Metadata Details

Title
Isotopic and TL Studies of Antarctic Ice Samples.

Science Keywords

Category	Cryosphere
Topic	Glaciers/Ice Sheets
Expedition Year	1982-1983
ISO Topic	Meteorology

Summary

Abstract
Shallow ice core samples near Dakshin Gangotri Station Antarctica from the transition zone between the inland polar ice and shelf ice were studied for 2 Pb 3 Cs 88 O and Thermoluminescence(TL)of tripped dust in ice layers. The total B activity shows a small peak around 15 m but 13 Cs activity is below the detection limit in all the samples. The lead 210 activity indicates an average fallout in the range1 1 ? 03 dpm/L in various samples. The vertical profile of 88 O in 3 m ice core ranges between-17 2 to-21 5/o indicating a mean annual surface air temperature of 9 C at the time of deposition. Natural thermoluminescence levels of the trapped dust are smaller than the geological levels consistent with data obtained earlier.

Purpose

Shallow ice core samples were collected near Dakshin Gangotri Station, from a location situated40 km inside the shelf, by the second Indian Expedition to Antarctica during January February1983. The samples were brought in frozen condition to Goa and then air lifted to Physical Research Laboratory, Ahmedabad in specially fabricated boxes (cooled by dry ice) for analysis. The ice samples were studied for natural and artificial radio activity, 3 Cs,2 Pb, Stable Isotope 8 8O and Thermolumincscence (TL) of trapped dust m ice layers. These data are compared with the findings insamples collected by the first Indian Expedition to Antarctica (Bhandan et al 1984)

Data Center