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Technical Memorandum 86216

MIZEX '84 NASA CV-990 Flight Report

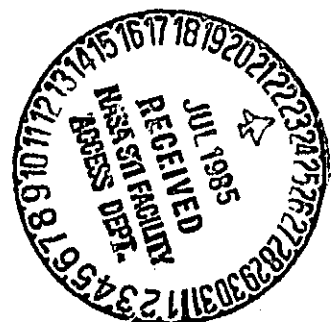


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Tom Wilheit, Tom Dod, Richard Kutz and
William J. Campbell

May 1985

National Aeronautics and
Space Administration

Goddard Space Flight Center
Greenbelt, Maryland 20771



MIZEX '84 NASA CV-990 FLIGHT REPORT

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May 1985

PREFACE

During June/July 1984, the NASA CV-990 Airborne Laboratory was utilized in a mission to overfly the Fram Strait/East Greenland Sea marginal ice zone (MIZ) during the main summer marginal ice zone experiment (MIZEX '84). The eight data flights were coordinated where possible with overpasses of the Nimbus-7 satellite, and with measurement of sea ice, open ocean, and atmospheric properties at the surface. The surface research teams were based on seven research vessels, some with helicopters: M/V Kvitbjorn, M/V Polarqueen, M/S Haakon Mosby, and M/S H.U. Sverdrup, all from Norway, F/S Polarstern from the Federal Republic of Germany, and the USNS Lynch from the USA. There were also coordinated flights with the NRL P3, NOAA P3, Canadian CV580, and the French B-17 during the overlap portions of their respective missions. Analysis of the real-time data acquired during the mission and uncalibrated data stored on tape has served to indicate the mission was over 90% successful.

The purpose of these flights was to obtain data to understand better the physical ocean/ice/atmosphere interactions occurring in the marginal ice zone (MIZ) and to improve the algorithm for obtaining sea ice concentration and age from microwave data especially in the melt season. To this end, the aircraft was equipped with both imaging and fixed-beam, dual-polarized passive microwave radiometers operating at wavelengths ranging from 0.3 to 1.7 cm. Also on board were a chirped-pulse radar from UK operating at 13 GHz, metric cameras, and an infrared radiometer operating at 10.7 micrometers.

Following a general discussion of the operational plan and on-board instrumentation, each flight is described by a summary report, a flight log of aircraft position once a minute and all automatically entered flight comments made by visual observers and on-board investigators, plots of the aircraft tracks, and where available, preliminary microwave mosaics prepared on-board the CV-990 during the flights.

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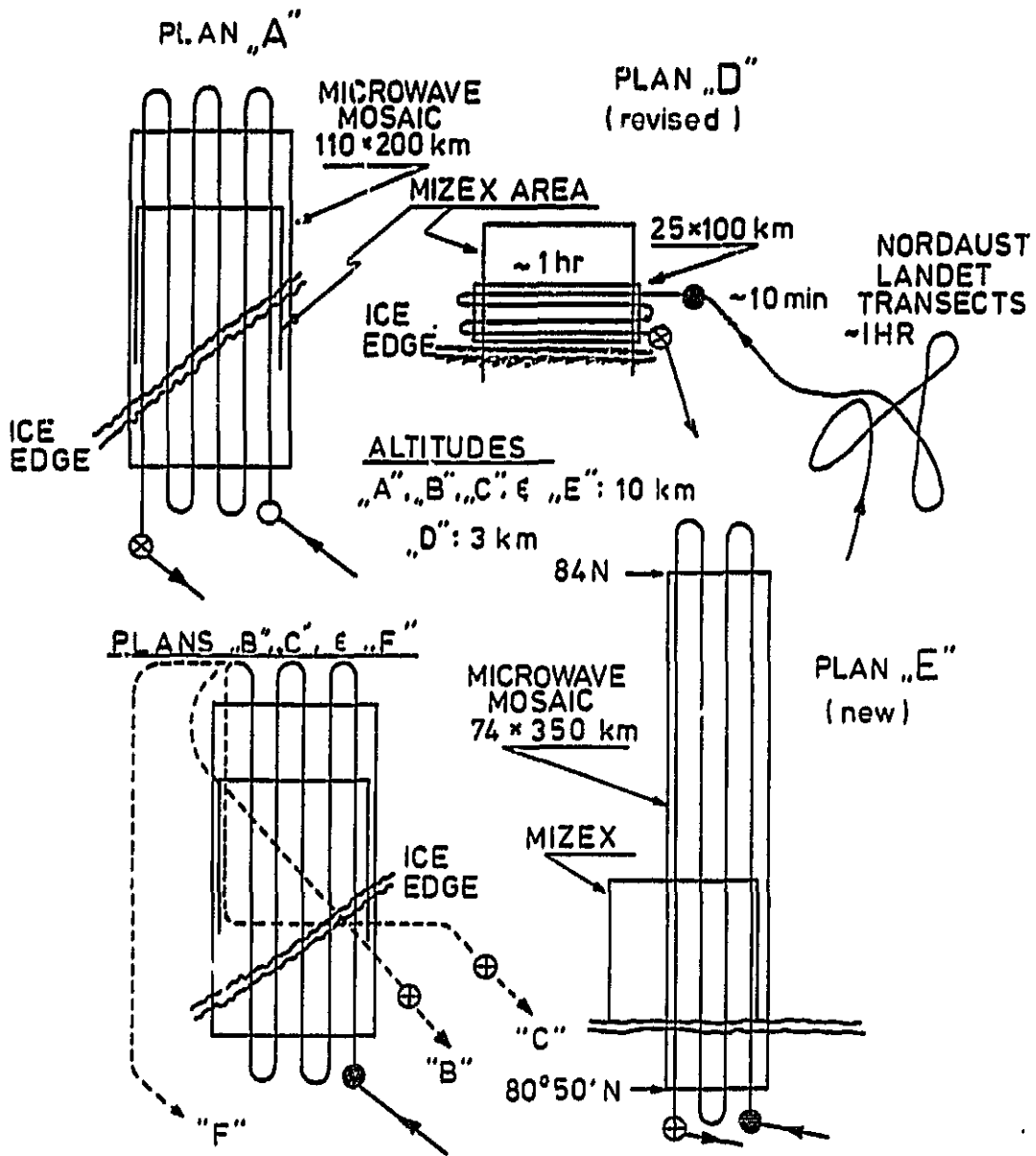
1. Background

This expedition of the NASA CV-990 airborne laboratory was carried out in accordance with the science plan for a summer marginal ice zone experiment in the Fram Strait/Greenland Sea (MIZEX '84) (Johannessen et al. 1983). Specifically, the objectives of this mission were: 1) to acquire mesoscale mosaics of multispectral microwave radiometric data from airborne imaging and fixed-beam instruments in the range 10.7 - 92 GHz over a drifting 200 Km square array during MIZEX '84 in such a way as to permit analysis of the data in terms of time-sequential maps of sea ice concentration, age, and surface temperature over the sea ice and near-surface winds over the open ocean within the array, 2) to distribute these flights over variations in the surface temperature below and at the melting point for the purpose of a detailed study of the problem of observed inaccuracies in sea ice concentrations from SMMR in the MIZ near that point, 3) to coordinate these flights with in-situ sea ice and oceanic data obtained by the international participants in MIZEX '84 on board the seven research vessels taking part in this experiment and with the Nimbus-7 SMMR overpasses, and 4) to coordinate the acquisition of the microwave mesoscale mosaics with that of high-resolution multispectral radar mosaics acquired by the NOAA P-3, the CCRS (Canadian Centre for Remote Sensing) Convair 580 and the CNES (French Space Agency) B-17 aircraft, and also the passive microwave data obtained with the USN/NRL P-3.

2. General Flight Plan

The original flight plan called for departure of the CV-990 from Ames Research Center on June 7 to permit obtaining the first MIZEX mosaic on June 8, 1984, in coordination with the SMMR overpass on that day. This plan had to be modified because of problems discovered with the landing gear at an intermediate stop (Malstrom AFB) on June 7. As a result, the CV-990 returned to Ames for emergency overnight repairs, and the mission began instead on June 8. In the middle of the schedule, another aircraft malfunction—loss of part of one of the spoilers on a wing during landing—caused an unscheduled down-time of six days and a subsequent compression of the remaining flight schedule. In spite of these difficulties, all of the scheduled eight data (see Table 1.) flights over the MIZEX area were successfully executed.

In order to facilitate coordination between the CV-990 and other aircraft involved in MIZEX '84 at the same time, a number of different flight patterns were designed before the mission, included in the Operations Plan, and labeled 'A' through 'F' (see Figure 1.). These plans were actually followed, with only an occasional minor modification. In the description of the individual flights to follow, the actual aircraft flight lines are shown in both an overall scale from base to base and in detail over the MIZEX test area. The navigational data acquired by the Airborne Digital Data Acquisition System (ADDAS), sampled once a minute, are shown for each flight along with all of the comments of the ice observers, mission managers, mission scientist, and instrument scientists that were logged into the ADDAS. A list of participants on this mission appears in Table 2. Finally, grey-scale renditions of the mosaics of the 19.35 GHz radiometric imager (ESMR) data acquired during each of the flight over the MIZEX areas are presented. Because of the practical limitation of the grey scale to ten steps, the radiance interval between steps is 15 K, about three times greater than the sensitivity of the ESMR.



NASA/CV-990

1984 SCHEDULE

Flights June	8	10	14	18	20	22	26	29
Flight Plan	"A"	"E"	"A"	"A"	"A/F"	"A/F"	"A/F"	"D"
Mosaic Alt.	10	10	10	10	10	10	10	3

Figure 1. Flight Plans

The scientific instrumentation on board (Table 3.) consisted of fixed-beam and scanning microwave radiometers in the wavelength range of 0.3 to 1.7 cm (92 to 18 GHz) from the Goddard Space Flight Center, a radar altimeter operating at 14 GHz from the Rutherford-Appleton Laboratories (RAL) (UK), and from the Ames Research Center, a precision albedo measuring system, a thermal infrared radiometer, and two cartographic cameras. For the most part, data from these instruments were acquired by the ADDAS as well as on their own data systems. As can be seen from the flight log, there were very few data gaps from any of the instruments. The most severe of these occurred on the June 9 Flight when the 92 GHz imager malfunctioned and could not be corrected during the flight because the cargo area where it was located was crammed with aircraft gear normally left behind at the base of operations. At this writing, it is estimated that better than 90% of the data desired were acquired.

During the course of the expedition, near real-time SMMR images of sea ice concentration and age were transmitted from Goddard via Telemail to the main base of operations at Tromso, Norway and to the CV-990 base at Evenes. The images were essential for optimization of the flight schedules in the field and optimal locations of the flight patterns over the MIZEX test area. Also, Telemail was utilized to transmit summary reports of each CV-990 flight to Tromso (and Goddard) as well as for receiving details of recommended flight plan revisions from Tromso. These summary reports are the primary basis for the flight summaries presented here.

Table 1. List of MIZEX '84 Flights

Flt#	Date	Day#	Flight Name	Base(s)	Purpose
1	6/02	154	----	Ames/Ames	Instrument check-out
2	6/05	157	----	Ames/Ames	Instrument check-out
3a	6/07	159	----	Ames/Malmstrom	Transit (aborted)
b	6/07	159	----	Malmstrom/Ames	Return for repairs
4a	6/08	160	Transit	Ames/Malmstrom	Refueling stop
b	6/08	160	Transit	Malmstrom/Thule	Temporary base
5	6/09	161	1st Data	Thule/Evenes	6-leg N/S mosaic
6	6/12	164	2nd Data	Evenes/Evenes	6-leg N/S mosaic
7	6/18	170	3rd Data	Evenes/Evenes	Long 4-leg N/S mosaic
8	6/22	174	4th Data	Evenes/Evenes	5-leg N/S mosaic, with low-level pass over leg 3
9	6/24	176	5th Data	Evenes/Evenes	6-leg N/S mosaic, with half the normal space between 5 & 6
10	6/26	178	6th Data	Evenes/Evenes	6-leg N/S mosaic
11	6/28	180	7th Data	Evenes/Evenes	Nordostlandet rosette; MIZEX edge transect
12	6/30	182	8th Data	Evenes/Evenes	5-leg E/W mosaic
13a	7/01	183	Transit	Evenes/Sondre	Refueling stop
b	7/01	183	Transit	Sondre/Malmstr.	Overnight rest stop
14	7/02	184	Transit	Malmstrom/Ames	Return to home base

Table 2. Participants

Function	Name	Organization
Aircraft Cmdr.	Fred J. Drinkwater	Ames Research Center
Aircraft Cmdr.	Robert C. Innis	Ames Research Center
Chief Pilot	James L. Martin	Ames Research Center
Chief Pilot	Paul M. Seabo	Ames Research Center
Flight Engineer	Frank P. Kosik	Ames Research Center
Flight Engineer	Wallace G. Stahl	Ames Research Center
Navigator	Eugene A. Moniz	Northrup
Mission Mgr	Donald L. Anderson	Ames Research Center
Asst Mission Mgr	John O. Reller, Jr.	Ames Research Center
Asst Mission Mgr	Robert D. Morris	Ames Research Center
Mission Scientist	Per Gloersen	Goddard Space Flight Center
Principal Inves.	Erik Mollo-Christensen	Goddard Space Flight Center
Ice Observer	William J. Campbell	USGS/Ice Dynamics Project
AMMR/ESMR/AMMS	Thomas T. Wilheit	Goddard Space Flight Center
AMMR/ESMR/AMMS	Lewis R. Dod	Goddard Space Flight Center
AMMR/ESMR/AMMS	Richard L. Kutz	Goddard Space Flight Center
AMMS	Joseph A. Gagliano	Georgia Tech.
AMMS	Thomas F. Stouffer	Georgia Tech.
ADDAS	Patricia G. Hathoway	Informatics
ADDAS	Susan D. Brooks	Northrup
ADDAS	Russell L. Burns	Informatics
Albedo Expt.	Anne B. Miller	Ames Research Center
Radar Altimeter	Redvers J. Powell	Rutherford-Appleton Labs
Radar Altimeter	Andree R. Birks	Rutherford-Appleton Labs
Radar Altimeter	W. John Bradford	Rutherford-Appleton Labs
Radar Altimeter	Charles L. Wrench	Rutherford-Appleton Labs
Radar Altimeter	Micheal R. Gorman	Scott-Polar Research Inst.
Radar Altimeter	Hugh D. Griffiths	U. College London
Radar Altimeter	Jean-Claud Morin	ESA
Radar Altimeter	Neil F. MacIntyre	Mullard SSL
Photography	Bernardo G. Pongeggi	Ames Research Center
Flight technician	Larry Parenti	Ames Research Center
Instrument tech.	Glen E. Frenzel	Ames Research Center
Gnd Cres Supervsr	Douglas J. McKinnon	Northrup
Inspector	Alfred A. Hill	Northrup
Ground Crew Chief	Steven G. Davis	Northrup
Ground Crew	Larry Kirkland	Northrup
A/C Mechanic	Michael Lakowski	Northrup

Table 3. Visiting Observers

Name	Organization
Robert A. Shuchman	ERIM (MIZEX Remote Sensing Co-Chairman)
Sylve Lilegren	Norsk Rikskringkastning Centrale (NRC)
Hanseric Vogter	NRC (Norwegian National Radio)
Arne Schei	NRC
Albert J. Fleig	GSFC (Project Scientist -- Nimbus-7)
Robert Majors	Norsk Teknisk Naturvitenskapelig Fors-
George W. Rosenberg	kningsraad (NTNF)
Lothar Beckel	ESA
John Conomos	USGS
Edward Joshberger	USGS
Duncan Ross	NOAA/SAIL/U. Miami
Bengt Benson	General, Swedish Air Force
F. Wickerts	Colonel, Swedish Air Force
Even Holt	Norsk Tekniske Hoegskole
Kenneth Morey	MIT
Charles Luther	ONR
Richard Francis	ESA

Table 4. List of Instruments

Sensor	P.I./Co-I.	Characteristics
ESMR	Tom Wilheit/GSFC Tom Dod/GSFC Dick Kutz/GSFC	Passive microwave imager Frequency: 19.35 GHz FOV: 1/20 radian Scan: +/- 50°
AMMR	Tom Wilheit/GSFC Tom Dod/GSFC Dick Kutz/GSFC	Fixed-beam microwave radiometers Frequencies: 18, 21, 37 GHz FOV: 1/7 radian Look angles: 45°R Polarization: H & V
Sky Radiometer	Tom Wilheit Tom Dod Dick Kutz	Fixed-beam microwave radiometers Frequencies: 21 & 37 GHz FOV: 1/7 radian Look angle: ca. 10° from zenith
AMMS	Tom Wilheit/GSFC Joe Gagliano/Georgia T.	Passive microwave imager Frequency: 92 GHz FOV: 1/30 radian Scan: +/- 45°
Radar Altim.	John Powell/RAL	Altimeter/Scatterometer Frequency: 13.7 GHz
Albedo Expt.	Francisco Valero/ARC Ann Miller/ARC	Solar Radiometer Wavelengths: 0.26-2.6 microns FOV: hemispherical (up/down)
PRT-5	John Reller/ARC	Thermal infrared radiometer Wavelength: 10.7 micrometers Nadir-viewing
KS-87B's	Dino Pongeggi/ARC	Cartographic Cameras 8-inch film format nadir- & 45°R-viewing

3.0 Individual Flight Reports

3.1 Transmit Flight—day 160—Ames to Thule

This flight was one day later than planned due to a landing gear strut problem on the aircraft. Some sea ice data were obtained over Hudson Bay, Foxe Basin, and part of Baffin Bay. Unfortunately, the ADDAS failed at the crucial time for using the data as calibrations for the GSFC instruments. However, excellent conditions for useful albedo measurements were obtained—both high and low level.

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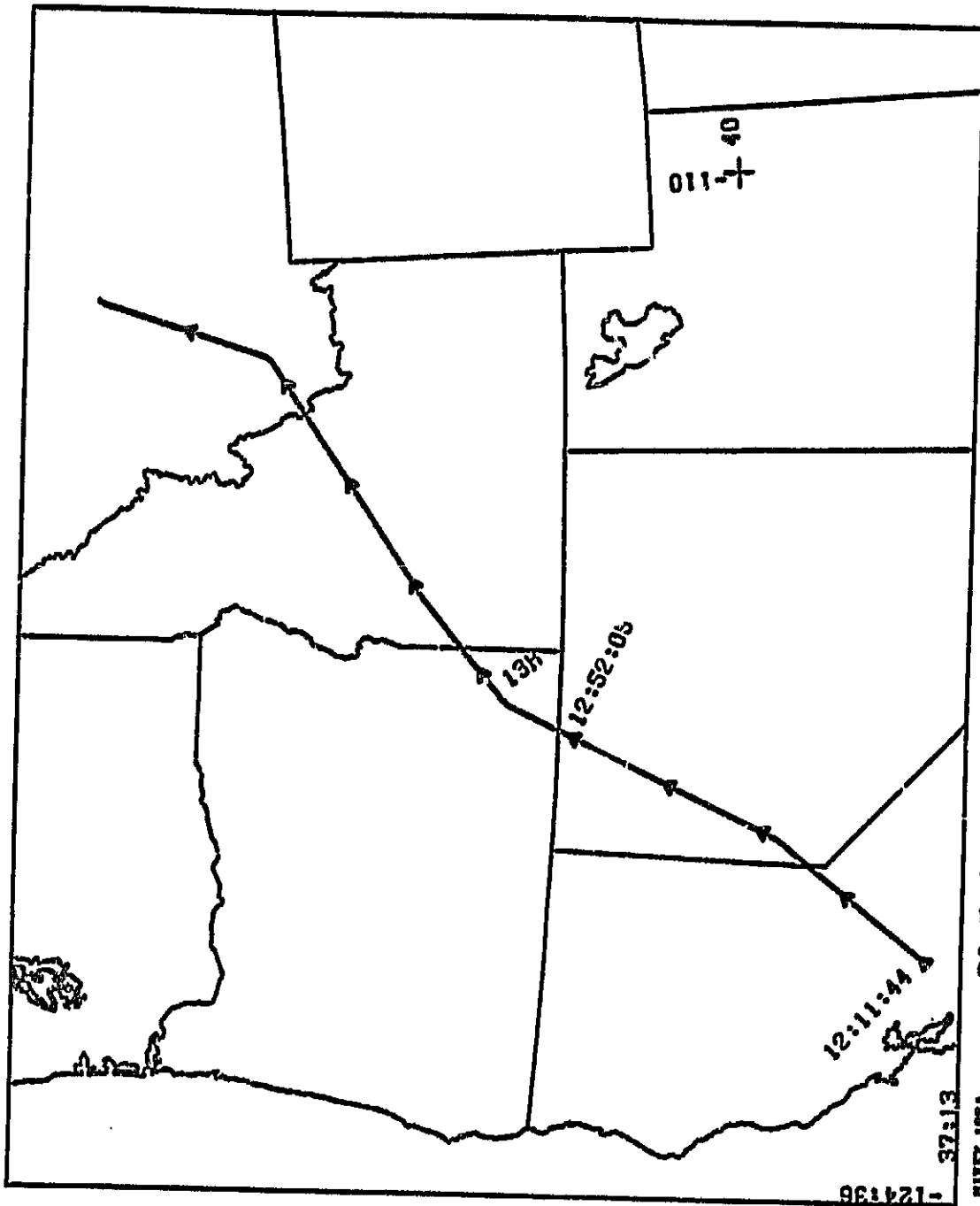
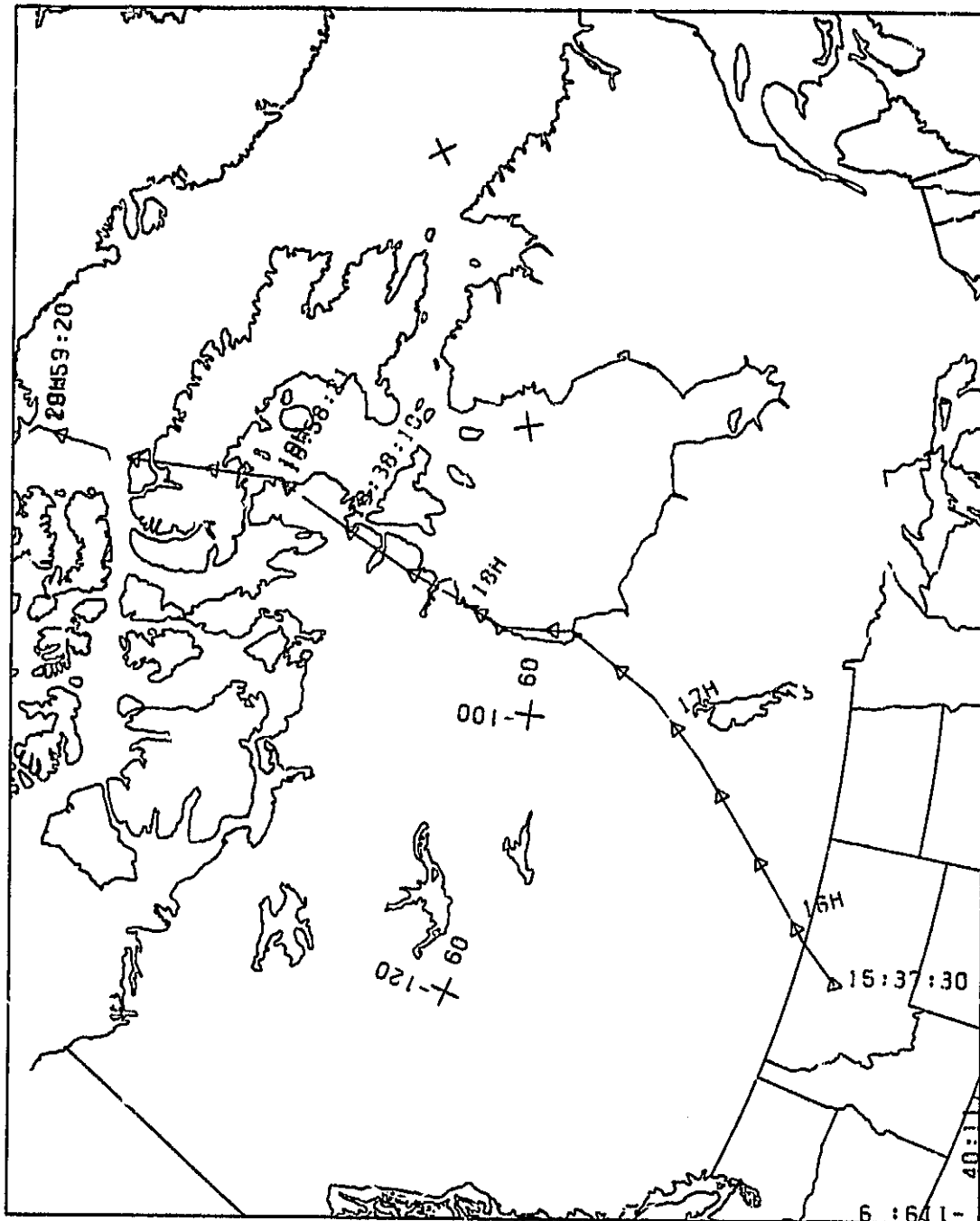


Figure 2. Flight tracks: Ames/Thule 6/8

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MIX '94
15:37:19 TO 20:19:37 UT
FLT #46 JUNE 9, 1984 HELMSTROM TO THULE
SCALE = 1:1,79E+07 TIME TICS EVERY 30.00 MINUTES

Figure 2. Flight tracks: Ames/Thule 6/8 (Continued)

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YEAR	1984	ADDAS	FLIGHT LOG	FLIGHT NO.	GRD TRUE	MIND	WIZEX	IR	AIR		
TIME	LAT	LONG	DIR	SPD	DIR	PRES	RAJAR	PITCH	ROLL		
160/11:56:05	00	00.0	000	000.0	000	000154857	75	-0.7	-1.4	29.3	10.0
160/11:57:01	37	24.8	122	02.8	0014	157.6	104	157.3	25.4	9.8	
160/11:58:01	37	24.6	122	02.7	0014	156.4	103	156.3	21.9	7.9	
160/11:59:01	37	24.4	122	02.7	0015	155.4	103	155.3	10.5	10.7	
160/12:00:01	37	24.4	122	02.6	0015	154.6	116	154.1	0.6	11.0	
160/12:01:01	37	26.0	122	02.3	0177	369.1	010	040	934	19.2	15.8
160/12:02:01	37	27.7	122	02.0	0235	096.3	019	299	2407	6.6	9.2
160/12:03:01	37	27.6	121	01.4	0278	021.0	014	361	4331	8.5	10.3
160/12:04:01	37	23.9	121	01.7	0301	139.0	015	316	6533	6.5	6.4
160/12:05:01	37	19.9	121	01.6	0318	139.8	026	311	8694	6.8	3.1
160/12:06:35	37	18.3	121	01.4	0305	003.8	041	327	9389	7.0	28.8
160/12:07:31	37	18.4	121	01.4	0306	022.4	042	322	10089	6.9	29.1
160/12:08:31	37	18.4	121	01.4	0306	072.4	045	322	10134	6.9	28.0
160/12:09:31	37	18.4	121	01.4	0302	059.2	045	318	10274	5.3	28.0
160/12:10:31	37	18.6	121	01.4	0300	050.2	049	315	10360	5.5	28.2
160/12:11:01	37	19.1	121	01.0	0297	037.6	043	312	10502	4.2	19.3
160/12:12:01	37	19.9	121	01.0	0304	025.7	042	310	10639	3.7	7.4
160/12:13:01	37	21.3	121	00.1	0319	021.0	043	312	10837	3.4	0.3
160/12:14:01	37	22.9	121	00.1	0334	021.5	043	311	11091	3.7	3.3
160/12:15:01	37	23.6	121	00.1	0343	022.8	045	312	11276	3.7	3.4
160/12:16:01	37	24.1	121	00.6	0403	025.3	044	310	11555	3.9	3.7
160/12:17:01	37	24.0	121	00.7	0410	024.4	046	309	11829	4.2	3.2
160/12:18:01	37	24.0	121	00.7	0412	023.6	047	309	11917	4.1	3.2
160/12:19:01	37	24.0	121	00.7	0412	023.6	047	307	12077	4.1	3.2
160/12:20:01	37	24.0	121	00.7	0412	023.6	047	307	12247	4.1	3.2
160/12:21:01	37	24.0	121	00.7	0412	023.6	047	306	12449	4.1	3.2
160/12:22:01	37	24.0	121	00.7	0412	023.6	047	306	12649	4.1	3.2
160/12:23:01	37	24.0	121	00.7	0412	023.6	047	306	12849	4.1	3.2
160/12:24:01	37	24.0	121	00.7	0412	023.6	047	306	13049	4.1	3.2
160/12:25:01	37	24.0	121	00.7	0412	023.6	047	306	13249	4.1	3.2
160/12:26:01	37	24.0	121	00.7	0412	023.6	047	306	13449	4.1	3.2
160/12:27:01	37	24.0	121	00.7	0412	023.6	047	306	13649	4.1	3.2
160/12:28:01	37	24.0	121	00.7	0412	023.6	047	306	13849	4.1	3.2
160/12:29:01	37	24.0	121	00.7	0412	023.6	047	306	14049	4.1	3.2
160/12:30:01	37	24.0	121	00.7	0412	023.6	047	306	14249	4.1	3.2
160/12:31:01	37	24.0	121	00.7	0412	023.6	047	306	14449	4.1	3.2
160/12:32:01	37	24.0	121	00.7	0412	023.6	047	306	14649	4.1	3.2
160/12:33:01	37	24.0	121	00.7	0412	023.6	047	306	14849	4.1	3.2
160/12:34:01	37	24.0	121	00.7	0412	023.6	047	306	15049	4.1	3.2
160/12:35:01	37	24.0	121	00.7	0412	023.6	047	306	15249	4.1	3.2
160/12:36:01	37	24.0	121	00.7	0412	023.6	047	306	15449	4.1	3.2
160/12:37:01	37	24.0	121	00.7	0412	023.6	047	306	15649	4.1	3.2
160/12:38:01	37	24.0	121	00.7	0412	023.6	047	306	15849	4.1	3.2
160/12:39:01	37	24.0	121	00.7	0412	023.6	047	306	16049	4.1	3.2
160/12:40:01	37	24.0	121	00.7	0412	023.6	047	306	16249	4.1	3.2

YEAR 1984	AIDAS FLIGHT LOGS	FLIGHT NO.	CRD TIME	--LATS--	--LONGS--	--MOHD--	SPD OIR	PRES	RADAR	PITCH	ROLL	--TEMP--	
												IR	AIR
----	----	----	----	----	----	----	----	----	----	----	----	----	----
TIME		ALTIM	FEZEX										
160/13:40:00	45	49.6-112.15.9	0459	018.6	011	231	26740	27625	2.0	0.2	5.9	-50.1	
160/13:41:00	46	49.6-112.15.9	0457	018.6	011	269	26725	27677	1.7	0.4	6.4	-50.4	
160/13:42:00	46	49.6-112.15.9	0457	018.6	011	283	26705	27677	1.7	0.4	7.5	-50.6	
160/13:43:00	46	49.6-112.15.9	0440	019.0	013	273	26703	26976	-1.9	-0.2	6.0	-51.5	
160/13:45:00	46	49.6-112.15.9	0446	019.9	017	159	26332	26685	-2.4	0.5	-10.3	-51.9	STARTING CLR DESCEND.
160/13:44:00	46	17.6-112.01.3	0456	019.5	014	165	26714	22280	-0.2	0.4	-10.7	-48.9	
160/13:45:00	46	24.5-111.57.8	0435	019.4	012	183	26423	21199	-2.4	0.5	-9.0	-42.6	
160/13:46:00	46	31.2-111.54.4	0422	019.7	012	183	25891	18250	-2.7	0.7	5.0	-36.1	
160/13:47:00	46	37.9-111.50.9	0413	019.3	010	221	21239	17237	-2.4	-0.1	-7.9	-30.2	
160/13:48:00	46	44.2-111.47.5	0401	019.2	008	224	18823	14070	-1.6	0.5	-1.6	-23.5	
160/13:49:00	46	49.6-111.44.9	0389	017.4	017	260	16832	10196	-2.4	0.7	-6.0	-19.1	
160/13:50:00	46	52.1-111.44.3	0371	017.9	013	243	18132	10223	-1.8	0.4	-1.9	-19.8	
160/13:51:00	47	02.1-111.41.1	0352	017.2	014	291	14725	7477	-1.2	1.1	9.3	-10.0	
160/13:52:00	47	06.9-111.33.9	0334	036.5	013	309	11267	6835	-0.3	-0.1	9.5	-5.6	
160/13:53:00	47	11.1-111.28.7	0308	038.4	012	325	10193	6080	1.2	-0.5	9.6	-5.6	
160/13:54:00	47	14.6-111.26.1	0271	037.6	016	339	9674	6190	2.0	0.8	19.1	-6.2	
160/13:55:00	47	17.8-111.19.9	0250	037.9	013	355	8978	4820	0.2	-0.4	12.0	-4.0	
160/13:56:00	47	21.1-111.16.1	0243	038.2	020	286	7356	3893	-0.3	0.5	11.4	0.7	
160/13:57:00	47	23.9-111.11.8	0254	039.6	026	266	5756	2082	0.5	-0.3	12.1	2.8	
160/13:57:26	47	25.1-111.10.2	0251	040.1	024	259	5609	2544	3.1	-0.3	10.4	4.7	
160/13:58:00	47	28.6-111.07.7	0238	037.2	023	259	5195	1800	3.9	0.3	11.3	3.8	
160/13:59:00	47	30.6-111.07.7	0238	036.0	021	239	4631	1151	1.1	-0.0	11.2	6.7	
160/14:00:00	47	32.1-111.06.1	0153	295.4	022	239	6471	1151	-1.5	-0.2	13.0	9.2	
160/14:01:00	47	32.6-111.09.4	0161	0161	022	229	3925	4338	2.3	-8.9	13.0	7.6	

RAWR 3 CAMERA ON AT 13 40 CO.

RAWR 3 CAMERA OFF.

ORIGINAL PART NO OF POOR QUALITY

Table with columns: YEAR 1959, ADDRESS, FLIGHT LOS, LAT, LONG, SPD, HEAD, SPD, DIR, ALTITUDE, PRESH, RADAR, PITCH, ROLL, IR, TEMP, AIR. Includes flight data from 160 00 29:51 to 160 16:04:59 and various notes such as 'CORRECTION: W/P 0 ABOVE', 'M/P 1 47-27 111 24.7 GTF', and 'M/P 2 49-04.9 109 35.2 GTF 020/122'. Also contains date entries like '1.7 TAKE OFF TIME 15 33 30' and 'JUNE 8, 1954'.

YEAR	1964	ACDAS	FLIGHT	LOG	---	FLIGHT	NO.	---	HEXZ	---	TEMP	---	FL	---
TIME	---	LAT	---	LONG	---	IND	---	ALTITUDE	---	IR	---	TIME	---	
---	---	---	---	---	---	SPD	DIR	PRES	REAR	PTCH	ROLL	---	---	
---	---	---	---	---	---	---	---	---	---	---	---	---	---	
160/20:03:11	75 41	9-071	22.3	0213	034.6	077	152	577	653	3.3	-0.8	1.0	FRAGMENTED ICE.	
160/20:04:11	75 42	9-071	15.5	033.5	034.5	077	152	577	653	3.3	-0.8	1.0	FRAGMENTED ICE.	
160/20:05:11	75 43	9-071	15.5	033.5	034.5	077	152	577	653	3.3	-0.8	1.0	FRAGMENTED ICE.	
160/20:06:11	75 45	6-071	11.0	0196	034.3	077	152	577	653	3.3	-0.8	1.0	FRAGMENTED ICE.	
160/20:07:11	75 46	6-071	09.6	0196	034.4	077	152	577	653	3.3	-0.8	1.0	FRAGMENTED ICE.	
160/20:08:11	75 46	6-071	03.4	0196	034.4	077	152	577	653	3.3	-0.8	1.0	FRAGMENTED ICE.	
160/20:09:11	75 46	6-071	03.4	0196	034.4	077	152	577	653	3.3	-0.8	1.0	FRAGMENTED ICE.	
160/20:10:11	75 46	6-071	03.4	0196	034.4	077	152	577	653	3.3	-0.8	1.0	FRAGMENTED ICE.	
160/20:11:11	75 46	6-071	03.4	0196	034.4	077	152	577	653	3.3	-0.8	1.0	FRAGMENTED ICE.	
160/20:12:11	75 46	6-071	03.4	0196	034.4	077	152	577	653	3.3	-0.8	1.0	FRAGMENTED ICE.	
160/20:13:11	75 46	6-071	03.4	0196	034.4	077	152	577	653	3.3	-0.8	1.0	FRAGMENTED ICE.	
160/20:14:11	75 46	6-071	03.4	0196	034.4	077	152	577	653	3.3	-0.8	1.0	FRAGMENTED ICE.	
160/20:15:11	75 46	6-071	03.4	0196	034.4	077	152	577	653	3.3	-0.8	1.0	FRAGMENTED ICE.	
160/20:16:11	75 46	6-071	03.4	0196	034.4	077	152	577	653	3.3	-0.8	1.0	FRAGMENTED ICE.	
160/20:17:11	75 46	6-071	03.4	0196	034.4	077	152	577	653	3.3	-0.8	1.0	FRAGMENTED ICE.	
160/20:18:11	75 46	6-071	03.4	0196	034.4	077	152	577	653	3.3	-0.8	1.0	FRAGMENTED ICE.	
160/20:19:11	75 46	6-071	03.4	0196	034.4	077	152	577	653	3.3	-0.8	1.0	FRAGMENTED ICE.	
160/20:20:11	75 46	6-071	03.4	0196	034.4	077	152	577	653	3.3	-0.8	1.0	FRAGMENTED ICE.	
160/20:21:11	75 46	6-071	03.4	0196	034.4	077	152	577	653	3.3	-0.8	1.0	FRAGMENTED ICE.	
160/20:22:11	75 46	6-071	03.4	0196	034.4	077	152	577	653	3.3	-0.8	1.0	FRAGMENTED ICE.	
160/20:23:11	75 46	6-071	03.4	0196	034.4	077	152	577	653	3.3	-0.8	1.0	FRAGMENTED ICE.	
160/20:24:11	75 46	6-071	03.4	0196	034.4	077	152	577	653	3.3	-0.8	1.0	FRAGMENTED ICE.	
160/20:25:11	75 46	6-071	03.4	0196	034.4	077	152	577	653	3.3	-0.8	1.0	FRAGMENTED ICE.	
160/20:26:11	75 46	6-071	03.4	0196	034.4	077	152	577	653	3.3	-0.8	1.0	FRAGMENTED ICE.	
160/20:27:11	75 46	6-071	03.4	0196	034.4	077	152	577	653	3.3	-0.8	1.0	FRAGMENTED ICE.	

3.2 First data flight—day 161—Thule to Evenes.

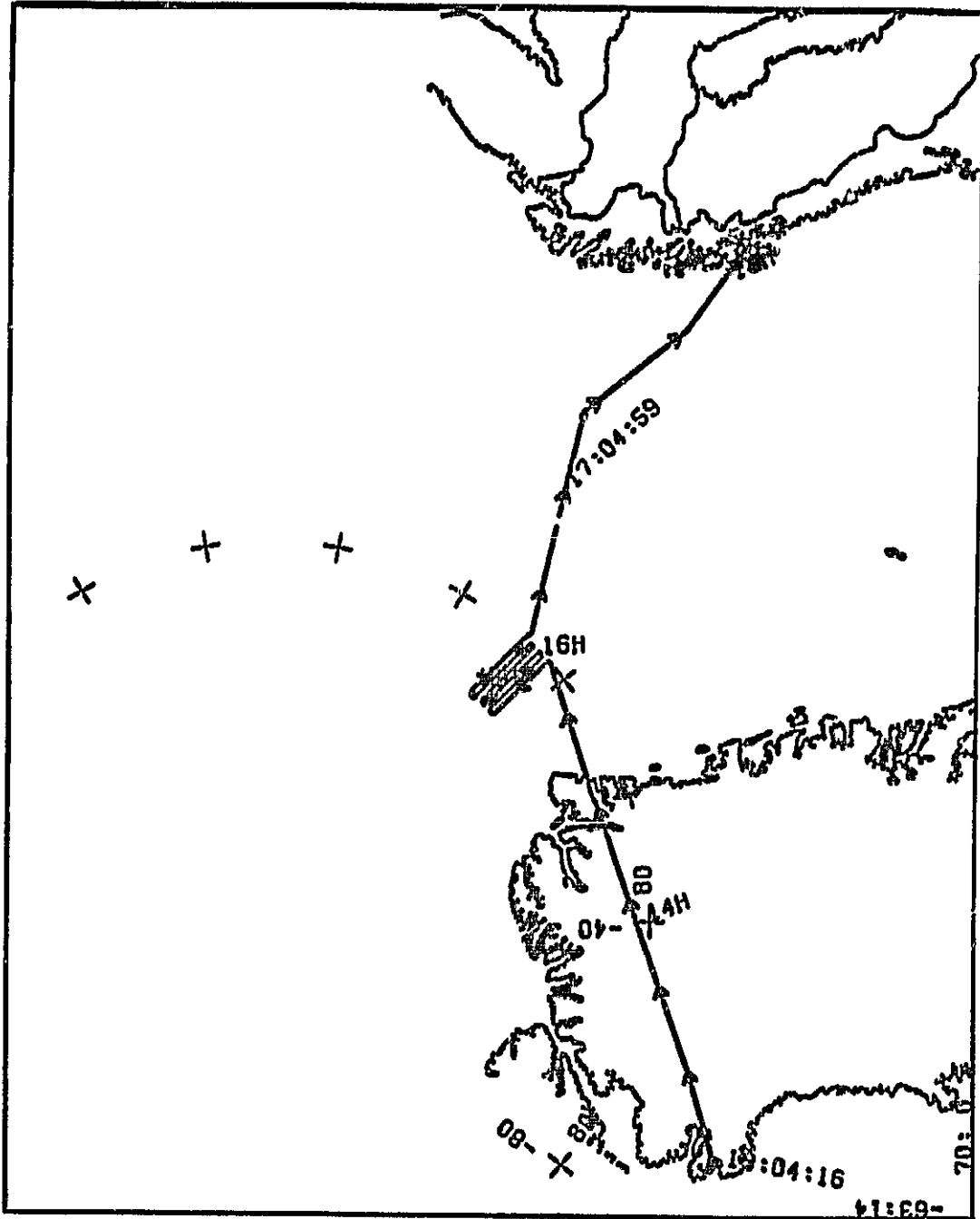
All instruments were operational except the Georgia Tech 94 GHz imager, which could not be accessed because of the heavy cargo load for this transit flight.

Pattern 'A' was executed going from west to east. Polarqueen was estimated to lie between tracks three & four of the mosaic pattern, about 60 Km from the southern edge. The real-time ESMR images indicated that the ice was near or above the melt point over the entire MIZEX area.

The decision to fly on a SMMR-off day was made so as not to impact the rest of the aircraft schedule.

Our attempt to acquire the RAL corner reflectors on Lofoten (for calibrating the RAL altimeter) was foiled by the accumulated error on the INS, and the weak reception on the Loran-C.

