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RADIO SONDE TEMPERATURE MEASUREMENTS
AT DOME FUJI STATION, ANTARCTICA (ABSTRACT)

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Upper air observations using an omega sonde system (RS80-15P: VAISÄLA) were carried out at Dome Fuji Station from November 7, 1995 to January 3, 1996. The total number of launched omega sondes was 22. Wind data could not be obtained, because VLF radio waves from omega stations could not be received at Dome Fuji Station. Seven omega sondes reached the tropopause, but the others failed due to problems with the sondes or the receiving apparatus. The average maximum height the sonde reached was about 8 km above sea level. A remarkable inversion layer was found with 21 observations. The maximum temperature difference between the top and bottom of the layer was 17.8°C. The mean thickness (ΔH) of the inversion layer was 256 m and the mean temperature difference (ΔT) between the top and bottom of the layer was 6.8°C. The observations show that ΔT is largest between 03 LT and 09 LT, and ΔH is thinnest between 21 LT and 03 LT.

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