

# Metadata Details

## Title

Gravity Survey (Helicopter Supported) between Schirmacher Oasis and Wohlthat Mountains, Dronning Maud Land, Antarctica.

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## Science Keywords

Category	Land Surface
Topic	Geomorphology
Expedition Year	1989-1990
ISO Topic	Geodesy

## Summary

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### Abstract

The helicopter-borne magnetic survey conducted between the Schirmacher Oasis (SO) and the Wohlthat Mountains (WM) during the Seventh Indian Antarctic Expedition (IAE) revealed a number of interesting anomaly zones in the region. To study some of these features in detail, a helicopter supported gravity survey was conducted during the Ninth IAE. Details of the logistics planning, data acquisition, processing and interpretation relating to this survey are described.

### Purpose

The need to conduct gravity survey around SO and in the region between SO and WM was realized when a number of interesting features were revealed by the helicopter-borne magnetic survey done during the seventh IAE. While the nunataks between the SO and WM showed high magnetic anomalies, the SO was found to be associated with a magnetic low (Fig. 1). Also a strong magnetic high was observed just northwest of SO. In order to further study this strong magnetic anomaly of more than 600 nT associated with the SO, a gravity survey was carried out during the Ninth IAE and measurements were taken along 4 profiles in the vicinity of SO. One of these profiles was extended upto Humboldt mountains while another (fifth profile) was taken between the eastern margin of SO and the foot-hills of the Gruber massif. After the standard data reduction and processing, the observed gravity values were interpreted considering available geological and geophysical information in the region.

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## Data Center