

Science Flight Report

Operation IceBridge Antarctica 2010



Flight: T04
Mission: LVIS Chile

Flight Report Summary

Aircraft	DC-8 (N817NA)
Flight Number	110105
Flight Request	118003 and 118010 (0.5 hours)
Date	Tuesday, October 19, 2010 (Z), Day of Year 292
Purpose of Flight	Operation IceBridge Mission LVIS Chile
Take off time	13:16:56 Zulu from Santiago (SCEL)
Landing time	16:12:54 Zulu at Punta Arenas (SCCI)
Flight Hours	3.0
Aircraft Status	Airworthy.
Sensor Status	All installed sensors operational.
Significant Issues	None
Accomplishments	<ul style="list-style-type: none"> • Transit from Santiago to Punta Arenas. • High-altitude survey (39,000 ft) of targets in Chile in support of DESDynI mission planning. • LVIS, POS/AV, DMS were operated on the survey lines. • ATM, Gravimeter, MCoRDS, snow and Ku-band radars were not in operation on this flight due to the high-altitude transit flight. • Conducted calibration maneuvers over water for LVIS.
Geographic Keywords	Chile, Patagonia
ICESat Tracks	338
Repeat Mission	yes, 2009

Science Data Report Summary

Instrument	Instrument Operational			Data Volume	Instrument Issues
	Survey Area	Entire Flight	High-alt. Transit		
ATM	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	N/A	None
MCoRDS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	N/A	None
Snow Radar	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	N/A	None
Ku-band Radar	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	N/A	None
LVIS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	20 GB	None
DMS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	2 GB	None
POS/AV (510 + 610)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	2 GB	None
Gravimeter	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	N/A	None
DC-8 Onboard Data	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	10 MB	None

Mission Report (Michael Studinger, Mission Scientist)

Today's flight is a high-altitude mission at 39,000 ft and primarily a transit flight from Santiago to Punta Arenas. Along the route we surveyed targets of opportunity in support for Flight Request 118010 (0.5 hours) for PI Bryan Blair in support of planning for the DESDynI mission. This flight is mostly a reflight of last year's mission. We also collected data along ICESat track 338. Most of the target sites were covered by clouds.

Individual instrument reports from experimenters on board the aircraft:

ATM: The ATM systems were not operated on this flight due to the high-altitude mission, but were in stand-by mode during the flight.

MCoRDS: The MCoRDS was not operated on this flight due to the high-altitude mission, but used the flight for testing and configuration of the system.

Snow and Ku-band radar: The Ku-band radar was not operated on this flight due to the high-altitude mission. The operator was testing the system during the flight.

Gravimeter: Not operated on this flight.

DMS: DMS worked well.

LVIS: LVIS system worked very well on all lines.

POS/AV: Systems worked well. No issues.

DC-8 on board data: System worked well.

LVIS SCEL-PUQ Transit Flight

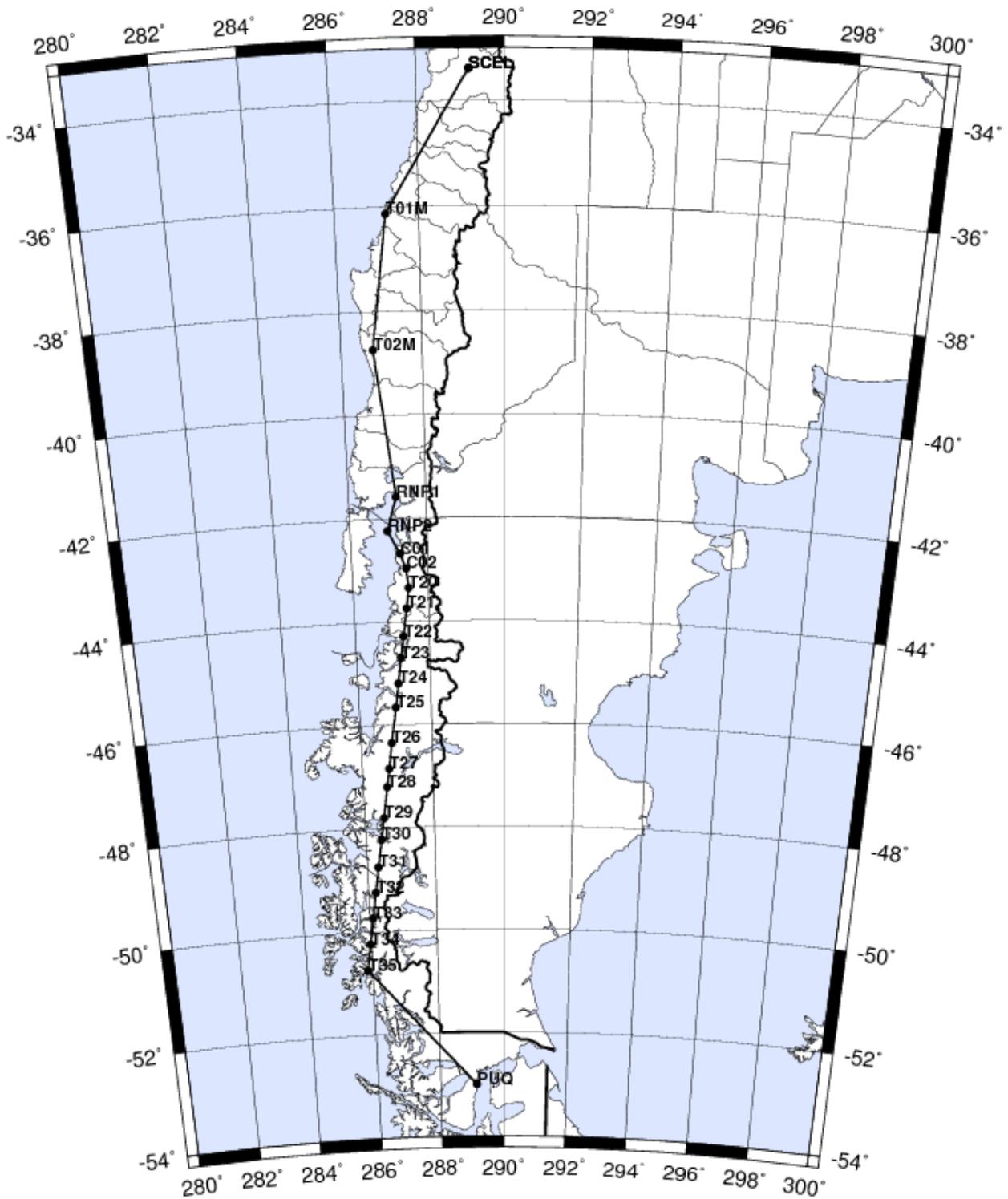


Figure 1: Today's flight path from Santiago to Punta Arenas. Map provided by John Sonntag.