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Preface

International Arctic Ocean Expedition 1991 (IAOE-91)

This special issue of *Tellus B* contains a set of papers describing the results of the Atmospheric Chemistry program of the International Arctic Ocean Expedition 1991. The Swedish ice breaker *Oden* and the German research vessel *Polarstern* brought participants from about 10 countries to the high Arctic during late summer and early fall 1991, reaching the North Pole, as the first civilian ships, on the 7th of September.

The atmospheric chemistry study, directed by Dr. Caroline Leck, focused on the impact of biological sources on the sulfur cycle in the marine arctic atmosphere. The long duration of the expedition (11 weeks) allowed the effect of seasonal variations of biological activity on atmospheric composition to be assessed. Extremely clean conditions, with very little influence from anthropogenic sources, were encountered during the expedition. This situation contributed to the success of the study. The accompanying meteorological program, with its frequent rawinsondes clearly showed the importance of boundary-layer mixing for the interpretation of measurements made near the surface, and suggests that future work in the area should include continuous monitoring of turbulence in the boundary layer.

The expedition was made possible by generous support from the Swedish government and from several national and international funding agencies and private foundations.

Henning Rodhe
Editor-in-chief

The Swedish Icebreaker *Oden*

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