

PREFACE

It is our great pleasure to have held the Fourth International Workshop on Ice Drilling Technology in Japan. The first symposium was held in Nebraska, U.S.A. in 1974, followed by the second in Calgary and the third in Grenoble. More than forty papers have been submitted and discussed extensively in Tokyo during the session, and the outcome of the symposium is summarized in this volume.

Recent advances in ice drilling technology reflect increasing research interest in polar/alpine regions and is required for the progress of environmental studies. The ice core analysis community has revealed a potential archive of global environmental changes in large ice mass stratigraphy. Ice drilling is the “key” to a depth information in glaciers and to past global climatic fluctuations.

Ice drilling technology includes studies of the design and type of drill, drilling operation, drill hole survey, hole liquid, coring, core processing/storage and drilling trench/camp facility. Each aspect is closely related to each purpose of scientific research investigations of ice masses. Therefore, it should be noted that one single technique by itself can not further progress in the technology, although new techniques are required.

The deep core drilling and analysis program is a comprehensive effort to obtain long, good-quality ice cores and conduct continuous and discrete measurements along the cores. To maximize the benefit received from the deep cores, interdisciplinary discussions should be held well in advance of drilling operations.

The organizing committee members are happy to report that there has been excellent cooperation of domestic and overseas participants for the success of this symposium.

The symposium was sponsored by the National Institute of Polar Research and co-sponsored by the Japanese Society of Snow and Ice. Support was also obtained from commercial companies. The organizing committee members are grateful for all of the above support. The publication of the proceedings issue was by the Papers Committee and supported by the National Institute of Polar Research.

March 1994
Okitsugu WATANABE
Chairman of Organizing Committee