

Preface

The Antarctic troposphere lies between the polar glaciers and the stratospheric ozone layer. It is surrounded by sources of pollution and natural compounds that can be transported from the north. Chemical, biological and physical processes within the Antarctic troposphere must be understood if we are to fully realize the potential of glacial ice core chemistry records or the implications of polar stratospheric ozone depletion.

Following discussions by experts in the field of tropospheric chemistry, the International Global Atmospheric Chemistry program (IGAC) identified a need for a specialty conference on Antarctic tropospheric chemistry research. In the past, tropospheric chemistry research had been conducted on a national basis with only ad hoc coordination of efforts between countries or groups. A symposium was organized with the objective to better understand the role of the southern high latitude troposphere in global change by reviewing past and present composition, and processes controlling composition, and to plan a strategy for future international research on this topic.

The International Symposium on the Tropospheric Chemistry of the Antarctic Region was held in Boulder, Colorado, 3–5 June 1991, followed by a 1-day workshop on 6 June. 90 scientists from 16 countries participated with 37 oral and 55 poster presentations. 6 sessions covered the topics of Gases, Clouds and Aerosols, Ice/Snow Chemistry Historical Records, Transport and Radiation, Troposphere/Stratosphere Exchange, and Air/Surface Exchange Processes. Workshop topics covered were: Antarctic Tropospheric Gas Chemistry Research, Antarctic Tropospheric Aerosol Chemistry Research, Transport and Tropospheric–Stratospheric Exchange Research, and Air–Snow Exchange and Glacial Chemistry Records Research. A workshop report was prepared that included recommendations for future research and cooperative efforts. This workshop report is available from either of the Guest Editors.

The goals of the Symposium were (1) to create a research community; (2) to produce a collection of publications in a recognized journal that documents past and present efforts; (3) to identify areas of future research and cooperation. It was the consensus of the participants that these goals have in a large part been met. New collaborative ventures were cultivated among the participants, many of whom met for the first time.

The collection of research articles presented in this and a forthcoming issue of *Tellus* constitutes a valuable addition to current research publications on the above topics. All of these papers have undergone the normal review process. Results of the papers, posters, and workshop help identify those areas ripe for further exploration.

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