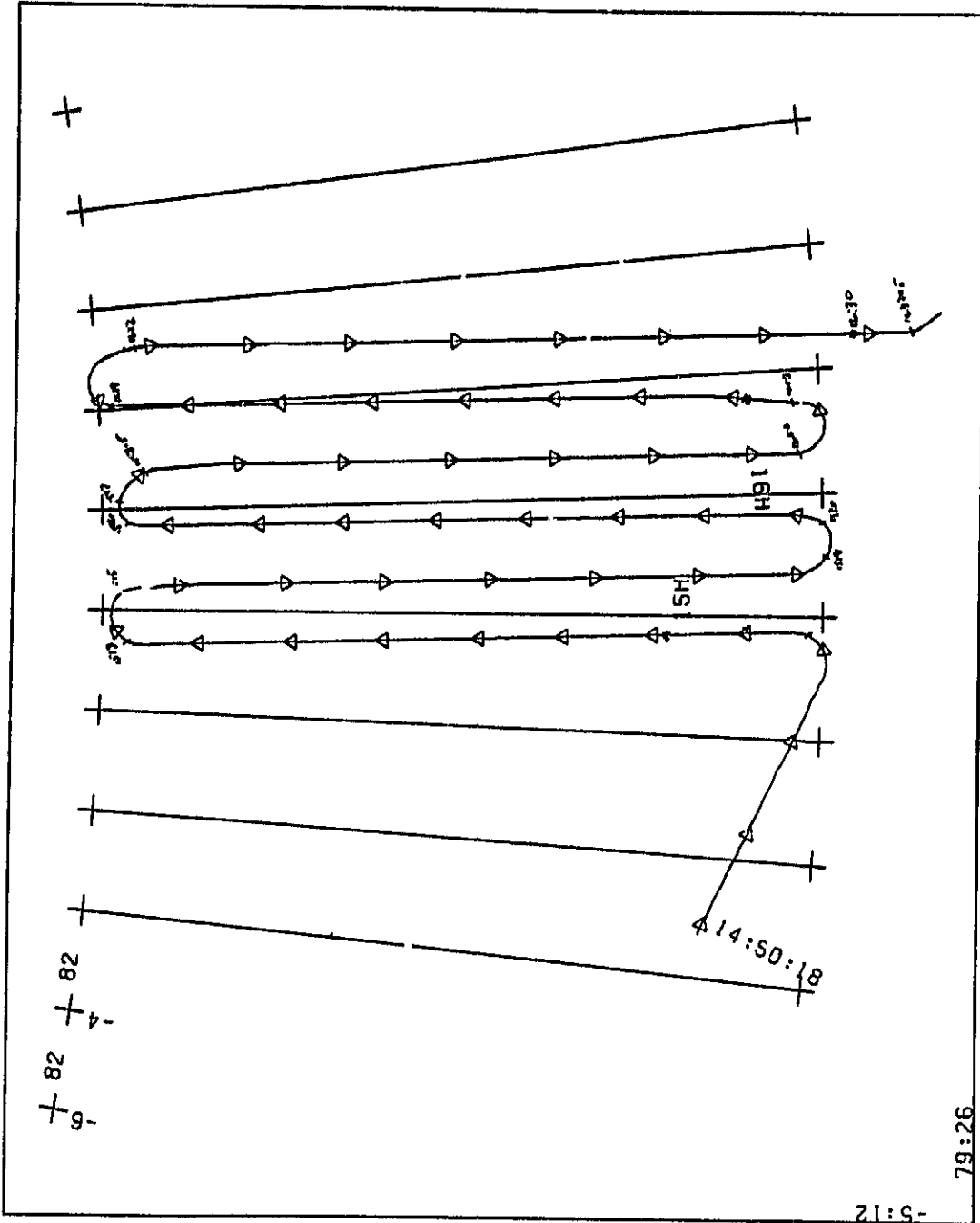
ORIGINAL PAGE 16
OF POOR QUALITY



0115X 1884 FMS JUNE 8-1884 THULE TO EVANES
19:04:07 TO 19:10:09 UT SCALE = 1:1-400:07 TIME TICS EVERY 20.00 MINUTES

Figure 3. Flight tracks: Thule/Evanes 6/9

ORIGINAL PAGE IS
OF POOR QUALITY



MIZEX '84 FLT #5 JUNE 9. 1984 EVENES LOCAL
14:50:07 TO 15:30:27 UT SCALE = 1:1.48E+05 TIME TICS EVERY 2.00 MINUTES

Figure 4. Mosaic pattern: 6/9

ORIGINAL FACSIMILE
OF POOR QUALITY

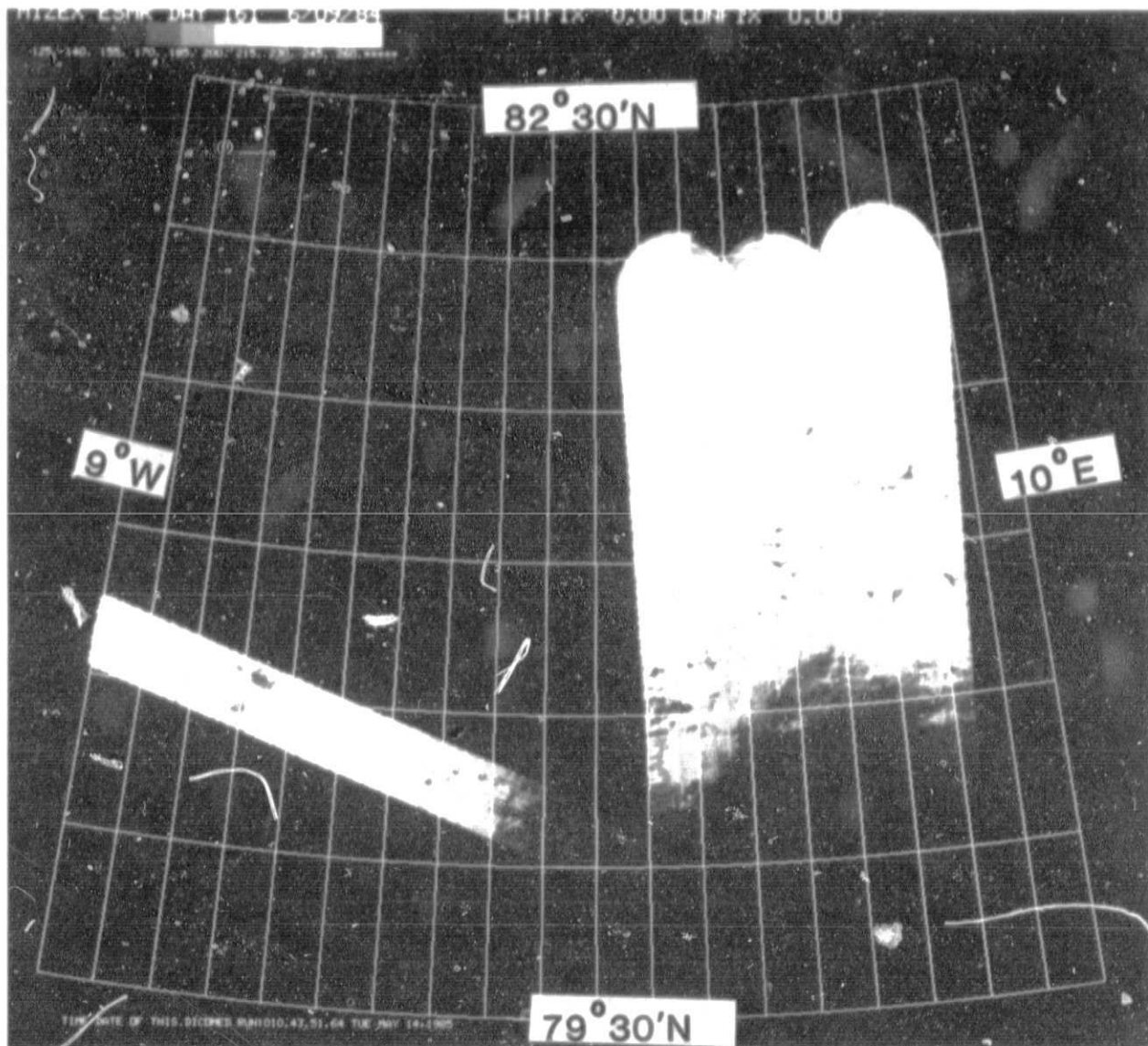


Figure 5. ESMR mosaic: 6/9

YEAR 1984 ADDAS FLIGHT LOG --- FLIGHT NO. 5 --- MIKEX
 ---TIME--- --LAT--- --LONG--- GRID TIME SPD DIR PRES RADAR ALTITUDE --- MIKEX
 ---TEMP---

TIME	LAT	LONG	GRID TIME	SPD	DIR	PRES	RADAR	ALTITUDE	MIKEX	TEMP
										IR
161/13:34:00	77	26.6-065	11.1	0426	049.2	010	023	24959	22442	8.2 -37.7
161/13:34:10	77	26.6-065	06.7	0427	049.2	010	023	25105	22742	0.8 -50.2
161/13:34:20	77	26.6-064	50.5	0432	049.8	012	038	25720	25945	-2.3 -40.7
161/13:34:30	77	26.6-064	45.4	0433	050.7	013	044	25608	26033	3.3 -39.9
161/13:34:40	77	26.6-064	45.4	0433	050.7	013	044	25926	26013	3.4 -39.9
161/13:34:50	77	31.5-064	45.4	0433	050.7	013	044	25926	26013	3.2 -0.1
161/13:35:00	77	35.9-064	49.7	0439	030.8	014	053	26864	22458	5.4 -42.4
161/13:35:10	77	40.3-063	55.4	0439	051.5	017	058	27913	22919	3.6 0.2
161/13:35:20	77	45.1-063	55.9	0442	051.7	017	055	28301	23256	3.2 -0.3
161/13:35:30	77	49.7-062	59.3	0443	052.6	021	064	29625	23613	3.0 0.3
161/13:35:40	77	54.0-062	31.8	0443	052.7	025	054	30544	24191	3.7 0.0
161/13:35:50	77	58.5-062	03.8	0432	052.7	028	049	31640	25067	3.4 0.1
161/13:36:00	78	01.9-061	34.8	0430	053.2	029	054	31967	25362	3.6 -0.5
161/13:36:10	78	06.7-061	49.8	0428	053.4	033	048	32740	26356	3.9 -0.2
161/13:36:20	78	11.1-061	09.0	0428	053.8	035	052	32976	26751	3.7 0.2
161/13:36:30	78	15.5-061	40.2	0428	054.0	035	046	32998	26743	2.4 -0.5
161/13:36:40	78	19.9-059	42.7	0428	054.0	035	046	32998	26743	2.4 -0.5
161/13:36:50	78	24.6-059	43.6	0437	051.6	030	045	32956	26344	2.4 0.1
161/13:37:00	78	29.1-059	45.7	0433	052.2	031	046	32945	26304	2.6 0.0
161/13:37:10	78	33.3-058	47.0	0430	052.5	032	045	32965	26395	2.5 0.0
161/13:37:20	78	37.6-057	47.9	0428	052.8	033	045	32957	26385	2.6 0.2
161/13:37:30	78	41.8-056	49.8	0428	053.4	033	045	32940	26356	2.9 -0.2
161/13:37:40	78	45.8-056	49.8	0428	053.4	033	045	32940	26356	2.9 -0.2
161/13:37:50	78	49.9-055	49.9	0428	053.2	033	045	32952	26748	2.5 -0.1
161/13:38:00	78	54.0-055	50.4	0423	053.8	038	036	32969	26319	2.6 -0.1
161/13:38:10	78	57.9-055	20.6	0422	054.4	036	034	32956	26262	2.7 -0.3
161/13:38:20	78	61.9-054	49.5	0422	054.6	037	030	32970	26251	2.6 -0.1
161/13:38:30	78	65.9-054	49.5	0423	054.7	037	031	32955	26283	2.7 -0.2
161/13:38:40	78	69.9-053	47.8	0424	054.9	039	029	32954	26289	2.4 -0.2
161/13:38:50	78	73.9-053	45.6	0426	055.2	039	025	32964	26210	2.7 -0.6
161/13:39:00	79	77.9-052	43.5	0426	055.8	040	025	32964	26171	2.7 -0.5
161/13:39:10	79	81.9-052	40.9	0426	055.9	040	025	32964	26171	2.7 -0.5
161/13:39:20	79	85.9-051	37.5	0427	056.4	040	020	32969	26076	2.2 -0.2
161/13:39:30	79	89.9-051	34.7	0427	056.6	043	020	32971	26087	2.4 0.1
161/13:39:40	79	93.9-050	30.9	0428	057.0	044	020	32955	25944	2.4 0.0
161/13:39:50	79	97.9-049	28.0	0428	057.5	044	019	32971	25849	2.4 -0.4
161/13:40:00	79	101.9-048	25.1	0429	057.9	044	016	32952	25736	2.5 -0.1
161/13:40:10	79	105.9-048	22.2	0429	058.1	044	015	32966	25699	2.4 0.2
161/13:40:20	79	109.9-048	19.3	0431	058.6	043	014	32955	25660	2.3 -0.4
161/13:40:30	79	113.9-047	16.4	0431	058.9	047	013	32948	25621	2.4 0.0
161/13:40:40	79	117.9-047	13.5	0431	059.0	047	014	32966	25612	2.4 0.0
161/13:40:50	79	121.9-046	10.6	0431	059.6	047	013	32969	25648	2.4 0.1
161/13:41:00	79	125.9-046	7.7	0432	059.6	047	015	32965	25648	2.4 0.1
161/13:41:10	79	129.9-045	4.8	0433	060.2	047	015	32965	25572	2.4 0.1
161/13:41:20	79	133.9-045	1.9	0434	061.0	044	012	32961	25524	2.4 0.1
161/13:41:30	80	00.0-045	07.0	0435	061.5	042	010	32951	25479	2.5 -0.3
161/13:41:40	80	04.0-044	28.5	0437	062.5	039	011	32961	25491	2.4 -0.4
161/13:41:50	80	08.0-043	50.0	0438	063.9	037	012	32965	25485	2.4 -0.7
161/13:42:00	80	11.9-042	31.8	0439	064.2	036	009	32965	25444	2.4 0.1
161/13:42:10	80	15.9-042	3.9	0439	064.2	036	009	32964	25431	2.4 0.0
161/13:42:20	80	19.9-041	31.2	0440	064.3	036	009	32943	25424	2.5 0.1
161/13:42:30	80	23.9-041	51.1	0441	065.1	036	009	32943	25424	2.6 -0.1
161/13:42:40	80	27.9-041	10.8	0442	066.2	035	006	32965	25444	2.6 0.1
161/13:42:50	80	31.9-040	45.9	0443	066.8	032	007	32968	25501	2.4 0.3
161/13:43:00	80	35.9-040	28.9	0443	067.8	031	002	32959	25520	2.6 -0.9
161/13:43:10	80	39.9-040	11.8	0443	068.8	029	007	32959	25520	2.6 -0.9
161/13:43:20	80	43.9-040	06.7	0443	069.8	028	007	32967	25607	2.6 -0.9
161/13:43:30	80	47.9-040	11.8	0444	070.8	027	007	32966	25622	2.5 -0.4
161/13:43:40	80	51.9-040	23.5	0447	071.8	027	010	32948	25809	2.5 -0.1

18 HORIZONTAL IS AT ITS COLDEST - TCM.
 ON THE HORNSEGEN SEA GRI 7970, PICKUPS UP OVER GREENLAND.
 PICKUPS UP 4 OUT OF 5 STATIONS.
 OVER ICE SHEET THERE IS THIN SURFACE HAZE.

SOME SURFACE HAZE AS WE GO OVER THE ICE SHEET.
 FLYING OVER HELT FIELDS.
 LOWER ELEVATION OF THE ICE SHEETS.
 PICKUPS ON THE COAST OF GREENLAND.
 HORIZONTAL VISIBILITY - EAST COAST OF GREENLAND.
 STRATUS PATCH'S ON THE ICE SHEET ABOUT 40 PERCENT COVERAGE.

ORIGINAL RECORD
OF POOL DATA

YEAR 1984 ADAMS FLIGHT LOGS --- FLIGHT NO. 5 --- HIZEX
---TIME--- --LAT-- --LONG-- GRD TRU ---MOC--- ALTITUDE---
SPO DIR SPO DIR PRES RADAR PITCH ROLL IR ---TEMP---
161/15:59:57 80 21.0 003 41.4 0425 357.3 033 348 32960 31748 2.4 0.0 -5.4 -51.2 ICE CONCENTRATION 60 PERCENT.
161/15:00:01 80 21.0 003 41.4 0425 357.3 033 348 32960 31748 2.4 0.0 -5.4 -50.6
161/15:00:59 80 20.8 003 40.5 0425 357.4 033 348 32960 31748 2.3 -0.2 -4.0 -50.6
161/15:01:00 80 20.8 003 40.5 0425 357.4 033 348 32960 31748 2.3 -0.2 -4.0 -50.5
161/15:00:57 80 27.9 003 40.2 0426 357.1 034 347 32961 31746 2.4 -0.3 -4.4 -50.5 ICE TYPE.
161/15:01:01 80 28.6 003 40.1 0426 357.1 033 345 32959 31766 2.4 -0.1 -4.6 -51.0 THIN ICE IN POLYNAS.
161/15:01:25 80 33.4 003 35.4 0426 356.9 032 344 32959 31762 2.4 0.0 -4.0 -50.5
161/15:02:01 80 35.6 003 36.2 0427 357.2 036 347 32964 31761 2.3 -0.2 -4.1 -51.4 ICE CONCENTRATION INCREASES ABOUT 85 PERCENT.
161/15:02:45 80 40.8 003 37.1 0427 357.1 034 344 32960 31763 2.3 -0.1 -4.2 -51.7 CLASSIC STRUCTURE VERY SIMILAR
161/15:03:25 80 42.7 003 36.8 0427 357.1 034 344 32959 31763 2.3 -0.1 -4.2 -52.3 CLASSIC STRUCTURE VERY SIMILAR TO THE PAST.
161/15:03:05 80 43.7 003 36.9 0428 357.2 034 344 32959 31763 2.3 -0.1 -4.2 -51.2 FRACTURED ICE, FIRST YEAR.
161/15:03:11 80 43.7 003 36.9 0428 357.2 034 344 32959 31763 2.3 -0.1 -4.2 -51.2 FRACTURED ICE, FIRST YEAR.
161/15:03:23 80 45.5 003 36.9 0428 356.6 035 347 32966 31769 2.4 -0.1 -4.3 -51.6 PATCHES OF LOW LEVEL STRATOCUMMUS ABOUT 20 PERCENT.
161/15:03:25 80 46.8 003 36.3 0428 356.7 034 346 32965 31766 2.4 0.1 -4.3 -51.6 MASSIVE ICE ZONE.
161/15:04:01 80 49.8 003 35.5 0428 357.3 033 345 32961 31766 2.3 0.2 -7.2 -50.3
161/15:04:49 80 55.4 003 34.5 0429 356.9 031 344 32962 31769 2.3 -0.3 -11.6 -50.5 MIXTURE MULTYEAR AND FIRST YEAR, MEDIUM TO SMALL 90 PERCENT ICE CONCENTRATION.
161/15:05:01 80 57.0 003 33.6 0429 356.8 031 344 32959 31768 2.4 -0.2 -12.1 -49.0 NORTH DETAIRS, IN AMOUNT OF OPEN WATER.
161/15:05:33 81 00.7 003 32.9 0429 357.4 029 346 32968 31766 2.4 0.1 -10.6 -51.2
161/15:06:01 81 00.7 003 32.3 0430 357.3 032 347 32952 31765 2.3 -0.4 -8.7 -50.2
161/15:06:23 81 06.7 003 31.4 0430 357.0 031 346 32964 31765 2.3 -0.3 -11.4 -51.0 CLOUD INCREASES - 30 PERCENT LOW LEVEL STRATOCUMMUS.
161/15:07:01 81 11.3 003 30.5 0430 357.2 032 346 32969 31765 2.3 -0.4 -11.1 -48.2
161/15:07:57 81 17.8 003 29.1 0431 357.1 032 346 32967 31763 2.3 -0.4 -10.6 -43.7 ED 45.4N 6 06.0EAST.
161/15:08:01 81 18.3 003 29.1 0431 357.1 032 348 32972 31763 2.3 -0.4 -10.6 -48.0
161/15:09:01 81 25.5 003 27.0 0430 357.2 031 348 32951 31750 2.3 -0.5 -12.4 -51.4
161/15:10:13 81 26.7 003 26.5 0430 357.0 033 345 32963 31756 2.1 0.1 -13.4 -50.4 ICE CONCENTRATION 95 PERCENT.
161/15:10:51 81 32.6 003 25.0 0430 357.4 034 350 32965 31749 2.3 -0.5 -7.1 -51.5
161/15:11:01 81 36.4 003 23.3 0431 357.3 030 350 32958 31753 2.3 0.0 -10.9 -49.5
161/15:11:57 81 46.4 003 21.2 0431 357.3 029 352 32959 31759 2.3 -0.4 -9.1 -49.5 NORTH END OF HIZEX HAS CONSIDERABLE ICE COVER.
161/15:12:01 81 46.6 003 21.5 0431 357.3 031 353 32952 31740 2.3 -0.3 -10.2 -49.9
161/15:12:39 81 50.3 003 20.5 0431 357.6 031 354 32960 31763 2.3 -1.2 -11.3 -50.0 III END OF RUN 1 TIME 15-12.30 LAT 8150.3 N LONG 00320.5 E FL 349
161/15:13:01 81 58.5 003 18.3 0428 036.4 022 032 32969 31763 2.7 28.7 -17.0 -49.8
161/15:13:01 81 58.5 003 18.3 0428 036.4 022 032 32969 31763 2.7 28.7 -17.0 -49.8
161/15:14:51 81 56.4 004 23.6 0469 159.9 025 319 33152 31933 0.6 30.7 -16.2 -49.6 45 DEGREE BANK TO THE RIGHT.
161/15:15:01 81 53.8 004 26.4 0479 175.3 025 004 32846 31628 2.2 -1.9 -12.6 -49.3
161/15:15:15 81 51.8 004 27.5 0481 174.8 026 004 32865 31657 2.5 0.7 -23.6 -49.4 ** START OF RUN 2 TIME 15.15.16 LAT 8151.7 N LONG 00427.4 E FL 348
161/15:15:49 81 47.3 004 29.9 0482 177.1 024 004 32926 31726 2.4 2.1 -10.7 -49.0 ASN - MADE 2050 DATA POINT.
161/15:16:01 81 45.5 004 30.5 0483 177.9 022 003 32959 31726 2.4 0.0 -11.1 -48.2
161/15:16:01 81 44.7 004 30.5 0483 178.1 022 003 32944 31701 2.3 0.4 -9.4 -50.3
161/15:17:01 81 37.7 004 31.3 0486 178.3 025 006 32956 31717 2.2 -0.2 -7.8 -50.0
161/15:17:07 81 35.9 004 31.9 0486 178.3 026 005 32953 31725 2.2 -0.1 -8.5 -49.9 REMOVED LARGE FLOES, RANDOM POLYNIA PATTERN.
161/15:18:01 81 29.5 004 31.9 0490 178.9 025 359 32958 31719 2.0 0.1 -7.4 -48.6 ICE CONCENTRATION DECREASES AS WE GO SOUTH.
161/15:18:01 81 29.5 004 32.4 0493 178.9 025 356 32958 31720 2.1 -0.1 -7.7 -49.7 HAZE IS INCREASING.
161/15:19:01 81 21.4 004 34.1 0493 178.8 027 357 32960 31729 2.1 -0.3 -11.2 -50.4
161/15:19:49 81 15.0 004 34.2 0495 179.6 027 356 32956 31734 2.2 -0.5 -10.5 -48.6 80 PERCENT CLOUD COVER.
161/15:20:01 81 13.0 004 34.2 0495 179.6 027 355 32951 31704 2.0 -0.4 -11.4 -48.9
161/15:21:01 81 07.7 004 35.4 0494 179.9 025 353 32950 31734 2.1 -0.2 -21.8 -49.0
161/15:21:26 81 02.7 004 36.2 0494 179.2 026 352 32956 31720 2.1 -0.4 -14.5 -49.4 NEW LARGE MULTYEAR FLOES, 85 PERCENT CONCENTRATION.
161/15:22:01 80 56.7 004 36.2 0494 179.2 026 352 32958 31705 2.2 0.0 -16.0 -50.4
161/15:23:24 00 00.0 000 00.0 000.0 000 000 32958 31720 2.0 -0.2 -15.7 -50.0
161/15:23:56 00 00.0 000 00.0 000.0 000 000 32957 31717 2.0 -0.3 -14.5 -50.4 FRA
161/15:23:56 80 41.1 004 39.1 0495 179.1 026 355 32957 31707 2.0 -0.1 -19.3 -49.1 FRACTURED RUNNING FROM SOUTHWEST UP TO NORTHEAST ICE CONCENTRATION 60 PERCENT.
161/15:24:00 80 40.4 004 37.4 0495 179.2 026 355 32957 31705 2.1 -0.1 -18.6 -49.5
161/15:24:10 80 38.9 004 36.0 0495 179.2 026 355 32957 31707 2.1 0.0 -15.2 -50.2 15 23 03 TRANSITION LARGE TO FRACTURED FLOES INTO THE MIX.
161/15:24:56 80 55.4 004 39.2 0493 179.3 025 350 32962 31721 2.2 0.0 -8.4 -51.6 LORAN C TRACKING ALL FIVE STATIONS.
161/15:25:00 80 52.0 004 36.4 0494 179.8 027 349 32960 31709 2.0 -0.1 -6.7 -52.3 EDGE OF FRACTURED ICE ZONE MIX.
161/15:25:32 80 27.9 004 38.0 0494 179.6 027 349 32962 31702 2.0 -0.1 -5.3 -50.5
161/15:26:00 80 23.9 004 39.7 0494 179.1 025 355 32960 31712 2.0 0.2 -4.6 -51.1 AREA OF MANY LARGE BLOKS.
161/15:26:00 80 23.9 004 39.7 0494 179.1 025 355 32960 31712 2.0 0.2 -4.6 -51.0

YEAR 1984 ADDAS FLIGHT LOG

Table with columns: TIME, LAT, LONG, FLIGHT NO., GND TRUC, SPD HEAD, SPD DIR, ALTITUDE, PRES, RADAR, FTCH, HDL, IR, AIR, and TEPE. It contains detailed flight log data for 1984, including altitude, speed, and radar information.

Notes and observations: LOTS OF OPEN WATER ON PORT SIDE. ORIENTATION OF PLUME IS... CORRECTION: LAYER. ANN - MADE DATAPOINT 3975. PLUMES GENERALLY DISTRIBUTED EAST AND WEST.

Summary statistics and remarks: CORRECTION: LAYER. CORRECTION: LAYER. REAL START OF RUN SHOULD BE 15:48:55. LOCAL TIME IN EVENES IS 17:46.

YEAR 1984	ACDAS	FLIGHT NO.	5	MIXX			TEMP								
				SPD	DIR	ALTIM	PRES	REAR	FITCH	SKUL	IR	AIR			
181	716:57:01	77	25.4	016	17.6	0479	154.2	019	030	32955	31360	1.9	-0.2	-11.2	-53.5
181	716:57:17	77	23.4	016	21.9	0479	154.7	018	015	32954	31326	1.7	-0.3	-9.3	-53.6
181	716:58:01	77	18.0	016	32.9	0478	154.9	019	017	32956	31372	1.7	0.0	-26.7	-49.9
181	716:59:01	77	18.8	016	46.9	0478	154.7	021	023	32960	31591	2.0	0.0	-21.4	-53.8

3.3 Second data flight—day 164—Evenes RT

All instruments were operational.

Pattern 'A' was flown rather than the planned pattern 'E' because of surface reports through Tromso indicated warm ice conditions north of the Polarqueen, and colder conditions to the East. Consequently, the pattern was situated so that according to the last reported position of the Polarqueen, she would be located on the westernmost leg of that pattern. (Unfortunately, our best efforts to contact Tromso the morning of the flight were to no avail, since all of the phone lines there were either busy or remained unanswered up to the time of takeoff.) When we finally contacted the Polarqueen directly en route, the current position she reported was such that she would have fallen just outside our mosaic to the west. Luckily, due to a combination of errors, she fell directly underneath us on the last leg of the mosaic pattern. The pattern was flown from east to west, our normal mode of operation.

This time, the ESMR mosaic prepared on board showed that the ice was below freezing in the southern part of the MIZEX area, but mostly towards the west rather than towards the east as had been predicted by Tromso. In this area, the multiyear floes could easily be distinguished on the ESMR mosaic.

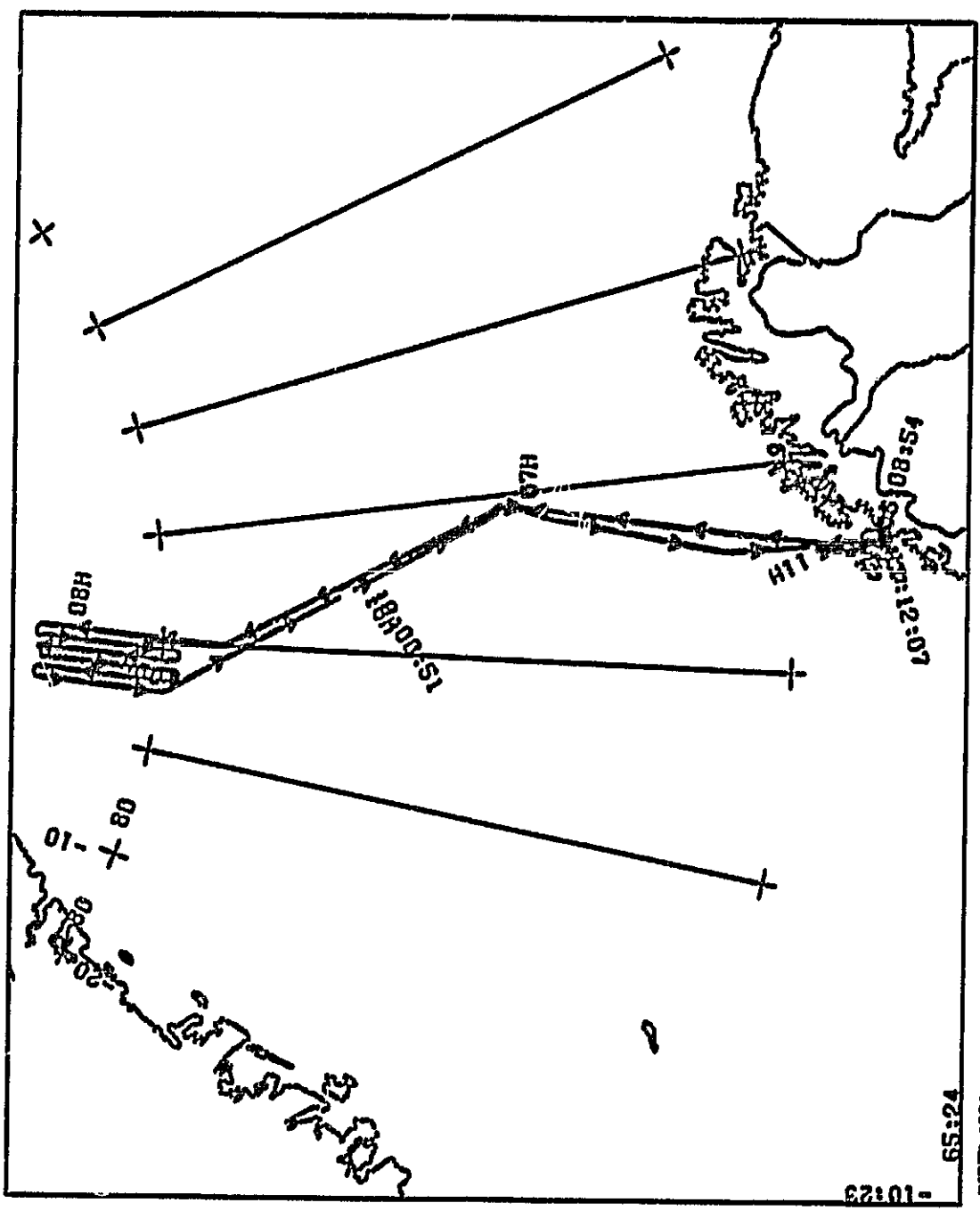
Initial evaluation of the data indicate a very successful mission, indeed, since all of the microwave equipment on board appeared to be operating properly.

Post-flight comparison with Nimbus-7 SMMR data caused us some momentary regret at not pursuing the long-track, four-leg mosaic as originally planned, since there was indeed cold ice signature shown on the satellite image north of the six-leg pattern that was flown. Indeed, the warm spot at the north of our pattern also clearly showed up on the SMMR image. On the other hand, the varied data that were acquired in an area where more surface information is available more than compensated for our momentary regrets.

Upon landing, the aircraft suffered damage to her left-wing center spoiler, so was out of commission until late on Sunday, June 17.

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FLY 08 JUNE 12, 1984 EVENS LOCAL
01:00:43 TO 11:00:27 UT SCALE = 1:10-315:00 TIME TICS EVERY 10.00 MINUTES

Figure 6. Flight tracks: Evens RT 6/12

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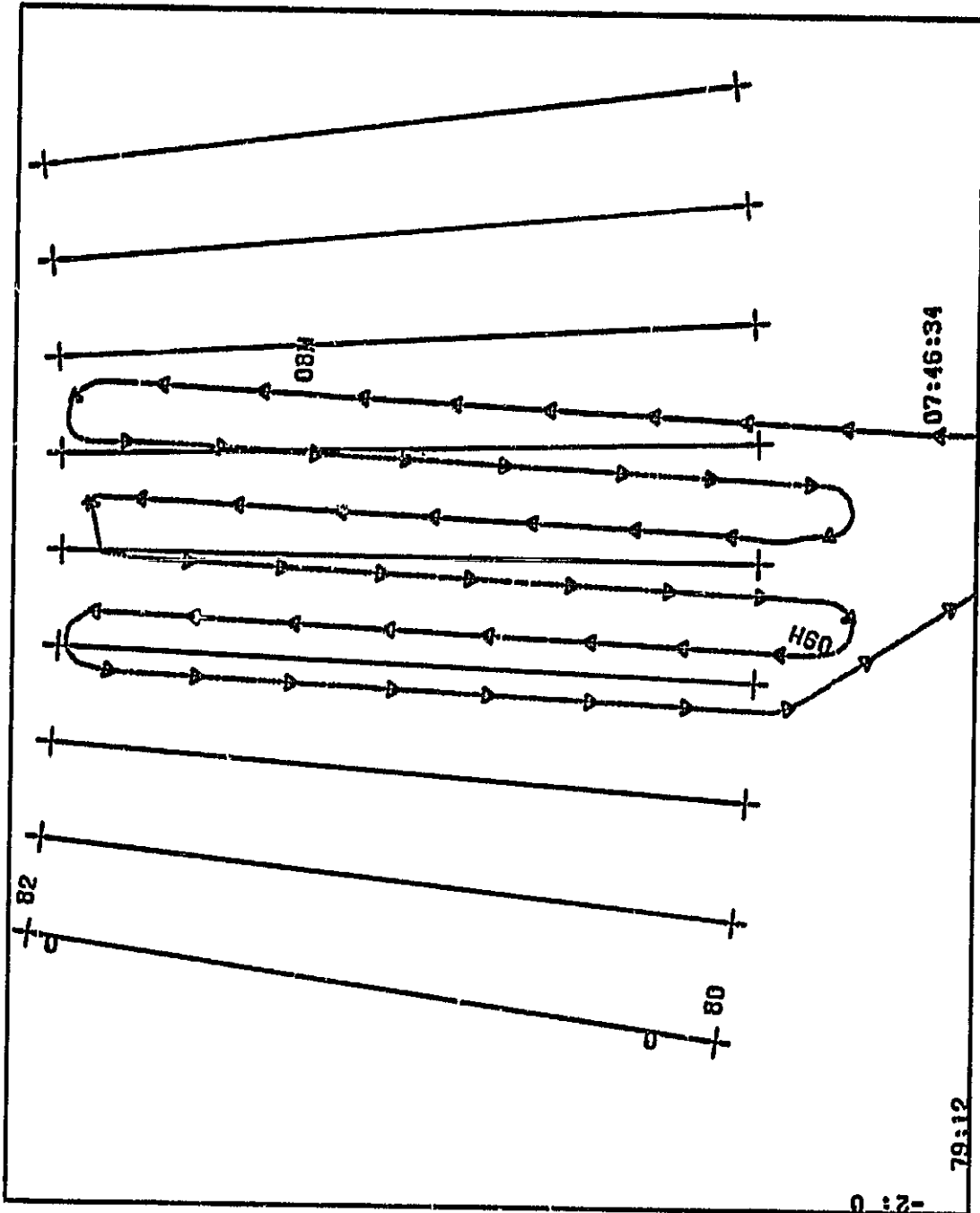


Figure 7. Mosaic pattern: 6/12

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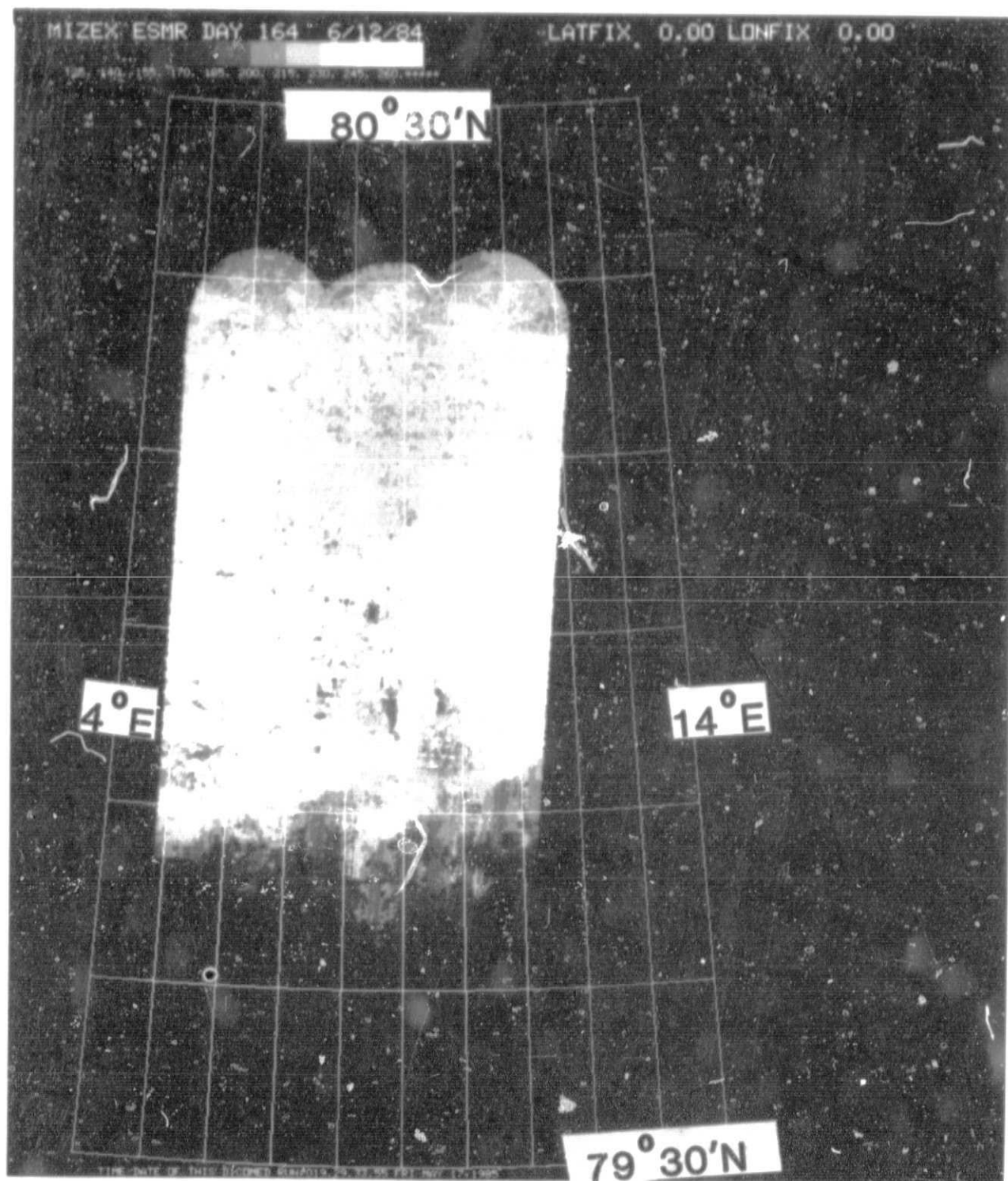


Figure 8. ESMR mosaic: 6/12

TIME	LAT	LONG	ALTITUDE	TEMP AIR
164/07:52:41	77 49.6	013 08.9	0463	331.7
164/07:53:01	77 51.8	013 03.6	0463	331.7
164/07:53:11	77 53.9	012 46.3	0463	331.0
164/07:53:31	78 01.4	012 29.5	0464	330.9
164/07:53:51	78 09.4	012 12.9	0464	330.8
164/07:54:11	78 17.4	012 07.3	0464	330.6
164/07:54:31	78 25.4	011 50.5	0465	330.2
164/07:54:51	78 33.4	011 33.5	0466	330.2
164/07:55:11	78 41.4	011 16.5	0466	330.2
164/07:55:31	78 49.4	011 0.0	0466	330.2
164/07:55:51	78 57.4	009 16.5	0466	330.2
164/07:56:11	79 05.4	008 33.0	0466	330.2
164/07:56:31	79 13.4	007 49.5	0466	330.2
164/07:56:51	79 21.4	006 66.0	0466	330.2
164/07:57:11	79 29.4	005 82.5	0466	330.2
164/07:57:31	79 37.4	004 99.0	0466	330.2
164/07:57:51	79 45.4	004 15.5	0466	330.2
164/07:58:11	79 53.4	003 32.0	0466	330.2
164/07:58:31	80 01.4	002 48.5	0466	330.2
164/07:58:51	80 09.4	001 65.0	0466	330.2
164/07:59:11	80 17.4	000 81.5	0466	330.2
164/07:59:31	80 25.4	000 98.0	0466	330.2
164/07:59:51	80 33.4	000 114.5	0466	330.2
164/07:59:51	80 33.4	000 114.5	0466	330.2

1/20 CIRRIUS, 10/10 ALTOSTRATUS AND STRATOCUMULUS.
 APPROACH NORTH END - CLOUD DIMINISH - CAN NOT SEE THE SURFACE.
 STEWARD - NORTH END.
 SECRETARY TECH - JUST NOW GOT ON THE CODE 07 36 00.
 HAVE BEEN RUNNING ON INTERVAL TIME.
 CLOUDS RAPIDLY CLEARING.
 78 07.7N LON 10 59.0E APPROX 07 40 00 - LOCAL C.
 78 42.5N 10 51.7E INS.
 NORTH 4 GREEN
 10/10 STRATOCUMULUS.
 *** START OF RUN 2 TIME 07.47.28 LAT 79.57.7 N LON 010.09.6 E FL 329
 START OF RUN 50 PERCENT STRATOCUMULUS, NUMEROUS ICE PLUMES.
 ORIENTATION OF ICE PLUMES EASTWEST.
 RAPID INCREASE IN ICE FLAKE INTENSITY.
 5.10 STRATOCUMULUS AND HAZE.
 PLUME STRUCTURE BROKEN DOWN - SCATTERED MEDIUM FLOES.
 FRACTURED ZONE GREATLY DISPERSED SINCE THE LAST FLIGHT.
 LORAN C HAS ACCY MARKINGS.
 EXTENDED RANGE AT THE MOMENT MORE THAN 2.9 Nautical MILES.
 ICE CONCENTRATION 50 PERCENT.
 CAMERAS ON
 STILL IN FRACTURED ICE 60 PERCENT CONCENTRATION.
 9/10 CLOUD COVER STRATOCUMULUS.
 ENTERING THE MAIN PACK.
 CAMERAS OFF.
 10/10 STRATOCUMULUS.
 HAZE LAYER HAS DISAPPEARED.
 LARGE MULTILAYER ICE FLOES 90 PERCENT ICE CONCENTRATION.
 CORRECTION: MULTILAYER.
 10 MILES WEST NO CLOUD COVER - CAN SEE ICE CLEARLY.
 APPROACH END OF RUN 10/10 STRATOCUMULUS.
 IN 01 16.6N LON 11 03.2E.

