

Metadata Details

Title

Position Fixing in Antarctica

Science Keywords

Category	Atmosphere
Topic	Altitude
Expedition Year	1981-1982
ISO Topic	Meteorology

Summary

Abstract

Antarctica with large desolate areas, snow and ice cover, few landmarks, hostile weather and bad radio propagation conditions poses problems for position fixing. The Expedition used a portable land-sea satellite position fixing system and least-square and 3 D techniques to determine the following positions: Automatic Weather Station, Dakshin Gangotri Base Camp (Hut) Base Camp? 7045' 12". 963S: 11038' 13". 618E? 69?59'12". 672S: 11?55'7". 263E? 69?59'23". 119S: H?56'26". 83E

Purpose

Antarctica with large desolate areas, snow and ice cover, few land marks and even fewer geodetic marks is a challenge for position fixing and surveys. The weather accompanied by strong wind and snowfall also hampers position fixing. Accurate position fixing is a prime requirement for scientific work especially surveys and exploration. The radio propagation conditions in Antarctica are also not favourable for the operation of radio positioning systems. However, the development of satellite navigation systems in recent years has provided a tool for position fixing. The present note describes the use of satellite navigation system, its calibration and performance in Antarctica

Data Center