information not only about the birth and growth of the particle but on the various conditions of the space through which it has travelled.

It is for these reasons that we have organized these two international scientific meetings . . . the Earth Storm Symposium and the Cosmic Ray Conference . . . jointly under one common organizing committee. The sessions of the whole Conference have been arranged accordingly.

The enterprise of IGY excited a remarkable improvement of observations, both in material and in method, in the fields of geophysics, cosmic rays and astrophysics over the world during the IGY and the succeeding periods, and most of the important results of these observations obtained in the past four years have bearing directly on the phenomena of the earth storms. Let me cite some examples.

First, we now have available data on world distribution of aurora and cosmic rays, besides those obtained from improved geomagnetic and ionospheric observations. It is especially worthy of notice that the network of observing stations has been effectively extended for the first time to the Antarctic regions.

Secondly, the improvement of observation instruments and the development of new methods have brought forth better data and, at the same time, various new findings about the physical properties of the space outside the earth. At this meeting also we expect that a number of new findings will be reported.

Thirdly, the recent development of theories of plasma physics has affected research in interplanetary plasma, and has produced ambitious undertakings to construct new theories on the basis of new data and findings.

We have so arranged that individual important problems concerned will be discussed at the respective sessions of Parts I and II of the Conference.

It cannot be said that all researchers agree in opinion about various problems. The difference, I believe, is largely due to the lack of mutual understanding, and this Conference will provide us with a good opportunity to exchange views with one another for better understanding among participants.

Besides furthering the advance of geophysical science, the IGY led to stronger ties among nations in their efforts for creating atmosphere of harmony by promoting cooperation for common purposes among thousands of observers and by establishing personal contacts, through meetings and correspondence, among scientists in different parts of the world. It is very significant that this Conference is to be opened by the lecture of Prof. S. Chapman, under whose brilliant leadership the IGY program was carried out.

As a Japanese scientist, I assume it a great honour that this important Conference is now held in Japan, and I should like to thank the executive members of the IUPAP Cosmic Ray Commission and of the International Association of Geomagnetism and Aeronomy for their adopting and supporting this Conference.

In concluding my address, I express my wish that this Conference will be successful

in obtaining valuable suggestions towards future advancement of observation and theoretical research through exchange of views and active discussion in harmonious atmosphere.

Welcome Address

Takeo KUWAHARA

Vice-President, Science Council of Japan

It is a great privilege for me to say a few words on the occasion of the Opening of the International Conference on Cosmic Rays and the Earth Storm, representing the hosts to the Conference, and especially on behalf of the Science Council of Japan.

First I should like to extend my sincere welcome to the participating scientists, especially to our friends who have come over to Japan from different parts of the world. I also wish to express my thanks to the distinguished guests who have honoured us by their presence at this Opening Session.

The Science Council of Japan is deeply concerned with promotion of international cooperation and exchange in the field of science, and for this purpose, the Council has been organizing international scientific meetings and also dispatching our scientists to such meetings held in other countries.

The significance of an international scientific meeting lies not only in active exchange of views and experiences. It also provides participating scientists from different countries with a valuable opportunity of becoming acquainted with one another, and thereby contributing to the promotion of mutual understanding and friendly relations among nations of the world.

I hope that the Conference will successfully achieve its objectives from the scientific stand point as well as in helping promote friendly relations among the countries represented.

I believe this is an opportune chance for our colleagues from abroad to visit our universities and laboratories to see work being done in these institutions. I also hope that they will have an ample time after the Conference to visit various parts of this country and become better acquainted with our people, our daily life and our traditions, especially our cultural heritage in which this old capital of Japan, Kyoto, abounds.

In concluding my address, I wish to express my heartfelt gratitude to the International Union of Pure and Applied Physics, the International Union of Geodesy and Geophysics and other international scientific unions that have extended generous support to us in organizing this Conference. My thanks are also due to the industrial circles of Japan for contributing greatly towards the Conference expenses.