YEAR 1984 ADDAS FLIGHT LOG --- FLIGHT NO. 6 --- MIXEZ
 ---TIME--- --LAT-- --LONG-- --KIND-- --ALTITUDE--
 GRD TRUE SPD DIR PRES RADAR PITCH ROLL IR AIR

164708:00:51 01 23.1 111 07.4 0482 005.1 006 200 32965 31308 2.2 -0.1 -19.8 -36.8 LORAN C 03.5CN LON 10 39.5SE
 164708:01:01 01 24.5 01.1 09.7 0482 005.2 005 202 32959 31312 2.2 -0.2 -19.5 -37.2
 164708:01:11 01 25.1 01.1 09.7 0482 005.2 005 170 32972 31324 2.3 0.0 -16.6 -38.1
 164708:02:00 01 27.1 01.1 18.9 0482 005.5 006 159 32972 31329 2.2 0.1 -19.8 -37.7 END OF RUN THE ICE IS APPEARING DIMINISHING 90 PERCENT ICE CONCENTRATION.
 164708:02:19 01 24.7 01.1 18.9 0482 005.5 006 162 32972 31325 2.2 1.0 -19.8 -38.6 LARGE AND MEDIUM FIRST YEAR FLOES.
 164708:02:29 01 36.1 01.1 15.7 0483 006.1 010 176 32973 31331 2.3 0.1 -8.6 -37.6 CAMERAS ON.
 164708:03:01 01 40.3 01.1 19.0 0483 006.5 012 165 32993 31328 2.2 -0.2 -7.7 -38.2
 164708:03:55 01 47.6 01.1 24.0 0483 006.1 012 166 32973 31316 2.2 -0.4 -9.6 -38.4 95 PERCENT CONCENTRATION.
 164708:04:01 01 49.5 01.1 26.1 0483 006.2 011 162 32977 31329 2.5 -0.2 -9.1 -38.7
 164708:04:21 01 51.1 01.1 25.5 0483 006.3 011 158 32972 31313 2.5 -0.3 -8.2 -38.7 1/2 END OF RUN 2 TIME 03.04.20 LAT 0151.1 N LON 01126.5 E FL 329
 164708:05:01 01 56.3 01.1 18.8 0487 322.6 022 191 33019 31399 2.4 -28.7 -9.4 -39.2
 164708:05:17 01 58.5 01.0 18.5 0481 293.3 024 179 32991 31372 2.5 -28.3 -9.9 -39.1
 164708:06:21 01 52.3 01.0 12.3 0461 237.4 034 162 33060 31994 3.2 -42.6 -10.1 -38.7
 164708:06:42 01 55.9 01.0 15.2 0450 180.8 019 133 32832 31200 2.7 -5.8 -7.8 -37.9 95 PERCENT ICE CONCENTRATION.
 164708:08:45 01 55.9 01.0 15.2 0450 180.8 019 133 32832 31200 2.7 -5.8 -7.8 -37.9 95 PERCENT STRATOCUMULUS.
 164708:07:01 01 51.8 01.0 12.5 0450 179.0 016 137 32879 31243 2.7 -0.7 -7.6 -37.7
 164708:07:49 01 45.8 01.0 11.1 0452 182.3 013 146 32953 31205 2.5 0.9 -8.0 -37.2 *** START OF RUN 3 TIME 03.07.50 LAT 0145.6 N LON 01311.0 E FL 329
 164708:08:01 01 44.9 01.0 10.4 0453 182.9 013 148 32960 31317 2.4 0.4 -7.5 -36.9
 164708:08:29 01 40.8 01.0 08.2 0455 183.5 014 149 32979 31315 2.3 -0.4 -9.2 -38.1 GREASE AND THIN ICE IN POLYNVA.
 164708:08:55 01 37.6 01.0 06.9 0457 183.4 012 144 32972 31334 2.4 -0.7 -11.1 -38.0 CAMERAS OFF.
 164708:09:01 01 36.9 01.0 06.6 0458 183.5 013 152 32969 31319 2.4 -0.5 -10.5 -38.0
 164708:09:55 01 30.2 01.0 02.7 0461 184.1 009 148 32969 31337 2.4 -1.0 -17.5 -38.7 10/10 STRATOCUMULUS.
 164708:10:01 01 27.2 01.0 02.5 0460 184.0 010 151 32972 31336 2.4 -0.5 -17.2 -37.8
 164708:11:01 01 24.7 01.0 02.2 0461 184.4 009 179 32979 31330 2.2 -0.7 -19.7 -37.8
 164708:12:01 01 14.1 009 29.5 0463 184.4 009 188 32968 31311 2.3 -0.5 -18.4 -37.0
 164708:13:01 01 06.1 009 50.6 0466 184.5 012 185 32969 31316 2.2 -0.9 -16.8 -37.6
 164708:13:27 01 02.9 009 48.9 0465 183.9 013 192 32972 31338 2.2 -0.1 -15.5 -36.0
 164708:14:01 01 02.9 009 47.2 0467 184.6 012 208 32990 31301 1.9 0.9 -14.9 -38.9 2 STAGE HYGROMETER IN BALANCE CHECK.
 164708:15:01 01 00.9 009 43.6 0469 184.7 019 191 32984 31273 1.6 -0.8 -15.4 -38.2 10/10 STRATOCUMULUS.
 164708:16:01 01 00.8 009 39.8 0469 184.4 019 181 32982 31268 1.8 -0.9 -15.8 -39.6
 164708:16:17 01 00.9 009 38.7 0468 184.3 017 188 32959 31261 2.1 -0.9 -15.7 -39.5 FRONT OF AIRCRAFT CAN SEE FRACTURED ICE.
 164708:16:59 01 35.4 009 36.4 0467 184.2 018 188 32950 31289 1.9 -0.6 -13.0 -40.4 CAMERAS ON.
 164708:17:01 01 35.3 009 36.3 0467 184.2 017 188 32950 31295 1.9 -0.9 -13.6 -38.7
 164708:18:22 01 00.0 000 00.0 000 000 000 000 32962 31286 2.0 -0.6 -8.4 -41.0
 164708:19:00 01 00.0 000 00.0 000 000 000 000 32973 31295 2.0 -0.8 -15.1 -39.8
 164708:19:18 01 15.7 009 28.7 0465 183.8 015 184 32965 31294 2.1 -0.7 -16.2 -38.5 70 PERCENT ICE CONCENTRATION 03 19 CD.
 164708:19:33 01 17.7 009 28.0 0464 184.0 015 184 32965 31291 2.1 -0.7 -16.2 -38.5 70 PERCENT INCREASE IN ICE CONCENTRATION.
 164708:19:50 01 12.9 009 27.3 0464 183.9 015 189 32962 31301 2.0 -0.7 -9.3 -38.1 SUN GLINTZ POLYNVA - RUN ICE OR GREASE ICE 03 18 CD.
 164708:20:00 01 12.2 009 27.0 0464 183.8 015 184 32962 31288 2.0 -0.7 -9.7 -39.6
 164708:20:02 01 12.0 009 26.6 0464 183.8 015 184 32965 31294 2.0 -0.7 -10.7 -39.7 ADDAS DOWN 03 17 15 BACK UP 03 18 30.
 164708:20:18 01 09.8 009 25.9 0464 183.9 015 184 32967 31311 2.1 -0.5 -9.2 -39.3 07 17 15 80 PERCENT ICE CONCENTRATION IN FRACTURED ICE ZONE.
 164708:20:50 01 05.9 009 24.4 0464 183.6 013 177 32958 31311 2.1 -0.7 -8.7 -40.2 ICE CONCENTRATION 10 PERCENT.
 164708:21:00 01 04.6 009 24.1 0464 183.6 013 177 32966 31364 2.2 -0.7 -8.9 -40.1 DISBURSED ICE AREA.
 164708:21:02 01 02.8 009 24.3 0465 183.6 012 174 32968 31359 2.0 -0.7 -9.9 -40.3
 164708:21:12 01 02.8 009 23.6 0465 183.6 012 174 32968 31352 2.2 -0.6 -15.5 -40.9 SUN GLINTZ APPEARS POLYNVA ARE FULL OF ICE.
 164708:21:18 01 00.9 009 22.6 0465 183.6 012 174 32967 31357 2.0 -0.6 -11.2 -40.1 50 PERCENT STRATOCUMULUS AND HAZE.
 164708:21:48 01 58.2 009 21.4 0465 183.8 013 179 32966 31345 2.0 -0.9 -11.2 -40.2 POLYNVA C - AT THIS POSITION HE CAN ONLY PICK UP 2 STATION ON THIS NET.
 164708:21:58 01 57.3 009 21.0 0466 183.8 013 179 32966 31345 2.0 -0.9 -11.2 -40.2 98SD.
 164708:22:00 01 57.0 009 21.0 0466 183.8 013 185 32963 31319 2.1 -0.7 -11.5 -39.3
 164708:22:16 01 54.8 009 20.0 0466 183.7 010 185 32960 31357 2.1 -0.5 -11.8 -39.8 SAME LAT AND LON AS THE END OF THIS RUN.
 164708:22:18 01 54.7 009 20.2 0466 183.7 010 185 32957 31364 2.2 -0.9 -13.1 -39.9 PLUMES.
 164708:23:00 01 49.0 009 16.8 0466 183.7 010 178 32958 31365 2.1 1.8 -12.4 -39.1
 164708:23:16 01 46.9 009 16.1 0460 201.9 015 237 33105 31365 2.1 6.6 36.9 -9.4 39.0 STRATOCUMULUS AT THE END OF RUN 3 50 PERCENT.
 164708:23:56 01 43.9 008 55.0 0458 262.4 009 285 32993 31458 3.0 3.6 -13.4 -38.7 MAKE DATA RUN AT END OF RUN 3.
 164708:24:00 01 43.9 008 55.0 0458 262.4 010 303 33027 31464 3.0 3.6 -13.4 -38.7
 164708:24:10 01 44.2 008 50.4 0457 275.9 010 316 33024 31470 2.9 30.4 -16.0 -38.6 CONNECTION: RUN 3.
 164708:24:12 01 44.2 008 49.4 0457 274.7 009 327 32994 31459 2.2 36.6 -14.7 -37.6 CONNECTION: CAMERA OFF.
 164708:24:20 01 44.6 008 39.3 0457 303.8 007 346 33031 31469 2.2 36.6 -14.7 -37.6 CONNECTION: POLYNVA CONNECTION ABOVE.
 164708:24:42 01 46.8 008 30.2 0457 347.5 004 083 33011 31452 2.2 36.4 -21.9 -38.9 ICE LANDINGS NET 99SD-CAN PICK UP MASTER ABOUT 99 PERCENT.
 164708:25:00 01 49.0 008 28.5 0463 356.1 006 245 32872 31290 2.5 0.5 -21.6 -39.7

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YEAR 1984 ADDAS FLIGHT LOG --- FLIGHT NO. 6 --- MIKEX
 ---TIME--- --LAT-- --LONG-- SPD TRUE SPD HEAD SPD OVR SPD OVR ALTITUDE--- ALTITUDE--- --TEMP--
 ---IR--- PITCH COLL IR AIR

164/09:54:01 77 36.2 012 58.2 0473 152.5 003 293 32976 31462 1.3 0.4 -26.6 -44.2
 164/09:55:01 77 29.3 013 15.1 0475 153.1 010 256 32969 31446 1.8 -0.2 -19.8 -44.9
 164/09:56:01 77 22.4 013 15.1 0477 153.4 007 297 32976 31449 1.5 0.3 -18.3 -43.9
 164/09:57:01 77 05.4 014 13.7 0480 153.3 009 273 32950 31972 1.6 -0.4 -18.9 -44.7
 164/09:58:29 77 04.8 014 13.7 0480 153.3 008 238 31216 61262 1.6 1.6 -18.5 -44.6
 164/09:59:23 00 09.0 000 00.0 0000 000.0 000 000 32974 31451 1.6 0.1 -12.4 -45.2
 164/10:00:01 76 27.9 016 24.9 0482 154.4 010 253 32966 31479 1.6 0.2 -15.9 -46.2
 164/10:01:01 76 19.7 012 23.9 0482 154.4 009 253 32964 31469 1.6 -0.3 -17.1 -44.2
 164/10:03:01 76 32.5 012 23.9 0479 154.7 007 275 32964 31509 1.7 -0.2 -18.1 -44.9
 164/10:04:01 76 25.3 015 39.9 0478 154.7 011 295 32960 31545 1.8 0.0 -14.6 -45.7
 164/10:05:01 76 18.4 015 33.2 0478 155.0 003 301 32972 31527 1.8 0.0 -11.0 -45.7
 164/10:06:01 76 11.5 016 07.7 0478 155.2 003 302 32970 31526 1.6 -0.2 -11.7 -46.4
 164/10:07:01 76 04.0 016 22.1 0478 155.3 003 294 32975 31520 1.7 -0.3 -2.8 -45.5
 164/10:08:01 75 57.0 016 35.7 0478 155.9 005 206 32964 31518 1.7 0.0 0.7 -44.8
 164/10:09:01 75 49.8 016 49.0 0478 155.7 007 293 32972 31550 1.5 0.2 -1.0 -44.8
 164/10:10:01 75 42.4 017 03.2 0478 156.2 007 271 32972 31526 1.6 0.0 2.5 -45.6
 164/10:11:01 75 35.3 017 16.2 0478 156.2 006 290 32971 31551 1.3 0.0 -1.9 -44.2
 164/10:12:01 75 28.0 017 28.1 0479 156.5 009 283 32964 31536 1.6 0.0 -1.1 -44.7
 164/10:13:01 75 20.6 017 42.0 0479 156.8 008 293 32975 31527 1.6 0.0 -1.5 -45.9
 164/10:14:01 75 13.4 017 54.0 0479 156.8 006 291 32977 31531 1.6 -0.1 -0.3 -46.4
 164/10:15:01 75 06.7 018 19.2 0478 157.2 004 291 32962 31553 1.7 0.0 -0.2 -46.4
 164/10:16:01 74 51.7 018 31.1 0473 157.2 004 291 32964 31543 1.7 -0.1 0.8 -44.1
 164/10:17:07 74 50.9 018 32.1 0473 157.2 005 296 32960 31530 1.7 0.0 1.0 -45.9
 164/10:17:23 74 49.1 018 35.4 0473 156.3 004 291 32966 31555 1.6 -2.0 1.2 -45.7
 164/10:17:29 74 48.2 018 36.8 0473 155.7 005 286 32955 31545 1.9 -2.5 0.8 -44.4
 164/10:18:01 74 44.5 018 43.4 0472 151.9 005 296 32962 31558 1.7 -4.1 0.8 -45.8
 164/10:19:01 74 37.6 018 59.6 0471 153.8 003 300 32962 31562 1.9 0.5 2.2 -44.8
 164/10:20:01 74 30.7 018 12.1 0469 152.8 002 319 32978 31452 1.7 -0.5 4.0 -45.3
 164/10:20:25 74 28.1 019 17.0 0464 165.5 003 269 33043 31431 1.9 30.4 -2.0 -45.7
 164/10:21:01 74 23.7 019 23.4 0464 165.5 003 255 32946 31539 1.8 6.0 -1.9 -46.1
 164/10:22:01 74 16.4 019 04.9 0459 205.4 007 244 32968 31576 1.8 1.2 -3.2 -44.4
 164/10:23:01 74 07.0 018 04.9 0459 205.2 005 265 32964 31606 1.9 1.0 -3.1 -46.3
 164/10:24:01 74 00.1 018 36.4 0459 208.2 006 279 32969 31616 1.8 0.0 -7.1 -45.0
 164/10:25:01 73 53.1 018 25.5 0460 205.0 006 291 32963 31605 1.7 -5.4 1.9 -46.7
 164/10:26:01 73 45.9 018 16.6 0463 197.8 007 294 32967 31631 1.7 -0.5 -10.3 -47.1
 164/10:27:01 73 38.6 018 09.7 0464 197.2 010 286 32970 31630 1.7 0.2 1.6 -46.3
 164/10:28:01 73 31.1 018 01.4 0465 196.9 008 283 32969 31615 1.7 0.2 1.8 -45.0
 164/10:29:01 73 23.7 017 58.9 0465 197.1 010 284 32965 31620 1.8 -0.2 1.4 -45.6
 164/10:30:01 73 16.4 017 46.8 0466 197.3 013 295 32956 31653 2.1 -0.2 2.3 -46.4
 164/10:31:01 72 09.7 017 32.3 0466 197.0 011 290 32971 31654 1.7 0.0 2.5 -46.2
 164/10:32:01 72 01.3 017 25.4 0467 196.9 013 292 32975 31652 1.6 0.0 -2.4 -46.4
 164/10:33:01 72 51.9 017 18.3 0467 196.9 013 292 32975 31652 1.6 0.0 -2.4 -46.4
 164/10:34:01 72 46.3 017 18.3 0467 196.9 013 292 32975 31652 1.6 0.0 -2.4 -46.4
 164/10:34:57 72 39.4 017 12.0 0467 196.7 012 293 32966 31642 1.7 -0.3 1.2 -45.6
 164/10:35:01 72 39.0 017 11.5 0467 196.7 013 303 32972 31670 1.7 0.0 1.5 -45.4
 164/10:36:01 72 31.5 017 08.7 0469 197.0 016 285 32968 31659 1.8 0.1 -7.6 -46.5
 164/10:37:01 72 23.9 016 59.1 0469 196.7 015 283 32977 31701 1.7 0.0 -13.9 -45.7
 164/10:38:01 72 16.3 016 51.2 0470 196.6 015 301 32966 31681 1.8 0.1 2.7 -45.0
 164/10:39:01 72 09.0 016 44.8 0470 196.6 015 293 32955 31672 1.6 0.0 -9.4 -46.9
 164/10:40:01 72 01.2 016 38.2 0470 196.2 017 309 32955 31659 1.7 0.0 -9.0 -46.9
 164/10:41:01 71 51.7 016 31.9 0470 196.4 016 296 32969 31703 1.7 0.1 0.8 -46.3
 164/10:42:01 71 46.2 016 25.9 0470 196.4 016 294 32967 31718 1.7 0.1 2.6 -45.8
 164/10:43:01 71 39.6 016 19.6 0470 196.1 015 301 32965 31716 1.6 0.2 -6.1 -45.3
 164/10:44:01 71 31.1 016 13.6 0470 196.2 016 309 32972 31718 1.6 -0.2 -6.1 -46.5
 164/10:45:01 71 23.2 016 10.2 0470 196.2 016 302 32950 31762 1.6 -0.3 0.1 -45.3
 164/10:45:01 71 26.6 016 10.2 0470 196.2 016 302 32976 31747 1.6 -0.4 4.6 -45.6
 164/10:45:09 71 22.3 016 06.8 0470 196.2 018 300 32967 31715 1.6 0.0 -6.3 -44.2

AIN - STARTED WAKE DATA RUN 10 09 CO PATCHES OF OCCASIONAL CLOUD.

ZERO CLOUD COVER.
 IMMEDIATE SELL.

JUST PASSED OVER BEAR ISLAND.

OCEAN SEEMS TO BE CALM, SELLS CUT NO WHITE CAPS.

INS - 71 34.8N LOI 16 16.5E.
 LOREN C - 71 51.6N LOI 16 24.5E.

BACK ON EXTENDED RANGE USING KREWEIGER NET.

3.4 Third data flight—Day 170—Evenes RT

All instruments were operational.

In spite of the fact that our replacement spoiler was delivered late Sunday evening rather than in the morning as scheduled because SAS bumped that cargo at Oslo in favor of a shipment of flowers, our stalwart ground crew completed the repairs in time for today's flight.

On the basis of weather predictions from Tromso, we elected to fly Pattern 'E', the four-leg pattern extending about 350 Km north of the ice edge in the hopes of realizing below-freezing conditions over the entire mosaic. Instead, we found freezing conditions in the MIZEX box and near-melt conditions further north! This was coupled with observations of scattered ice-clouds over MIZEX and heavy clouds north of there. If we were to try another Pattern 'E', we should want to make sure that clear conditions are firmly forecast or observed over the entire area.

Our pattern was situated such that the projected position of the Polarqueen would have been directly underneath us on the third leg of the pattern; her updated position as of 1500 GMT received just prior to takeoff placed her between legs 3 & 4.

We were startled to find the sea ice extending some 110 Km south of the edge as observed on the first leg; possibly we were observing part of an eddy. This information was radioed to the Polarqueen as we departed the area.

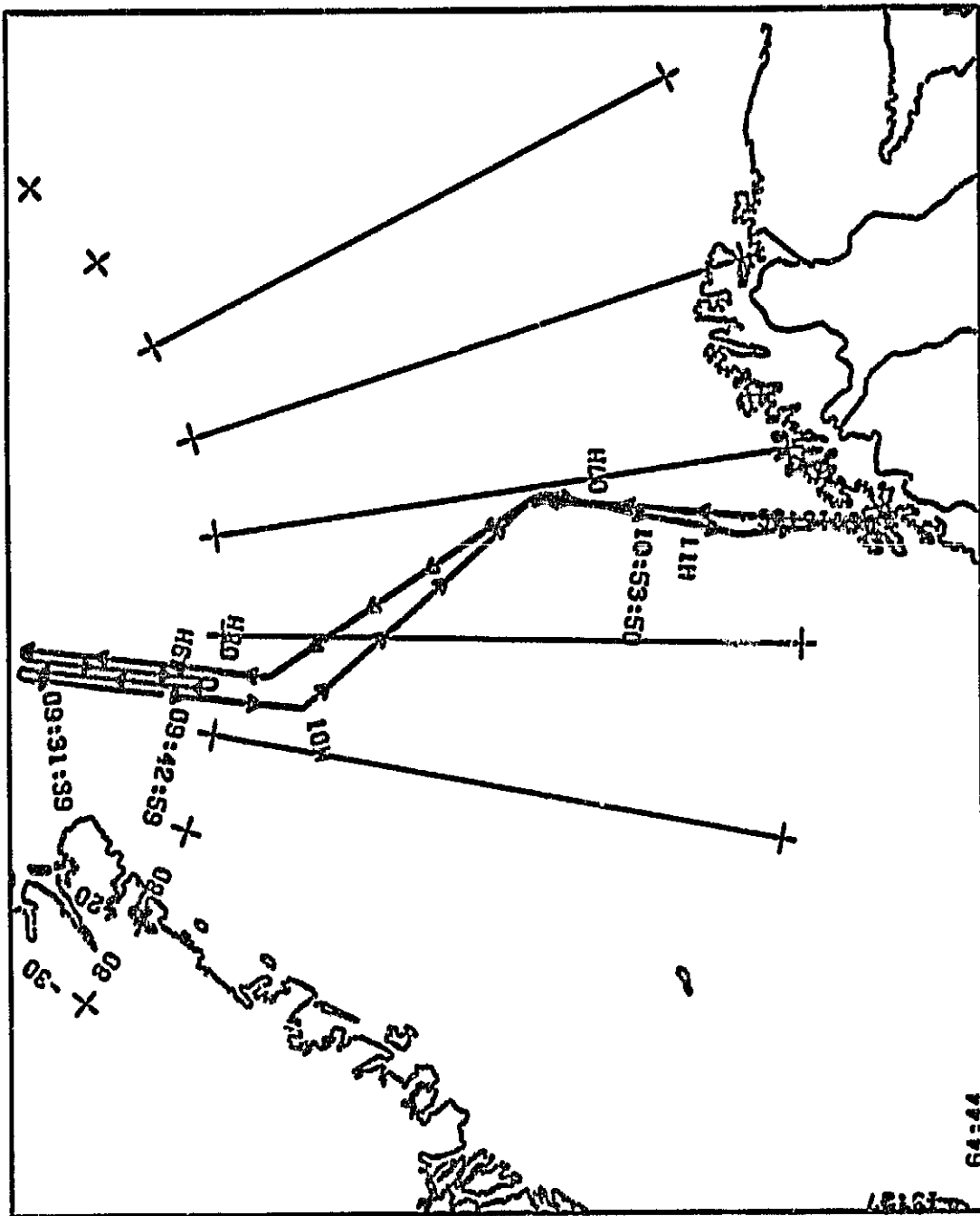
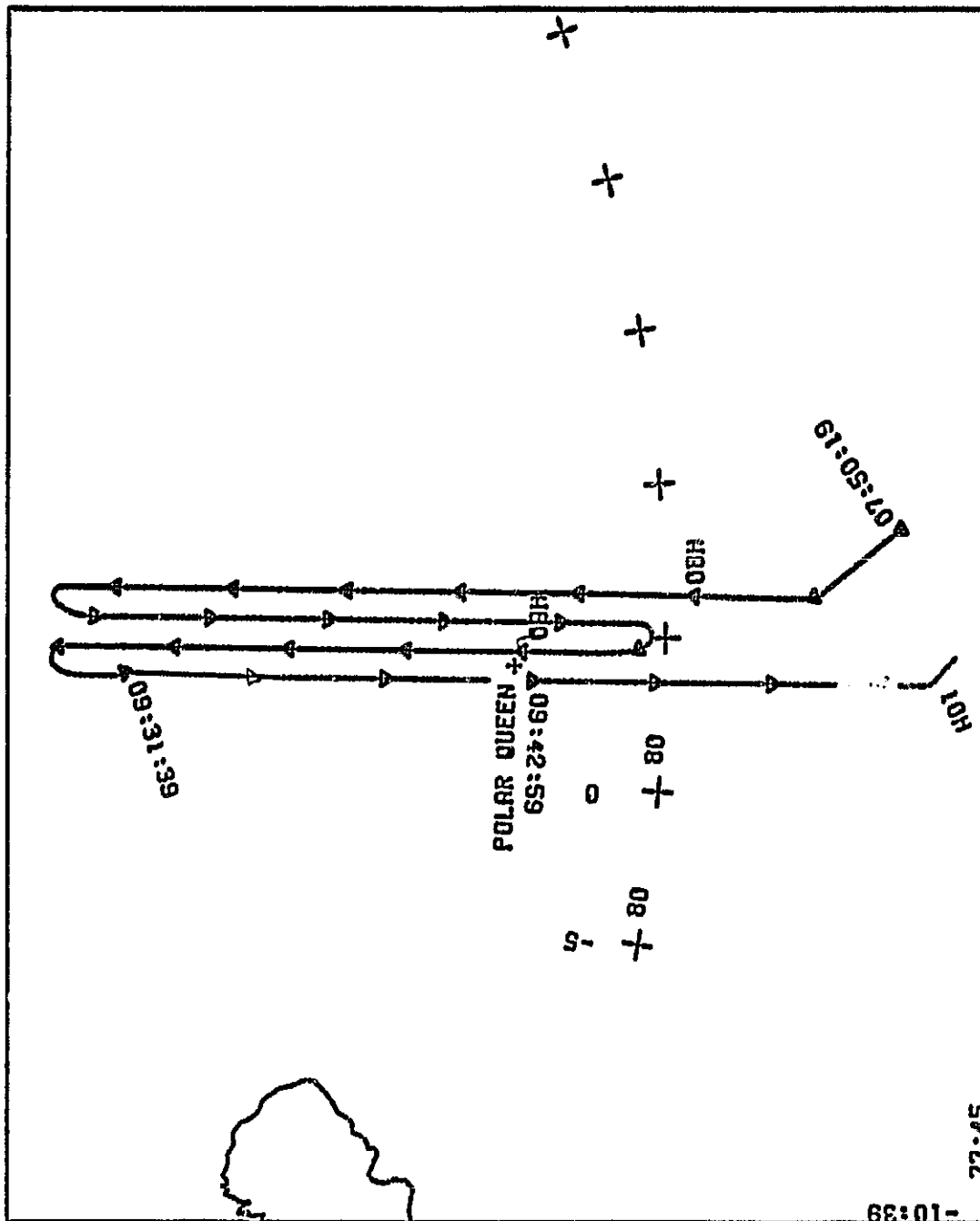


Figure 9. Flight tracks: Evenes RT 6/16

ORIGINAL PAGE IS
OF POOR QUALITY



HIEX 1984 FLX 07 JUNE 18. 1534 EVENES LOCAL
7:50:10 TO 10:10:30 UT SCALE = 1:3.00E:06 TIME TICS EVERY 5.00 MINUTES

Figure 10. Mosaic pattern: 6/16

ORIGINAL PAGE IS
OF POOR QUALITY

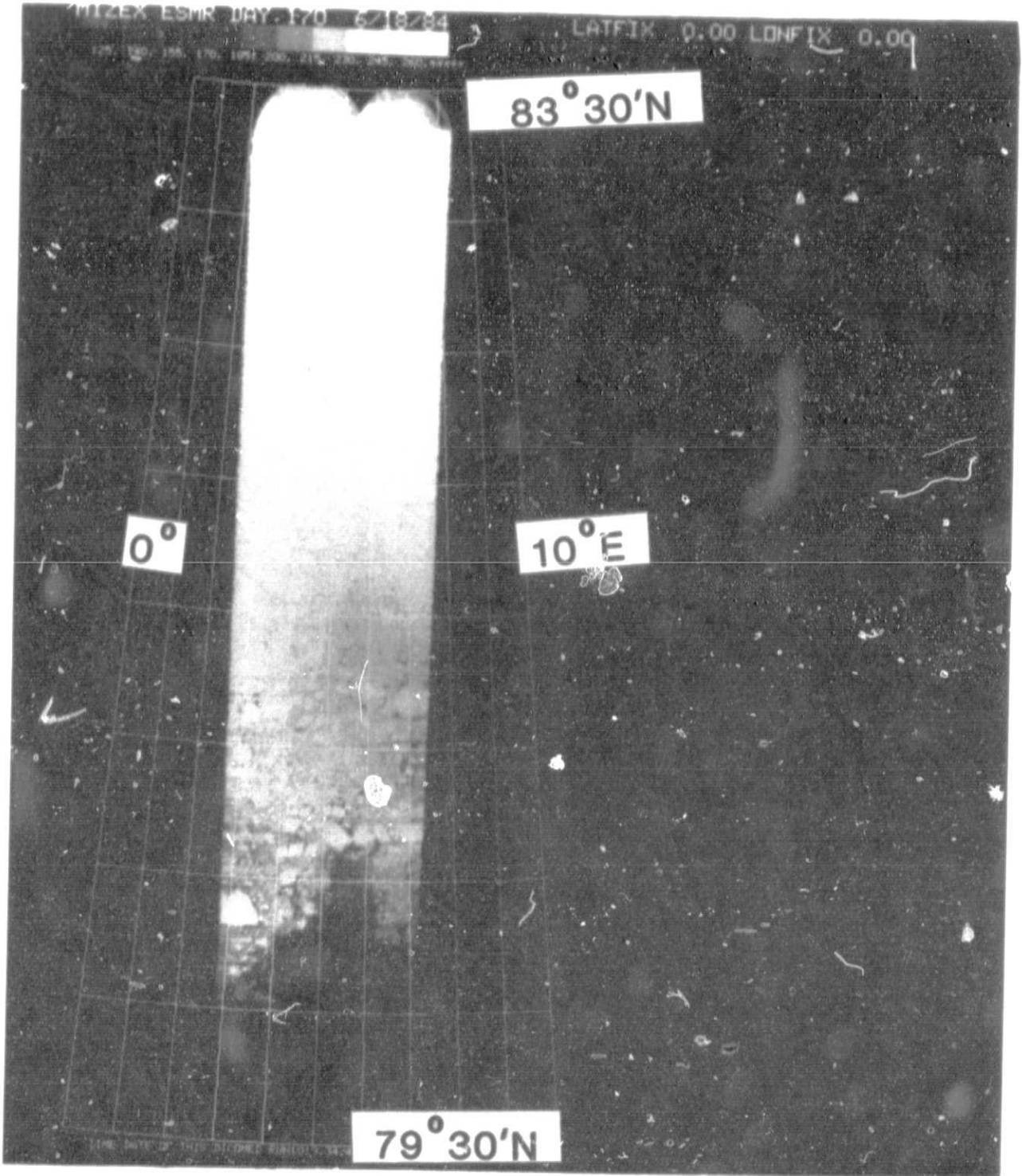


Figure 11. ESMR mosaic: 6/16

170/06:27:17 69 22.0 016 01.9 0352 004.6 017 266 9963 9707 2.4 2.3 -4.1 -6.9 III
 170/06:28:01 69 26.4 016 03.6 0356 006.4 018 271 9979 9915 2.3 0.5 -4.5 -5.9
 170/06:28:59 69 29.2 016 06.8 0376 009.2 015 263 11031 11031 5.3 -0.9 -4.1 -7.1
 170/06:30:00 70 35.3 016 09.8 0377 005.4 024 266 13238 13152 4.9 0.2 -3.7 -10.9
 170/06:31:01 69 42.8 016 12.0 0385 006.1 024 266 14950 14950 4.9 0.2 -5.2 -11.7
 170/06:32:01 69 47.1 016 14.1 0398 005.0 031 272 16777 16777 5.0 0.0 -4.2 -12.4
 170/06:33:01 69 51.4 016 19.3 0388 006.0 031 272 18578 18578 5.1 0.4 -4.6 -15.3
 170/06:34:01 70 01.9 016 22.7 0387 005.6 032 262 20216 20170 5.2 0.6 -4.6 -15.4
 170/06:35:01 70 10.1 016 26.4 0392 006.0 034 251 21675 21612 5.3 -1.4 -3.7 -20.0
 170/06:35:01 70 16.5 016 29.3 0399 003.5 036 252 22688 22862 4.9 1.3 -3.6 -31.0
 170/06:37:01 70 32.6 016 32.6 0410 004.1 041 252 23903 23803 4.5 0.0 -2.2 -34.4
 170/06:38:01 70 30.0 016 35.9 0418 003.5 046 252 24830 24730 3.9 0.5 -3.8 -36.9
 170/06:40:01 70 44.1 016 43.2 0429 002.3 043 257 26695 26536 4.0 -0.1 -5.0 -38.1
 170/06:41:01 70 51.0 016 46.5 0435 006.0 047 260 27566 27399 3.9 1.3 -2.9 -43.6
 170/06:42:01 70 54.1 016 51.9 0442 004.2 051 261 28591 28183 3.7 -0.4 -7.3 -45.1
 170/06:43:01 71 01.5 016 54.2 0449 003.0 050 269 29757 29688 3.7 0.0 -7.1 -46.5
 170/06:43:27 71 08.3 016 57.2 0444 003.7 051 263 29415 29143 3.7 -0.2 -7.4 -47.7
 170/06:44:01 71 12.5 016 59.3 0445 003.7 051 261 29796 29525 3.8 0.0 -8.2 -49.5
 170/06:45:01 71 19.7 017 03.3 0444 004.5 047 262 30423 30315 3.9 -0.2 -9.1 -50.8
 170/06:45:35 71 25.8 017 05.7 0445 004.7 045 260 31036 30697 3.3 -0.3 3.5 -50.5
 170/06:45:59 71 27.1 017 07.6 0445 004.9 044 263 31307 30941 3.8 0.1 4.0 -53.0
 170/06:46:01 71 27.2 017 07.6 0445 004.8 044 263 31327 30967 3.8 0.1 4.0 -53.2
 170/06:47:01 71 34.3 017 11.8 0445 005.1 042 264 31996 31592 3.8 0.1 4.2 -53.4
 170/06:47:27 71 36.8 017 14.5 0445 005.0 042 264 32375 31973 3.8 0.0 4.7 -55.9
 170/06:48:01 71 41.4 017 18.5 0444 004.8 042 266 32650 32449 3.6 -0.4 4.7 -57.4
 170/06:48:21 71 44.4 017 19.6 0444 004.8 042 266 32925 32723 3.9 0.5 3.4 -56.4
 170/06:48:35 71 45.8 017 18.7 0444 004.8 042 267 32956 32748 3.7 -0.4 3.0 -56.3
 170/06:49:01 71 47.7 017 19.8 0446 004.9 049 264 32967 32579 3.2 0.3 5.0 -54.2
 170/06:49:01 71 49.1 017 20.6 0448 004.6 047 264 32967 32579 3.2 0.3 5.1 -55.3
 170/06:49:45 71 54.4 017 23.8 0458 004.6 048 265 33003 32563 2.5 0.5 -1.0 -56.1
 170/06:50:01 71 56.4 017 25.1 0461 004.7 047 265 32989 32530 2.3 -0.2 -1.8 -56.1
 170/06:51:00 72 03.6 017 29.5 0473 004.8 051 266 32965 32502 2.3 0.0 -1.7 -56.5
 170/06:52:00 72 11.7 017 34.6 0482 004.9 049 269 32962 32445 2.2 -0.1 -0.3 -56.6
 170/06:52:00 72 19.5 017 39.4 0484 005.0 050 270 32958 32430 2.0 0.0 2.2 -56.5
 170/06:52:00 72 27.3 017 44.2 0484 005.3 048 269 32963 32434 2.3 0.2 4.3 -57.4
 170/06:54:00 72 34.3 017 48.9 0485 005.1 050 272 32969 32417 2.0 0.0 2.0 -57.7
 170/06:54:54 72 34.3 017 49.0 0485 005.1 050 272 32977 32434 2.1 0.4 3.9 -59.7
 170/06:55:00 72 35.3 017 49.7 0483 005.0 051 273 32976 32401 1.8 0.0 3.6 -58.6
 170/06:55:00 72 43.1 017 55.0 0479 005.5 049 274 32962 32391 2.0 0.1 -7.6 -58.9
 170/06:57:00 72 50.7 018 00.2 0474 005.7 046 274 32957 32398 2.0 0.1 -4.2 -58.9
 170/06:58:00 72 58.5 018 05.5 0470 005.8 045 274 32948 32377 2.2 0.1 -3.2 -56.7
 170/06:59:00 73 06.1 018 10.7 0466 005.7 047 279 32949 32368 2.2 -0.1 3.3 -54.6
 170/07:00:00 73 13.6 018 16.1 0462 006.2 044 278 32961 32383 2.3 -0.5 3.6 -56.2
 170/07:00:25 73 17.1 018 18.6 0461 006.0 044 280 32953 32362 2.4 -0.3 3.4 -56.4
 170/07:00:32 73 21.6 018 18.6 0461 006.1 042 279 32945 32355 2.3 -0.4 3.9 -54.9
 170/07:00:40 73 21.2 018 17.9 0460 006.1 043 277 32947 32361 2.0 0.4 3.9 -56.8
 170/07:01:00 73 21.2 018 21.2 0460 006.3 042 277 32947 32353 2.5 0.3 1.9 -56.9
 170/07:02:00 73 28.5 018 26.6 0458 006.7 041 277 32945 32375 2.3 0.0 -0.4 -56.6
 170/07:03:00 73 36.3 018 32.0 0458 007.0 038 280 32958 32365 2.3 0.5 -10.7 -56.8
 170/07:04:00 73 43.6 018 38.0 0457 007.1 039 281 32975 32348 2.4 0.1 -16.4 -52.5
 170/07:05:31 09 00.0 000 00.0 000 000 000 32955 32320 2.3 0.6 -32.9 -52.9
 170/07:05:51 73 57.4 018 48.4 0453 007.0 040 280 32961 32342 2.4 -0.1 -13.5 -55.5
 170/07:06:01 73 58.6 018 49.5 0458 007.0 043 283 32964 32311 2.5 -0.5 -13.9 -54.5
 170/07:06:05 73 59.1 018 49.5 0458 006.8 042 282 32975 32322 2.3 -0.4 -13.5 -56.4
 170/07:07:01 74 06.1 018 25.3 0458 007.1 041 279 32964 32296 2.4 0.2 -13.7 -56.2
 170/07:07:21 74 13.5 019 28.2 0459 007.2 041 274 32949 32261 2.4 0.3 -13.5 -56.0
 170/07:08:01 74 15.5 019 31.2 0459 007.2 041 274 32949 32261 2.6 0.6 -14.2 -55.9

ADDAS PRINTCHECK BETWEEN ADDAS AND FCC ARE OKAY.
 POLAR QUEEN - 0500Z 170, LAT 60 50.2N LCH 4 00.0E.
 LEAVING 10/10 STRATOCUMULUS DECK AND IS CLEARING.
 CORRECTION: STRATOCUMULUS.
 ANI - WARE IS TAKING DATA 06 47 00.
 LIGHT SKELL AND NO WHITE CAPS.
 50 PERCENT STRATOCUMULUS.
 HEAVIER ON EITHER SIDE.
 HEAVIER CLOUD DECK ON EITHER SIDE.
 LOOKING FORWARD - JUST PATCHES OF LOW LEVEL CURRULUS BUT CLEARING.

AVERAGE WARE DATA FREQUENCY 1.3 PUMPS PER SECOND.
 HILL TRY SOFTWARE ON NEXT RUN.
 OVER CLEAR PATCH AND LIGHT SKELL.
 NO WHITE CAPS.
 9/10 STRATOCUMULUS AND NO UPPER CLOUDS.
 ADDAS UP 07 05 40 NEAT DUNY 07 04 00.
 09 04 20 10/10 STRATOCUMULUS WITH NO UPPER CLOUDS.
 TO THE WEST THERE ARE CIRRUS CLOUDS ASSOCIATED WITH LOW CENTER.

