Metadata Details

Title
Characterizing atmospheric processes, variability and change in Antarctic Bharati

---

Science Keywords

Category	Cryosphere
Topic	Sea Ice
Expedition Year	2021-2022
ISO Topic	Meteorology

Summary

Abstract
Coastal waters in the last decade is alarming and puzzling the scientific community. The observed sea ice decline is believed to be due to the changes in the polar ocean and atmosphere related to climate change. The modelling efforts to reproduce the polar ocean-ice/snow-atmosphere behavior remain far from realistic. The lack of proper representation of processes active in the air-sea-ice interface, vertical mixing processes is attributed to the weak performance of climate models. Therefore, understanding the physical processes at the Air-Ice-Sea interface in the Polar Regions is essential for understanding the climate changes and their effects in the polar areas and beyond. Furthermore, for better policy making and climate change mitigation plans, a proper monitoring system is required for the polar oceans.
Purpose
Implement an ice tethered mooring system in the Quilty Bay Study the importance of ocean heat flux on the modification of sea ice.Understand the role of environmental conditions (wind, tides, sea-ice conditions, ocean circulation, submesoscale processes) on the microscale turbulence in the Quilty Bay.Study the role of turbulence and vertical nutrient fluxes in regulating the biology.

Data Center