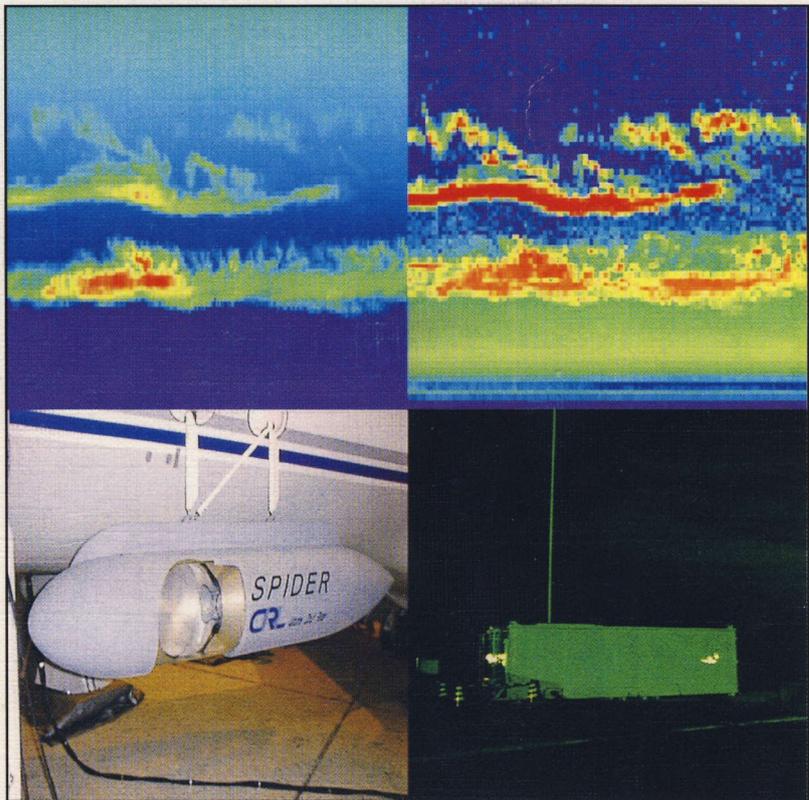


**PROCEEDINGS  
THE FIRST INTERNATIONAL WORKSHOP  
ON SPACEBORNE CLOUD PROFILING RADAR**

**TSUKUBA, JAPAN  
24-26 January 2000**



**Organized/sponsored by**

- Communications Research Laboratory, Japan**
- GKSS Research Center, Germany**
- Laser Radar Sub-group; Cloud Profiling Radar Sub-group;  
under ATMOS-B1 Team/ESTO(Earth Science and Technology Orga-  
nization), Japan**
- Science and Technology Agency, Japan**



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**Editors:**

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## Preface

The First International Workshop on Spaceborne Cloud Profiling Radar was held on 24-26 January 2000 at the Tsukuba International Congress Center, Tsukuba, Japan. The workshop was organized under the joint auspices of the Communications Research Laboratory (CRL), GKSS Research Center, Germany, Laser Radar Sub-group and Cloud Profiling Radar Sub-group under the ATMOS-B1 Team/Earth Science and Technology Organization (ESTO), and the Science and Technology Agency of Japan. The workshop program was discussed and finalized in the organizing committee, the members of which are listed below. As the chairman of the organizing committee, I express my sincere thanks to the committee member for their contributions to the workshop's success.

Organizing Committee members:

Hiroshi Kumagai (Chairman), CRL  
Ehrhard Raschke, GKSS  
Tamio Takamura, Center for Environmental Remote Sensing, Chiba University  
Yasuhiro Sasano, National Institute for Environmental Studies  
Yasushi Fujiyoshi, Institute of Low Temperature Sciences, Hokkaido University  
Hiroshi Kuroiwa, CRL  
Hajime Okamoto, CRL

The objective of the workshop was to review and share the latest knowledge and the experience gained with ground-based and airborne cloud profiling radar, lidar, and passive measurements. This workshop provided opportunities to exchange information between measurement/engineering and modeling groups. Among the measurement activities, both ongoing and being planned, emphasis is on synergy techniques. Further development of these techniques and their possible application to space observation were explored.

The status of ongoing programs and preparatory activities at space agencies for spaceborne cloud radars was reviewed. The CloudSat - Picasso/Cena program is going well toward launch in 2003. Discussion of next-generation space programs after CloudSat and of strategies for achieving them were also objectives of the workshop. These discussions should accelerate international mutual understanding and collaboration in developing spaceborne cloud profiling radar programs.

The workshop was very successful and productive. There were about 80 participants, including representatives from the U.S., Europe, and China. There were a total of 42 presentations. I believe that these proceedings will help the participants, both researchers in relevant fields and representatives of space agencies, to understand the workshop discussion outcomes and future directions.

Special thanks go to M. Kusakai, K. Aiso and Energy Sharing Co., Ltd. for their help in arranging the workshop and compiling the proceedings.

21 February 2000

Hiroshi Kumagai

Chairman of the Workshop Organizing Committee  
Kashima Space Research Center, Communications Research Laboratory