YEAR 1984 ADIDAS FLIGHT LOG 7 --- FLIGHT NO. --- HIZEX
---TIME--- --LAT-- --LONG-- ---SPD TRUE--- --ALTITUDE---
GND DIR SPD DIR PRES RADAR IR AIR

170/07:56:01 79 30.9 086 15.7 0464 359.2 028 279 32950 31737 2.1 0.4 -5.9 -48.4
170/07:57:01 79 30.4 086 17.6 0465 359.6 025 279 32957 31756 2.2 0.6 -5.8 -46.9
170/08:00:01 79 49.3 086 31.2 0465 359.4 026 277 32966 31786 2.1 0.4 -5.7 -46.6
170/08:01:01 79 58.0 086 30.3 0465 359.4 028 277 32969 31753 2.2 -0.1 -6.9 -47.6
170/08:01:01 79 58.0 086 27.1 0465 359.4 024 271 32951 31713 2.3 0.4 -6.7 -47.1

170/08:02:10 80 01.6 086 23.7 0464 359.6 024 277 32959 31718 2.3 -0.2 -7.4 -45.6
170/08:02:19 80 04.1 086 24.3 0464 359.7 025 278 32950 31720 2.4 0.2 -7.5 -46.9
170/08:02:27 80 04.9 086 25.9 0464 359.7 023 276 32956 31727 2.3 0.1 -7.7 -44.8
170/08:03:01 80 09.4 086 25.9 0464 359.9 023 278 32959 31719 2.3 0.2 -7.9 -46.8
170/08:03:03 80 09.6 086 25.8 0464 000.0 023 279 32953 31712 2.2 0.0 -7.9 -46.7

170/08:03:51 80 15.8 086 27.7 0465 359.3 024 287 32959 31712 2.3 -0.5 -8.0 -45.6
170/08:04:01 80 17.0 086 27.9 0465 359.1 025 284 32962 31714 2.3 0.1 -7.9 -45.6
170/08:05:01 80 24.9 086 29.3 0462 358.8 026 287 32955 31683 2.1 0.2 -8.4 -45.3
170/08:06:01 80 34.3 086 30.6 0462 359.5 021 291 32950 31653 2.2 -0.1 -8.5 -46.9
170/08:07:01 80 40.1 086 32.9 0462 359.5 023 294 32966 31649 2.2 -0.3 -8.0 -45.8

170/08:07:45 80 45.7 086 33.9 0461 359.7 020 286 32969 31657 2.3 0.4 -8.1 -45.1
170/08:08:01 80 47.6 086 34.2 0462 359.7 020 290 32960 31654 2.3 0.0 -8.1 -46.3
170/08:08:39 80 52.4 086 35.4 0461 359.7 020 293 32965 31648 2.2 0.4 -8.3 -44.8
170/08:09:01 80 55.3 086 36.1 0461 000.2 018 291 32968 31648 2.2 0.3 -8.5 -44.2
170/08:09:31 80 59.1 086 37.5 0460 000.3 018 291 32954 31626 2.3 -0.3 -8.5 -44.2

170/08:09:47 81 01.4 086 37.6 0460 359.9 019 289 32953 31638 2.4 0.1 -9.9 -45.6
170/08:10:01 81 03.2 086 38.4 0460 359.8 019 289 32951 31639 2.2 0.0 -11.0 -44.3
170/08:11:01 81 10.7 086 39.8 0460 359.6 020 290 32952 31616 2.3 0.0 -11.9 -44.4
170/08:12:01 81 18.4 086 41.7 0460 000.0 017 290 32964 31625 2.3 0.1 -13.8 -44.0
170/08:13:01 81 24.0 086 43.9 0460 000.0 019 285 32947 31619 2.3 -0.2 -16.0 -44.3

170/08:14:01 81 23.5 086 45.8 0460 000.5 016 282 32961 31615 2.4 0.2 -12.4 -44.5
170/08:15:01 81 41.1 086 47.9 0459 001.2 019 281 32966 31621 2.3 0.1 -13.7 -44.1
170/08:16:01 81 48.9 086 50.3 0459 001.4 011 312 32968 31621 2.4 0.1 -13.7 -44.1
170/08:16:39 81 53.3 086 51.3 0459 001.2 011 302 32955 31616 2.4 0.0 -10.1 -44.2
170/08:17:01 81 56.4 086 52.5 0459 001.3 009 301 32955 31612 2.4 0.0 -10.1 -44.2

170/08:18:01 82 04.0 086 54.8 0459 001.2 012 302 32955 31609 2.3 -0.3 -13.4 -42.3
170/08:19:01 82 11.8 086 57.0 0460 001.1 012 297 32966 31616 2.2 -0.2 -11.3 -42.3
170/08:19:07 82 12.4 086 57.1 0460 001.0 011 297 32958 31578 2.2 -0.2 -12.4 -43.5
170/08:20:01 82 19.2 086 59.1 0461 000.8 013 294 32961 31605 2.2 0.0 -7.0 -44.5
170/08:20:45 82 24.5 087 00.9 0461 001.1 011 292 32969 31610 2.3 -0.1 -6.8 -45.4

170/08:21:01 82 27.0 087 01.5 0461 001.1 010 290 32961 31616 2.3 0.2 -6.6 -45.6
170/08:21:22 82 28.5 087 02.8 0461 001.7 009 295 32964 31626 2.3 0.2 -6.8 -45.7
170/08:21:29 82 30.7 087 04.8 0462 001.7 009 295 32966 31627 1.9 0.2 -8.7 -44.1
170/08:22:01 82 32.7 087 04.5 0463 001.8 009 301 32968 31628 2.1 0.3 -8.6 -43.0
170/08:23:01 82 42.3 087 07.6 0464 001.7 009 301 32956 31624 2.1 0.3 -8.6 -43.6

170/08:24:01 82 49.7 087 09.6 0465 001.7 009 307 32958 31575 2.2 0.0 -9.3 -42.9
170/08:25:01 82 57.7 087 12.9 0465 002.0 007 307 32967 31594 2.3 -0.2 -9.3 -43.4
170/08:25:45 83 03.4 087 15.1 0466 002.3 006 326 32965 31602 2.2 0.4 -9.5 -45.4
170/08:26:01 83 05.5 087 15.9 0466 002.2 007 323 32965 31594 2.1 -0.2 -8.9 -43.9
170/08:27:01 83 13.0 087 18.9 0467 002.4 004 319 32957 31602 2.1 0.0 -9.8 -43.9

170/08:27:09 83 14.3 087 19.5 0467 002.5 005 319 32957 31578 2.3 -0.1 -10.7 -43.9
170/08:28:01 83 17.0 087 21.5 0470 002.4 004 334 32867 31594 2.1 1.7 -12.6 -44.8
170/08:28:01 83 21.8 087 22.6 0472 002.6 009 318 32969 31626 2.3 0.6 -13.0 -43.6
170/08:29:01 83 27.7 087 24.7 0472 002.5 009 318 32968 31626 2.3 0.6 -13.4 -43.6
170/08:30:01 83 37.7 086 02.1 0482 196.7 009 139 32904 31529 2.5 -12.3 -11.4 -43.7

170/08:30:49 83 11.0 085 53.9 0464 182.4 006 165 32944 31570 2.2 -2.2 -10.4 -45.2
170/08:31:01 83 10.0 085 53.9 0464 181.2 006 144 32947 31560 2.1 -1.7 -10.5 -45.2
170/08:31:31 83 06.1 085 52.9 0465 180.8 005 163 32956 31586 2.0 0.2 -11.3 -45.4
170/08:32:01 83 05.1 085 52.6 0465 181.0 005 163 32967 31601 2.2 0.0 -11.4 -44.2
170/08:33:01 82 54.6 085 51.1 0465 181.6 005 179 32966 31595 2.1 0.3 -10.3 -43.7

170/08:34:01 82 46.6 085 49.0 0465 181.7 005 216 32963 31585 2.1 0.0 -10.4 -44.5
170/08:35:01 82 47.9 0465 181.5 005 227 32962 31579 2.2 -0.1 -9.2 -44.7
170/08:36:01 82 41.3 085 48.7 0466 181.2 006 216 32966 31597 2.1 -0.1 -8.0 -44.5
170/08:37:01 82 31.8 085 48.7 0466 181.5 006 216 32966 31597 2.1 -0.2 -9.0 -44.7
170/08:38:01 82 18.9 085 43.9 0468 181.5 002 216 32955 31595 2.2 0.0 -10.2 -43.1

10/10 STRATOCUMULUS APPROACHING HIZEX AREA.
HALO EFFECTS FROM CLOUDS MADE UP OF ICE CRYSTALS.
STRATOCUMULUS.
*** START OF RUN 2 TIME 03.03.02 LAT 0309.6 N LONG 0425.8 E FL 329
FRACTURED AND MEDIUM SIZE FLUES AT THE START OF THE RUN.
10/10 STRATOCUMULUS WITH ALTOCUMULUS.
LEAVING FRACTURED ICE ZONE, ENTERING POLAR PACK ICE CONCENTRATION 50 PERCENT.
MEDIUM SIZE MULTILAYER FLUES WITH FIRST YEAR FLUES, ROUGHLY 50 PERCENT MIXED.
SORT OF A THREE LEVEL CLOUD STRUCTURE.
STRATUS, ALTOSTRATUS, ALTOCUMULUS.
NORTH ALGAS LEG THICKNESS INCREASING WITH STRATUS AND ALTOSTRATUS.
ICE TEMP IS INCREASING AS WE GO NORTH ALGAS THE LEG.
INCREASING MIDDLE LEVEL CLOUDS - 7/10 ALTOSTRATUS.
STARTING TO ENTER CIRRUS CLOUD DECK.
* LAYER CLOUD STRUCTURE.

FOUR LEVEL CLOUD STRUCTURE, TOTALLY OCCURRED BELOW.
IRMS AND LORAN C ARE TRACKING AT THIS LATITUDE, READINGS VERY CLOSE.
END OF RUN 2 TIME 06.27.52 LAT 8319.8 N LONG 03721.6 E FL 329

*** START OF RUN 3 TIME 03.30.48 LAT 8311.4 N LONG 0353.9 E FL 329
10/10 STRATOCUMULUS STRATUS, 4/10 ALTOSTRATUS AND PATCHES OF CIRRUS.

YEAR 1984 ADDAS FLIGHT LOG

Table with columns: TIME, LAT, LONG, FLIGHT NO., GRID, ALTITUDE, HIZEX, SPD, DIR, PRES, RADAR, PITCH, ROLL, IR, TEMP, AIR. Includes data for flights 170/09:19:01 to 170/09:26:51.

END OF RUN 4 TIDE 09.20.56 LAT 0320.5 N LON C0329.5 E FL 329
MAKE TURN COULD SEE PATCH AND IT WAS CLEAR WITH 95 PERCENT ICE CONCENTRATION.
TIDE 09.23.44 LAT 0315.5 N LON C0334.9 E FL 329

10/10 STRATOSPHERULUS, 5/10 AUTOCUMULUS AND CERULUS PATCHES.
MAKE RWX TAKINGS DATA AT 3 TIMES PER SEC
MAKE RWX TAKINGS DATA AT 3 TIMES PER SEC

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YEAR 1984	ADIDAS	FLIGHT LOG	LOGS	LAT	LONG	FLIGHT NO.	7	MIXEX	ALTITUDE	FRES	REAR	PITCH	ROLL	IR	TEMP	ATR
TIME						GRD	TRK	SPD	DIR	SPD	DIR					
170/11:33:00	68	24.3	015	49.1	0430	260.5	038	244	20197	20655	-4.3	51.2	0.8	-22.7		
170/11:34:00	68	28.2	015	33.8	0416	304.0	036	231	16811	16802	-2.3	10.9	4.3	-17.3		
170/11:35:00	68	32.1	015	19.7	0357	337.3	022	233	14115	14002	-5.4	28.6	-2.2	-13.2		
170/11:36:00	68	37.0	015	28.5	0357	072.4	016	236	10546	10501	-1.2	6.6	3.6	-5.6		
170/11:37:00	68	38.8	015	44.1	0359	074.0	011	236	9966	9663	1.0	-0.6	15.0	-5.7		
170/11:38:00	68	40.2	015	58.5	0307	074.9	017	246	9727	7891	-0.4	1.0	15.4	-3.9		
170/11:39:00	68	41.2	016	31.7	0377	073.6	012	249	7477	7454	-0.2	-0.3	4.8	-0.4		
170/11:40:00	68	42.9	016	24.7	0377	073.6	012	249	5857	5817	1.9	20.3	5.9	2.3		
170/11:41:00	68	43.1	016	34.0	0258	112.5	012	249	5857	5817	1.9	20.3	5.9	2.3		
170/11:42:00	68	39.6	016	41.0	0203	156.8	020	232	5800	5845	0.5	-4.4	0.1	1.2		
170/11:43:00	68	37.0	016	42.9	0153	185.7	031	196	4293	4147	-0.0	4.5	11.4	4.3		
170/11:44:00	68	34.6	016	43.0	0132	180.3	023	187	2609	2104	1.0	-2.1	11.7	5.0		
170/11:45:00	68	52.3	016	43.2	0132	176.3	014	157	1735	1578	2.1	-1.4	11.9	6.0		
170/11:46:00	68	50.0	016	43.5	0141	180.4	006	183	783	727	0.8	-1.3	12.3	10.7		

3.5 Fourth data flight—Day 174—Evenes RT

All instruments were operational.

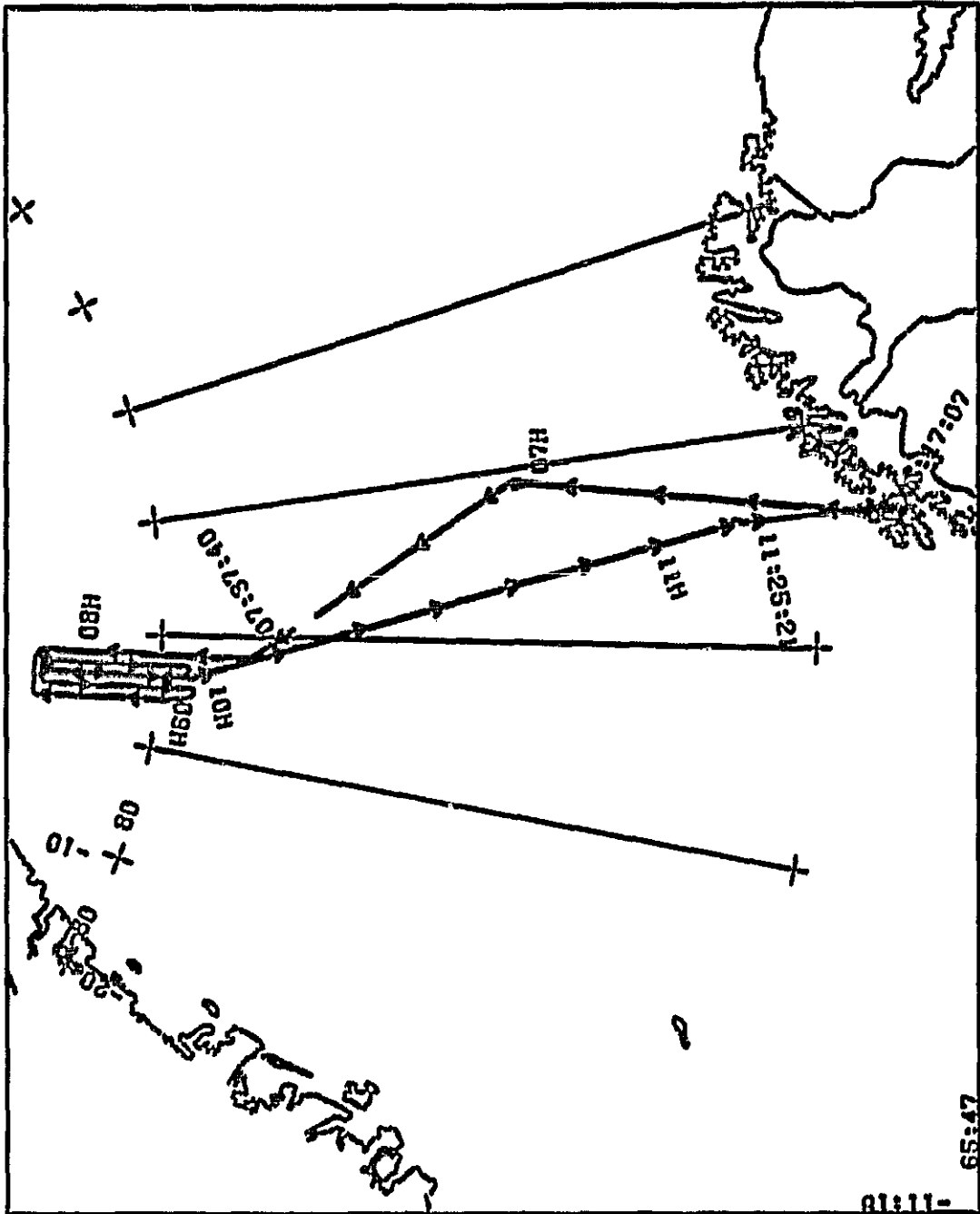
This flight originally scheduled for day 172 had to be postponed until 22 June because of difficulties with both Goddard and RAL gear.

Pattern 'B' was flown, with the low-level leg flown at 500' along the 6° 20' E meridian to coincide with intensive surface measurements and the NOAA P-3 transect along that line (the so-called Onstott line). The conditions were generally warm and cloudy over all of the MIZEX box, accompanied by the generally uninteresting radiometric signatures of sea ice near the melting point. As observed from the aircraft, the cloud deck seemed to hover over just the MIZEX box, being tantalizingly clear just to the north and west! Indeed, the SMMR image of multiyear fraction for this day indicates a strong MY signature also north and west of the MIZEX box, with the indication of no MY sea ice within it. It goes without saying that two days earlier, when we were unable to fly, the MY signature appeared very strongly within the MIZEX area in the SMMR image.

In addition to providing an excellent visual evaluation of ice conditions along the low-level transect, our choice of Option 'B' permitted obtaining albedo measurements of the solid pack, the ice margin, and the open sea with varying wave structure, albeit with a solid overcast. The low-level transect was extended to about 79° 30' N. The visual observations confirmed the presence of fresh snowfall over the entire area. Meltponds, although comprising less than 1% of the entire area, were observed to contain water.

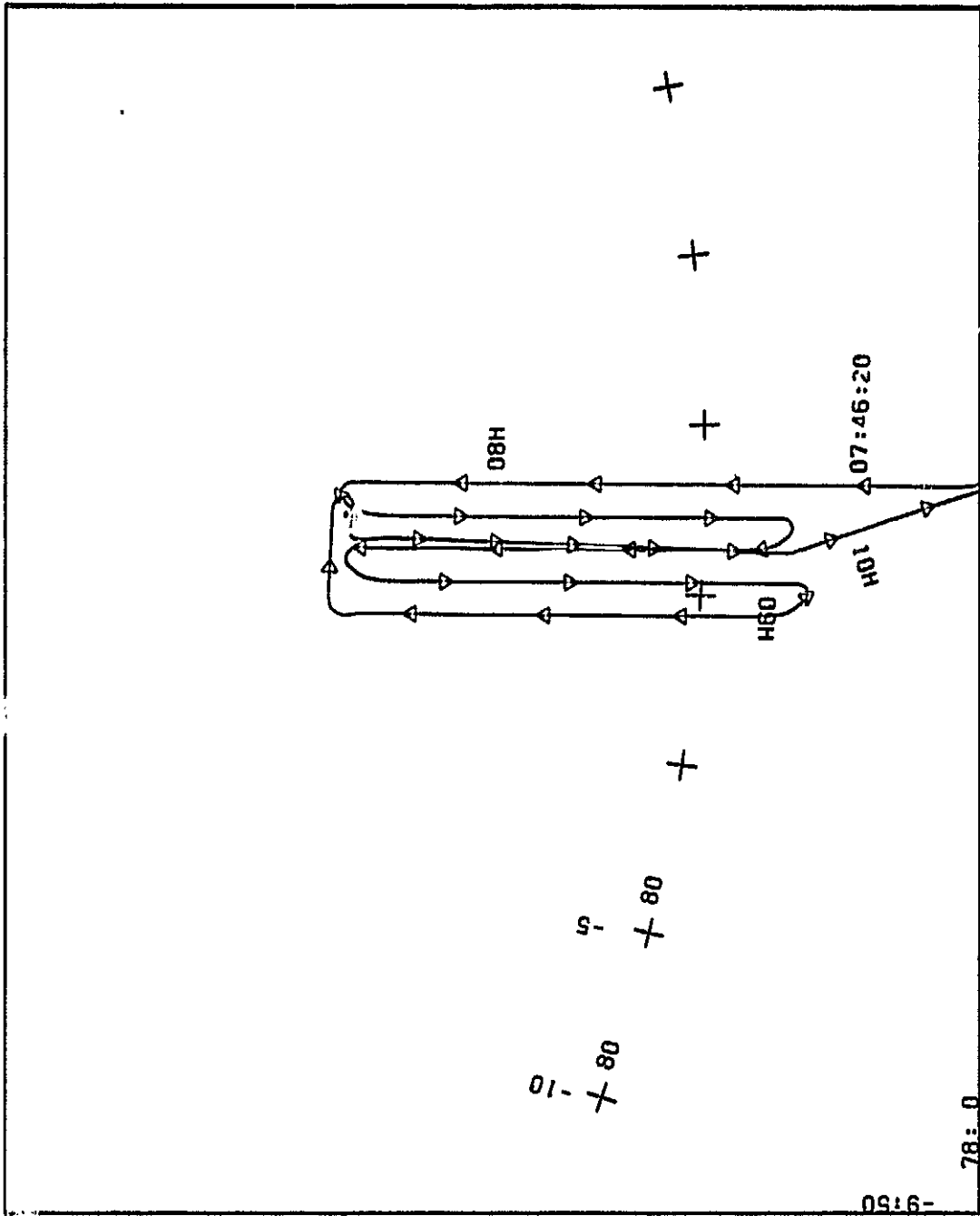
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ORIGINAL PART
OF POOR QUALITY.



RTZ 1888 FLJ 08 JUNE 22. 1958 EYES ON LOCAL
6:15:56 TO 11:58:32 UT SCALE = 1:10-11E:68 TIME SIGS EVERY 10-50 MINUTES

Figure 12. Flight tracks: Events RT 6/20



MI2EX '84 FLY #8 JUNE 22, 1984 EVENES LOCAL
 7:30:07 TO 10:48:01 UT SCALE = 1:2.70E+05 TIME TIC5 EVERY 5.00 MINUTES

Figure 13. Mosaic pattern: 6/20

ORIGINAL IMAGE IS
OF POOR QUALITY

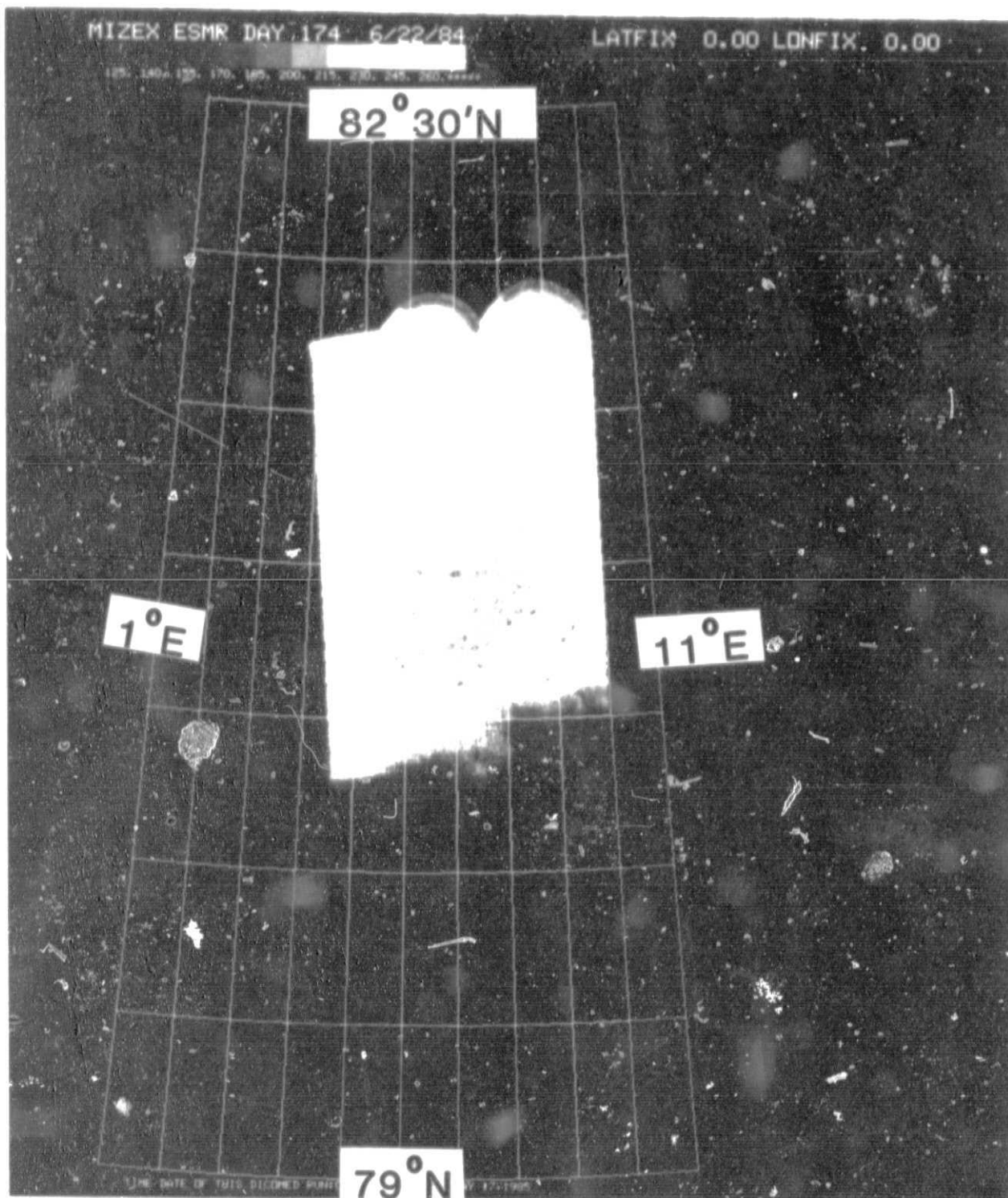


Figure 14. ESMR mosaic: 6/20

YEAR 1984 ADAMS FLIGHT LOG

TIME	LAT	LONG	FLIGHT NO.	SPD	TRUE	DIR	B ALTS DIR	HIZEK ALTS DIR	IR	TEMP	IR	TEMP				
174/07:52:34	80	00	04.2	008	14.1	0482	358.3	019	231	32957	31640	2.1	-0.5	-11.7	-46.6	BREAK IN THE CLOUDS SEE SOME OF THE FRACTURED ICE.
174/07:53:00	80	00	04.2	008	14.4	0482	358.2	019	231	32957	31648	2.1	-1.2	-11.0	-46.5	
174/07:53:30	80	00	04.2	008	14.4	0482	358.2	019	231	32957	31648	2.1	-1.2	-11.0	-46.5	
174/07:54:00	80	00	04.2	008	14.4	0482	358.4	017	235	32957	31623	2.1	-0.4	-9.4	-44.1	ICE CONCENTRATION 90 PERCENT.
174/07:54:30	80	00	04.2	008	14.3	0482	358.5	017	235	32955	31409	2.0	-0.7	-10.5	-45.4	ICE CONCENTRATION 5 PERCENT.
174/07:55:00	80	00	04.2	008	14.3	0482	358.4	019	234	32952	31422	2.1	-0.7	-12.6	-45.1	FROM RADAR WE SHOULD BE AT THE EDGE OF ICE PACK.
174/07:55:30	80	00	04.2	008	14.3	0483	358.1	017	232	32957	31408	2.0	-0.5	-12.3	-44.9	10/10 STRATOCUMULUS.
174/07:56:00	80	00	04.2	008	14.4	0484	358.0	017	231	32956	31408	2.0	-0.6	-12.3	-44.9	
174/07:56:30	80	00	04.2	008	14.4	0484	358.0	017	231	32954	31403	2.2	-0.9	-13.0	-42.8	
174/07:57:00	80	00	04.2	008	14.3	0484	358.5	017	232	32983	31400	2.3	-0.9	-13.0	-43.9	10/10 STRATOCUMULUS.
174/07:57:30	80	00	04.2	008	14.3	0483	358.5	015	229	32954	31416	2.2	-0.2	-12.3	-45.0	STRATOCUMULUS.
174/07:58:00	80	00	04.2	008	14.4	0483	358.6	017	222	32959	31421	2.0	-0.4	-12.0	-43.0	
174/07:58:30	80	00	04.2	008	14.3	0484	358.6	016	225	32952	31392	2.0	-0.7	-13.5	-45.6	
174/07:59:00	80	00	04.2	008	14.2	0484	358.6	016	225	32947	31386	2.0	-1.1	-13.5	-46.0	
174/08:00:00	81	08.4	008	16.4	0482	358.8	015	226	32952	31401	2.2	-0.4	-13.0	-44.9		
174/08:00:30	81	08.4	008	16.4	0481	358.8	015	218	32954	31593	2.1	-0.7	-12.2	-44.3		
174/08:01:00	81	08.4	008	16.4	0482	359.0	012	227	32964	31408	2.2	-0.3	-10.8	-45.0		
174/08:01:30	81	08.4	008	16.4	0479	359.0	015	214	32956	31583	2.5	-0.6	-10.3	-44.7	END OF THIS RUN 10/10 STRATOCUMULUS.	
174/08:02:00	81	08.4	008	16.4	0478	358.6	015	218	32959	31589	2.2	-0.2	-11.3	-44.9	NO PHOTO ON THIS RUN.	
174/08:03:00	81	08.4	008	16.4	0478	358.7	014	222	32960	31589	2.5	0.0	-11.0	-43.8		
174/08:04:00	81	08.4	008	16.4	0478	358.8	014	222	32956	31587	2.2	-0.2	-12.0	-43.4	ICE CONCENTRATION 90 PERCENT.	
174/08:05:00	81	08.4	008	16.5	0478	359.0	014	222	32956	31599	2.1	-0.4	-10.1	-44.7	MEDIUM TO LARGE SIZE MULTI FLOES.	
174/08:06:00	81	08.4	008	16.5	0478	359.0	014	222	32957	31610	2.2	-0.5	-8.9	-44.6	NORTH OF END OF RUN - NO CLOUDS ICE IS CLEAR.	
174/08:07:00	81	08.4	008	16.6	0478	358.9	016	215	32955	31587	2.1	-0.8	-9.0	-43.7		
174/08:08:00	81	08.4	008	16.6	0478	358.2	017	215	32948	31589	2.3	-1.2	-7.6	-44.5		
174/08:09:00	81	08.4	008	16.6	0478	358.2	017	215	32948	31589	2.2	-0.2	-9.1	-43.1	END OF RUN 2	
174/08:10:00	81	08.4	008	16.6	0478	358.2	017	215	32948	31589	2.2	-0.2	-9.1	-43.1	TIME 09:05:35	
174/08:11:00	81	08.4	008	16.6	0478	358.2	017	215	32948	31589	2.2	-0.2	-9.1	-43.1	LAT 8134.8 N	
174/08:12:00	81	08.4	008	16.6	0478	358.2	017	215	32948	31589	2.2	-0.2	-9.1	-43.1	LONG 00319.8 E	
174/08:13:00	81	08.4	008	16.6	0478	358.2	017	215	32948	31589	2.2	-0.2	-9.1	-43.1	FL 329	
174/08:14:00	81	08.4	008	16.6	0478	358.2	017	215	32948	31589	2.2	-0.2	-9.1	-43.1		
174/08:15:00	81	08.4	008	16.6	0478	358.2	017	215	32948	31589	2.2	-0.2	-9.1	-43.1		
174/08:16:00	81	08.4	008	16.6	0478	358.2	017	215	32948	31589	2.2	-0.2	-9.1	-43.1		
174/08:17:00	81	08.4	008	16.6	0478	358.2	017	215	32948	31589	2.2	-0.2	-9.1	-43.1		
174/08:18:00	81	08.4	008	16.6	0478	358.2	017	215	32948	31589	2.2	-0.2	-9.1	-43.1		
174/08:19:00	81	08.4	008	16.6	0478	358.2	017	215	32948	31589	2.2	-0.2	-9.1	-43.1		
174/08:20:00	81	08.4	008	16.6	0478	358.2	017	215	32948	31589	2.2	-0.2	-9.1	-43.1		
174/08:21:00	81	08.4	008	16.6	0478	358.2	017	215	32948	31589	2.2	-0.2	-9.1	-43.1		
174/08:22:00	81	08.4	008	16.6	0478	358.2	017	215	32948	31589	2.2	-0.2	-9.1	-43.1		
174/08:23:00	81	08.4	008	16.6	0478	358.2	017	215	32948	31589	2.2	-0.2	-9.1	-43.1		
174/08:24:00	81	08.4	008	16.6	0478	358.2	017	215	32948	31589	2.2	-0.2	-9.1	-43.1		
174/08:25:00	81	08.4	008	16.6	0478	358.2	017	215	32948	31589	2.2	-0.2	-9.1	-43.1		
174/08:26:00	81	08.4	008	16.6	0478	358.2	017	215	32948	31589	2.2	-0.2	-9.1	-43.1		
174/08:27:00	81	08.4	008	16.6	0478	358.2	017	215	32948	31589	2.2	-0.2	-9.1	-43.1		
174/08:28:00	81	08.4	008	16.6	0478	358.2	017	215	32948	31589	2.2	-0.2	-9.1	-43.1		
174/08:29:00	81	08.4	008	16.6	0478	358.2	017	215	32948	31589	2.2	-0.2	-9.1	-43.1		
174/08:30:00	81	08.4	008	16.6	0478	358.2	017	215	32948	31589	2.2	-0.2	-9.1	-43.1		

YEAR 1984 ADDAS FLIGHT LOG --- FLIGHT NO. 8 --- MIZEX

---TIME--- --LAT-- --LONG-- --KIND-- --ALTITUDE--

SPD OIR PRES RADAR PITCH EUIL IR AIR

TIME	LAT	LONG	KIND	ALTITUDE	SPD OIR	PRES RADAR	PITCH	EUIL	IR	AIR	REMARKS
174/09:25:22	81 11.6	006 19.5	0280	180.5	005 280	789	1.9	-0.4	0.3	-3.3	SMALL TO MEDIUM MULTI AND FIRST YEAR FLOES.
174/09:26:20	81 12.4	006 19.2	0280	180.3	007 212	788	2.0	-0.4	0.3	-3.2	85 PERCENT ICE CONCENTRATION.
174/09:27:16	81 13.0	006 19.1	0279	180.1	008 211	787	2.0	-0.4	-0.3	-1.3	CORRECTION: CONCENTRATION.
174/09:28:00	81 13.7	006 19.0	0279	180.1	008 213	787	1.9	-0.1	0.2	-2.3	
174/09:29:00	81 14.1	006 19.0	0280	179.9	005 183	790	1.9	-0.1	0.3	-4.3	
174/09:30:00	81 14.5	006 19.0	0280	179.9	005 183	790	1.9	-0.4	0.2	-2.8	OVER A LARGE FLOE.
174/09:31:00	81 15.1	006 19.0	0280	180.1	005 186	789	1.9	-0.6	0.4	-1.8	THIS IS THE LARGEST ONE WE'VE SEEN ON THIS RUN.
174/09:32:00	81 15.7	006 19.0	0280	179.9	003 164	787	1.8	-1.0	0.4	-3.4	END OF LARGE FLOE 09 30 19.
174/09:33:00	81 16.3	006 19.0	0280	179.9	003 202	782	2.1	-0.7	0.3	-1.6	
174/09:34:00	81 17.0	006 19.0	0279	179.9	003 172	784	2.1	-0.2	0.3	-1.8	
174/09:35:00	81 17.7	006 19.0	0279	179.9	002 153	794	2.0	-0.5	0.1	-4.2	NOT SEEING ANY NEW MELT POCES
174/09:36:00	81 18.4	006 19.0	0280	180.2	002 185	794	1.9	-0.2	0.1	-2.9	FLYING OVER A MELT POC 09 40 11.
174/09:37:00	81 19.1	006 19.0	0280	180.1	001 165	790	1.9	-0.1	0.3	-2.5	ALL SURFACES PREVIOUS COMMENT OF NEW SEEDING ANY MELT POCES.
174/09:38:00	81 19.8	006 19.0	0280	180.1	001 169	783	1.9	-0.3	0.1	-3.1	ALL SURFACES ARE ICE FREE.
174/09:39:00	81 20.5	006 19.0	0280	179.8	003 164	786	1.9	-0.3	-0.1	-0.5	
174/09:40:00	81 21.2	006 19.0	0280	179.8	003 164	786	1.9	-0.3	-0.1	-0.5	
174/09:41:00	81 22.0	006 19.0	0280	179.8	004 175	785	2.1	-1.2	0.2	-0.1	NOT MUCH WIND.
174/09:42:00	81 22.8	006 19.0	0280	179.7	002 193	789	2.1	-0.3	0.6	-1.1	SMOON ON ICE MAY HAVE SOME FREE WATER - LOOKS YET.
174/09:43:00	81 23.6	006 19.0	0280	179.8	002 357	782	2.1	-0.5	0.4	-1.6	
174/09:44:00	81 24.4	006 19.0	0280	180.3	003 239	787	2.1	-0.5	0.4	-2.3	
174/09:45:00	81 25.2	006 19.0	0280	180.3	002 265	791	2.1	-0.2	0.3	-2.3	
174/09:46:00	81 26.0	006 19.0	0280	180.5	002 265	791	2.1	-0.2	0.3	-2.3	
174/09:47:00	81 26.8	006 19.0	0280	180.5	002 265	791	2.1	-0.2	0.3	-2.3	
174/09:48:00	81 27.6	006 19.0	0280	180.5	002 265	791	2.1	-0.2	0.3	-2.3	
174/09:49:00	81 28.4	006 19.0	0280	180.5	002 265	791	2.1	-0.2	0.3	-2.3	
174/09:50:00	81 29.2	006 19.0	0280	180.5	002 265	791	2.1	-0.2	0.3	-2.3	
174/09:51:00	81 30.0	006 19.0	0280	180.5	002 265	791	2.1	-0.2	0.3	-2.3	
174/09:52:00	81 30.8	006 19.0	0280	180.5	002 265	791	2.1	-0.2	0.3	-2.3	
174/09:53:00	81 31.6	006 19.0	0280	180.5	002 265	791	2.1	-0.2	0.3	-2.3	
174/09:54:00	81 32.4	006 19.0	0280	180.5	002 265	791	2.1	-0.2	0.3	-2.3	
174/09:55:00	81 33.2	006 19.0	0280	180.5	002 265	791	2.1	-0.2	0.3	-2.3	
174/09:56:00	81 34.0	006 19.0	0280	180.5	002 265	791	2.1	-0.2	0.3	-2.3	
174/09:57:00	81 34.8	006 19.0	0280	180.5	002 265	791	2.1	-0.2	0.3	-2.3	
174/09:58:00	81 35.6	006 19.0	0280	180.5	002 265	791	2.1	-0.2	0.3	-2.3	
174/09:59:00	81 36.4	006 19.0	0280	180.5	002 265	791	2.1	-0.2	0.3	-2.3	
174/09:59:59	81 37.2	006 19.0	0280	180.5	002 265	791	2.1	-0.2	0.3	-2.3	

ORIGIN
OF POCES

LAT 7957.1 N LONG 0019.6 E FL C3

YEAR 1994 ADDAS FLIGHT LOG --- FLIGHT NO. B --- MIZEK
 GRD TRU ---HIC--- ALITUDE
 SPD HDG SPD DIR PRES RADAR FITCH ROLL IR AIR

174/11:24:13 68 00.9 016 07.3 0263 140.9 05A 166 19255 18723 -0.7 -9.2 -0.9 -21.3 11 35 SDCAMERA OFF.
 174/11:25:01 68 07.2 016 12.1 0282 140.2 03E 168 17405 19279 -1.0 -0.0 -1.1 -21.4
 174/11:26:01 68 26.3 016 20.4 0378 143.2 03E 168 16038 18274 -1.0 -0.0 -2.0 -21.0
 174/11:28:01 68 50.4 016 20.1 0261 158.6 041 151 11189 10540 -1.2 -13.6 -0.3 -7.9
 174/11:40:01 68 37.0 016 33.5 0253 139.4 03A 158 8270 6789 -2.3 -1.0 8.0 -3.1
 174/11:41:01 68 44.2 016 41.1 0214 139.9 03E 156 6630 6041 3.9 -1.5 9.6 3.1
 174/11:42:01 68 41.1 016 44.1 0201 174.2 029 160 5739 5160 -0.2 -1.5 10.5 2.9
 174/11:43:01 68 39.1 016 44.5 0168 176.9 017 150 5633 2571 3.4 -0.1 11.6 5.1
 174/11:44:01 68 35.3 016 44.9 0162 182.5 012 230 2572 1673 1.6 -2.7 12.0 7.6
 174/11:45:01 68 32.8 016 45.1 0143 182.8 019 233 1620 821 -2.4 2.5 12.5 9.1

3.6 Fifth data flight—Day 176—Evenes RT

All instruments were operational; the main data recording system (ADDAS) had some momentary malfunctions.

A slightly modified pattern 'A' was flown from west to east with the first five legs spaced the usual 10 nm apart but the fifth and sixth spaced only 5 nm apart. The sixth leg was also along the 6° 10' E meridian to coincide with the estimated position of the now-famous Onstott Line overflowed on day 174. This was designed to permit the passive microwave side-lookers to acquire data along that line on leg 5, and the altimeter on leg 6. Upon our approach, we were informed by the Polarstern that the drift had been 10' further west than the prediction upon which we had based our pattern. Fortunately, that simply meant that the altimeter & side-looking radiometers had exchanged favorable legs. For that flight, our two inertial navigation systems and the Loran-C were all in agreement to within 0.2 nm; none of them had been updated since departure from Evenes!

Our approach to Leg 1 was actually straight-line from 78° 38.2' N, 2° 26.8' E. This permitted us a spectacular passive microwave image of the eastern edge of the Greenland MIZ. Unfortunately, the entire area was solidly cloud-covered, so photography was precluded. About 100 Km south of the east/west ice edge, an ice streamer, about 25 Km in extent, was observed to meander mostly due east and then south. This streamer was observed on both legs 1 and 2. The MIZEX area itself appeared rather compact, with relatively few open leads of less than 1 Km in width in evidence. The pack signature was monotonously that of moist sea ice, and so the floe structure was indistinguishable. The ice edge in the MIZEX area was quite compact, but with an astonishingly regular sine-wave pattern with a wavelength of about 28 Km. About 2-½ oscillations were observed. A solitary thin ice band, ca. 1 Km wide, was observed running east/west about 30 Km south of the edge across legs 5 & 6.

Leg 6 was extended to 78° 40' N in order to get some good wind/wave data. The visual estimation of wind further south was about 20 m/s, judging from the whitecaps. Unfortunately, we had eliminated both passes over Bjornoye to maximize time over MIZEX, so we shall have to rely on WX charts for our wind comparisons.

