

# Metadata Details

## Title

Studies of High Latitude D-Region Using VLF Observations.

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## Science Keywords

Category	Solid Earth
Topic	Geomagnetism
Expedition Year	1982-1983
ISO Topic	Geodesy

## Summary

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### Abstract

Measurements of phase variation of 12.9 kHz signals from OMEGA, Argentina (43°S 65.2°W) were made at the Indian Antarctic Base Camp (70°S, 11°E) during the 1st Indian Antarctica Expedition. The path was 5060 km long and traversed mainly mid-high latitudes. The length of the path was enough for only the 1st order mode  $n = 1$  (Wait and Spies, 1964) to be predominant during daytime. The phase recording was made with TRACOR 599K VLF receiver and 1 m<sup>2</sup> loop antenna, the reference being Rubidium frequency standard. The period of measurement was 17.1.1983 to 16.2.1983.

### Purpose

In our previous study during the 1st Indian Antarctic Expedition it was concluded (Sen Gupta, 1983) that the solar zenith angle control of the D-region ionisation during daytime is identical at low and high latitudes. This conclusion was based on VLF phase variation data obtained from a trans-equatorial path Goa-Re Union and a high latitude path Antarctic base-Omega Argentina, during the 1st Indian Expedition. In the present work the above conclusion has been reconfirmed using the data obtained over the Antarctic base-Argentina path.

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## Data Center