FOREWORD

This book contains a selection of papers contributed to the International Cloud Physics Conference. An approximate total of 175 papers was received of which the International Program Committee accepted approximately 100 for oral presentation and 45 as reserve papers, while about 30 were rejected. The abstracts of all papers submitted have been included in the Second Circular to the conference.

The overwhelming response to the Call for Papers made it very difficult for the Program Committee to assign papers to the above categories, considering the physical limitations imposed by the available time. In the Call for Papers it was, therefore, mentioned that submissions related to nuclei and nucleation should be limited in view of the forthcoming International Conference on Nucleation in Galway, Ireland in 1977, therefore only a few key papers in this area were accepted. Furthermore, the guidelines for selection placed emphasis on measurements and observations. The reason is that the store of measurements describing fundamental cloud physics parameters, which are so important for model development and verification, has become nearly exhausted. Indeed, what is needed now is a new "renaissance" of basic research in cloud physics. Not only are the basic cloud processes still poorly understood, such as nucleation, formation of droplet spectra, growth habits of ice crystals, and development of precipitation particles, they are frequently related through complicated feedback mechanisms to the mesoscale of atmospheric motion in and around clouds which in themselves are poorly understood. It becomes ever clearer that processes in cloud physics are extremely complex, as if nature protects this part of her kingdom with special care.

An important session of this conference is being dedicated to the memory of the late Dr. A. Borovikov, who devoted most of his scientific career to investigating and understanding basic cloud physical processes. His work is a shining example of what is urgently needed in the future, namely a dedication to conduct intensively basic research.

We consider it significant that this conference occurs back-to-back with the Second WMO Scientific Conference on Weather Modification. There is probably no area of modern meteorological research, in which new data from basic research projects in cloud and precipitation physics is more urgently needed, than in weather modification.

May this book and the corresponding volume of the Weather Modification Conference supplement each other and contribute to mutually beneficial cross fertilization.

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