ORIGINAL PARTIAL
OF POOR QUALITY

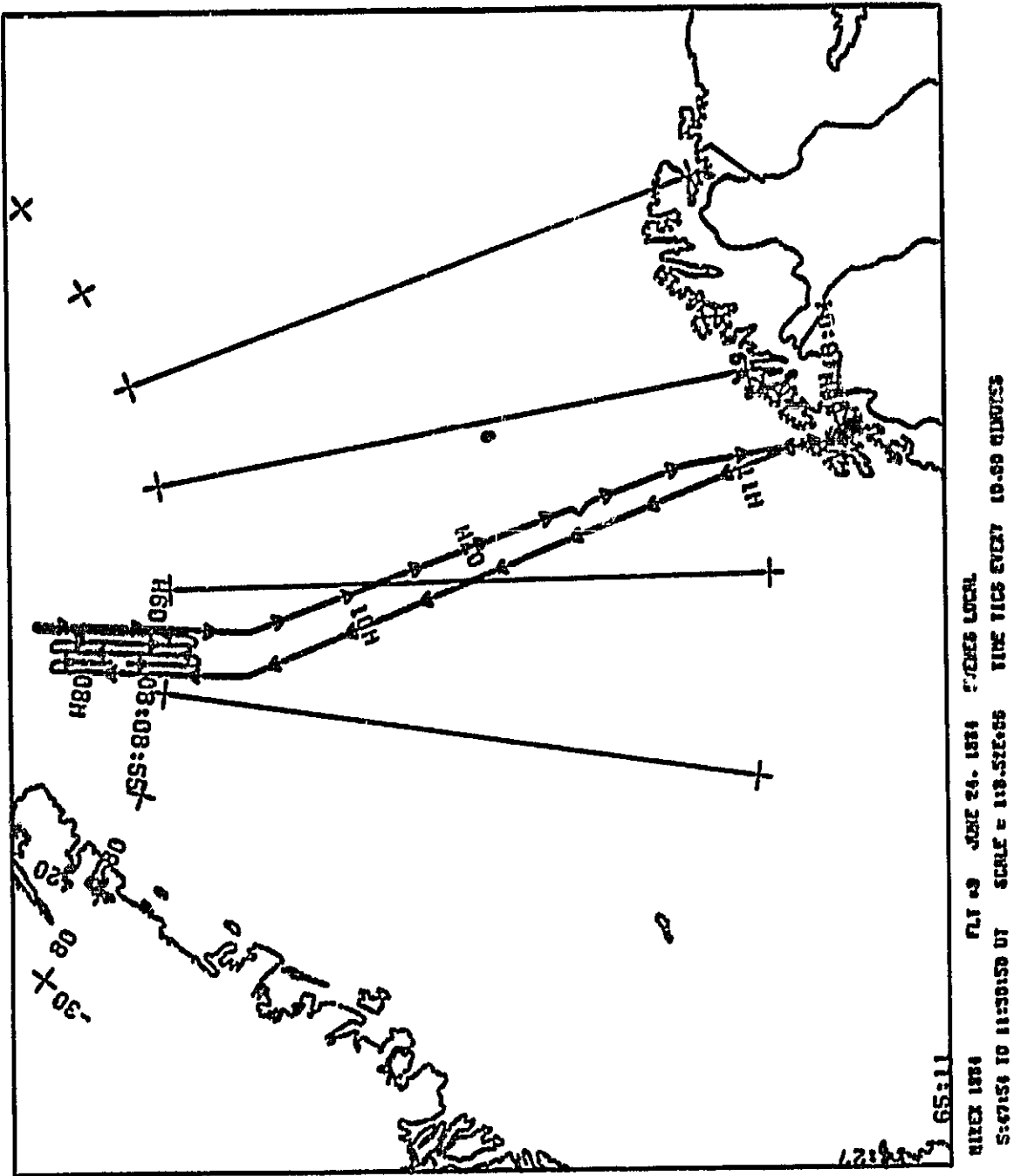
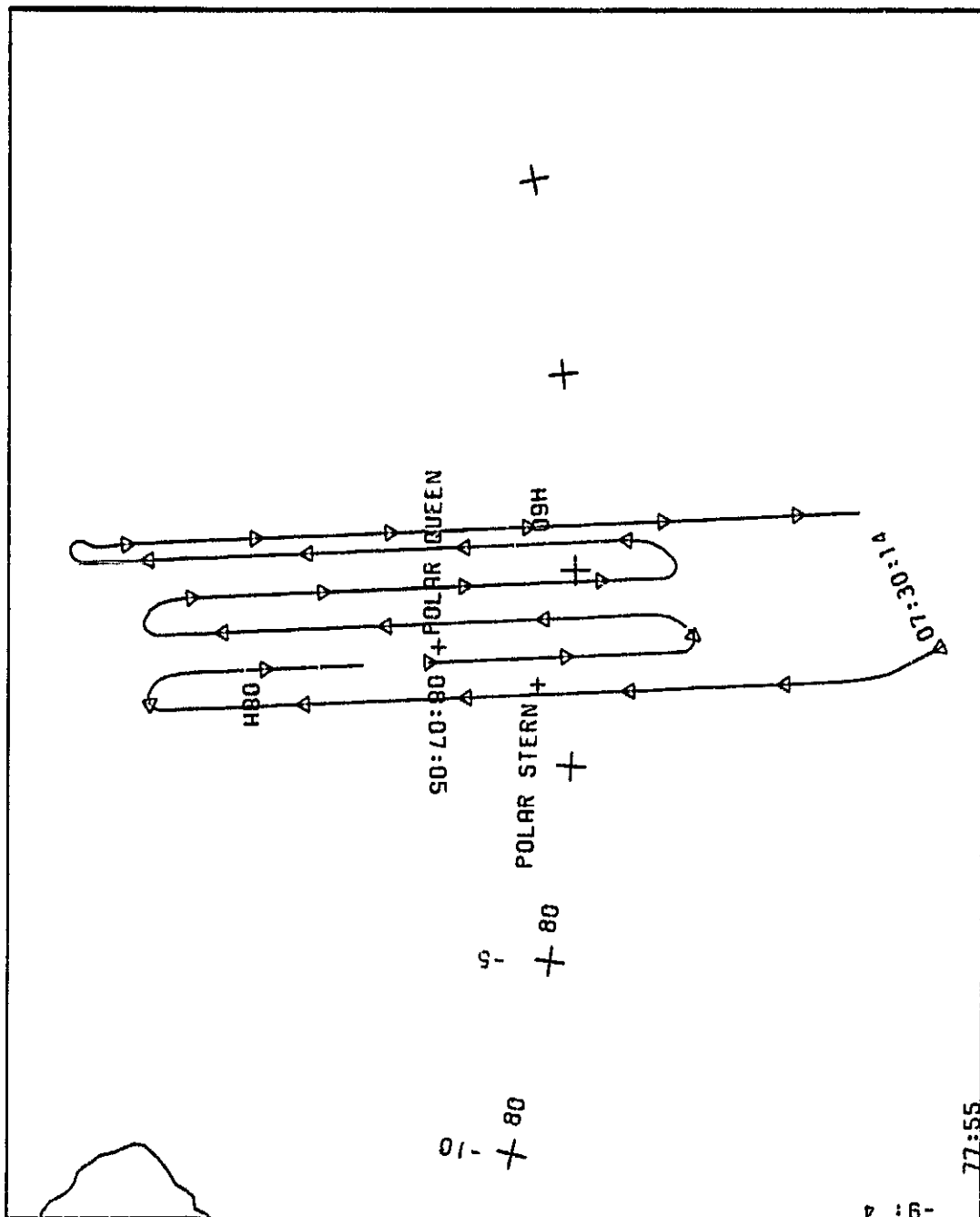


Figure 15. Flight tracks: Evenes RT 6/22

ORIGINAL PATTERN
OF POOR QUALITY



MIZEX '94
7:30:04 TO 9:45:23 UT SCALE = 1:2.35E+06 TIME TICS EVERY 5.00 MINUTES
FLT #3 JUNE 24, 1984 EVERES LOCAL
77:55

Figure 16. Mosaic pattern: 6/22

ORIGINAL PAGE IS
OF POOR QUALITY

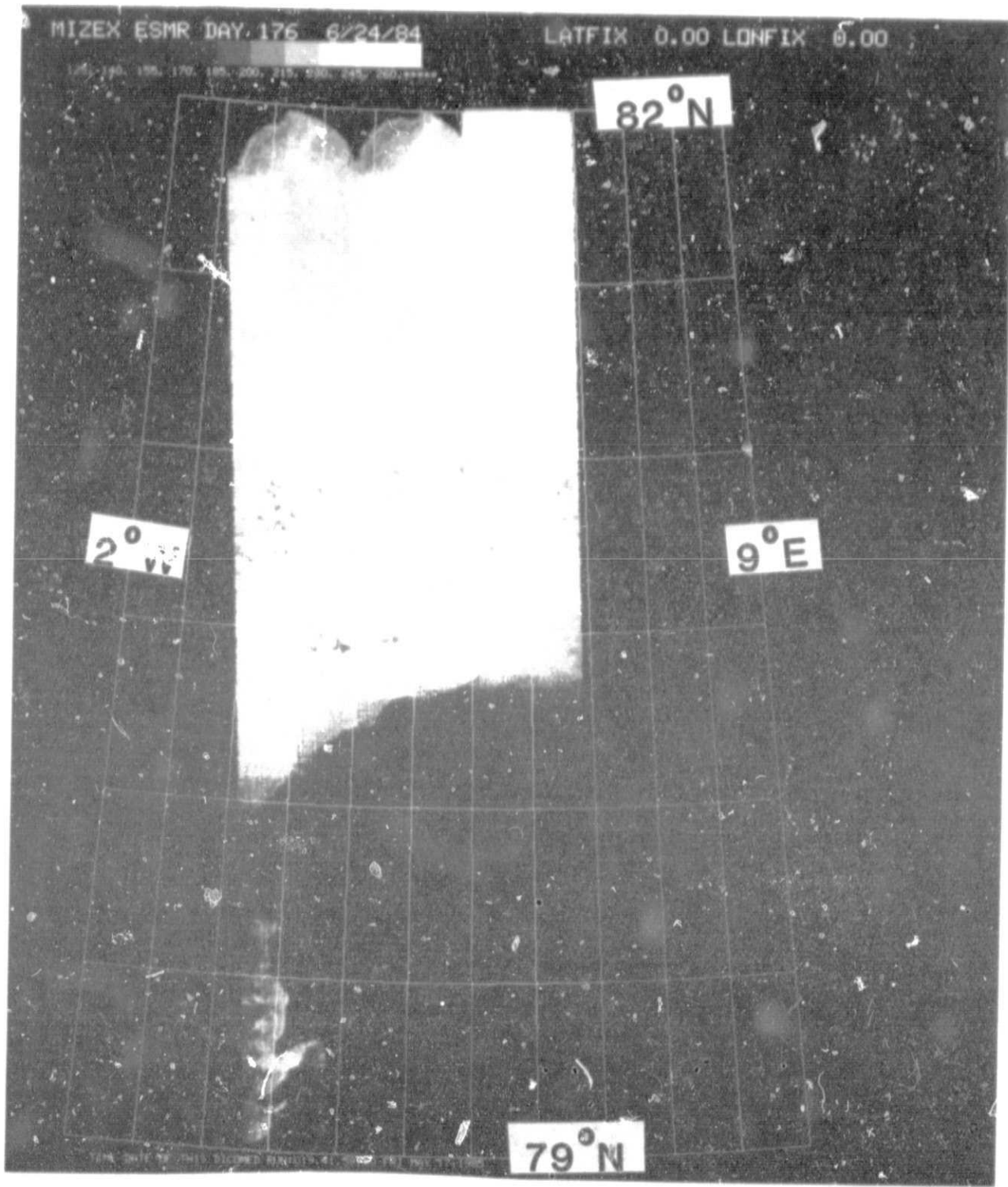


Figure 17. ESMR mosaic: 6/22

YEAR 1984 A3DAS FLIGHT LOG

Table with columns: TIME, LAT, LONG, FLIGHT NO., ALT, SPD, DIR, PITCH, ROLL, IR, TEMP AIR, MZEX, NWS, PRES, RADAR, FCH, ROLL, IR, TEMP AIR. Includes flight data for various times and altitudes, with notes like 'M/P 1/3 68-22.1 15-56.7E RTV.', 'TV CAMERA OFF AT 06 30 CD OR LORAN C.', 'HOUSEKEEPING CHECK WITH MCC - OKAY.', and 'ESTIMATED WIND SPEED 40 KNOTS, HEAVY SMOG AND WHITE CAPS.'.

YEAR 1954 ADDRESS FLIGHT NO. --- FLIGHT NO. --- ALTITUDE --- MILEZEX ---TEMP---
 ---TIME--- ---LAT--- ---LONG--- SPD TRUE SPD DIR SPD DIR PRES RADAR IR AIR
 176/09:16:01 82 09.5 086 17.1 0399 197.0 055 294 33114 32115 2.4 43.0 -9.6 -47.3
 176/09:16:21 82 07.5 086 08.1 0411 204.2 065 167 32933 31809 3.3 -27.7 -9.7 -46.0
 176/09:17:01 82 08.2 086 04.8 0396 175.6 065 166 32956 31903 2.3 -1.9 -8.6 -48.0
 176/09:17:29 82 07.2 086 06.8 0394 174.6 063 167 33010 31950 2.0 1.2 -6.8 -47.4
 176/09:17:55 81 57.2 086 08.0 0394 176.5 063 168 33018 31989 2.0 0.7 -10.3 -46.8
 176/09:18:01 81 56.6 086 07.9 0395 176.9 057 168 33016 31987 2.4 0.4 -10.9 -45.8
 176/09:18:01 81 50.2 086 08.2 0425 170.5 052 169 33028 32052 2.2 -0.5 -12.0 -47.2
 176/09:18:01 81 50.2 086 08.2 0425 170.5 052 169 33028 32052 2.2 -0.5 -12.0 -47.2
 176/09:19:01 81 48.7 086 08.9 0412 178.7 048 167 33039 32072 2.1 -0.7 -12.5 -48.2
 176/09:22:01 81 28.0 086 08.4 0417 178.5 041 164 33053 31988 2.1 -0.9 -13.0 -44.6
 176/09:23:01 81 22.7 086 09.6 0422 178.1 038 157 33060 31985 2.0 -0.7 -14.8 -44.3
 176/09:24:01 81 18.8 086 09.0 0425 178.7 034 164 33057 31996 2.1 -0.6 -15.9 -42.7
 176/09:25:01 81 08.1 086 09.0 0428 178.9 040 168 33065 31975 2.0 -1.1 -16.5 -41.6
 176/09:26:01 81 01.5 086 08.8 0428 178.9 040 170 33059 31950 1.9 -0.5 -16.6 -41.6
 176/09:27:01 80 54.4 086 08.4 0428 179.2 045 170 33044 31932 1.8 -0.9 -16.4 -40.9
 176/09:28:01 80 47.5 086 08.9 0426 179.2 044 170 33055 31936 1.8 -0.9 -15.9 -43.4
 176/09:29:01 80 40.1 086 08.7 0426 179.0 044 170 33060 31929 1.9 -0.6 -15.7 -42.1
 176/09:30:01 80 33.2 086 08.7 0425 178.8 045 170 33044 31903 2.0 -0.4 -16.6 -43.0
 176/09:31:01 80 26.5 086 08.7 0424 178.8 044 168 33052 31950 1.9 -0.7 -17.5 -42.7
 176/09:32:01 80 19.1 086 08.7 0424 178.9 043 169 33049 31902 1.8 -0.5 -16.4 -41.1
 176/09:33:01 80 12.1 086 08.7 0425 178.9 042 167 33049 31907 2.0 -0.6 -16.0 -41.3
 176/09:34:01 80 05.0 086 08.8 0426 179.0 043 167 33049 31923 2.1 -0.7 -16.2 -41.9
 176/09:35:01 79 56.7 086 08.8 0426 178.9 043 167 33043 31964 2.0 -0.4 -16.6 -41.7
 176/09:35:11 79 55.0 086 08.9 0426 178.9 043 167 33043 31983 2.0 -0.6 -16.5 -41.5
 176/09:35:27 79 55.0 086 08.9 0426 178.9 040 164 33044 31981 2.1 -0.6 -16.0 -41.2
 176/09:36:01 79 51.0 086 09.0 0428 179.0 037 165 33059 31972 2.0 -0.9 -16.5 -39.9
 176/09:37:01 79 43.7 086 08.8 0429 178.5 046 161 33060 31967 1.7 -0.7 -15.6 -40.7
 176/09:37:57 79 39.5 086 09.0 0430 178.5 044 163 33063 31933 1.8 -0.7 -15.1 -40.1
 176/09:38:01 79 36.0 086 09.0 0430 178.4 046 163 33054 31959 1.9 -0.6 -15.2 -42.0
 176/09:38:05 79 36.1 086 08.7 0430 178.4 043 163 33056 31956 1.9 -0.5 -15.3 -41.7
 176/09:38:39 79 32.0 086 08.6 0430 178.1 045 160 33051 31959 1.8 -0.8 -15.3 -41.5
 176/09:40:01 79 25.0 086 08.6 0429 178.0 043 161 33053 31939 1.8 -0.8 -15.0 -37.9
 176/09:41:01 79 18.1 086 08.6 0430 178.0 043 159 33046 31962 2.1 -0.7 -15.3 -39.8
 176/09:42:01 79 08.2 086 09.0 0429 178.4 041 164 33034 31959 1.9 -1.4 -15.8 -42.0
 176/09:43:01 79 01.1 086 09.3 0430 178.3 042 171 33047 31932 1.9 -0.6 -15.0 -39.9
 176/09:44:01 78 53.8 086 09.5 0431 179.6 041 174 33055 31930 1.7 -1.0 -17.7 -41.6
 176/09:45:01 78 46.6 086 09.4 0429 178.6 042 165 33044 31922 2.0 -0.8 -12.5 -42.3
 176/09:45:53 78 46.6 086 09.6 0429 179.0 041 169 33049 31920 1.8 -0.8 -12.5 -42.8
 176/09:46:01 78 39.6 086 11.8 0427 164.0 0.3 168 33057 31908 1.9 -3.2 -12.5 -41.1
 176/09:47:01 78 32.0 086 24.8 0431 157.9 037 166 33047 31942 1.8 -1.0 -16.6 -41.3
 176/09:48:01 78 26.4 086 28.8 0432 158.0 041 165 33048 31916 1.9 -0.4 -16.1 -40.8
 176/09:49:01 78 19.9 086 22.9 0432 158.2 036 167 33056 31957 1.9 -0.7 -16.1 -40.0
 176/09:50:01 78 08.6 087 19.8 0425 158.6 037 169 33056 31951 1.7 -0.7 -12.5 -40.3
 176/09:51:01 78 08.6 087 19.8 0425 158.6 037 169 33056 31951 1.7 -0.7 -12.5 -40.3
 176/09:52:01 77 59.6 087 32.6 0436 159.1 037 171 33047 31936 1.7 -0.6 -21.3 -41.4
 176/09:53:01 77 52.9 087 45.4 0436 159.4 041 171 33050 31945 1.7 -0.7 -23.3 -40.0
 176/09:54:01 77 46.3 087 58.1 0438 159.5 037 172 33043 31954 1.7 -0.4 -22.8 -41.5
 176/09:55:01 77 39.5 088 10.0 0439 160.0 036 175 33049 31917 1.7 -0.5 -17.4 -40.7
 176/09:55:21 77 37.3 088 15.0 0440 160.1 038 174 33055 31934 1.6 -0.9 -16.4 -39.3
 176/09:56:01 77 32.7 088 23.3 0440 160.1 038 172 33051 31954 1.6 -1.1 -16.2 -41.5
 176/09:57:01 77 25.0 088 35.5 0441 160.2 041 172 33052 31921 1.7 -0.5 -8.4 -40.9
 176/09:58:01 77 19.1 088 56.7 0442 160.4 040 172 33050 31928 1.6 -0.5 -8.6 -40.7
 176/09:59:01 77 12.9 088 56.7 0442 160.5 043 172 33052 31936 1.7 -0.5 -9.1 -41.7
 176/10:00:01 77 08.3 089 10.2 0432 160.5 043 172 33057 31962 1.7 -0.5 -9.5 -41.8
 176/10:00:15 77 04.0 089 12.3 0431 160.7 043 172 33048 31966 1.7 -0.6 -6.1 -40.5
 176/10:00:30 77 02.1 089 15.4 0430 160.9 045 171 33041 31949 1.9 -0.6 -5.8 -40.3
 176/10:00:49 77 02.5 089 18.8 0429 161.0 045 172 33045 31975 1.7 -0.7 -0.1 -41.3
 176/10:01:01 76 59.8 089 20.7 0428 161.1 043 174 33047 31968 1.8 -0.5 -2.5 -41.4

LOTRAN C - 82 05.6N LON 05 39.0E AS OF 9 14 15.
 DURDIS TURN YOU COULD SEE THRU THE CLOUDS 95 PERCENT ICE CONCENTRATION.
 *** START OF RUN 7 TIME 09.17.56 LAT 61.57.2 N LON 06.03.0 E

INS - 09 33 30 / 80 03.4N 06 08.9E
 LOTRAN C - 80 03.5N 06 09.1E AT 09 33 39.
 09 31 00 LAT 80 26.3 LON 60 20.2 TIP OF THE EDDIE.
 CORRECTION LAT 80 26.3 TO 80 20.2.
 INS 2ND LOTRAN C ARE READING 2/10 KNUTICAL MILE DIFFERENCE IN THEIR POSITION.

END OF RUN 7 TIME 09.45.32 LAT 78.42.9 N LON 02.609.6 E FL 330
 10 03 20 PATTI, 10 04 30 BUSS.
 09 57 50 - INS 77 20
 01 176 10 00 13 AURAS TAPES SKITCHED, EOT
 INS 77 20N 03 44.4E
 LOTRAN C - 77 19.3N 08 39.6E AT 09 57 50.
 DISTANCE BETWEEN IS 1.3385 KNUTICAL MILES.

ORIGINAL TABLE
OF POOR QUALITY

YEAR 1984 AODAS FLIGHT LOG --- FLIGHT NO. 9 --- HIZEK
 ---TIME--- --LAT-- --LONG-- --ALITUDE--
 ---THRU--- --LAT-- --LONG-- --PRES RADAR
 ---TEMP---
 IR AIR

176/10:01:25 76 55.9 089 25.2 0427 161.2 043 174 35031 31978 1.8 -0.6 -5.4 -42.0
 176/10:02:01 76 51.9 089 31.9 0425 161.1 043 172 35038 31953 1.8 -0.7 -3.4 -41.7
 176/10:03:01 76 45.4 089 42.3 0425 161.2 042 172 35035 31977 1.8 -0.6 -3.9 -41.7
 176/10:04:01 76 38.2 089 52.1 0427 161.9 043 172 35041 31975 1.9 0.5 -9.1 -42.5
 176/10:04:51 76 31.9 010 03.2 0427 161.9 045 173 35040 32020 1.7 -0.5 -9.0 -40.9
 176/10:05:03 76 31.9 010 03.3 0427 162.0 045 173 35056 31997 1.7 -0.4 -8.9 -42.7
 176/10:06:01 76 25.3 010 13.1 0428 162.1 045 174 35057 32013 1.7 0.0 -9.3 -43.0
 176/10:07:01 76 18.6 010 22.7 0430 162.5 046 175 35054 32030 1.6 -0.7 -9.8 -41.8
 176/10:08:01 76 11.6 010 32.7 0428 162.4 048 175 35045 32028 1.8 -0.7 -10.0 -43.1
 176/10:09:01 76 05.2 010 42.2 0426 162.6 047 174 35043 32017 1.8 -0.7 -9.8 -44.3
 176/10:10:01 75 58.6 010 51.7 0424 162.5 048 173 35041 31999 1.7 -0.6 -10.0 -42.5
 176/10:11:01 75 51.8 012 51.2 0422 162.6 047 171 35051 32034 1.7 -0.7 -9.4 -42.5
 176/10:12:01 75 45.1 011 10.0 0421 162.7 048 172 35049 32040 2.0 -0.9 -11.7 -49.4
 176/10:13:01 75 38.7 011 18.9 0420 162.8 045 173 35058 32030 2.0 -0.6 -11.7 -49.4
 176/10:14:01 75 31.9 011 27.9 0421 162.9 046 170 35060 32073 1.7 -0.9 -12.3 -49.6
 176/10:15:01 75 25.3 011 37.2 0422 163.1 047 171 35054 32043 1.8 -0.9 -12.2 -49.0
 176/10:16:01 75 18.6 011 44.6 0422 163.2 050 170 35043 32056 1.8 -0.8 -9.4 -43.0
 176/10:17:01 75 11.8 011 53.1 0422 163.3 047 170 35035 32032 1.8 -0.7 -8.7 -44.6
 176/10:18:01 75 05.3 012 01.5 0422 163.4 043 172 35049 32056 1.8 -0.8 -9.9 -43.0
 176/10:19:01 74 58.6 012 09.5 0422 163.4 045 173 35041 32061 1.8 -0.7 -9.5 -44.4
 176/10:20:01 74 51.7 012 17.6 0423 163.5 042 171 35042 32041 1.6 -0.6 -5.2 -45.4
 176/10:21:01 74 45.1 012 25.4 0423 164.0 044 168 35055 32033 1.6 0.8 -6.6 -42.4
 176/10:22:01 74 38.4 012 33.2 0424 163.9 044 169 35054 32100 1.7 -1.3 -7.4 -43.1
 176/10:23:01 74 31.5 012 40.7 0425 163.7 044 170 35052 32111 1.7 -0.6 -7.9 -44.0
 176/10:24:01 74 25.0 012 48.6 0426 163.6 046 169 35053 32084 1.7 -0.9 -7.2 -45.0
 176/10:25:01 74 18.3 013 56.1 0427 162.4 045 167 35052 32090 1.6 -0.6 -2.7 -45.9
 176/10:26:01 74 11.3 013 04.0 0427 162.9 046 169 35059 32107 1.5 -0.5 -2.7 -45.9
 176/10:27:01 74 04.6 013 11.5 0427 164.0 050 170 35045 32070 1.6 -0.8 -0.6 -46.3
 176/10:28:01 73 57.8 013 18.5 0423 164.2 046 170 35042 32103 1.4 -0.8 -3.1 -45.3
 176/10:29:01 73 51.0 013 25.7 0421 164.5 046 172 35048 32113 1.6 -0.9 -8.0 -44.0
 176/10:30:01 73 44.3 013 32.8 0421 164.8 047 175 35051 32114 1.6 -0.9 -1.7 -45.3
 176/10:31:01 73 37.6 013 39.5 0421 164.8 046 175 35056 32142 1.6 0.0 -2.5 -45.0
 176/10:32:01 73 30.8 013 46.8 0420 165.2 046 174 35051 32135 1.4 -1.0 3.8 -45.2
 176/10:33:01 73 24.1 013 53.1 0419 165.0 046 174 35038 32149 1.6 -0.7 3.5 -45.4
 176/10:34:01 73 17.6 013 59.8 0418 165.3 048 175 35049 32150 1.3 -0.7 1.6 -44.0
 176/10:35:01 73 10.9 013 05.7 0418 165.7 046 168 35072 32013 1.5 -0.8 -2.0 -45.2
 176/10:36:01 73 04.2 014 13.0 0418 166.0 048 170 35070 32003 1.8 -0.8 -2.4 -44.7
 176/10:38:01 72 58.3 014 17.5 0406 158.6 053 168 30376 29470 2.4 9.1 2.6 -49.1
 176/10:39:01 72 50.2 014 26.0 0406 164.6 048 174 31879 30950 2.8 0.1 -6.7 -48.5
 176/10:40:01 72 43.5 014 32.5 0418 164.3 043 164 32825 31912 2.9 -0.4 9.3 -46.0
 176/10:41:01 72 36.7 014 38.7 0422 164.8 048 166 32932 32048 1.5 -0.7 -0.6 -46.5
 176/10:42:01 72 30.1 014 44.9 0423 164.9 046 166 32919 32020 1.6 -0.7 4.7 -45.1
 176/10:43:01 72 23.2 014 51.0 0423 165.1 045 167 32929 32021 1.5 -0.7 3.4 -46.3
 176/10:44:01 72 16.3 014 57.2 0424 165.2 045 166 32930 32033 1.5 -0.7 6.9 -45.8
 176/10:45:01 72 09.6 014 03.2 0425 162.4 044 165 32912 32042 1.5 -1.0 2.0 -44.7
 176/10:46:01 71 52.0 015 10.5 0420 162.0 046 162 32918 32057 1.7 -0.7 3.7 -46.3
 176/10:48:01 71 45.3 015 18.5 0419 165.2 045 164 32929 32062 1.7 -0.5 4.8 -46.9
 176/10:49:01 71 38.7 015 25.7 0419 165.3 042 164 32924 32041 1.7 -0.8 5.1 -45.7
 176/10:50:01 71 32.1 015 31.3 0420 165.3 040 164 32930 32059 1.7 -0.6 4.7 -46.8
 176/10:51:01 71 25.4 015 36.9 0419 165.8 042 167 32927 32075 1.7 -0.6 4.5 -46.7
 176/10:52:01 71 18.4 015 41.8 0420 170.3 042 170 32921 32070 1.8 -0.2 -0.1 -45.0
 176/10:53:01 71 11.4 015 45.7 0420 171.6 041 170 32913 32062 1.8 -0.3 4.9 -44.1
 176/10:54:01 71 04.6 015 48.2 0419 175.7 043 171 32914 32062 1.7 0.0 6.5 -46.5
 176/10:55:01 71 01.8 015 50.2 0419 177.9 041 173 32914 32061 1.2 -1.0 1.8 -42.8
 176/10:56:01 70 54.7 015 50.5 0424 170.4 045 165 32926 32078 1.5 -1.0 1.9 -42.4
 176/10:58:01 70 48.5 015 51.3 0425 170.8 043 181 32919 32074 1.6 -1.4 9.7 -45.2

INS READINGS AS OF 09 57 50 - 77 20H 03 44.25.
 CAN SEE SEA SURFACE THRU A BREAK IN THE CLOUDS.
 MEDIUM SHELL, WHITE CAPS, MDC SPEED 15 KNOTS.

YEAR 1984 ADDAS FLIGHT LOGS --- FLIGHT NO. 9 --- MIZEK

TIME	LAT	LONG	SPD	DIR	PRES	RADAR	FITCH	ROLL	IR	TEMP	AJR	
176/11:05:01	70 35.4	015 51.9	0426	178.2	081	184	32921	32078	1.5	-2.4	-9.7	-45.6
176/11:06:01	70 35.4	015 52.3	0427	178.1	082	187	32924	32079	1.6	-0.9	-9.8	-44.9
176/11:07:01	70 35.4	015 52.7	0428	178.4	083	191	32927	32079	1.6	-1.0	-9.5	-43.8
176/11:08:01	70 35.4	015 53.1	0429	178.7	084	197	32931	32078	1.5	-0.9	2.9	-45.7
176/11:09:01	70 35.4	015 53.8	0428	178.3	083	189	32924	32094	1.6	-0.8	0.0	-44.1
176/11:10:01	70 12.1	015 55.0	0429	178.2	082	188	32925	32101	1.4	-1.0	0.0	-45.1
176/11:11:01	70 07.1	015 55.4	0431	178.2	082	192	32926	32093	1.5	-0.6	0.0	-45.4
176/11:12:01	70 03.0	015 55.9	0432	178.3	082	196	32929	32113	1.6	-0.9	0.0	-44.7
176/11:13:01	70 00.0	015 57.2	0434	177.8	081	199	32930	32112	1.7	-0.6	0.0	-44.5
176/11:14:01	69 58.0	015 57.2	0436	177.8	081	199	32930	32112	1.7	-0.6	0.0	-44.5
176/11:15:01	69 50.6	015 58.4	0438	178.7	083	202	32931	32085	1.5	0.5	-5.2	-45.5
176/11:16:01	69 42.5	015 59.3	0439	178.8	081	203	32932	32117	1.5	-0.7	-4.1	-45.8
176/11:17:01	69 34.1	015 59.7	0440	180.5	085	207	32933	32080	1.3	-1.0	-4.3	-45.9
176/11:18:01	69 26.7	015 59.8	0440	180.6	088	208	32932	32116	1.4	-1.0	-5.4	-45.8
176/11:19:01	69 20.4	015 60.7	0439	180.8	089	211	32930	32103	1.5	-0.5	-5.9	-44.9
176/11:20:01	69 14.9	015 61.1	0439	180.4	085	215	32911	32109	1.5	-0.7	-5.9	-45.4
176/11:21:01	69 21.4	016 02.3	0438	180.6	087	216	32919	32109	1.4	-2.7	-4.1	-47.1
176/11:22:01	69 15.6	016 02.1	0437	180.0	088	211	32928	32114	1.4	-0.4	-5.0	-44.2
176/11:23:01	69 10.4	016 02.5	0437	179.9	087	213	32924	31949	1.5	-0.2	-5.0	-44.2
176/11:24:01	69 15.1	016 02.6	0436	180.0	089	217	32925	31793	1.4	-1.0	-6.0	-44.5
176/11:25:01	69 09.1	016 03.3	0436	179.9	080	218	32929	32012	1.5	-0.8	-5.7	-46.1
176/11:26:01	69 06.0	016 03.4	0436	180.0	081	218	32925	32082	1.6	-0.7	-5.4	-47.2
176/11:27:01	69 01.1	016 04.6	0435	180.0	083	213	32940	32099	1.3	-0.7	-5.3	-46.6
176/11:28:01	68 59.0	016 04.5	0435	179.8	082	211	32925	32098	1.7	-0.4	-5.3	-47.6
176/11:29:01	68 59.3	016 04.5	0434	179.9	085	212	32909	32116	1.5	-1.0	-5.2	-49.4
176/11:30:01	68 59.1	016 05.0	0435	179.6	085	210	32911	32106	1.4	-1.7	-5.2	-47.9
176/11:31:01	68 52.9	016 06.0	0434	175.7	089	210	30868	30150	-3.1	-20.0	-4.6	-50.7
176/11:32:01	68 51.9	016 06.4	0430	171.7	081	210	20568	29609	-2.5	-21.4	-4.7	-51.8
176/11:33:01	68 50.2	016 08.6	0431	158.7	088	223	26611	25235	-2.1	-20.1	-2.4	-47.7
176/11:34:01	68 46.4	016 15.5	0431	159.7	088	223	26611	25235	-2.1	-20.1	-2.4	-47.7
176/11:35:01	68 40.3	016 25.0	0409	156.6	044	217	28276	21030	-3.2	-1.1	-0.3	-53.0
176/11:36:01	68 34.6	016 33.5	0386	155.5	027	215	18189	17778	-3.3	0.0	3.2	-25.0
176/11:37:01	68 29.3	016 43.5	0371	147.0	021	216	16270	13699	-3.5	0.2	5.2	-17.7
176/11:38:01	68 23.9	016 45.1	0354	211.0	025	226	10552	10281	0.6	17.6	1.3	-8.6
176/11:39:01	68 19.0	016 57.5	0287	216.9	039	212	9270	8977	-0.4	-2.5	-0.5	-7.2
176/11:40:01	68 16.2	016 59.0	0276	101.5	002	359	6701	5265	0.7	-35.6	-1.3	-2.2
176/11:41:01	68 19.2	016 44.4	0267	001.3	002	350	4033	4033	1.8	-3.8	7.4	-0.2
176/11:42:01	68 22.1	016 44.4	0262	351.5	002	359	4990	4990	1.9	-0.2	8.2	-3.3
176/11:43:01	68 26.4	016 42.6	0175	268.5	005	324	4004	4004	1.5	-19.5	8.3	-1.9
176/11:44:01	68 26.7	016 36.2	0178	221.2	005	325	4104	3687	5.1	18.5	8.9	-0.7
176/11:45:01	68 23.0	016 28.9	0204	239.2	002	359	4126	3999	4.1	-0.7	9.1	-0.1
176/11:46:01	68 21.2	016 21.3	0184	254.2	005	350	4119	3675	6.1	28.9	9.5	1.6
176/11:47:01	68 23.0	016 20.2	0197	074.4	003	316	5186	3094	2.0	-8.1	9.1	1.3
176/11:48:01	68 26.1	016 27.7	0174	061.4	002	044	2534	2637	0.3	5.1	9.7	5.4
176/11:49:01	68 26.1	016 35.2	0172	076.3	002	359	1533	1447	0.2	1.5	10.1	6.4
176/11:50:01	68 25.8	016 42.3	0187	049.7	014	359	742	677	1.4	-11.8	10.7	8.1

10 59 54 DNS - 70 27 LN 15 52.7E
 10 59 54 LORAN C 70 28.5N 15 52.9E

DISTANCE BETWEEN BOTH - 1.5 KNOTICAL MILES.
 *** START OF RUN 8
 I I I END OF RUN
 I I I END OF RUN - FORWARD MESSAGE CAME UP
 I I I END OF RUN 8
 I I I END OF RUN 8
 I I I END OF RUN 8
 I I I END OF RUN 8

TIME 11.08.34 LAT 6920.6 N LONG 01601.2 E FL 329
 TIME 11.11.50 LAT 6901.1 N LONG 01604.6 E FL 329
 TIME 11.12.03 LAT 6859.1 N LONG 01604.8 E FL 329

11 09 48 ACCORDING TO RADAR 3 THE TIME FOR REFLECTOR ONE.
 CORRECTION THAT TIME SHOULD READ 11 09 44.

3.7 Sixth Data Flight—Day 178—Evenes RT

Aside from the annoying ADDAS dropouts which have now become commonplace, all instruments were operational. The data system dropouts have not as yet resulted in any significant loss of data.

Plan 'A' was flown from west to east, with the western edge of the mosaic image right along the Greenwich meridian, i.e. the flight track was along a line displaced 5 nm east of that meridian. It had been our prior custom to approach the MIZEX area along a straight line which becomes the first leg of the mosaic, and to start that straight-line approach at about $77^{\circ} 35' \text{N}$. Because of the most interesting circumstances elaborated upon below, we extended the first four legs southward at least 120 Km beyond the MIZEX ice edge, but at the expense of coverage in the northeastern part of the MIZEX box on legs 5 & 6. As it happens, this was no real sacrifice, since the sea ice was apparently at the melt point in that area.

While there were some radiometrically interesting features to the west (see below), this was definitely the day for ice edge observations! The MIZEX ice edge was quite compact and following its recent east/west sinusoidal undulations in tracks 5 & 6. A distinct change in orientation of the ice edge occurred in tracks 3 & 4, now running from southwest to northeast at a 45 degree slant across our tracks, still compact, and still undulating sinusoidally. In tracks 1 & 2, the ice edge was quite diffuse, and nearly merging with the following feature.

By far the most exciting feature was what gave the appearance of an explosion on the north/south ice edge along Greenland which projected some large ice floes (ca. 18 Km in extent) to the east at a rate of at least 35 Km in two days, since this floe pattern was further west in our prior flight two days earlier. There were two floes of that size which seemed to leave a trail of less compact ice behind them. There were about nine floes half of that size leaving similar trails. The shape of this event (including the less compact ice) is best described in terms of a running dog's head, with long ears flying overhead. The outline of the throat and chin went east and slightly south from $79^{\circ} 08' \text{N}$, 0°E with a well-defined, undulating edge for a distance of about 45 Km (center of swath 3). The lower jaw was ca. triangularly shaped with a maximum thickness of 8 Km. The mouth was open about 10 Km and the juncture of the upper & lower jaws was about 12 Km to the west (western edge of swath three). The upper roof of the mouth extended due east from that (at a latitude of $79^{\circ} 19' \text{N}$) to the nose some 36 Km to the east (eastern edge of swath 4). The nose was in fact one of the two largest floes described earlier. From there on, the outline of the dog's head becomes a bit diffuse, but the eyes and ears are all in swath three, extending northwards to within 18 Km of the compact MIZEX ice edge. A solitary long ice streamer 18 Km in extent was observed running parallel to the MIZEX edge (slanting at 45 degrees across the swath) at about 18 Km to the south; this appeared to be part of the 'dog' pattern. Some distinguishable multiyear ice signatures were observed in the western part of the microwave mosaic, again in complete accord with the concurrent SMMR image. Comparing with SMMR images in the area on earlier occasions, the multiyear signature observed is believed to be associated with ice just below the freeze point, since the SMMR multiyear fraction was significantly less than before.

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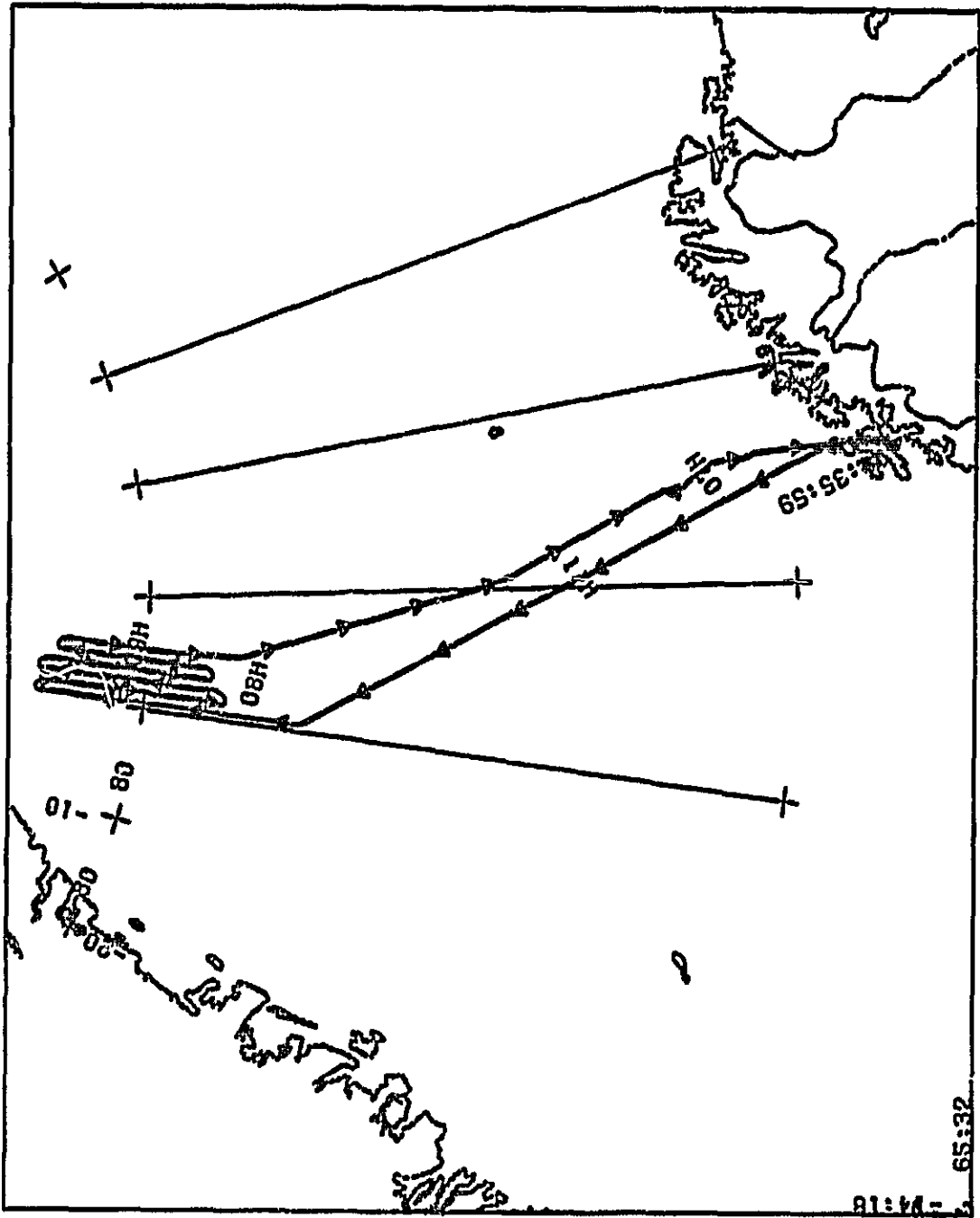
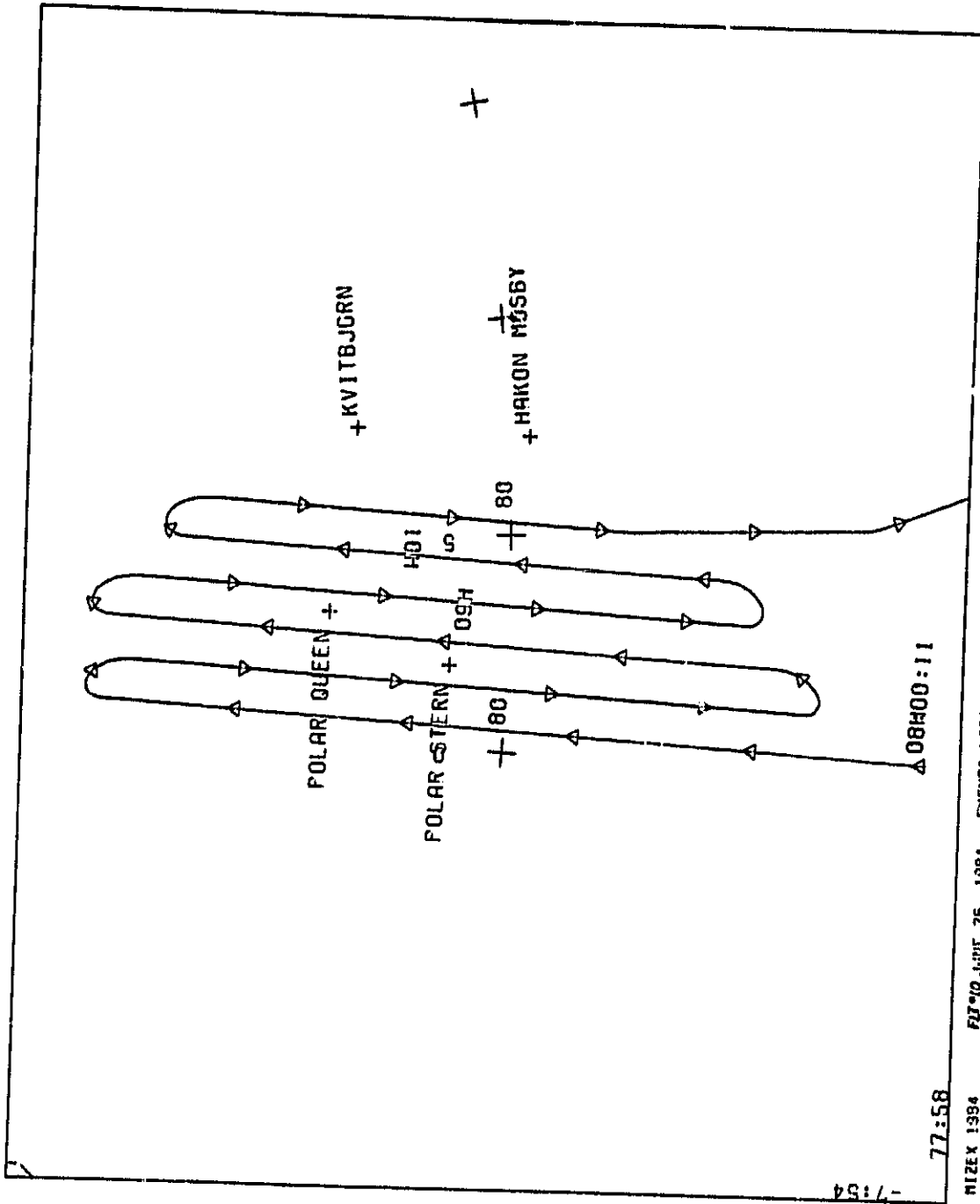


Figure 18. Flight tracks: Evenes RT 6/26

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NIZEX 1994 FZT*10 JUNE 26. 1994 EVENES LOCAL
9:00:02 TO 10:30:35 UT SCALE = 1:2.05E+06 TIME TICS EVERY 5.00 MINUTES

