

Metadata Details

Title

Geology of Dakshin Gangotri Hill Range, Antarctica.

Science Keywords

Category	Land Surface
Topic	Geomorphology
Expedition Year	1983-1984
ISO Topic	Geodesy

Summary

Abstract

Geological and structural studies of the Dakshin Gangotri (Schirmacher) range Queen Maud Land of East Antarctica were carried out from Jan 12 to Feb 5 1984. The dominant rock types are high grade quartzo feldspathic gneisses with intercalations of metabasites. Gneisses have been broadly differentiated into pyroxene granulite banded gneiss garnet biotite gneiss augen gneiss and biotite gneiss. In addition amphibolites migmatites and mylonites are also prevalent. Intrusives are pegmatites of different ages and basic rocks. The dominant foliation trend is E-W with moderate dips to wards south. Rocks have undergone polyphase deformation.

Purpose

Schirmacher range of Queen Maud land of east Antarctica named after Dakshin Gangotri the Indian Research Station is about 16 km long between latitude (70°44' 30 S and 70°46' 30 S) and longitude (11°22' 40 E to 11°54' 00 E). It is an E-W trending low lying range with a maximum width of 2.7 km in the central part. Northern periphery of this hill range has an abrupt and steep fall towards the shelf-ice. The southern periphery underlies the continental ice-sheet, which cascades down gently over the bedrock. A characteristic feature of the southern periphery is the presence of a number of glacier outlets, giving rise to about 12 prominent glacial lakes, the largest lake being 1 km x 0.75 km and the smallest 400 m x 130 m.

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