
Science Flight Report

Operation IceBridge Arctic 2012



Flight: Falcon 12
Mission: Southeast Grid-3 (land ice)

Flight Report Summary

Aircraft	Falcon (HU-25) N525
Flight Number	Falcon 07
Flight Log number	12F001
Date	Tuesday, May 8, 2012 (Z)
Purpose of Flight	Flight to southern Greenland to refly 2011 ATM and 2010 LVIS tracks.
Take off time	1020 Zulu at Kangerlussuaq (with refuel at Narsarsuaq airport)
Landing time	1400 Zulu at Kangerlussuaq
Flight Hours	3.6 hrs
Aircraft Status	Airworthy/ second flight cancelled by problem with right landing gear, which was repaired that day.
Sensor Status	All installed sensors operational.
Significant Issues	Heavy fog in fjord valleys
Accomplishments	• Flew repeat lines over ATM and LVIS tracks.
Geographic Keywords	Southeast Greenland
Satellite Tracks	none
Repeat Mission	repeated part of an ATM track from 2011 and LVIS tracks from 2010

Science Data Report Summary

Instrument	Data Volume			Instrument Issues
	Survey Area	Entire Flight		
LVIS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	33 GB	None
LVIS cameras	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	43 GB	None

Mission Report (Seelye Martin, Acting Project Manager)

Flew to southeast Greenland to survey a variety of lines. Weather showed that similar to the day before, this region of southern Greenland was the only clear area on the continent. As shown on the figure, a variety of ATM and LVIS lines were reflight. On the return from the lines, we flew a flow line, which is a line given to us by the Ice Sheet Team, which follows a glacial flow line.

The distances flown for each case was as follows:

ATM 2011 track = 75 km

LVIS 2010 tracks = 800 km

Flow line track = 325 km

Total distance flown (including turns and transit) = 2,374 km.

Clouds only restricted LVIS coverage on the outbound transit line.

Preliminary examination of the camera and LVIS data shows that the instruments worked well.

Individual instrument reports from experimenters on board the aircraft:

LVIS: The LVIS system worked well and collected data along the data lines.

LVIS-cameras: worked well.

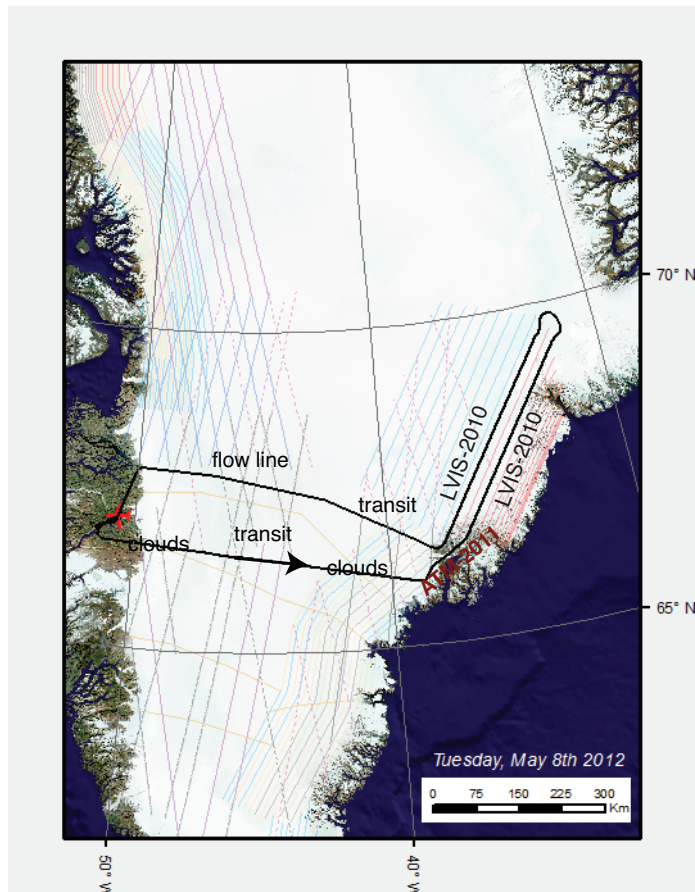


Figure 1: Figure showing trajectory for Southeast Grid-3 flight. See text for more information.