Figure 19. Mosaic pattern: 6/26

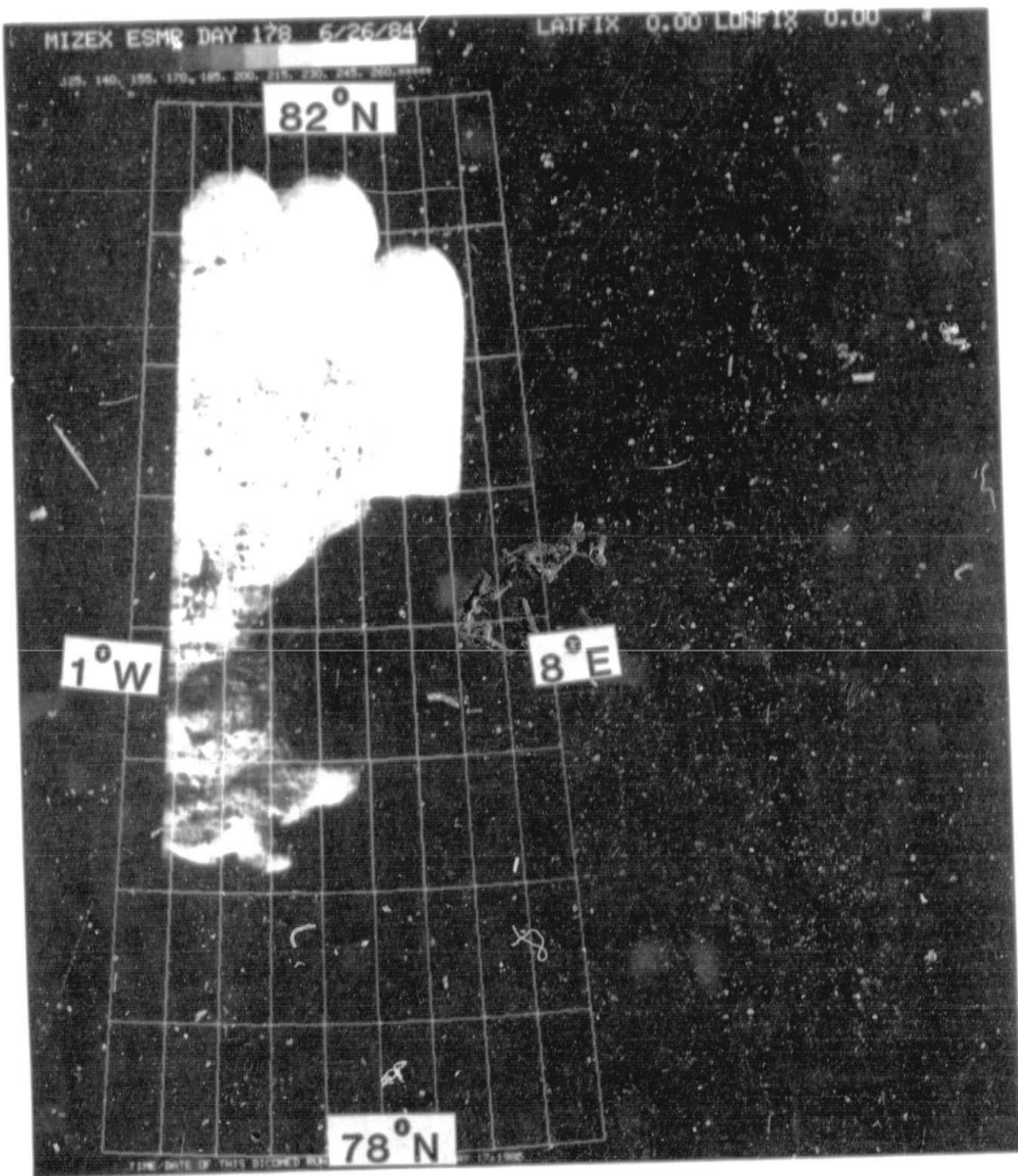


Figure 20. ESMR mosaic: 6/26

YEAR 1984 AIDAS FLIGHT LOG --- SLIGHT NO. 10 --- MIZEX
 ---TIME--- --LAT-- --LONG-- --ALT-- --MIND-- --MIZEX--
 SPD HEAD SPD DIR PRES RADAR PITCH ROLL IR AIR

178/08:06:01 79 07.6 000 27.9 0489 359.2 031 201 32968 32011 2.4 -1.0 -4.2 -43.7 ICE IS ON ESKR.
 178/08:06:07 79 08.4 000 27.9 0489 359.0 034 202 32968 31966 2.7 -0.5 -4.4 -43.6 10/10 STRATOCUMULUS.
 178/08:06:15 79 10.1 000 27.9 0489 359.0 033 204 32985 31937 2.2 -0.6 -4.5 -42.8 SEE THE OUTLINE OF THE FLOE THRU STRATOCUMULUS .
 178/08:06:25 79 11.5 000 27.9 0489 358.9 032 203 32973 31971 2.4 -1.2 -4.6 -42.9 ABOUT 1.5 CUFT THICK.
 178/08:06:35 79 12.3 000 28.4 0489 358.8 033 204 32970 31994 2.6 -0.4 -4.6 -43.6 CORRECTED; STRATOCUMULUS.
 178/08:06:53 79 14.5 000 28.5 0489 358.8 033 205 32968 31994 2.5 -0.9 -4.7 -42.9 NORTH SOUTH ICE EDGE IS MIXED; THE MIZEX BOX.
 178/08:07:01 79 15.7 000 28.6 0489 358.7 031 203 32978 31977 2.5 -0.9 -4.7 -42.9
 178/08:08:01 79 24.0 000 28.6 0489 359.2 031 201 32965 32020 2.5 -0.9 -4.6 -42.9
 178/08:08:03 79 27.1 000 28.9 0489 359.3 032 198 32963 31954 2.6 -0.7 -4.7 -42.6 THREE LARGE FLOES ONE WEST OF US.
 178/08:08:09:01 79 31.9 000 28.9 0489 359.3 034 197 32963 31978 2.8 -0.9 -5.1 -42.6
 178/08:08:09:27 79 35.4 000 28.7 0485 359.2 033 200 32993 32022 2.5 -0.2 -4.9 -42.2 HAVE STARTED RUN OVER NORTH SOUTH ICE EDGE AS WE WILL PROCEED TO THE EAST.
 178/08:08:09:29 79 35.6 000 28.8 0485 359.2 033 200 32991 32030 2.5 -0.3 -5.1 -42.7 *** START OF RUN 2 TIME 08:09:28 LAT 7935.6 N LONG 00020.0 E FL 329
 178/08:08:09:41 79 37.1 000 28.9 0485 359.2 033 199 32991 32030 2.7 -0.7 -5.1 -42.8 THE ICE EDGE WILL BE PROCEEDING TO THE NORTH.
 178/08:08:10:00 79 37.9 000 28.7 0485 359.2 034 197 32965 31958 2.8 -0.8 -5.4 -41.8
 178/08:08:10:59 79 47.8 000 27.1 0484 359.5 030 201 32990 31984 2.6 -0.8 -5.2 -43.2 10/10 STRATOCUMULUS ALONG THIS LEG.
 178/08:08:11:01 79 48.2 000 29.1 0484 359.5 029 198 32990 31959 2.5 -0.7 -5.1 -43.4
 178/08:08:11:31 79 51.9 000 29.1 0483 359.3 031 198 32980 31974 2.5 -1.0 -4.8 -43.1 FLOE STRUCTURE IS EVIDENT ON THE ESKR.
 178/08:08:12:01 79 56.0 000 29.0 0482 359.8 029 203 32997 31924 2.5 -0.2 -4.8 -43.1
 178/08:08:12:05 79 56.6 000 29.6 0482 359.9 029 203 32992 31927 2.7 -0.6 -4.7 -43.5 SEE THRU STRATOCUMULUS WE ARE IN ICE ZONE 90 PERCENT ICE CONCENTRATION.
 178/08:08:13:01 60 04.0 000 29.9 0482 359.2 031 200 32969 31944 2.7 -0.6 -4.7 -43.5
 178/08:16:00 60 11.8 000 30.6 0482 359.4 032 199 32975 31994 2.6 -0.6 -4.7 -44.5
 178/08:16:25 60 15.5 000 30.7 0482 359.3 031 199 32966 31999 2.8 -1.0 -4.7 -43.5 ALOT OF LITTLE MULTYEAR FLOES.
 178/08:16:40 60 20.7 000 30.7 0482 358.9 032 200 32987 31969 2.7 -0.4 -4.8 -40.4
 178/08:16:50 60 27.9 000 31.6 0482 359.0 032 199 32972 31947 2.5 -0.5 -4.9 -42.1
 178/08:17:00 60 31.6 0488 359.5 032 195 32971 31937 2.5 -0.9 -4.4 -41.7 PROCEED NORTH - SOME BREAKS IN STRATOCUMULUS CLOUDS.
 178/08:18:00 60 44.2 000 32.0 0489 359.5 032 196 32978 32031 2.6 -0.8 -4.5 -42.8
 178/08:18:00 60 52.0 000 32.5 0491 359.2 032 198 32969 31907 2.4 -0.4 -4.7 -42.8
 178/08:20:00 61 00.4 000 32.9 06.1 359.4 030 197 32976 31924 2.4 -0.4 -5.6 -41.5
 178/08:21:00 61 08.4 000 33.4 0492 359.4 031 196 32964 31977 2.4 -0.6 -5.6 -41.6 BREAK IN MARE DATA 0 17 TO 0 19 FOR OISK CHAISE - AIN.
 178/08:21:00 61 08.4 000 33.8 0493 359.4 029 203 32966 31876 2.3 -0.6 -5.9 -42.5
 178/08:21:04 61 09.0 000 33.4 0493 359.3 028 203 32970 31915 2.4 -0.8 -6.2 -42.2 SEE THRU BREAK IN CLOUDS - FORWARD OF A/C MEDIUM AND SMALL FLOES.
 178/08:21:06 61 11.2 000 33.5 0493 359.3 027 202 32976 31902 2.2 -0.9 -6.1 -43.3 SOME LARGE POLYNAS, ICE CONCENTRATION 85 PERCENT.
 178/08:21:06 61 12.6 000 34.0 0493 359.3 028 201 32972 31897 2.3 -1.1 -5.8 -41.1 TO THE WEST OF A/C MEDIUM AND LARGE FLOES, ICE CONCENTRATION 95 PERCENT.
 178/08:21:06 61 14.6 000 34.6 0493 359.3 028 202 32972 31897 2.3 -1.1 -5.8 -41.9
 178/08:21:06 61 16.6 000 34.8 0493 359.3 025 199 32971 31867 2.2 -0.7 -5.9 -41.2
 178/08:21:06 61 18.6 000 35.0 0492 359.7 023 199 32971 31867 2.2 -0.7 -5.3 -41.7 CLOUD COVER 10/10 STRATOCUMULUS.
 178/08:21:18 61 27.4 000 35.0 0492 359.7 023 199 32971 31906 2.2 -0.7 -5.3 -41.7
 178/08:21:00 61 33.0 000 35.4 0492 359.5 023 201 32982 31922 2.2 -0.7 -5.4 -42.5
 178/08:21:14 61 34.9 000 35.5 0491 359.6 020 202 32974 31861 2.4 -0.4 -5.7 -41.7 III END OF RUN 2 TIME 08:24:15 LAT 8134.9 N LONG 00335.5 E FL 329
 178/08:21:00 61 36.6 000 34.8 0451 493.0 040 183 33089 32106 3.7 44.4 -6.8 -42.1
 178/08:21:52 61 36.1 001 28.8 0433 151.1 035 203 32889 31821 2.9 17.2 -6.1 -41.5 CAMERA
 178/08:25:58 61 35.5 001 32.0 0432 154.2 032 201 32913 31866 2.7 15.9 -5.9 -41.8 CAMERA ON 08 25 50.
 178/08:26:00 61 35.7 001 32.3 0432 157.2 032 202 32916 31869 2.7 15.9 -5.9 -41.8
 178/08:26:00 61 34.5 001 32.7 0432 162.5 034 206 32938 31895 2.9 12.3 -6.1 -40.7 MEDIUM MULTYEAR FLOES.
 178/08:26:16 61 33.5 001 32.1 0432 168.1 036 202 32940 31868 2.9 12.3 -6.0 -40.0 MULTYEAR FLOES, ICE CONCENTRATION 95 PERCENT.
 178/08:26:24 61 32.6 001 32.7 0432 171.7 035 203 32937 31863 2.6 10.1 -6.0 -41.0 MEDIUM 3 CAMERA ONLY.
 178/08:27:00 61 28.4 001 40.7 0434 180.8 039 196 32956 31868 2.3 1.2 -3.9 -42.5 OS 26 55 MUDIR 3 CAMERA OFF.
 178/08:27:06 61 27.8 001 40.7 0434 181.6 035 200 32964 31889 2.3 1.0 -5.3 -42.5
 178/08:27:30 61 24.6 001 40.7 0434 182.6 036 197 32971 31912 2.3 0.3 -5.2 -43.0 10/10 STRATOCUMULUS AL.
 178/08:27:32 61 24.5 001 40.7 0434 182.6 036 197 32971 31892 2.3 -0.4 -5.4 -42.7 *** START OF RUN 3 TIME 08:27:33 LAT 8124.1 N LONG 00140.7 E FL 329
 178/08:27:46 61 22.7 001 40.0 0434 182.9 036 196 32964 32047 2.0 -0.2 -5.6 -43.5 10/10 STRATOCUMULUS ALONG THIS LEG.
 178/08:28:00 61 21.1 001 39.6 0435 182.8 039 194 32971 31915 2.3 1.1 -5.7 -43.4 OVER ENTIRE MIZEX BOX THERE ARE NO UPPER LEVEL CLOUDS.
 178/08:28:10 61 19.6 001 39.4 0435 182.8 039 194 32971 31915 2.3 -0.4 -5.8 -41.8 FLOES VISIBLE OUTLINE - THRU CLOUDS.
 178/08:29:00 61 13.7 001 37.4 0436 182.7 039 194 32968 31904 1.9 -0.7 -5.9 -42.5
 178/08:30:00 61 06.7 001 37.3 0436 182.7 039 194 32967 31897 1.9 -0.7 -5.9 -42.5
 178/08:30:02 61 06.4 001 37.3 0436 182.7 039 194 32966 31892 2.1 -0.8 -5.7 -41.8 SEVERAL LARGE MULTYEAR FLOES.
 178/08:31:00 60 59.5 001 36.0 0435 183.1 036 201 32974 31927 2.2 -0.2 -5.3 -41.3
 178/08:32:00 60 52.4 001 34.5 0435 183.9 040 193 32985 31912 2.1 -1.3 -4.8 -42.1
 178/08:32:00 60 44.5 001 33.2 0435 182.7 040 194 32970 31915 2.2 -0.6 -5.9 -40.4
 178/08:33:04 60 44.5 001 33.2 0435 182.7 040 194 32973 31910 2.2 -1.0 -5.9 -40.4 10/10 STRATOCUMULUS.

YEAR 1984 AODAS FLIGHT LOG						FLIGHT NR. 10		HIZES		TEMP AIR			
TIME	LAT	LONG	GRD VELE	SPD	DIR	HEAD	PHES	RADAR	PITCH	ROLL	IR		
178/09:08:26	81	19.0	002	47.9	04999	001.9	026	190	32973	31913	-5.5	-4.0	10/10 STRATOCUMULUS AS HE APPROACH THE END OF THIS RUN.
178/09:09:00	81	23.7	002	49.5	04553	002.0	029	197	32962	31890	-5.8	-4.0	
178/09:10:00	81	28.4	002	52.3	04916	003.5	026	195	32971	31923	-5.2	-4.1	END OF RUN 4 TIME 09.10.15 LAT 81E4.2 N LON C0253.0 E FL 329
178/09:11:00	81	33.9	003	54.6	04660	004.6	048	181	32959	31968	-7.2	-4.1	
178/09:12:00	81	35.6	003	44.9	04331	040	040	195	32864	31835	-5.8	-4.2	STRATOCUMULUS DECK GOES ALL THE WAY TO SWALBARD.
178/09:13:00	81	34.7	003	55.8	04228	100.8	040	194	32949	31911	-5.6	-4.2	
178/09:14:00	81	26.0	003	54.8	04628	103.8	040	194	32956	31926	-6.1	-4.1	10/10 STRATOCUMULUS AS HE START THE RUN.
178/09:15:00	81	21.0	003	52.0	04628	104.7	040	192	32970	31939	-6.0	-4.1	*** START OF RUN 5 TIME 09.13.15 LAT 81E4.0 N LON C0354.8 E FL 329
178/09:16:00	81	16.5	003	51.0	04628	107.6	038	179	32964	31933	-5.3	-4.1	
178/09:17:00	81	11.0	003	48.6	04532	105.2	042	189	32963	31930	-5.5	-4.3	ALTOSTRATUS CLOUDS OVER SWALBARD.
178/09:18:00	81	06.0	003	45.6	04532	105.2	042	189	32963	31930	-5.5	-4.3	
178/09:19:00	81	01.0	003	40.7	04331	104.7	044	194	32971	31916	-4.9	-4.2	
178/09:20:00	81	00.0	003	35.0	04228	104.7	044	195	32966	31927	-4.1	-4.2	
178/09:21:00	81	30.4	003	32.8	04627	104.5	044	194	32967	31956	-4.5	-4.2	
178/09:22:00	81	25.6	003	30.0	04626	104.5	043	193	32969	31958	-4.9	-4.2	
178/09:23:00	81	21.7	003	29.2	04626	104.6	042	194	32968	31995	-4.9	-4.2	FRACTURED ICE, ICE ZONE.
178/09:24:00	81	16.2	003	27.5	04626	104.2	044	192	32970	32015	-4.9	-4.2	
178/09:25:00	81	10.8	003	25.8	04626	104.3	044	194	32972	32036	-4.7	-4.2	OVER FRACTURED ICE ZONE.
178/09:26:00	81	09.4	003	25.0	04626	104.3	045	193	32971	32045	-4.7	-4.2	POLAR QUEEN - 60 42.7N LON 3 7.5E.
178/09:27:00	81	02.3	003	22.5	04627	104.6	046	196	32962	32028	-4.9	-4.2	
178/09:28:00	81	00.0	003	19.9	04627	104.9	047	199	32972	32058	-5.0	-4.2	
178/09:29:00	81	00.0	003	17.9	04627	104.7	048	179	32961	32047	-4.7	-4.2	ICE EDGE 09 22 CD ON ESRR.
178/09:30:00	81	00.0	003	15.8	04627	104.7	048	179	32961	32047	-4.5	-4.2	
178/09:31:00	81	00.0	003	13.5	04627	104.9	051	199	32963	31991	-4.0	-4.2	ICE EDGE TIME RECORDED FROM ESRR.
178/09:32:00	81	00.0	003	11.0	04626	104.9	050	200	32979	31995	-4.0	-4.2	ICE EDGE 10/10 STRATOCUMULUS.
178/09:33:00	81	00.0	003	09.4	04625	104.6	047	193	32976	32010	-4.0	-4.2	
178/09:34:00	81	00.0	003	08.9	04625	104.6	047	193	32976	32010	-4.0	-4.2	
178/09:35:00	81	00.0	003	07.3	04625	104.6	048	199	32972	32039	-3.7	-4.2	09 31 13 OTHER EDGE OF ICE TORQUE.
178/09:36:00	81	00.0	003	05.8	04624	104.4	048	195	32966	32074	-3.4	-4.2	
178/09:37:00	81	00.0	003	05.0	04624	104.4	051	195	32976	32097	-3.2	-4.2	END OF RUN 5 TIME 09.33.15 LAT 79E4.3 N LON C0365.0 E FL 329
178/09:38:00	81	00.0	003	04.6	04624	107.0	050	187	32968	32059	-4.9	-4.2	
178/09:39:00	81	00.0	003	03.7	04624	107.0	050	187	32968	32059	-4.9	-4.2	
178/09:40:00	81	00.0	003	03.2	04624	107.0	050	187	32968	32059	-4.1	-4.2	CLEARLY SEE THE SHAPE OF THE ICE EDDIE.
178/09:41:00	81	00.0	003	02.7	04624	107.0	050	187	32968	32059	-4.1	-4.2	CAN EVEN SEE PLUMES ON THE EDGE.
178/09:42:00	81	00.0	003	02.5	04624	107.0	050	187	32968	32059	-3.8	-4.2	
178/09:43:00	81	00.0	003	02.5	04624	107.0	050	187	32968	32059	-3.9	-4.2	*** START OF RUN 6 TIME 09.36.19 LAT 79E4.5 N LON C0403.5 E FL 329
178/09:44:00	81	00.0	003	02.2	04624	107.0	050	187	32968	32059	-4.0	-4.2	
178/09:45:00	81	00.0	003	02.2	04624	107.0	050	187	32968	32059	-4.0	-4.2	OVER EASTERN OF A LARGE EDDIE.
178/09:46:00	81	00.0	003	02.2	04624	107.0	050	187	32968	32059	-4.2	-4.2	
178/09:47:00	81	00.0	003	02.2	04624	107.0	050	187	32968	32059	-4.2	-4.2	PAST PLUME ON ESRR.
178/09:48:00	81	00.0	003	02.2	04624	107.0	050	187	32968	32059	-3.9	-4.2	
178/09:49:00	81	00.0	003	02.2	04624	107.0	050	187	32968	32059	-4.1	-4.2	
178/09:50:00	81	00.0	003	02.2	04624	107.0	050	187	32968	32059	-4.2	-4.2	SOME WHITE CAPS ON OCEAN SURFACE.
178/09:51:00	81	00.0	003	02.2	04624	107.0	050	187	32968	32059	-4.2	-4.2	
178/09:52:00	81	00.0	003	02.2	04624	107.0	050	187	32968	32059	-4.4	-4.2	ICE EDGE TIME RECORDED FROM ESRR.
178/09:53:00	81	00.0	003	02.2	04624	107.0	050	187	32968	32059	-4.4	-4.2	ICE EDGE TIME RECORDED FROM ESRR.
178/09:54:00	81	00.0	003	02.2	04624	107.0	050	187	32968	32059	-4.4	-4.2	ICE COMPLETELY COVERS ICE EDGE - MAIN PACK 09 45 23.

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YEAR 1984 ADDAS FLIGHT LOG										FLIGHT NO. 10										HIZEX														
---					--LAT--					--LONG--					GRD TRUE					MIND					ALTITUDE					---				
TIME	LAT	LONG	SPD	DIR	SPD	DIR	PRES	RADAR	PTCH	ROLL	IR	TEMP	AIR	IR	TEMP	AIR	IR	TEMP	AIR	IR	TEMP	AIR	IR	TEMP	AIR	IR	TEMP	AIR	IR					
178/11:34:00	70 30.4	016 04.1	0354	169.7	092	160	30978	30707	1.0	9.8	7.2	-47.2																						
178/11:35:00	70 24.2	016 04.6	0360	172.4	092	158	30828	30828	1.6	9.7	7.1	-46.5																						
178/11:36:00	70 18.7	016 04.9	0361	172.3	091	157	30839	30839	1.5	9.7	7.8	-46.6																						
178/11:37:00	70 12.2	016 05.3	0362	176.2	089	157	30938	30823	1.6	9.5	6.0	-48.0																						
178/11:38:00	70 06.2	016 05.9	0363	176.4	090	156	30951	30640	1.5	9.9	9.1	-48.0																						
178/11:39:00	70 00.4	016 05.5	0363	175.6	091	157	30945	30626	1.6	9.7	8.3	-47.8																						
178/11:40:00	69 54.2	016 05.4	0364	175.6	088	154	30930	30607	1.8	9.7	8.7	-48.2																						
178/11:41:00	69 48.2	016 03.4	0364	176.2	087	153	30959	30626	1.8	9.7	9.0	-48.1																						
178/11:42:00	69 42.2	016 02.9	0364	174.8	089	152	30949	30607	1.4	9.5	8.3	-47.6																						
178/11:43:00	69 36.2	016 02.9	0364	174.8	089	152	30949	30607	1.4	9.5	8.3	-47.6																						
178/11:44:00	69 30.0	016 03.2	0364	173.8	090	153	30962	30631	1.5	1.3	8.8	-49.3																						
178/11:45:00	69 23.2	016 03.5	0365	174.5	089	153	30929	30621	1.5	9.9	7.2	-49.1																						
178/11:46:00	69 17.2	016 03.5	0366	174.6	089	153	30926	30620	1.3	9.7	15.2	-49.0																						
178/11:47:00	69 11.2	016 03.2	0366	175.3	092	153	30944	30710	1.5	1.1	21.0	-48.1																						
178/11:48:00	69 05.0	016 03.0	0368	175.4	091	153	30949	30357	1.4	9.8	17.3	-47.8																						
178/11:49:00	69 00.0	016 02.9	0369	174.9	088	153	30960	30552	1.2	1.8	21.6	-50.1																						
178/11:50:00	68 54.6	016 06.4	0394	183.3	059	167	24372	25968	6.2	2.2	22.3	-47.6																						
178/11:51:00	68 47.8	016 05.7	0420	180.1	034	171	10730	18308	4.7	0.7	9.7	-21.7																						
178/11:52:00	68 41.0	016 05.3	0395	183.3	026	160	14375	14608	4.5	-1.1	13.2	-13.6																						
178/11:53:00	68 34.6	016 04.9	0372	183.2	017	164	10278	7215	3.9	-1.2	9.5	-6.0																						
178/11:54:00	68 28.9	016 04.8	0372	179.9	012	164	6114	7315	1.9	-1.1	19.7	-1.4																						
178/11:55:00	68 23.7	016 06.6	0275	132.9	004	156	6164	6002	1.9	-2.8	11.4	-1.3																						
178/11:56:00	68 24.8	016 25.4	0221	073.7	005	169	4338	4153	5.4	-2.4	8.4	-5.8																						
178/11:57:00	68 24.8	016 25.4	0179	070.5	005	263	3000	2849	-2.5	-0.8	9.6	10.5																						
178/11:58:00	68 25.7	016 32.9	0176	070.7	009	250	2240	2074	2.0	-7.1	10.9	10.9																						
178/11:59:00	68 26.7	016 40.8	0169	069.5	005	263	1627	1249	-0.8	-2.3	12.0	15.8																						
178/12:00:00	68 29.7	016 44.6	0158	355.2	010	197	517	12255	2.3	0.4	13.2	17.3																						

LAT 6923.3 N LON 01603.3 E FL 539

11.45.09

TIME

*** START OF RUN 9

11 46 00.

FIRST REFLECTOR.

11 46 43.

SECOND REFLECTOR.

11 47 20.

THIRD REFLECTOR -

11 47 30.

END OF RUN 9

LAT 6923.0 N LON 01603.3 E FL 539

11.43.05

TIME

END OF RUN 9

11 48 00.

CAMERAS OFF

11 48 00.

3.8 Seventh Data Flight—Day 180—Evenes RT

All instruments were operational.

Pattern 'D' was flown over Nordaustlandet. The left-over time was used to fly a straight-line transect between $80^{\circ} 20' N$, $15^{\circ} 00' E$ to west of the estimated position of the Polarstern, $80^{\circ} 20' N$, $5^{\circ} 00' W$. We returned on a parallel line 5 nm north of that to the $0^{\circ} 30.8'$ meridian and headed south along one of the tracks flown on Day 178 to a latitude of $79^{\circ} 30'$, the predicted location of the northern edge of the eddy, and then headed east. Because of anticipated strong headwinds on the return home, we were able to execute only a single transect of the large eddy region observed two days earlier.

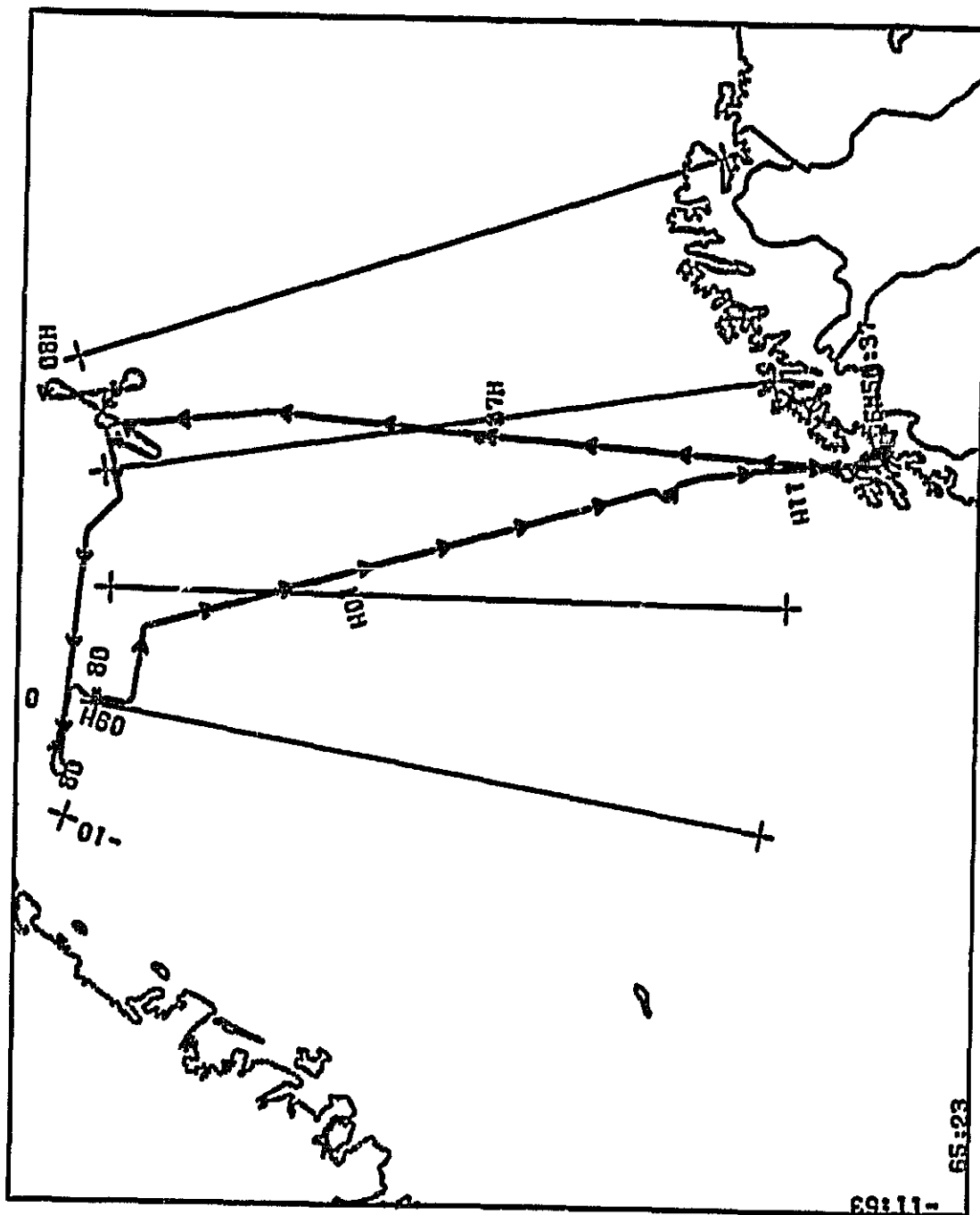
Nordaustlandet was about 95% cloud-covered, so photographic coverage was quite limited. Microwave signatures indicated that the upper layer of the ice cap was near the melt point, and so the signature was monotonous.

The east/west transect over the sea ice was clear, and afforded the opportunity for some excellent photography of sea ice. The lack of cloud cover also resulted in below-freezing ice temperatures and the strongest multiyear microwave signatures observed so far on this mission.

We were not so fortunate in our attempts to obtain microwave imagery of the large eddy, since it had drifted southwards and outside of the preselected imager swath. It was easily observed visibly, however, with about the same eastward extent as before. Hopefully, the 45° metric camera also captured an image of it to permit more precise placement on subsequent analysis.

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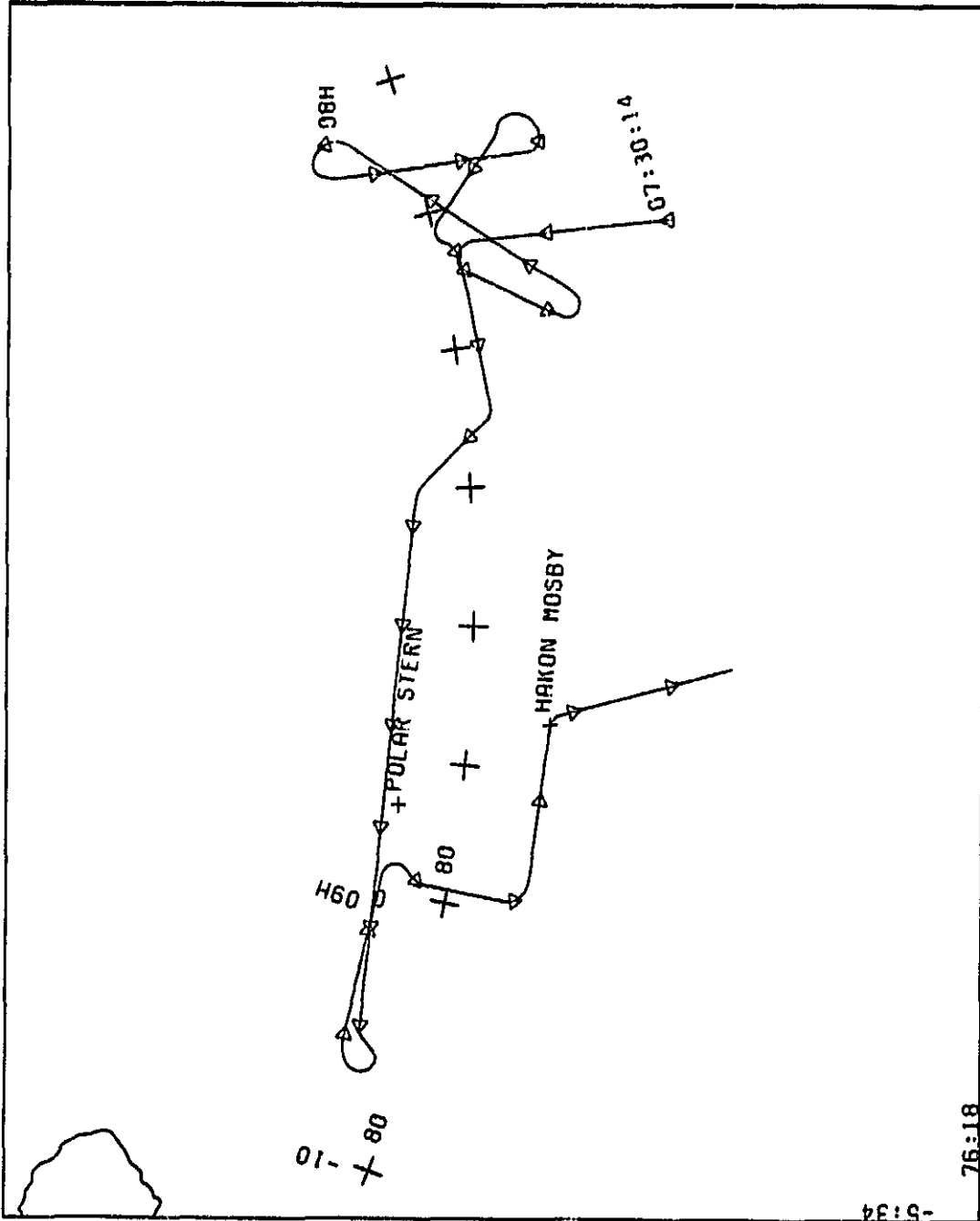
ORIGINAL PAGE IS
OF POOR QUALITY



FLY 011 JUNE 29. 1956 EVENES LOGR.
5:58:27 TO 11:19:33 UT SCALE = 1:17.77E+08 TIME TICS EVERY 10.00 MINUTES

Figure 21. Flight tracks: Evenes RT 6/28

ORIGINAL PAGE IS
OF POOR QUALITY



76:18
-5:34
MIZEX '84 FLY #11 JUNE 28, 1984 EVENES LOCAL
7:39:04 TO 9:05:12 UT SCALE = 1:3.33E-06 TIME TICS EVERY 5.00 MINUTES

Figure 22. Survey pattern: 6/28

ORIGINAL PAGE IS
OF POOR QUALITY

YEAR 1964 ACAS FLIGHT LOS --- FLIGHT NO. --- HORIZ
 ---TIME--- --LAT-- --LONG-- SPD DIR PWS BLANK PFM WAIL IR TEMP AIR
 160/05:15:21 68 42.0 015 59.9 0244 002.2 C03 100 9922 9710 2.6 -1.3 2.8
 160/05:15:35 68 43.4 015 59.9 0344 001.2 C03 100 9922 9710 2.6 -1.3 2.8
 160/05:16:01 68 45.4 015 59.9 0544 001.4 010 C03 9930 9719 2.3 -0.6 -1.5
 160/05:17:01 68 51.0 015 59.9 0243 002.4 015 401 9991 9725 2.2 0.3 1.6
 160/05:17:15 68 51.0 015 59.9 0243 002.8 010 100 9973 9725 2.2 -1.0 -1.0
 160/05:18:01 68 57.3 016 C02 0339 011.9 010 C03 9765 9719 2.4 -0.7 -5.6
 160/05:19:01 69 03.8 016 C01 0336 011.8 010 C03 9732 9722 2.5 -0.5 -5.5
 160/05:20:01 69 08.4 016 C01 0334 011.9 009 C03 9976 9727 2.6 -0.6 -6.2
 160/05:20:15 69 12.0 016 C02 0332 011.7 010 077 9735 9739 2.3 -0.6 -6.4
 160/05:20:39 69 12.0 016 C02 0332 011.7 010 077 9735 9739 2.3 -0.6 -6.4

160/05:21:01 69 13.4 016 C03 0332 011.9 010 C03 9976 9733 2.7 -0.5 -5.9
 160/05:21:05 69 14.2 016 C02 0331 011.7 010 C03 9925 9732 2.7 -0.5 -5.6
 160/05:21:15 69 14.2 016 C02 0331 011.9 010 C03 9925 9732 2.6 -0.5 -5.7
 160/05:21:27 69 16.4 016 C02 0331 011.4 007 C03 9970 9656 2.7 -0.8 -5.0
 160/05:22:01 69 19.3 016 C01 0331 011.4 007 094 9970 9741 2.7 -0.7 -5.4
 160/05:23:01 69 25.0 016 C02 0330 011.5 009 C03 9731 9731 2.7 -0.0 -4.9
 160/05:23:27 69 27.3 016 C02 0330 011.2 015 C03 9742 9749 3.0 -1.1 -4.6
 160/05:24:01 69 30.3 016 C01 0329 011.9 010 071 11640 9740 4.7 -13.1 -13.9
 160/05:25:01 69 32.3 016 C02 0329 011.9 010 071 12492 9740 4.7 -13.1 -13.9
 160/05:26:01 69 41.4 016 12.1 0361 010.2 022 141 15763 12492 5.6 -0.9 -3.4

160/05:27:01 69 47.3 016 15.0 0373 010.8 015 125 17782 17455 5.6 -0.9 -3.4
 160/05:28:01 69 53.4 016 17.7 0324 011.1 015 134 19576 19203 5.0 -0.4 -2.5
 160/05:29:01 69 59.9 016 21.0 0356 011.4 016 137 21254 20389 4.7 -0.2 -1.0
 160/05:30:01 70 03.4 016 24.9 0409 011.6 011 129 22673 22253 3.9 -0.1 -1.4
 160/05:31:01 70 15.4 016 27.9 0433 011.5 010 117 23643 23154 4.3 -0.7 -37.3
 160/05:32:01 70 20.4 016 31.8 0437 011.5 013 111 25159 26645 3.1 -0.6 -1.0
 160/05:33:01 70 27.4 016 35.4 0437 011.6 013 073 26737 26174 4.3 -0.6 -1.0
 160/05:34:01 70 34.4 016 39.0 0437 011.6 016 113 28310 27695 4.3 -0.1 -0.3
 160/05:35:01 70 42.4 016 42.7 0437 011.6 012 121 29817 28811 3.1 -0.6 -1.7
 160/05:36:01 70 48.9 016 46.3 0435 013.1 027 136 30822 29811 3.1 -0.6 -1.7

160/05:37:01 70 56.3 016 50.4 0450 013.0 025 136 32533 30624 3.5 -0.7 -5.4
 160/05:38:01 71 03.6 016 54.6 0457 014.1 037 137 31014 30463 3.3 -0.1 -2.8
 160/05:39:01 71 11.0 016 59.2 0465 013.8 035 139 31015 30043 3.3 -0.1 -3.2
 160/05:40:01 71 18.0 016 59.5 0465 013.6 034 139 31653 30377 3.3 -0.3 -3.2
 160/05:41:01 71 18.0 017 03.4 0473 013.9 036 147 31830 31249 3.3 -0.5 -3.5
 160/05:42:01 71 26.4 017 07.9 0481 014.4 042 147 32279 31737 3.4 -1.1 -3.6
 160/05:43:01 71 34.5 017 12.1 0491 013.7 039 147 32565 32325 3.7 -0.4 -3.4
 160/05:44:01 71 42.4 017 22.3 0493 014.2 042 143 32613 32449 2.4 -0.2 -3.2
 160/05:45:01 71 50.5 017 27.3 0501 014.1 044 153 32659 32476 2.4 -0.9 -4.0

160/05:46:01 72 06.7 017 32.3 0501 014.4 047 152 32959 32482 2.6 -0.9 -3.9
 160/05:47:01 72 15.1 017 37.5 0502 014.1 044 152 32970 32501 2.6 -0.1 -3.5
 160/05:48:01 72 23.2 017 42.7 0506 015.1 049 150 32964 32556 2.6 -0.3 -4.5
 160/05:49:01 72 31.4 017 47.9 0510 015.2 053 152 32971 32553 2.6 -0.2 -4.2
 160/05:50:01 72 39.8 017 53.0 0515 015.2 055 152 32964 32550 2.4 -0.1 -4.4
 160/05:51:01 72 48.3 017 59.5 0515 015.6 056 153 32964 32550 3.3 -0.0 -3.8
 160/05:52:01 72 55.2 018 04.9 0517 015.3 060 159 32934 32537 2.4 -0.7 -3.0
 160/05:53:01 72 55.2 018 04.9 0519 015.9 060 157 32951 32541 2.4 -0.1 -3.9
 160/05:54:01 73 13.5 018 16.8 0522 016.5 071 159 32959 32775 2.5 -0.2 -3.5

160/05:55:01 73 21.9 018 22.9 0525 016.4 074 161 32976 32610 2.4 -0.6 -3.9
 160/05:56:01 73 30.7 018 29.2 0530 016.3 079 165 32950 32623 2.5 -0.0 -3.4
 160/05:57:01 72 39.3 018 35.5 0536 016.1 079 167 32957 32642 2.4 -2.0 -3.1
 160/05:58:01 73 47.7 018 41.8 0542 016.4 084 169 32974 32647 2.3 -1.7 -3.3
 160/05:59:01 73 55.8 018 49.0 0547 016.1 085 169 32964 32631 2.0 0.0 -3.0

160/07:00:01 74 04.0 018 56.0 0547 015.9 032 169 32959 32743 2.5 -0.7 -3.4
 160/07:01:01 74 14.5 019 10.1 0545 015.4 030 171 32971 32649 2.5 -1.2 -3.4
 160/07:02:01 74 23.6 019 16.1 0545 015.4 030 173 32964 32653 2.3 -0.5 -3.0
 160/07:03:01 74 32.3 019 21.7 0542 016.7 034 175 32959 32693 2.5 -0.5 -3.1
 160/07:04:01 74 40.9 019 25.4 0545 016.4 033 177 32952 32712 2.6 -0.5 -2.6

CS-17.14 LAT 6553.0 N LON 0159.9 E FL 99

CS-23.26 LAT 6927.3 N LON 0140.2 E FL 97

ACAS UP AND DOWN ON 19 CO - REAL TIME MODE - GEORGIA TECH.

ACAS CHECKLIST WITH POC - OKAY.

