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REPORT ON THE RESULTS OF REGIONAL OZONE SOUNDINGS IN ANTARCTICA 1993 (ABSTRACT)

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The 34th Japanese Antarctic Research Expedition carried out continuous ozone sonde observations during the first 10 days of September 1993 to examine the dynamical effect on the variation of ozone amount at the time when the ozone hole appeared. These observations were done in cooperation with Neumayer Base (Germany) and Maitri Base (India). From September 1 to September 9, every day at 12 UTC, at these three bases ozone sondes were launched and vertical distributions of ozone were observed at the same time.

At Syowa Station ozone flights were made eight times except on September 2, although the weather was not good for observations. Since unfortunately we have not yet received the data of Maitri in detail, we compared the data of Neumayer and Syowa. According to the backward trajectory at 90, 70, 50, 30 hPa standard pressure levels, it took 24 hours for upper air to move from Neumayer Base to Syowa Station. Daily vertical distribution data at Syowa do not show any coincidence with those at Neumayer on the same day. But vertical distribution data at Neumayer coincide with the following day's data at Syowa. This coincidence indicates movement of the atmosphere.

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