

OIB - P-3 Orion 03/20/17 Science Report

Aircraft: [P-3 Orion - WFF \(See full schedule\)](#)

Date: Monday, March 20, 2017

Mission: OIB

Mission Location: Greenland

Mission Summary:

This mission is a repeat of missions flown each year of OIB beginning in 2009. In addition to Level-1 Requirements S11 and S12, it addresses sea ice level 1 baseline requirement S13a by providing data on the thickness gradient and distribution of perennial and seasonal ice across the Arctic Basin. In past years the mission had to be launched in the early morning hours to get to Thule before the airport closing time which meant the first few hours were flown in darkness. This year we took advantage of an opportunistic late closing of Thule airport and were able to fly the entire data line with enough light for DMS to collect good imagery. We also overflowed a fast ice thickness survey from the Naval Academy near the Thule ramp, the Accumulation Radar was turned on to assess whether ice thickness could be determined from the radar data. MCoRDS was not used due to the 30 MHz bandwidth which would be too low to resolve interfaces in the relatively thin sea ice.

The weather forecast showed patchy clouds and haze throughout the flight line with potentially thick areas at times. However, only a thin haze was present for much of the line at our altitude making for an excellent flight line with no loss of data. With this mission we have now completed all of our baseline sea ice flights for the campaign.

Data volumes

ATM: T5: 21 Gb T6: 117 Gb

FLIR: 11.5 Gb

Cambot: 57 Gb

KT19: 10 Mb

DMS: 64.4 Gb

Snow/Ku radar: 1.1 Tb

MCoRDS: Did not run

data on: 1412

data off: 1917

Submitted by: Nathan T. Kurtz on 03/20/17

File:

 [south_basin_transect.pdf](#)

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