
Science Flight Report

Operation IceBridge Arctic 2012



Flight: Falcon 04
Mission: Thule2Kanger transit (land ice)

Flight Report Summary

Aircraft	Falcon (HU-25) N525
Flight Number	Falcon 04
Flight Log number	12F001
Date	Tuesday, May 1, 2012 (Z)
Purpose of Flight	transit from Thule to Kanger, plus occupy MABEL/LVIS lines
Take off time	1323 Zulu at Thule
Landing time	1700 Zulu at Kangerlussuaq
Flight Hours	3.5 hours
Aircraft Status	Airworthy.
Sensor Status	All installed sensors operational.
Significant Issues	None.
Accomplishments	• Surveyed two MABEL lines, and three LVIS and ATM lines
Geographic Keywords	Northern Greenland
Satellite Tracks	none
Repeat Mission	Repeated 2012 MABEL lines, 2010 LVIS lines and 2011 ATM lines to intercalibrate with MABEL, and calculate height change by comparison with LVIS and ATM lines.

Science Data Report Summary

Instrument	Data Volume			Instrument Issues
	Survey Area	Entire Flight		
LVIS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	29 GB	None
LVIS cameras	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	42 GB	None

Mission Report (Seelye Martin, Acting Project Manager)

This flight is the transit from Thule to Kanger, which included three line segments. The eastern or most inland segment and the middle line repeat MABEL lines from 2012, LVIS lines from 2010, and ATM lines from 2011. The western line duplicates an LVIS line from 2010 and an ATM line from 2011. These lines were flown under clear conditions. The line lengths were as follows:

Eastern line = 413 km

Middle Line = 337 km

Western line = 731 km

Subtotal = 1,481 km

Between 74 N and 71 N, cloudy conditions prevailed. South of 71 N, the LVIS gathered data through to Kangerlussuaq. Total distance flown is 2,165 km.

Individual instrument reports from experimenters on board the aircraft:

LVIS: The LVIS system worked well and collected data for the data lines and for the cloud-free portion of the transit.

LVIS-cameras: worked well.

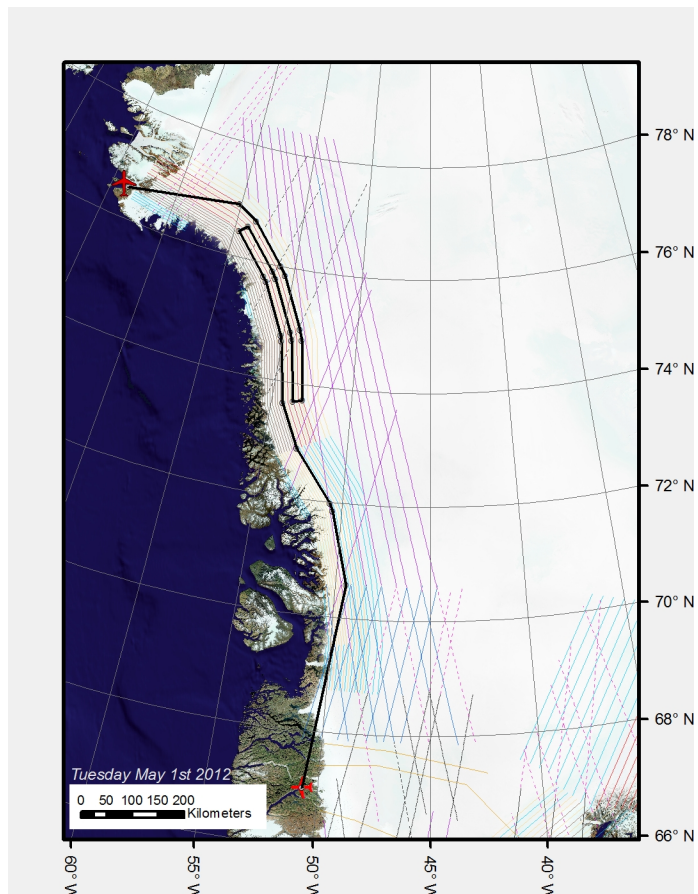


Figure 1: The transit mission between Thule and Kangerlussuaq showing the track segments flown over the MABEL, LVIS and ATM lines.