YEAR 1994 ADDAS FLIGHT LOG --- FLIGHT NO. 11 --- ALTITUDE --- MIZEX
 --- TIME --- LAT --- LONG --- SFD DIR PRES RADAR --- SFD TRUE --- SFD HEAD --- IR --- AIR

180/07/05:01 74 50.0 039 33.8 059 016.0 C87 179 32966 32718 2.2 -0.4 -2.5 -48.5
 180/07/07:01 74 50.2 039 34.0 089 016.0 C89 181 32967 32705 2.3 -0.4 -1.9 -49.0
 180/07/09:01 74 50.4 039 34.2 089 016.0 C89 181 32967 32711 2.3 -0.4 -1.9 -49.1
 180/07/11:01 74 50.7 039 34.4 089 016.0 C89 182 32968 32718 2.3 -0.4 -1.9 -49.1
 180/07/13:01 75 52.0 020 08.3 057 016.1 C87 186 32965 32747 2.2 -0.1 -1.9 -49.1

180/07/09:43 75 32.0 020 19.4 056 015.9 C85 184 32965 32761 2.0 -0.6 -2.1 -48.9
 180/07/10:01 75 32.0 020 17.0 055 016.1 C86 184 32965 32752 2.0 -0.5 -1.9 -50.1
 180/07/10:15 75 36.8 020 19.2 055 016.4 C86 182 32958 32752 2.2 -0.4 -1.9 -49.9
 180/07/11:01 75 43.7 020 26.4 052 016.3 C87 184 32949 32769 2.3 -0.4 -1.6 -48.6
 180/07/12:01 75 52.4 020 35.5 049 016.2 C87 186 32971 32779 2.5 -0.6 -1.4 -48.4

180/07/13:01 76 01.1 020 54.0 058 016.5 C88 185 32960 32772 2.4 -0.4 -0.9 -48.9
 180/07/14:01 76 11.1 020 54.4 059 016.4 C88 187 32960 32771 2.4 -0.4 -0.9 -48.9
 180/07/15:01 76 19.9 021 04.3 050 016.5 C89 187 32954 32797 2.3 -0.4 -0.7 -48.9
 180/07/16:01 76 27.5 021 14.6 050 016.4 C87 188 32966 32802 2.3 -0.4 -0.7 -48.8
 180/07/17:01 76 36.7 021 25.1 051 016.3 C86 189 32970 32819 2.3 -0.4 -0.4 -50.0

180/07/18:01 76 40.2 021 36.8 051 016.5 C87 190 32961 32835 2.3 -0.4 -0.7 -48.0
 180/07/19:01 76 42.0 021 46.2 052 016.1 C85 192 32965 32760 2.2 -0.5 -0.7 -49.1
 180/07/20:01 77 03.0 021 57.4 051 016.4 C84 193 32973 32783 2.2 -0.7 -0.8 -49.8
 180/07/21:01 77 11.8 022 08.9 050 017.0 C84 191 32971 32787 2.2 -0.7 -0.5 -48.8
 180/07/21:15 77 13.7 022 15.4 049 016.9 C81 191 32956 32737 2.2 -0.8 -0.5 -48.8
 180/07/21:35 77 16.8 022 15.4 058 016.4 C85 192 32965 32737 2.4 -0.4 -1.1 -47.6
 180/07/22:01 77 20.4 022 19.9 058 016.4 C85 192 32965 32737 2.4 -0.4 -1.1 -47.6
 180/07/22:30 77 20.3 022 27.3 056 011.8 C81 196 32962 32753 2.3 -10.0 -0.6 -47.2
 180/07/23:01 77 29.4 022 31.9 054 015.8 C87 195 32978 32760 2.1 -5.3 -0.9 -47.5
 180/07/23:27 77 33.3 022 31.9 054 022.6 C87 195 32978 32760 2.1 -1.9 -0.7 -48.2
 180/07/24:01 77 30.2 022 33.8 054 022.8 C87 194 32960 32722 2.4 -0.4 -0.9 -48.8
 180/07/25:01 77 47.1 022 36.9 051 003.5 C82 197 32955 32609 2.4 -0.7 -0.5 -47.9
 180/07/26:01 77 56.1 022 41.3 059 003.5 C81 196 32955 32609 2.3 -0.9 -1.0 -48.7
 180/07/27:01 78 00.2 022 45.4 051 005.5 C82 185 32994 32531 2.4 -0.2 -0.8 -47.9
 180/07/28:01 78 13.7 022 49.6 052 004.0 C82 194 32960 32676 2.2 -0.8 5.2 -4.0
 180/07/29:01 78 22.9 022 54.1 052 004.3 C82 193 32978 32705 2.2 -0.4 -0.8 -46.9
 180/07/30:01 78 30.2 022 58.0 052 004.3 C82 194 32978 32705 2.2 -0.4 -0.8 -46.9
 180/07/31:50 00 00.0 023 05.6 054 000.0 C80 000 000 000 2.2 -0.6 -0.5 -45.0
 180/07/31:52 78 47.0 023 06.7 053 004.0 C80 000 000 000 2.1 -1.2 -0.6 -45.7

180/07/31:58 78 48.6 023 07.0 054 004.0 C80 000 000 000 2.0 -0.8 -0.7 -46.8
 180/07/32:00 78 49.0 023 07.0 054 004.0 C80 000 000 000 2.1 -0.3 -0.6 -45.6
 180/07/33:00 78 57.7 023 12.1 055 004.2 C80 000 000 000 2.7 -0.9 -1.1 -47.1
 180/07/33:56 79 01.2 023 16.3 056 003.7 C80 000 000 000 2.5 -1.1 -0.6 -44.5
 180/07/34:00 79 08.7 023 16.5 056 003.6 C80 000 000 000 2.5 -0.9 -0.5 -47.0

180/07/34:18 79 09.4 023 18.3 056 003.6 C81 199 32978 32691 2.1 -0.4 -0.4 -45.1
 180/07/34:32 79 13.5 023 19.2 057 003.7 C81 199 32978 32691 2.2 -0.4 -0.4 -45.1
 180/07/34:46 79 13.6 023 20.3 058 003.7 C81 199 32978 32691 2.2 -0.4 -0.4 -45.1
 180/07/34:58 79 15.2 023 21.7 059 004.0 C81 199 32999 32721 2.4 -0.4 -0.4 -45.7
 180/07/35:00 79 15.4 023 21.7 057 004.0 C82 200 32967 32159 2.2 -0.3 -0.2 -42.3

180/07/35:14 79 17.6 023 22.9 057 004.0 C82 200 32976 32021 2.4 -0.1 -0.2 -42.7
 180/07/35:00 79 28.5 023 26.8 058 004.0 C80 000 000 000 2.4 -1.1 -0.2 -42.7
 180/07/37:00 79 31.0 023 32.0 058 004.4 C80 000 000 000 2.4 -0.5 -0.2 -44.2
 180/07/38:00 79 42.3 023 37.4 058 004.6 C80 000 000 000 2.4 -0.8 -0.6 -41.7
 180/07/38:14 79 44.3 023 34.4 058 004.9 C80 000 000 000 2.4 -0.8 -0.6 -42.0

180/07/39:00 79 50.4 023 32.6 C89 316.5 C82 30009 32968 2.4 -28.7 -1.2 -41.1
 180/07/40:00 79 52.7 022 54.6 C89 316.5 C82 30009 32968 2.4 -28.7 -1.2 -41.1
 180/07/41:00 79 48.2 022 27.7 C89 316.5 C82 30009 32968 2.4 -28.7 -1.2 -41.1
 180/07/41:20 79 46.4 022 20.4 C89 316.5 C82 30009 32968 2.4 -28.7 -1.2 -41.1
 180/07/42:00 79 42.0 022 05.4 C89 316.5 C82 30009 32968 2.4 -28.7 -1.2 -41.1

180/07/43:00 79 37.3 021 43.1 C89 316.5 C82 30009 32968 2.4 -28.7 -1.2 -41.1
 180/07/43:08 79 36.4 021 40.5 C89 316.5 C82 30009 32968 2.4 -28.7 -1.2 -41.1
 180/07/44:00 79 31.9 021 03.7 C89 316.5 C82 30009 32968 2.4 -28.7 -1.2 -41.1
 180/07/45:02 79 27.5 020 59.6 C89 316.5 C82 30009 32968 2.4 -28.7 -1.2 -41.1
 180/07/45:00 79 26.5 020 59.6 C89 316.5 C82 30009 32968 2.4 -28.7 -1.2 -41.1

LAT 60 2EM LOH 3 17.0N POLAR STERN.
 LAT 79 5CN LOH 6 4SE HV.
 LAT 7904.3 N LOH C2316.3 E FL 329
 LAT 7904.3 N LOH C2339.4 E FL 329
 LAT 7904.4 N LOH C2220.4 E FL 329

ADDAS ISM ON 07 21 CO. Sidelooking camera ism on 07 21 CO.
 SEA ICE SOUTH OF SWAIBAO ON PORT SIDE OF AIRCRAFT.
 ADDAS CON 07 30 21 BACK I/P 07 31 31.
 START WIDE DATA RUN 07 29 00.
 CAMERAS ON 07 30 CO.
 *** START OF RUN 2 TIME 07:33:55 LAT 7904.3 N LOH C2316.3 E FL 329
 END OF RUN 2 TIME 07:38:13 LAT 7904.3 N LOH C2339.4 E FL 329
 END OF RUN 3 TIME 07:41:19 LAT 7904.4 N LOH C2220.4 E FL 329
 *** START OF BARE LAW UNDERWATER.
 ALOT OF BARE LAW UNDERWATER.
 2.8 PER SECOND WAVE DATA AVERAGE.

ORIGINAL PAGE IS OF POOR QUALITY

YEAR	1984	ADDRAS	FLIGHT	LOS	FLIGHT	NO.	11	MIXEK
TIME	LAT	LONG	TRUE	DIR	ALTITUDE	GPS	DIR	MIXEK
TIME	LAT	LONG	SPEED	DIR	FEET	GPS	DIR	FEET
TIME	LAT	LONG	SPEED	DIR	FEET	GPS	DIR	FEET
TIME	LAT	LONG	SPEED	DIR	FEET	GPS	DIR	FEET
TIME	LAT	LONG	SPEED	DIR	FEET	GPS	DIR	FEET
TIME	LAT	LONG	SPEED	DIR	FEET	GPS	DIR	FEET
TIME	LAT	LONG	SPEED	DIR	FEET	GPS	DIR	FEET
TIME	LAT	LONG	SPEED	DIR	FEET	GPS	DIR	FEET
180/07:45:04	79 25.9	020 57.4	0406	212.3	067	194	32961	31181
180/07:45:06	79 25.7	020 56.6	0407	212.4	069	195	32961	31182
180/07:45:08	79 25.4	020 54.9	0408	212.1	070	197	32969	32014
180/07:45:10	79 25.4	020 54.9	0409	212.1	071	199	32971	32016
180/07:46:00	79 20.9	020 38.3	0410	212.3	088	197	32933	32574
180/07:46:30	79 18.9	020 29.4	0412	195.6	073	191	33045	32659
180/07:47:00	79 16.9	020 30.4	0417	193.3	062	190	33015	32667
180/07:47:10	79 13.7	020 34.0	0430	145.6	062	192	32991	32630
180/07:48:00	79 12.0	021 03.3	0526	070.5	055	199	33038	32811
180/07:48:58	79 17.0	021 38.6	0528	046.8	065	194	32895	32559
180/07:49:00	79 17.8	021 40.0	0528	046.6	065	196	32897	32559
180/07:49:30	79 21.2	021 18.9	0526	049.2	069	197	32901	32538
180/07:50:00	79 24.5	021 11.7	0526	047.7	071	197	32929	32530
180/07:50:36	79 27.8	021 31.4	0527	048.4	072	197	32946	31777
180/07:50:56	79 29.9	022 44.3	0528	048.8	073	197	32953	30725
180/07:51:00	79 30.4	022 44.5	0529	048.9	073	193	32956	30659
180/07:51:26	79 35.2	023 00.1	0530	048.7	073	200	32955	30643
180/07:52:00	79 34.8	023 19.3	0532	049.0	071	200	32955	30506
180/07:53:00	79 44.9	023 54.5	0533	049.6	069	193	32971	30427
180/07:53:26	79 45.8	024 11.5	0534	050.1	070	193	32978	30251
180/07:54:00	79 48.7	024 07.2	0536	050.6	074	199	32967	30039
180/07:55:03	79 52.1	024 11.8	0539	051.7	080	199	32962	30028
180/07:55:20	79 57.1	025 19.7	0539	052.0	080	197	32951	30068
180/07:56:00	80 01.2	025 45.5	0541	052.4	082	193	32963	31072
180/07:56:12	80 06.2	025 53.1	0541	052.6	084	198	32969	31248
180/07:56:50	80 06.2	026 17.7	0541	052.7	082	199	32960	31860
180/07:57:00	80 07.0	026 23.3	0541	052.6	080	201	32971	32075
180/07:57:12	80 08.4	026 31.3	0541	052.6	077	200	32982	32369
180/07:57:42	80 11.5	026 51.6	0542	053.0	076	201	32971	32757
180/07:58:00	80 13.7	027 04.2	0543	053.8	080	202	32983	32759
180/07:59:00	80 17.0	027 44.1	0542	054.7	078	201	32985	32757
180/08:00:00	80 23.2	028 21.6	0542	024.2	080	206	33023	32859
180/08:00:04	80 25.9	028 23.4	0553	019.1	081	207	33024	32857
180/08:01:00	80 33.8	029 16.5	0518	317.0	085	204	32964	32763
180/08:02:00	80 37.5	027 36.3	0434	258.5	091	196	32984	32757
180/08:03:00	80 33.0	027 09.7	0396	198.5	086	200	32900	32643
180/08:04:00	80 26.5	027 01.1	0393	190.5	084	200	32942	32691
180/08:05:00	80 20.3	026 55.5	0387	189.9	087	201	32945	32496
180/08:05:28	80 17.0	026 53.2	0386	189.4	089	199	32953	32323
180/08:05:42	80 15.9	026 52.1	0386	189.5	089	199	32954	32376
180/08:06:00	80 13.4	026 50.3	0385	189.3	088	199	32975	32716
180/08:06:02	80 13.4	026 50.3	0386	189.4	089	200	32948	32719
180/08:06:24	80 11.3	026 48.9	0385	189.3	086	199	32945	32694
180/08:06:56	80 07.9	026 46.3	0384	189.4	089	200	32975	32577
180/08:07:00	80 07.4	026 46.3	0384	189.3	087	200	32968	32266
180/08:07:28	80 05.2	026 42.1	0383	189.1	089	199	32949	31967
180/08:07:58	80 05.2	026 42.1	0383	189.0	094	197	32977	31578
180/08:08:00	80 05.0	026 41.6	0383	188.9	093	196	32982	31351
180/08:08:10	80 01.2	026 37.4	0378	188.2	093	194	32966	31203
180/08:09:34	79 51.3	026 35.4	0375	188.3	101	195	32943	31466
180/08:10:00	79 48.6	026 33.3	0374	188.3	100	195	32938	31574
180/08 10:30	79 45.7	026 31.8	0372	188.9	100	197	32960	31928
180/08:10:52	79 43.4	026 30.0	0372	188.4	092	194	32939	32089
180/08:10:58	79 42.5	026 30.0	0372	188.5	092	194	32946	32242
180/08:11:00	79 42.5	026 29.1	0372	188.9	092	196	32946	32243
180/08:11:02	79 42.5	026 29.1	0372	188.9	092	196	32946	32243
180/08:12:00	79 38.4	026 25.5	0370	189.0	099	193	32976	32727
180/08:12:00	79 38.4	026 25.5	0370	189.0	099	193	32976	32731

---TEMP---
IR AIR

1-2 -41.3
-1.0 -42.2
-0.3 -42.3
-0.7 -43.2
-1.9 -43.4

1-2 -43.0
-1.9 -42.6
-0.8 -42.4
-1.1 -43.9
-0.5 -43.4

-1.2 -44.3
-0.7 -42.8
-0.6 -42.0
-1.0 -43.6
-1.0 -42.8

-1.4 -43.2
-1.2 -44.0
-0.7 -43.1
-1.0 -42.7

-0.9 -41.8
-0.9 -42.1
-0.9 -43.2
-1.3 -42.3

-0.7 -39.8
-0.9 -41.8
-0.9 -41.8
-0.3 -42.1

-0.8 -42.3
-1.5 -41.3
-1.6 -40.7
-1.6 -43.3

-0.7 -41.4
-0.7 -42.3
-0.8 -42.5
-0.8 -41.5

-1.1 -41.0
-1.1 -43.2
-1.2 -42.2
-0.9 -42.5

-1.8 -42.3
-1.0 -46.5
-0.5 -45.7
-0.1 -46.3

0.0 -45.1
0.1 -44.2
0.2 -45.3
0.1 -46.3

END OF RUN 3
VOID ABOVE START OF RUN.
CORRECTION: END OF RUN ABOVE - FUELED.
END OF RUN 3

END OF RUN 3
END OF RUN 3
END OF RUN 3

END OF RUN 3
END OF RUN 3
END OF RUN 3

END OF RUN 5
END OF RUN 5
END OF RUN 5

END OF RUN 4
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END OF RUN 4
END OF RUN 4

END OF RUN 5
END OF RUN 5
END OF RUN 5

LAT 7725.9 N LONG C2657.6 E FL 329
LAT 7723.4 N LONG C2649.3 E FL 329
LAT 7717.0 N LONG C2140.0 E FL 328

TIME 07:45:03
TIME 07:45:33
TIME 07:48:59

END OF RUN 3
VOID ABOVE START OF RUN.
CORRECTION: END OF RUN ABOVE - FUELED.
END OF RUN 3

END OF RUN 3
VOID ABOVE START OF RUN.
CORRECTION: END OF RUN ABOVE - FUELED.
END OF RUN 3

END OF RUN 4
VOID ABOVE START OF RUN.
CORRECTION: END OF RUN ABOVE - FUELED.
END OF RUN 4

END OF RUN 5
VOID ABOVE START OF RUN.
CORRECTION: END OF RUN ABOVE - FUELED.
END OF RUN 5

END OF RUN 4
VOID ABOVE START OF RUN.
CORRECTION: END OF RUN ABOVE - FUELED.
END OF RUN 4

END OF RUN 5
VOID ABOVE START OF RUN.
CORRECTION: END OF RUN ABOVE - FUELED.
END OF RUN 5

END OF RUN 4
VOID ABOVE START OF RUN.
CORRECTION: END OF RUN ABOVE - FUELED.
END OF RUN 4

END OF RUN 5
VOID ABOVE START OF RUN.
CORRECTION: END OF RUN ABOVE - FUELED.
END OF RUN 5

END OF RUN 4
VOID ABOVE START OF RUN.
CORRECTION: END OF RUN ABOVE - FUELED.
END OF RUN 4

END OF RUN 5
VOID ABOVE START OF RUN.
CORRECTION: END OF RUN ABOVE - FUELED.
END OF RUN 5

END OF RUN 3
VOID ABOVE START OF RUN.
CORRECTION: END OF RUN ABOVE - FUELED.
END OF RUN 3

END OF RUN 3
VOID ABOVE START OF RUN.
CORRECTION: END OF RUN ABOVE - FUELED.
END OF RUN 3

END OF RUN 4
VOID ABOVE START OF RUN.
CORRECTION: END OF RUN ABOVE - FUELED.
END OF RUN 4

END OF RUN 5
VOID ABOVE START OF RUN.
CORRECTION: END OF RUN ABOVE - FUELED.
END OF RUN 5

END OF RUN 4
VOID ABOVE START OF RUN.
CORRECTION: END OF RUN ABOVE - FUELED.
END OF RUN 4

END OF RUN 5
VOID ABOVE START OF RUN.
CORRECTION: END OF RUN ABOVE - FUELED.
END OF RUN 5

END OF RUN 4
VOID ABOVE START OF RUN.
CORRECTION: END OF RUN ABOVE - FUELED.
END OF RUN 4

END OF RUN 5
VOID ABOVE START OF RUN.
CORRECTION: END OF RUN ABOVE - FUELED.
END OF RUN 5

END OF RUN 4
VOID ABOVE START OF RUN.
CORRECTION: END OF RUN ABOVE - FUELED.
END OF RUN 4

END OF RUN 5
VOID ABOVE START OF RUN.
CORRECTION: END OF RUN ABOVE - FUELED.
END OF RUN 5

END OF RUN 3
VOID ABOVE START OF RUN.
CORRECTION: END OF RUN ABOVE - FUELED.
END OF RUN 3

END OF RUN 3
VOID ABOVE START OF RUN.
CORRECTION: END OF RUN ABOVE - FUELED.
END OF RUN 3

END OF RUN 4
VOID ABOVE START OF RUN.
CORRECTION: END OF RUN ABOVE - FUELED.
END OF RUN 4

END OF RUN 5
VOID ABOVE START OF RUN.
CORRECTION: END OF RUN ABOVE - FUELED.
END OF RUN 5

END OF RUN 4
VOID ABOVE START OF RUN.
CORRECTION: END OF RUN ABOVE - FUELED.
END OF RUN 4

END OF RUN 5
VOID ABOVE START OF RUN.
CORRECTION: END OF RUN ABOVE - FUELED.
END OF RUN 5

END OF RUN 4
VOID ABOVE START OF RUN.
CORRECTION: END OF RUN ABOVE - FUELED.
END OF RUN 4

END OF RUN 5
VOID ABOVE START OF RUN.
CORRECTION: END OF RUN ABOVE - FUELED.
END OF RUN 5

END OF RUN 4
VOID ABOVE START OF RUN.
CORRECTION: END OF RUN ABOVE - FUELED.
END OF RUN 4

END OF RUN 5
VOID ABOVE START OF RUN.
CORRECTION: END OF RUN ABOVE - FUELED.
END OF RUN 5

YEAR 1984	AIDAS	FLIGHT NO.	11	KIZEK			PITCH	ROLL	IR	18702	AIR	TIME	LAT	LONG	GRD TRUE	HEAD	DIR	SPD	ALTITUDE	MIXER			TYPE	TIME	LAT	LONG	E	FL
				HDG	IND	ALTITUDE														ALTITUDE	ALTITUDE							
180	09	18:46	80	25.3	000	15.7	0487	083.9	018	250	32950	32314	1.7	-0.9	-1.5	-45.9	MARK RESTART.	09.19.07	LAT	8025.1 N	LONG	C0303.5 E	FL	329				
180	09	19:00	80	25.3	000	27.4	0486	094.3	018	226	32948	32307	1.8	-0.6	-1.2	-46.7	END OF RUN 8											
180	09	19:26	80	25.1	000	31.5	0486	094.5	020	222	32951	32304	2.2	0.6	-1.1	-45.7	END OF RUN 8											
180	09	19:40	80	25.9	000	27.0	0484	116.7	019	210	33002	32385	2.1	30.5	-1.3	-45.6	END OF RUN 8											
180	09	19:40	80	25.9	000	57.2	0484	136.2	032	222	33006	32397	2.6	30.5	-1.4	-45.3	W/P 0' 30-25 SM.											
180	09	19:58	80	22.3	001	03.4	0453	157.8	034	229	33005	32379	2.2	30.6	-1.7	-43.5	W/P 1" 80-25 0-30 EE.											
180	09	20:00	80	20.9	001	05.9	0447	173.4	033	233	32385	32369	2.4	30.5	-1.8	-44.4	W/P 3" 80-20 0-30.8.											
180	09	20:08	80	19.1	001	05.7	0439	196.1	034	236	32393	32378	2.1	30.4	-1.6	-43.5	W/P 3" 79-50 0-27.2E.											
180	09	20:30	80	16.0	001	05.5	0436	203.7	033	237	32380	32368	2.3	29.7	-1.5	-45.6	W/P 4/2 70-30 6-50E.											
180	09	21:00	80	15.4	000	50.4	0437	225.4	027	221	32894	32275	2.3	11.2	-1.3	-45.2												
180	09	21:36	80	13.7	000	43.1	0436	245.9	024	218	32972	32327	2.2	17.2	-1.4	-46.2	CROSSING LARGE FLOES, 1 TO 2 MILES OF OPEN WATER BETWEEN THEM.											
180	09	22:00	80	09.0	000	30.9	0440	189.3	023	222	32371	32344	2.1	19.9	-1.2	-48.2	50 TO 60 PERCENT ICE CONCENTRATION, PROBABLY GREASE ICE IN THE LEADS.											
180	09	22:42	80	03.9	000	28.6	0443	183.8	024	222	32354	32354	2.0	3.3	-1.4	-46.7	*** START OF RUN 9											
180	09	23:00	80	01.6	000	28.1	0443	182.9	022	221	32958	32377	1.9	-1.4	-1.4	-45.6												
180	09	23:20	79	59.3	000	28.4	0444	182.6	025	219	32361	32365	1.9	-1.2	-1.7	-43.5	OVER SMALLER BEDMEN PIECES OF ICE, 1/2 MILE SIZE.											
180	09	23:34	79	57.5	000	28.0	0445	182.6	026	219	32970	32361	2.0	-0.9	-1.0	-43.6												
180	09	24:00	79	54.4	001	27.5	0446	182.5	025	219	32968	32356	2.0	-0.9	-1.1	-45.1	60 PERCENT OR LESS ICE CONCENTRATION.											
180	09	25:00	79	46.8	000	27.5	0447	182.5	025	220	32967	32361	2.0	-0.7	-1.6	-44.8												
180	09	25:46	79	41.3	000	27.1	0447	183.0	025	219	32970	32364	2.0	-1.3	-1.5	-45.6	LARGE AREA OF OPEN WATER, 2 MILES ACROSS, CONTING UP ON LARGE MIDYEAR FLOES.											
180	09	26:08	79	39.5	000	26.6	0448	182.8	025	217	32972	32376	1.9	-1.0	-0.9	-46.7												
180	09	27:00	79	32.6	000	48.5	0448	182.6	015	217	32972	32380	2.2	18.5	-0.9	-46.7	III END OF RUN 9											
180	09	27:26	79	31.2	000	57.7	0470	165.9	017	215	32956	32389	2.0	-16.8	-1.4	-46.4	THIN STRATUS, LOW CLOUDS.											
180	09	28:00	79	30.7	001	21.4	0477	093.9	020	220	32933	32373	1.9	-6.4	-1.3	-47.5	LARGE AREA OF OPEN WATER, HIGH DENSITY, 3 OR 5 MILES SMALLER FLOES, SEVERAL FLAKED YARDS ACCO											
180	09	28:06	79	30.6	001	25.4	0477	092.8	018	218	32953	32365	2.0	-0.8	-0.9	-47.2	HELL DEFINED ICE EDGE.											
180	09	28:42	79	30.6	002	52.1	0478	090.2	017	222	32957	32343	1.9	-1.2	-5.1	-45.0	ICE EXTENDING TO THE EAST.											
180	09	28:56	79	30.7	002	04.7	0477	090.1	017	219	32962	32371	1.8	-1.1	-2.1	-44.1	HOOKS TO THE NORTH.											
180	09	29:00	79	30.7	002	04.7	0477	090.2	016	213	32958	32377	1.9	-0.7	-1.6	-45.2												
180	09	29:20	79	30.7	002	19.2	0476	090.0	015	217	32958	32422	1.8	-0.4	-0.1	-47.4	HAVE MOTION IN THE WATER - ALLOT.											
180	09	29:30	79	30.7	002	47.5	0476	091.5	022	218	32960	32459	2.0	-0.7	1.8	-47.1	*** START OF RUN 10											
180	09	30:06	79	30.7	003	21.9	0476	091.9	023	218	32962	32423	1.9	-0.7	-0.1	-46.1	*** START OF RUN 10											
180	09	30:30	79	30.7	003	52.0	0475	091.4	023	216	32961	32466	1.9	-0.8	-1.6	-44.9	CLOUD COVER.											
180	09	31:30	79	30.7	003	53.0	0475	092.3	020	222	32965	32459	2.0	-0.5	-1.9	-45.4	OLD MISS NORTH HOOK ON THE ESKR.											
180	09	32:00	79	30.7	004	14.6	0474	092.8	021	217	32976	32450	1.8	-0.9	-1.5	-45.5												
180	09	33:00	79	30.7	004	58.0	0475	093.6	021	222	32954	32451	2.2	-0.4	-1.0	-45.9												
180	09	34:00	79	29.9	004	41.7	0474	094.3	020	216	32953	32475	2.1	-1.1	-1.8	-44.0												
180	09	35:00	79	29.9	006	24.8	0475	095.1	020	219	32972	32484	1.9	-0.4	-0.0	-45.0												
180	09	35:06	79	30.0	006	28.5	0475	095.2	021	219	32967	32485	1.7	2.1	-1.0	-45.2	III END OF RUN 10											
180	09	36:00	79	30.7	007	10.4	0446	164.2	030	219	32965	32526	1.8	23.4	-3.2	-46.1												
180	09	36:00	79	30.7	007	21.9	0446	164.2	030	219	32965	32526	1.7	23.4	-3.2	-46.1												
180	09	36:10	79	30.7	007	31.9	0446	164.2	030	219	32965	32526	1.9	0.2	-2.7	-45.2												
180	09	36:54	79	06.6	007	37.3	0446	164.3	023	200	32941	32488	2.0	-0.3	-3.3	-45.0	CAMERA'S OFF AT 09 39 CD.											
180	09	39:00	79	05.9	007	38.4	0446	164.3	024	199	32967	32481	2.0	-0.1	-3.2	-44.6												
180	09	40:00	79	58.7	007	50.3	0445	162.8	025	195	32965	32524	1.8	-1.6	-3.1	-45.6												
180	09	41:00	78	51.8	008	12.6	0445	164.6	026	185	32969	32553	1.7	-0.3	-5.5	-43.5												
180	09	42:00	78	44.6	008	15.9	0445	163.8	027	189	32934	32536	1.6	-1.3	-2.6	-46.8												
180	09	43:00	78	37.6	008	25.5	0446	164.6	030	194	32965	32532	1.6	-1.1	-3.1	-45.6												
180	09	44:00	78	30.6	008	36.9	0446	163.5	028	183	32974	32546	1.7	0.8	-2.8	-47.8												
180	09	45:00	78	23.4	008	49.8	0447	163.2	031	183	32975	32546	1.6	-0.8	-2.9	-48.2												
180	09	47:00	78	14.5	009	10.2	0446	163.6	031	183	32975	32546	1.8	-0.8	-3.3	-49.2												
180	09	47:00	78	09.5	009	21.9	0439	163.8	030	185	32952	32538	1.7	-0.8	-3.6	-50.1												
180	09	49:00	78	02.7	009	13.6	0434	163.2	030	183	32961	32534	1.9	-0.9	-3.6	-50.6												
180	09	49:00	77	55.8	009	32.2	0432	163.4	029	177	32965	32557	1.9	-0.6	-3.1	-52.1												
180	09	50:00	77	48.9	009	42.2	0431	163.6	027	179	32968	32575	2.0	-0.9	-2.0	-51.3												
180	09	51:00	77	42.2	009	52.3	0430	163.8	025	181	32954	32600	2.0	-1.0	-2.2	-48.9												
180	09	52:00	77	35.3	010																							

ORIGINAL PAGE IS
OF POOR QUALITY

YEAR: 1984 ADDAS FLIGHT LOG --- FLIGHT NO. 11 --- MIZER
 ---TIME--- --LAT--- --LONG--- --HDG--- --ALT--- --MIXER
 SPD TRK SPD OIR PRES RADAR FTCH WIND IR AIR

180/09:54:00 77 21.8 010 20.4 0428 162.9 030 158 32557 32593 2.0 -0.5 -1.3 -47.3
 180/09:55:00 77 14.6 010 19.4 0426 162.7 030 151 32562 32640 2.0 -0.8 -0.7 -47.1
 180/09:56:00 77 08.1 010 19.4 0427 163.0 033 154 32561 32569 2.0 -1.0 -0.9 -49.1
 180/09:57:00 77 01.3 010 47.7 0428 163.0 031 151 32574 32615 1.6 -0.7 -1.3 -46.6
 180/09:58:00 76 54.4 010 56.8 0428 162.7 029 146 32944 32602 1.9 -0.9 -2.2 -46.0
 180/09:59:00 76 47.6 011 05.6 0431 162.5 030 140 32970 32554 1.8 -1.2 -7.9 -46.7
 180/10:00:00 76 40.7 011 13.9 0434 162.8 027 145 32979 32601 1.9 -0.9 -5.4 -48.3
 180/10:01:00 76 33.6 011 22.9 0437 162.9 028 143 32965 32607 1.9 -1.0 -2.5 -48.3
 180/10:02:00 76 26.6 011 31.1 0439 163.4 028 143 32942 32579 1.9 -0.7 -2.2 -47.7
 180/10:03:00 76 19.7 011 39.1 0440 163.4 032 146 32967 32567 1.8 -0.7 -4.2 -46.3
 180/10:04:00 76 12.7 011 47.6 0440 163.2 031 140 32974 32599 1.6 -0.8 -2.8 -47.7
 180/10:05:00 76 05.6 011 55.4 0439 163.6 032 147 32964 32585 1.6 -0.7 -2.8 -47.6
 180/10:06:00 75 03.0 012 03.7 163.5 036 146 32961 32581 1.7 -0.8 -3.0 -45.5
 180/10:07:00 75 51.6 012 10.7 0435 163.9 033 147 32951 32573 1.8 -0.6 -3.1 -45.4
 180/10:08:00 75 44.6 012 18.2 0434 164.0 032 147 32969 32600 1.6 -1.4 -2.6 -47.0
 180/10:09:00 75 37.6 012 25.8 0432 163.5 035 142 32958 32577 1.8 -1.1 -2.7 -45.4
 180/10:10:00 75 30.6 012 32.9 0431 163.8 036 144 32965 32569 1.8 -0.9 -3.0 -45.2
 180/10:11:00 75 23.7 012 40.2 0432 164.0 035 145 32965 32569 1.5 -0.7 -3.3 -47.0
 180/10:12:00 75 16.9 012 47.1 0431 164.1 033 144 32959 32569 1.6 -0.9 -2.3 -48.2
 180/10:13:00 75 09.7 012 54.3 0431 164.6 035 148 32973 32572 1.6 -1.1 -2.1 -45.1
 180/10:14:00 75 02.6 012 02.1 164.5 036 148 32965 32572 1.5 -0.7 -2.6 -42.1
 180/10:15:00 75 51.0 012 07.3 0431 164.2 036 148 32965 32579 1.5 -0.7 -2.6 -42.1
 180/10:16:00 74 42.1 013 14.2 0429 165.0 037 152 32973 32553 1.7 -0.7 -2.3 -45.7
 180/10:17:00 74 35.3 013 20.6 0429 165.1 034 151 32964 32578 1.6 -0.7 -2.3 -45.7
 180/10:18:00 74 28.3 013 26.8 0429 165.2 036 149 32966 32554 1.9 -0.5 -1.9 -46.2
 180/10:19:00 74 21.4 013 33.4 0428 165.4 035 151 32974 32538 1.9 -0.7 -2.9 -45.9
 180/10:20:00 74 14.4 013 39.4 0428 165.5 036 153 32964 32510 1.8 -0.9 -3.2 -44.9
 180/10:21:00 74 07.4 013 45.4 0427 165.9 038 157 32967 32536 1.9 -0.8 -2.8 -46.6
 180/10:22:00 74 00.4 013 51.4 0427 165.5 037 153 32962 32549 1.6 -0.6 -3.0 -45.2
 180/10:23:00 74 00.7 013 57.3 0427 165.6 036 149 32958 32503 1.9 -0.7 -3.0 -44.3
 180/10:24:00 72 02.9 0426 162.7 036 150 32958 32515 1.9 -0.5 -4.1 -44.5
 180/10:25:00 72 02.9 0426 162.7 036 150 32958 32515 1.9 -0.5 -4.1 -44.5
 180/10:26:00 72 39.8 014 19.8 0429 165.6 037 160 32961 32505 1.8 -0.7 -3.7 -42.5
 180/10:27:00 72 33.0 014 26.0 0428 165.5 037 147 32962 32495 1.8 -0.6 -2.6 -43.9
 180/10:28:00 72 26.0 014 32.4 0429 165.8 037 147 32973 32463 1.3 -1.1 -3.0 -43.3
 180/10:29:00 72 19.1 014 38.1 0429 166.3 037 153 32963 32469 1.6 -0.8 -2.0 -45.2
 180/10:30:00 72 12.2 014 44.1 0430 166.3 038 152 32964 32479 1.7 -0.7 -1.5 -44.3
 180/10:31:00 72 05.0 014 49.1 0430 166.0 038 147 32965 32474 1.7 -0.7 1.9 -43.1
 180/10:32:00 72 58.2 014 47.2 0430 166.0 038 146 32960 32431 1.6 -0.7 -3.1 -45.0
 180/10:33:00 72 51.2 014 52.1 0430 165.9 038 147 32960 32441 1.8 -0.7 -2.8 -44.8
 180/10:34:00 72 44.1 014 57.5 0431 166.2 039 147 32951 32424 1.6 -0.6 -2.6 -44.0
 180/10:35:00 72 37.1 015 00.0 0430 166.1 041 146 32966 32416 1.6 -0.7 -2.6 -44.4
 180/10:36:00 72 30.1 015 06.6 0430 166.2 040 146 32966 32419 1.7 -0.6 -3.7 -44.9
 180/10:37:00 72 23.1 015 12.4 0431 166.4 038 147 32956 32429 1.5 -1.1 -4.1 -43.5
 180/10:38:00 72 16.2 015 17.3 0432 166.9 035 150 32957 32393 1.7 -0.7 -4.0 -44.0
 180/10:39:00 72 09.4 015 21.9 0432 167.0 034 152 32968 32370 1.7 -0.9 -3.3 -44.8
 180/10:40:00 72 02.1 015 26.1 0433 167.1 033 151 32971 32412 1.6 -0.6 -4.3 -44.9
 180/10:41:00 71 55.0 015 27.2 0433 200.7 036 147 30803 30162 -2.8 -2.4 -3.8 -43.9
 180/10:42:00 71 48.0 015 32.8 0437 215.6 016 155 26547 30382 -5.4 -2.1 -3.5 -44.2
 180/10:43:00 71 41.1 015 38.1 0438 233.8 043 123 27553 26957 -22.9 -23.4 -4.0 -46.4
 180/10:44:00 71 34.1 015 43.6 0438 237.1 022 163 22960 22449 -2.1 -0.4 -2.9 -53.6
 180/10:45:00 71 27.1 015 49.0 0430 139.0 016 149 20481 20112 -1.9 -3.9 -1.8 -50.4
 180/10:46:00 71 20.1 015 54.6 0432 163.7 011 164 19584 18628 1.5 2.6 -2.1 -27.8
 180/10:47:00 71 13.1 015 59.9 0435 168.7 015 163 19399 19615 1.1 -1.2 -1.6 -28.4
 180/10:48:00 71 06.1 015 65.1 0439 168.3 014 153 19991 19405 0.9 1.6 -1.4 -27.3
 180/10:49:00 71 59.8 015 70.5 0438 177.5 015 163 19559 19593 1.1 -0.6 -1.5 -28.6
 180/10:50:00 70 52.3 015 75.9 0401 179.4 016 166 19937 19593 1.0 -0.7 -0.6 -27.5
 180/10:51:00 70 45.3 016 81.1 0401 177.1 018 158 19992 19612 1.1 -0.9 -1.0 -28.7
 180/10:52:00 70 38.5 016 86.6 0402 177.1 018 158 19992 19612 1.1 -0.9 -1.0 -28.7

180 10.01.83 ADDAS TAPES SKETCHED, EDT

YEAR 1984 ADDAS FLIGHT LOG --- FLIGHT NO. 11 --- N1ZEX											
TIME	LAT	LONG	GRD TRUE	WIND	ALTITUDE	SPD DIR	PRES	RADAR	PITCH	ROLL	TEMP
											IR AIR
180/10:53:00	70 42.0	016 08.1	0392	176.8	019	164	19990	19591	1.2	-0.5	-0.7 -29.6
180/10:54:00	70 35.7	016 08.1	0390	177.0	018	161	19991	19623	1.1	-0.6	-4.2 -29.4
180/10:55:00	70 29.3	016 08.1	0386	182.8	021	152	19999	19619	0.9	-10.9	-4.8 -28.1
180/10:56:00	70 23.0	016 08.0	0385	181.6	020	166	19959	19601	1.3	-2.9	1.2 -29.4
180/10:57:00	70 17.0	016 08.0	0382	179.5	018	169	19969	19600	1.4	-0.5	-0.6 -27.8
180/10:58:00	70 10.5	016 08.0	0378	182.5	017	176	19990	19606	1.5	-0.1	-4.5 -27.8
180/10:59:00	70 04.5	016 07.1	0377	182.1	018	167	19993	19615	1.4	-0.3	-0.0 -26.5
180/11:00:00	69 58.4	016 06.7	0376	179.9	019	157	19995	19603	1.4	-0.4	0.4 -29.6
180/11:01:00	69 51.8	016 06.6	0376	178.7	019	154	19997	19638	1.4	-0.6	2.4 -27.5
180/11:01:34	69 48.4	016 06.6	0376	178.6	018	152	19999	19618	1.3	-0.7	2.3 -27.2
180/11:02:00	69 45.6	016 06.4	0377	179.8	018	153	19997	19594	1.3	-0.7	2.1 -27.4
180/11:03:00	69 42.9	016 06.2	0378	179.7	017	150	19995	19622	1.3	-0.9	1.5 -28.6
180/11:04:00	69 40.0	016 06.2	0378	178.7	016	152	19997	19624	1.3	-0.3	2.3 -30.8
180/11:05:00	69 37.3	016 06.2	0378	178.7	016	152	19997	19624	1.3	-0.3	2.3 -30.8
180/11:05:36	69 35.1	016 06.2	0379	180.2	021	156	19996	19621	1.2	-0.7	2.5 -28.5
180/11:06:00	69 32.9	016 06.2	0379	180.2	021	156	19996	19621	1.5	-0.4	2.2 -28.1
180/11:06:30	69 30.7	016 06.2	0379	180.2	021	156	19996	19621	1.5	-0.4	2.2 -28.1
180/11:07:00	69 28.5	016 06.2	0379	180.2	021	156	19996	19621	1.5	-0.4	2.2 -28.1
180/11:07:30	69 26.3	016 06.2	0379	180.2	021	156	19996	19621	1.5	-0.4	2.2 -28.1
180/11:08:00	69 24.1	016 06.2	0379	180.2	021	156	19996	19621	1.5	-0.4	2.2 -28.1
180/11:08:30	69 21.9	016 06.2	0379	180.2	021	156	19996	19621	1.5	-0.4	2.2 -28.1
180/11:09:00	69 19.7	016 06.2	0379	180.2	021	156	19996	19621	1.5	-0.4	2.2 -28.1
180/11:09:30	69 17.5	016 06.2	0379	180.2	021	156	19996	19621	1.5	-0.4	2.2 -28.1
180/11:10:00	69 15.3	016 06.2	0379	180.2	021	156	19996	19621	1.5	-0.4	2.2 -28.1
180/11:10:30	69 13.1	016 06.2	0379	180.2	021	156	19996	19621	1.5	-0.4	2.2 -28.1
180/11:11:00	69 10.9	016 06.2	0379	180.2	021	156	19996	19621	1.5	-0.4	2.2 -28.1
180/11:11:30	69 08.7	016 06.2	0379	180.2	021	156	19996	19621	1.5	-0.4	2.2 -28.1
180/11:12:00	69 06.5	016 06.2	0379	180.2	021	156	19996	19621	1.5	-0.4	2.2 -28.1
180/11:12:30	69 04.3	016 06.2	0379	180.2	021	156	19996	19621	1.5	-0.4	2.2 -28.1
180/11:13:00	69 02.1	016 06.2	0379	180.2	021	156	19996	19621	1.5	-0.4	2.2 -28.1
180/11:13:30	69 00.0	016 06.2	0379	180.2	021	156	19996	19621	1.5	-0.4	2.2 -28.1

SOLID CLOUDS UNDERNEATH US.

TIME 11-05.17 LAT 6928.7 N LONG 01605.5 E FL 199

START OF RUN II FIRST REFLECTOR.

SECOND REFLECTOR.

THIRD REFLECTOR.

TIME 11-09.15 LAT 6500.1 N LONG 01604.3 E FL 199

END OF RUN II

3.9 Eighth Data Flight—Day 182—Evenes RT

All instruments were operational. The weather was exceptionally clear, permitting excellent photographic coverage.

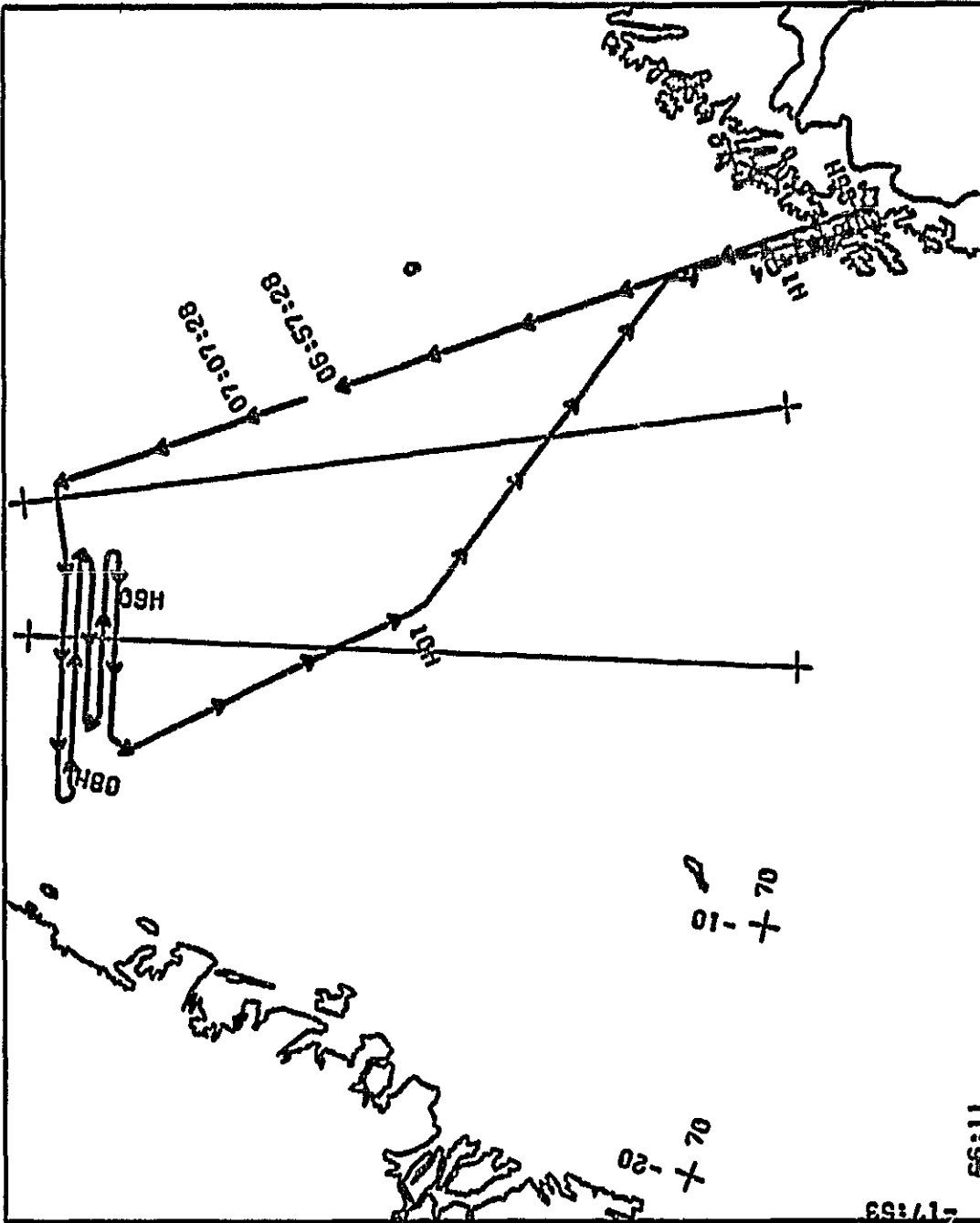
The original flight plan consisted of five 17-minute legs running east/west, starting at the north at $79^{\circ} 29.8' \text{N}$, $5^{\circ} 57.1' \text{E}$, and separated by 10 nm. This was to permit intersection with the predicted position of the Polarstern as of 2400 Z on 29 June. At the end of the fifth leg, the plan was to take a bearing of 315 degrees for a transect into heavy multiyear ice, but that had to be aborted in favor of extending legs one and two to $10^{\circ} 50' \text{W}$ in order to intersect with the actual position of the Polarstern as she was struggling through heavy ice at $79^{\circ} 24' \text{N}$, $10^{\circ} 42' \text{W}$ at 0733 GMT.

The 'head of the running dog' eddy encountered four days earlier was no longer recognizable. Indeed, the ill-defined edge of the ice pack was far to the west—at 2°W . A rather complicated eddy structure was present in the MIZ at this point. Location of the major eddy feature was radioed (by request) to Ola Johannessen onboard the Polarstern.

Multiyear ice signatures were indeed encountered, but not in compact ice. This was disappointing from the point-of-view of radiometry, but certainly not from the standpoint of ice dynamics.

This was our final data flight with the CV-990. We had hoped also to do a north-south transect of the East Greenland Sea sea ice on the way to Sondrestromfjord, but this had to be aborted since our long-standing reservations for overnighing there were suddenly cancelled just yesterday, for some cause not yet determined. This was particularly disappointing to us, since the last-minute changes required in today's flight precluded looking at the more compact multiyear ice to the south.

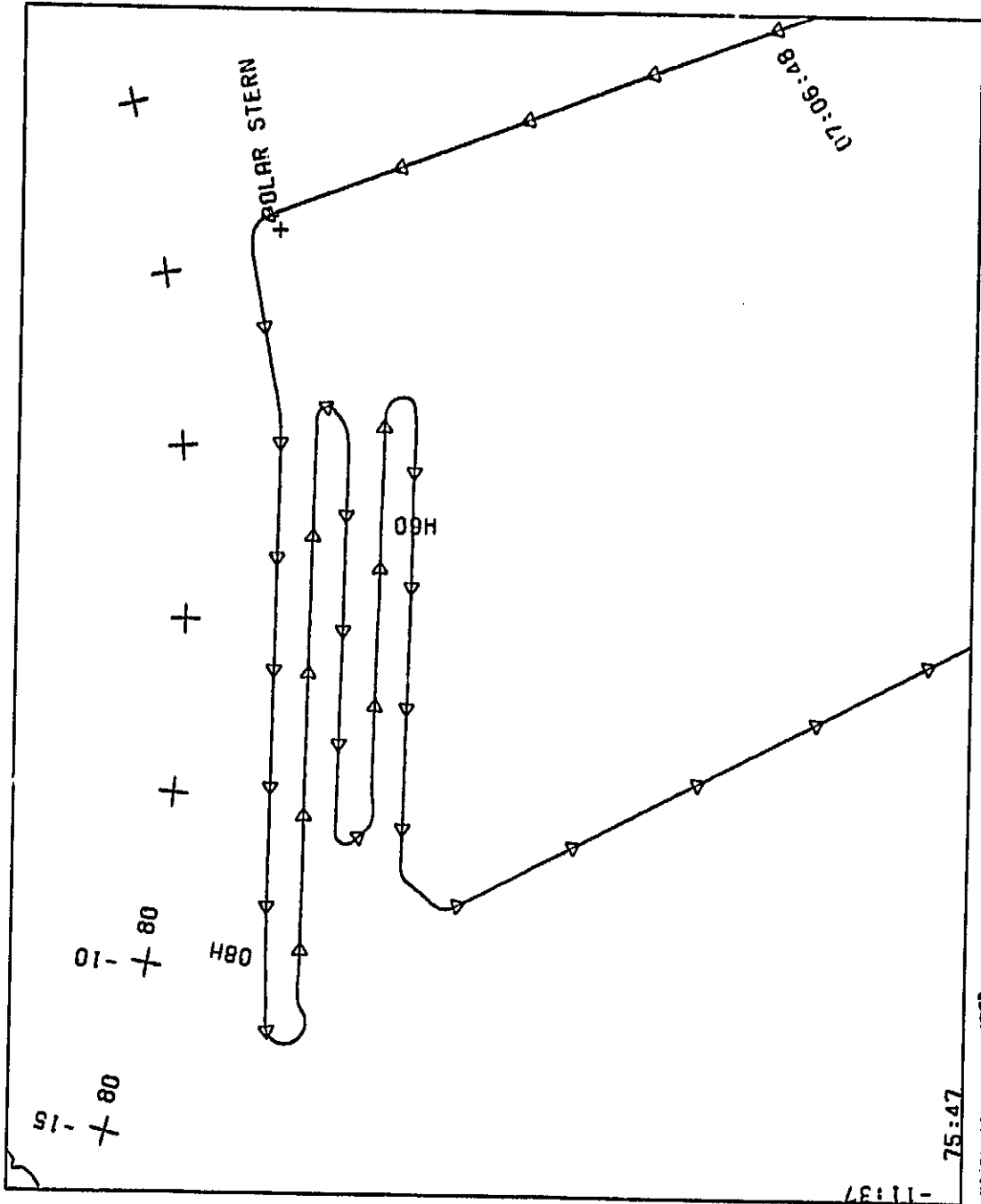
ORIGINAL PAGE IS
OF POOR QUALITY



FLY 012 JUNE 29, 1974 EVENES LOCAL
5:56:54 TO 11:39:52 UT SCALE = 1:16-282:08 TIME TICKS EVERY 10.69 MINUTES

Figure 23. Flight tracks: Evenes RT 6/29

ORIGINAL PAGE IS
OF POOR QUALITY



NIZEX '84 F1782 JUNE 30. 1984 EVENES LOCAL
7:01:39 TO 10:00:09 UT SCALE = 1:2.61E+06 TIME TICS EVERY 5 CO MINUTES

Figure 24. Mosaic pattern: 6/29

ORIGINAL PAGE IS
OF POOR QUALITY

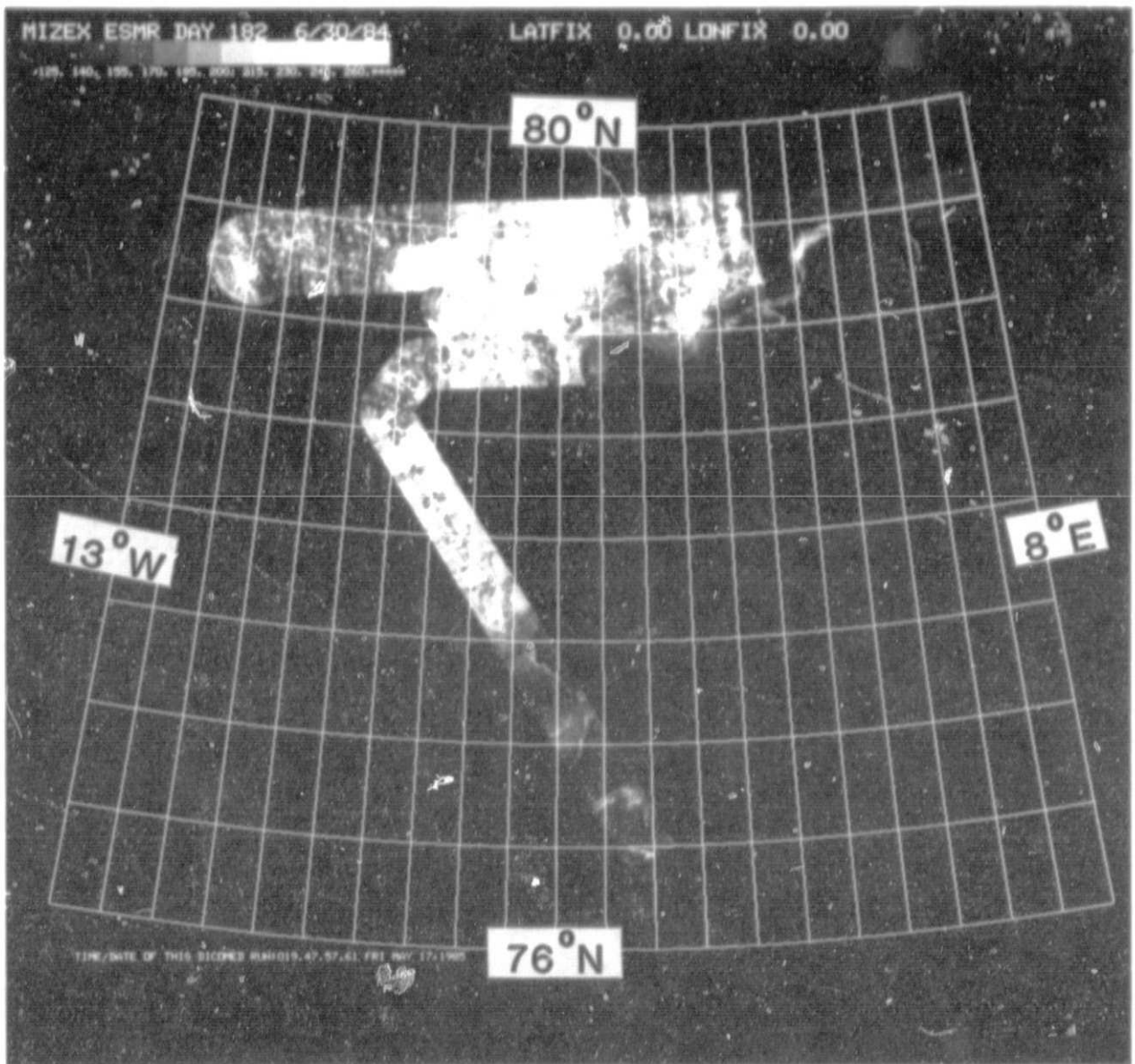


Figure 25. ESMR mosaic: 6/29

YEAR 1984 ADDAS FLIGHT LOGS		FLIGHT NO. 12		MIXER		ALTITUDE		TEMP		MIXER			
TIME	LAT	LONG	GPS TRU	KNOTS	SFD	DIR	DIR	PRE	BACAR	FITCH	RCIL	IR	AIR
182/06:21:46	71 02.2	015 59.9	C42	003.4	069	118	32977	32668	2.5	0.1	-2.1	-49.8	53.0077.
182/06:22:00	71 02.9	015 59.2	C45	003.8	059	110	33012	32705	2.4	0.3	-1.5	-49.8	
182/06:22:30	71 03.2	015 58.4	C44	003.4	067	113	33011	32781	2.5	1.0	-1.9	-49.8	F
182/06:22:40	71 03.4	015 58.2	C43	003.9	058	119	32977	32697	2.4	-1.1	-1.4	-49.8	
182/06:23:00	71 03.6	015 57.8	C45	003.3	065	119	32977	32697	2.4	-1.1	-1.4	-49.8	
182/06:25:00	71 29.8	015 52.0	C51	000.1	061	114	32972	32716	2.4	-0.7	-2.7	-49.6	
182/06:26:00	71 31.1	015 48.2	C47	000.3	059	112	32966	32729	2.4	-0.4	-4.6	-49.7	
182/06:27:00	71 45.4	015 45.5	C44	359.8	057	115	32971	32749	2.5	-0.6	-4.2	-50.2	
182/06:28:00	71 55.4	015 42.4	C42	359.4	054	115	32951	32755	2.5	-0.6	-4.0	-51.3	
182/06:29:00	72 01.6	015 39.7	C45	358.8	050	114	32976	32814	2.4	-0.5	-2.6	-49.5	
182/06:30:00	72 09.7	015 36.8	C45	353.4	047	115	32959	32836	2.4	-0.4	-2.7	-49.5	
182/06:31:00	72 17.9	015 34.9	C48	352.1	044	116	32971	32856	2.4	-0.7	-3.4	-50.3	
182/06:32:00	72 22.9	015 33.8	C46	352.1	041	116	32971	32856	2.4	-0.7	-3.4	-50.3	
182/06:33:00	72 33.8	015 32.7	C45	357.3	039	113	32973	32855	2.3	-0.5	-2.1	-51.4	
182/06:34:00	72 41.8	015 31.4	C45	357.3	037	117	32973	32857	2.3	-0.4	-5.4	-51.1	
182/06:35:00	72 49.9	015 24.4	C43	357.0	033	111	32966	32850	2.4	-0.8	-2.0	-51.1	
182/06:36:00	72 57.8	015 18.5	C41	356.9	031	109	32976	32859	2.2	-0.8	-5.7	-49.7	
182/06:37:00	73 05.7	015 15.2	C45	356.6	030	103	32975	32859	2.4	-0.6	-1.6	-49.7	
182/06:38:00	73 13.7	015 12.2	C42	356.6	029	104	32971	32859	2.2	-0.6	-1.9	-52.1	
182/06:39:00	73 21.5	015 03.8	C42	356.1	028	093	32953	32859	2.5	-0.6	-2.2	-49.3	
182/06:40:00	73 29.3	015 05.4	C47	355.6	022	097	32965	32857	2.4	-0.9	-1.4	-49.5	
182/06:41:00	73 37.0	015 02.7	C48	355.3	017	091	32955	32819	2.4	-0.9	-1.7	-50.8	
182/06:42:00	73 44.6	014 50.7	C46	355.0	015	095	32971	32852	2.4	-0.3	-0.9	-50.8	
182/06:43:00	73 52.1	014 55.5	C48	354.8	014	071	32946	32971	2.2	-0.5	-2.7	-49.2	
182/06:44:00	74 00.0	014 51.9	C46	354.1	010	034	32959	32977	2.5	-0.6	-3.3	-51.1	
182/06:45:00	74 07.4	014 48.6	C46	354.0	010	050	32957	32976	2.5	-0.5	-3.3	-51.1	
182/06:46:00	74 14.8	014 45.0	C45	353.8	011	048	32959	32976	2.4	-0.3	-2.9	-49.3	
182/06:47:00	74 22.0	014 41.4	C47	353.6	013	030	32959	32953	2.3	-0.4	-3.2	-50.4	
182/06:48:00	74 30.1	014 37.9	C45	353.5	014	048	32953	32970	2.4	-0.8	-2.8	-50.1	
182/06:49:00	74 37.5	014 34.5	C45	353.6	017	019	32977	32911	2.4	-0.8	-2.5	-51.5	
182/06:50:00	74 45.1	014 30.7	C40	353.6	016	039	32946	32974	2.4	-0.9	-2.0	-49.9	
182/06:51:00	74 52.9	014 27.0	C40	353.0	016	023	32972	32992	2.5	-0.9	-1.8	-51.5	
182/06:52:00	75 00.7	014 23.9	C43	352.1	021	018	32961	32913	2.5	0.0	-3.5	-50.5	
182/06:53:00	75 08.5	014 20.8	C42	352.9	021	018	32948	32993	2.5	0.0	-2.9	-49.1	
182/06:54:00	75 16.3	014 17.6	C42	352.9	023	009	32943	33006	2.4	-0.5	-4.9	-51.1	
182/06:55:00	75 24.1	014 14.5	C44	353.3	023	015	32957	33014	2.1	-0.3	-5.0	-50.9	
182/06:56:00	75 31.8	014 11.4	C42	353.4	024	016	32955	33022	2.5	-0.4	-4.9	-49.7	
182/06:57:00	75 39.5	014 08.5	C41	353.4	023	017	32962	33013	2.4	-0.9	-4.9	-49.3	
182/06:58:00	75 47.3	014 05.5	C41	353.2	021	017	32969	33031	2.3	-0.7	-5.2	-49.3	
182/07:01:32	76 00.0	014 02.0	C40	352.0	023	009	32943	33006	2.4	-0.5	-4.9	-51.1	
182/07:01:52	76 07.7	014 02.2	C42	352.7	019	014	32964	33021	2.4	-0.7	-4.9	-49.2	
182/07:02:00	76 15.8	014 01.6	C42	352.7	019	014	32964	33021	2.4	-0.7	-4.9	-49.2	
182/07:02:02	76 23.9	014 01.3	C41	352.7	019	014	32959	33016	2.4	-0.7	-4.9	-50.0	
182/07:02:14	76 32.1	013 40.9	C42	352.6	016	017	32977	33046	2.4	-0.7	-4.9	-50.0	
182/07:02:26	76 40.3	013 39.7	C43	352.6	017	015	32959	33021	2.4	-0.6	-4.4	-50.0	
182/07:02:52	76 48.5	013 38.2	C42	352.7	017	015	32952	33019	2.4	-0.6	-4.4	-50.0	
182/07:03:00	76 56.7	013 37.5	C42	352.5	017	015	32952	33019	2.4	-0.7	-4.9	-50.7	
182/07:04:00	76 64.9	013 36.8	C41	352.8	016	042	32982	33030	2.5	-0.6	-4.9	-50.7	
182/07:05:00	76 73.1	013 36.1	C46	352.8	013	042	32982	33030	2.5	-0.6	-4.9	-50.7	
182/07:06:00	76 81.3	013 35.4	C43	352.4	010	030	32964	33022	2.4	-0.7	-4.9	-51.2	
182/07:07:00	76 89.5	013 34.7	C45	352.0	009	018	32970	33040	2.4	-0.9	-5.2	-50.8	
182/07:07:12	76 97.7	013 34.0	C43	352.0	009	020	32957	33042	2.6	-0.9	-4.7	-51.0	
182/07:08:00	76 105.9	013 33.3	C45	352.0	010	025	32952	33028	2.4	-0.9	-4.7	-51.0	
182/07:09:00	76 114.1	013 32.6	C43	351.9	009	021	32964	33025	2.3	-0.5	-4.5	-50.6	
182/07:09:58	77 02.7	013 05.3	C45	351.6	005	020	32970	33029	2.3	-0.6	-3.7	-49.9	
182/07:10:00	77 10.9	013 04.6	C45	351.7	003	048	32970	33033	2.3	-0.6	-3.1	-50.0	
182/07:11:00	77 19.1	013 03.9	C45	351.8	003	046	32971	33031	2.4	-0.7	-2.9	-51.6	
182/07:12:00	77 27.3	013 03.2	C45	351.8	003	041	32971	33031	2.4	-0.7	-2.9	-51.6	
182/07:13:00	77 35.5	013 02.5	C43	350.5	004	266	32966	33039	2.3	-0.6	-3.6	-48.8	

ACROSS FRAMELEN REMAINED WITH EXEC SYSTEM.

ACROSS HEIGHT CORN CS 51 SW AND BACK UP AT CS 5A 17.

SURFACE WIND ARE OUT OF THE NORTH/EAST AT ABOUT 50 KNOTS. CLEAR BELOW.

ACROSS HEIGHT CORN CS 5B 12 AND BACK UP AT 07 03 57. 2 KNOTS - SURFACE WINDS 07 00 25. CLEAR HAVE PATTERN - 10 WHITE CAPS 07 00 49.

THE STREAMERS 07 01 25. 5 CH 6 KNOTS - SURFACE WINDS. CEMERAS ON 07 07 03.

OVER BIOLOGICAL PLUMES.

OF POOR QUALITY

YEAR 1934 AODAS FLIGHT LOGS --- FLIGHT NO. 12 --- ALTITUDE --- MILES --- TIME ---

Table with columns: TIME, AODAS, FLIGHT NO., ALTITUDE, MILES, and various other data points. Includes handwritten annotations like 'A DEPT OF US - STENOED - DEE FLICE.', '79 283 LCH 10 43H FOLAR STEAD.', and 'START OF RUN 1 WIDE 07.37.21 LAT FEB. 7 10 LCH CD2A.2 E FL 589'. The table contains 48 rows of data.

YEAR 1984 ADMAS FLIGHT LOG --- FLIGHT NO. 12 --- MIKEX
 ---TIME--- --LAT-- --LONG-- --HDG-- --ALTITUDE-- --TEMP---
 ---TIME--- --LAT-- --LONG-- --HDG-- --ALTITUDE-- --TEMP---
 SPD DIR PRES RADAR PITCH ROLL IR AIR

182/07:52:30 79 21.5-004 17.1 0414 262.1 046 224 32974 32552 2.5 -0.4 -19.1 -46.8 CAN SEE ICE CUT LOOKS HAZY.

182/07:53:00 79 21.1-004 16.0 0420 261.7 047 222 32972 32547 2.4 -0.5 -2.7 -46.8

182/07:54:00 79 20.7-005 15.0 0426 261.8 042 225 32975 32556 2.2 -0.8 -9.6 -46.3 LARGE 30 MILE OR SO MULTIVEAR FLICE, 15 MILES SOUTH OF THE AIRCRAFT.

182/07:54:20 79 20.4-005 14.3 0421 261.9 041 230 32966 32564 2.2 -0.4 -19.8 -45.5 RADAR READINGS FROM PARE - RADIO 41 - ZENITH.

182/07:54:46 79 20.1-005 13.6 0423 262.2 039 231 32959 32564 2.4 -0.4 -19.1 -46.4

182/07:55:00 79 20.0-005 12.6 0424 262.0 039 233 32965 32565 2.4 -0.5 -3.9 -45.6 STILL IN LIGHT PATCHY CLOUD COVER.

182/07:55:24 79 19.7-006 11.9 0427 261.6 038 230 32969 32571 2.4 -0.9 -3.5 -46.3 ESTER SHOWING NICE MULTIVEAR ICE.

182/07:55:40 79 19.5-006 11.0 0428 261.7 037 230 32972 32572 2.2 -0.7 -6.6 -47.0

182/07:56:00 79 19.3-007 10.2 0430 261.1 036 233 32974 32574 2.1 -0.8 -5.6 -46.5 40 MILES DIAMETER 30 PERCENT ICE COVER NORTH OF THE AIRCRAFT - 20 MILES.

182/07:56:50 79 18.6-007 03.9 0430 261.0 036 235 32972 32493 2.0 -0.5 -6.2 -47.9 BROKEN ICE.

182/07:57:38 00 0.0 000 000.0 000 000 000 000 000 2.4 -0.8 -3.4 -47.6 ADMAS DOWN 07 56 52 AND BACK UP 07 57 39.

182/07:57:50 79 27.7-007 42.3 0433 260.7 034 237 32966 32490 2.0 -0.8 -1.9 -46.3

182/07:58:00 79 27.7-007 49.5 0434 260.5 033 238 32965 32493 2.5 -1.5 -1.2 -46.1

182/07:59:00 79 26.5-008 23.0 0436 259.4 032 240 32950 32479 2.5 -0.5 -1.2 -46.1

182/08:00:00 79 25.3-009 04.3 0436 258.9 030 243 32973 32485 2.1 -0.9 -1.2 -45.2

182/08:01:00 79 24.2-009 05.7 0440 258.3 028 247 32955 32485 2.2 -0.9 -1.6 -48.4

182/08:01:32 79 23.2-010 08.6 0440 258.2 027 246 32957 32473 2.0 -0.7 -1.3 -45.8 ICE FLICE LARGER - MUCH GREATER MELT STRUCTURE AT THIS POINT.

182/08:01:54 79 23.2-010 08.6 0440 258.1 027 248 32957 32473 2.0 -0.7 -1.3 -45.9 COVER 50 PERCENT ICE.

182/08:02:00 79 22.5-010 24.6 0440 258.1 029 250 32950 32469 2.0 0.0 -1.2 -45.4

182/08:02:54 79 21.2-010 59.2 0441 258.0 030 251 32950 32463 2.7 -3.4 -1.2 -44.8 III END OF RUN 1 TIME 03.02.55 LAT 7921.1 N LONG 01103.8 W FL 329

182/08:03:00 79 21.0-011 03.0 0440 255.6 030 241 32959 32514 2.3 -2.9 -1.6 -45.6 SOME GREASE ICE IN THE SD CALLED "OPEN WATER".

182/08:03:50 79 16.9-011 25.2 0446 194.7 023 234 32954 32524 2.5 -0.2 -1.9 -49.2

182/08:04:00 79 15.5-011 26.1 0453 181.9 017 240 32975 32517 2.6 -28.3 -1.9 -47.4 STREMS EVIDENCE OF GREASE ICE IN THIS AREA.

182/08:05:00 79 11.0-011 02.9 0478 110.4 021 250 32947 32476 3.4 -27.9 -2.2 -44.9

182/08:05:54 79 11.0-011 27.4 0475 045.2 022 252 32933 32476 1.4 -0.6 -1.4 -45.7 75 PERCENT ICE COVER.

182/08:06:00 79 11.0-011 25.0 0481 045.9 021 236 32877 32439 3.5 29.2 -1.7 -43.1

182/08:06:32 79 13.7-010 04.1 0481 077.0 020 242 32907 32470 2.3 0.0 -1.3 -46.3 51 MILES SOUTH OF ICE FREE AREA - POLYNIA.

182/08:07:00 79 14.3-009 43.7 0481 083.7 021 244 32942 2.3 0.0 -1.6 -46.0

182/08:08:00 79 15.4-009 01.8 0483 083.1 022 241 32958 32499 2.2 -0.8 -2.1 -46.1 PATCHY CLOUDS AT ALTITUDE ON STARBOARD SIDE. LAT 7916.2 N LONG 00324.2 W FL 329

182/08:08:16 79 16.2-008 34.2 0483 083.0 023 240 32972 32502 2.3 -0.2 -2.9 -44.2

182/08:08:40 79 16.2-008 34.2 0483 083.0 023 240 32972 32502 2.3 -0.2 -2.9 -44.2

182/08:09:00 79 16.2-008 34.2 0483 083.3 023 240 32968 32502 2.3 0.0 -2.8 -44.8

182/08:10:00 79 17.5-007 51.6 0483 084.3 023 232 32968 32502 2.3 0.0 -2.2 -46.2

182/08:10:10 79 17.6-007 29.4 0488 084.6 027 234 32948 32496 2.1 -0.1 -3.0 -45.7 GOING FROM 50 PERCENT ICE TO 60 PERCENT ICE.

182/08:10:34 79 17.6-007 27.2 0488 084.8 027 234 32952 32497 2.4 -0.3 -20.3 -47.0 ALL MULTIVEAR FLOES.

182/08:11:00 79 18.5-006 52.9 0450 085.5 023 231 32969 32532 2.2 -0.8 -21.9 -46.5

182/08:11:18 79 18.9-006 39.5 0450 085.8 029 229 32974 32550 2.1 -0.8 -18.8 -46.7 OVER FULL CLOUD COVER.

182/08:12:00 79 19.3-006 09.7 0492 086.5 031 223 32957 32520 2.0 -1.4 -15.1 -45.2

182/08:13:00 79 20.4-005 24.6 0494 087.0 033 222 32964 32535 2.2 0.7 -14.6 -45.5

182/08:14:00 79 21.0-004 40.8 0496 088.8 036 218 32957 32518 1.8 -0.2 -21.2 -47.6

182/08:15:00 79 21.9-003 39.5 0497 089.0 035 216 32962 32514 1.8 -0.5 -2.2 -47.4

182/08:15:30 79 22.0-003 24.5 0497 090.7 041 212 32975 32530 1.9 -0.7 -2.1 -47.4 20 PERCENT CLOUD OCCULTION, 80 PERCENT ICE OCCULTION 5 MILE DIAMETER FLOES.

182/08:16:00 79 22.0-003 11.4 0497 091.5 043 209 32967 32554 1.9 0.3 -3.7 -46.0

182/08:17:00 79 22.4-002 12.2 0497 092.5 044 211 32963 32541 1.8 1.2 -5.3 -49.2

182/08:18:00 79 22.9-001 42.3 0500 092.9 049 220 32952 32533 1.9 -1.1 -2.1 -51.6

182/08:19:00 79 22.9-000 56.7 0502 094.1 047 214 32962 32546 1.9 -0.6 -1.4 -48.2

182/08:19:02 79 22.6-000 55.5 0502 094.1 045 213 32969 32552 1.9 -0.4 -1.4 -49.0 PARE HAS BEEN HIS FAMOUS EDDIE OUT OF MIND - NOT NELSON EDDIE!!!!.

182/08:19:18 79 22.9-000 43.1 0502 094.5 047 210 32964 32548 1.8 -1.0 -1.3 -48.4 3.4 SECOND MILES FROM 1.2 DEGREES.

182/08:20:00 79 22.6-000 43.1 0502 094.5 047 210 32964 32548 1.8 -1.0 -1.3 -48.4

182/08:20:30 79 22.6-000 43.1 0502 094.5 047 210 32964 32548 1.8 -1.0 -1.3 -48.4

182/08:21:00 79 22.6-000 43.1 0502 094.5 047 210 32964 32548 1.8 -1.0 -1.3 -48.4

182/08:21:32 79 22.6-000 43.1 0502 094.5 047 210 32964 32548 1.8 -1.0 -1.3 -48.4

182/08:22:00 79 22.6-001 10.2 0497 097.8 057 205 32971 32614 1.8 -0.3 -1.1 -49.2

182/08:23:00 79 22.4-002 02.6 0495 099.8 050 207 32969 32615 1.9 -0.5 -1.2 -50.0

182/08:23:08 79 22.1-002 07.7 0495 099.0 060 207 32965 32665 1.7 -0.9 -1.6 -49.8 EASTERN EDGE OF ICE PATTERN.

182/08:23:24 79 22.1-002 19.6 0495 100.6 064 205 32959 32681 1.9 -0.5 0.4 -49.6 ICE EDDIE IS STILL OFF ON OUR STARBOARD SIDE.

182/08:23:52 79 22.0-002 41.7 0495 109.4 067 208 32964 32690 1.8 -0.4 -0.0 -51.4 ENTERING 85 PERCENT LOW CLOUD COVER.

YEAR 1984 ACAS FLIGHT LOG	FLIGHT NO.	LAT	LONG	HEZEX ALTITUDE PRES QDADR	SPD DIR	SPD HEAD	WIND	IR	TEMP	IR	TEMP
TIME	LOC			FT	DIR	KT	DIR		IR		IR
182/08:24:00	79 21.6	082	46.9	0495	100.5	067	208	32953	32697	1.9	-0.6
182/08:25:00	79 21.5	083	31.8	0496	101.5	069	205	32953	32682	1.9	-0.4
182/08:26:00	79 20.9	084	16.1	0497	102.1	068	209	32957	32752	2.0	-0.9
182/08:27:00	79 20.2	085	00.1	0495	102.2	064	213	32959	32767	2.0	-0.6
182/08:27:56	79 19.7	085	26.0	0493	102.2	063	213	32960	32802	2.1	-3.4
182/08:28:54	79 19.2	085	38.7	0490	127.2	075	212	33187	33033	2.8	44.9
182/08:29:00	79 19.6	085	42.7	0492	128.2	080	216	33134	33076	2.5	44.3
182/08:29:30	79 19.0	085	29.0	0491	127.8	079	215	32929	32704	2.2	2.6
182/08:30:00	79 18.6	085	20.0	0492	127.9	079	215	32930	32704	2.2	2.6
182/08:30:56	79 18.0	084	28.5	0492	128.1	079	215	32930	32704	2.2	2.6
182/08:31:00	79 11.0	084	20.0	0494	126.1	069	215	32958	32820	1.9	0.6
182/08:31:00	79 11.0	084	25.2	0494	126.4	067	217	32959	32815	1.9	0.6
182/08:31:50	79 11.5	083	55.4	0497	126.6	072	213	32964	32763	2.0	-0.8
182/08:32:00	79 11.5	083	48.9	0497	126.6	072	213	32969	32778	2.0	-0.8
182/08:33:00	79 12.0	083	12.1	0497	126.5	074	212	32959	32761	2.1	-0.4
182/08:33:52	79 12.3	082	40.3	0497	126.5	067	211	32954	32748	2.1	-1.0
182/08:34:00	79 12.3	082	34.2	0497	126.5	069	215	32952	32728	2.1	-0.2
182/08:35:00	79 12.7	081	57.9	0496	126.5	068	214	32966	32676	2.1	-0.9
182/08:35:30	79 12.8	081	52.8	0496	126.5	068	214	32962	32697	2.3	-0.6
182/08:36:00	79 12.8	081	47.4	0496	126.5	068	214	32962	32697	2.3	-0.6
182/08:36:46	79 12.9	081	21.8	0495	126.9	068	212	32968	32714	2.3	-0.7
182/08:36:46	79 13.0	081	15.8	0495	126.5	061	213	32969	32665	2.2	-0.9
182/08:36:42	79 13.0	081	55.0	0495	126.6	059	211	32957	32655	2.4	-0.9
182/08:37:00	79 13.1	080	43.7	0495	126.4	058	210	32947	32668	2.5	-0.3
182/08:38:00	79 13.2	080	07.7	0495	126.4	058	212	32964	32635	2.4	-0.8
182/08:39:00	79 13.2	080	29.1	0494	126.4	054	216	32960	32622	2.2	-0.4
182/08:40:00	79 13.1	081	06.2	0494	126.4	053	217	32969	32622	2.4	-1.2
182/08:41:00	79 13.0	081	24.5	0493	126.2	052	214	32950	32600	2.4	-0.5
182/08:42:00	79 12.9	081	30.0	0492	126.3	052	213	32954	32591	2.5	-0.3
182/08:42:08	79 12.8	082	20.8	0493	126.3	054	214	32954	32589	2.5	-0.7
182/08:43:14	79 12.8	082	27.9	0493	126.3	054	222	32969	32598	2.2	-0.6
182/08:43:00	79 12.7	082	56.7	0495	126.2	056	212	32964	32600	2.4	-0.7
182/08:43:46	79 12.3	083	23.8	0496	126.2	045	219	32976	32599	2.3	-0.9
182/08:44:00	79 12.3	083	32.8	0496	126.2	046	219	32960	32594	2.3	-0.7
182/08:45:00	79 11.8	084	09.1	0497	126.2	042	227	32957	32575	2.3	-0.5
182/08:45:52	79 11.5	084	41.3	0497	126.3	039	228	32959	32557	2.3	-0.9
182/08:46:00	79 11.4	084	46.5	0497	126.2	039	229	32959	32568	2.3	-0.6
182/08:46:24	79 11.4	084	53.0	0496	126.2	038	229	32959	32568	2.3	-0.6
182/08:47:00	79 10.7	085	33.8	0496	126.2	037	235	32956	32558	2.0	-0.4
182/08:47:16	79 10.7	085	33.8	0496	126.2	037	235	32959	32558	2.0	-0.4
182/08:48:00	79 08.2	085	54.1	0494	130.3	057	215	33148	32016	2.9	-42.9
182/08:49:00	79 02.6	085	30.9	0461	134.6	036	232	33157	32769	1.0	0.5
182/08:50:00	79 01.5	084	53.2	0502	082.9	031	226	32955	32943	1.5	-47.1
182/08:50:40	79 01.3	084	24.4	0502	086.0	034	218	32951	32531	1.7	2.3
182/08:51:00	79 01.6	084	10.1	0501	088.4	039	219	32953	32534	1.7	1.5
182/08:51:02	79 02.1	084	08.7	0501	088.7	038	218	32944	32533	1.8	1.5
182/08:51:52	79 02.1	083	31.8	0500	091.0	040	214	32970	32560	1.6	-0.7
182/08:52:00	79 02.1	083	25.1	0500	091.1	040	214	32964	32566	1.7	-0.6
182/08:52:06	79 02.2	083	21.8	0499	091.1	040	214	32965	32566	1.7	-0.4
182/08:52:44	79 02.3	082	54.5	0499	092.1	045	215	32960	32586	1.6	-1.1
182/08:53:00	79 02.3	082	42.3	0499	091.9	045	215	32962	32558	1.6	-0.8
182/08:53:28	79 02.6	082	22.3	0497	091.7	059	220	32959	32562	1.9	-0.9
182/08:54:00	79 02.8	081	59.8	0497	092.7	044	217	32959	32580	2.0	-0.6
182/08:54:52	79 02.8	081	36.4	0496	093.3	046	219	32962	32574	1.6	-0.5
182/08:55:00	79 02.9	080	32.1	0499	094.9	033	216	32946	32590	1.9	-0.9
182/08:56:00	79 02.9	080	32.1	0499	094.9	033	216	32946	32590	1.9	-0.1
182/08:57:00	79 02.8	080	11.3	0497	097.5	056	213	32991	32630	1.7	0.1
182/08:58:00	79 02.6	080	54.6	0497	096.8	053	212	32956	32653	1.6	-2.6
182/08:59:00	79 02.3	081	37.7	0495	097.1	056	218	33056	32753	1.6	-50.8
182/09:00:00	79 02.1	082	20.5	0496	098.3	059	218	33000	32761	1.4	-0.2
182/09:00:52	79 01.8	082	58.2	0497	100.6	064	215	32969	32760	1.9	-0.4

LAT 7919.6 N LONG 0327.7 E FL 329

LAT 7911.0 N LONG 03428.8 E FL 324

LAT 7910.7 N LONG 03233.8 W FL 329

LAT 7903.6 N LONG 03403.7 W FL 329

END OF RUN 2 TIME 03:27.57
50 DEGREE TURN TO THE RIGHT.

END OF RUN 3 TIME 03:50.55
END PERCENT CLOUD COVER BELOW M.

END OF RUN 4 TIME 03:51.01
HARDER MULTILAYER FLOES, ABOUT 80 PERCENT.

END OF RUN 5 TIME 03:51.01
10 TO 15 PERCENT THIN CLOUDS.

END OF RUN 6 TIME 03:51.01
OVER NORTH WEST CORNER OF THE EDDIE STRUCTURE.

END OF RUN 7 TIME 03:51.01
INTERVAL WAVE PATTERN.

END OF RUN 8 TIME 03:51.01
REGION OF 10 TO 160 METER FLOES, NORTHERN BOUNDARY OF THE EDDIE.

END OF RUN 9 TIME 03:51.01
AREA OF BROKEN CLOUD.

PASSING A REGION OF 70 TO 80 METERS OF ICZ PATCHES.
CLEAR CONVULSIONS.

MIXTURE OF FIRST YEAR AND MULTILAYER ICE.
CORRECT: IN: ICE FLOES.

TRANSITION FROM SMALL
MULTILAYER FLOES TO LARGER FLOES.

LARGE MULTILAYER FLOES GOOD BUILDING STRUCTURES A FEW FEET APART.

LARGE MULTILAYER FLOES AHEAD AND TO THE SOUTH OF US.

LEAD OF FLOES SMALL PUSHED AWAY FROM THE HUDS.

END OF RUN 3 TIME 03:47.15
SURFACE STRUCTURE LOOKS LIKE ICE.

END OF RUN 4 TIME 03:51.01
HARDER MULTILAYER FLOES, ABOUT 80 PERCENT.

END OF RUN 5 TIME 03:51.01
OVER NORTH WEST CORNER OF THE EDDIE STRUCTURE.

YEAR 1924 ANDAS FLIGHT LOG 12 FLIGHT NO. 12 --- ALTITUDE --- MIZEK
 ---TIME--- --LAT-- --LON-- --HDG-- --TRK-- --SPO-- --DIR-- --PRES-- --BEAR-- PITCH ROLL IR AIR ---TEMP---
 182/09:01:00 79 01.6 003 04.9 0497 100.0 064 216 32994 32706 2.1 -1.0 -0.7 -52.4
 182/09:02:00 79 01.4 003 04.9 0493 101.4 067 219 33047 32693 2.0 -2.0 -0.8 -51.6
 182/09:03:00 79 00.4 004 30.9 0504 101.1 064 219 32925 32768 1.8 -1.1 0.3 -51.6
 182/09:04:00 78 59.6 005 15.1 0505 101.5 061 223 32944 32826 1.3 -0.1 0.1 -52.6
 182/09:04:02 78 59.5 005 16.8 0506 101.9 062 222 32932 31791 1.5 0.1 0.7 -53.0
 182/09:05:00 78 58.5 005 51.2 0439 150.4 070 225 33059 32849 2.0 20.1 -7.5 -50.9
 182/09:06:00 78 50.4 005 04.0 0400 245.8 084 230 32822 32793 1.9 31.1 -8.2 -52.2
 182/09:07:00 78 50.4 005 07.6 0305 240.0 080 230 32822 32793 1.7 -0.4 0.9 -51.4
 182/09:08:51 78 51.7 004 01.6 0423 268.6 087 222 33016 32692 1.8 -0.4 0.9 -51.4
 182/09:09:01 78 51.9 003 55.4 0424 268.3 070 222 33033 32683 1.6 -0.4 0.2 -51.8
 182/09:09:37 78 52.4 003 33.3 0425 268.1 072 221 32968 32766 1.6 0.1 -0.3 -52.2
 182/09:10:01 78 52.4 003 19.7 0426 267.9 072 219 32933 32756 1.6 1.4 -0.4 -51.7
 182/09:11:01 78 52.4 002 43.5 0420 265.0 066 221 32933 32744 1.9 0.9 0.3 -51.9
 182/09:12:01 78 52.9 032 06.7 0418 265.7 062 220 32933 32732 1.8 -0.6 -0.2 -49.6
 182/09:13:01 78 53.0 001 30.9 0437 265.6 063 218 32952 32750 1.9 -0.4 2.4 -49.4
 182/09:13:35 78 53.1 001 04.9 0437 265.5 061 218 32927 32707 2.0 -0.4 1.9 -49.9
 182/09:14:01 78 53.2 000 15.4 0430 262.4 058 220 32976 32682 2.0 -0.4 1.0 -50.4
 182/09:15:01 78 53.3 000 17.1 0421 265.3 054 223 32966 32636 2.0 -0.7 -5.0 -50.3
 182/09:16:01 78 53.4 -003 17.1 0421 265.3 054 223 32966 32636 2.0 -0.7 -5.0 -50.3
 182/09:16:13 78 53.4 -003 24.6 0422 265.4 053 226 32960 32627 1.7 -0.5 -1.0 -49.9
 182/09:17:01 78 53.3 -002 26.3 0423 265.3 050 226 32967 32631 1.9 -0.5 -0.9 -52.1
 182/09:17:33 78 53.3 -001 12.9 0423 265.5 047 227 32946 32614 1.9 -0.4 -4.7 -53.0
 182/09:18:01 78 53.2 -001 30.4 0425 265.8 046 229 32952 32602 1.8 -0.7 -6.7 -50.6
 182/09:18:43 78 53.2 -001 55.3 0425 264.5 047 225 32947 32610 2.2 -0.1 -6.7 -50.6
 182/09:18:45 78 53.1 -001 56.5 0425 264.5 047 226 32957 32610 2.2 -0.3 -7.4 -50.4
 182/09:18:51 78 53.2 -002 01.2 0425 264.5 046 224 32964 32623 1.9 -0.2 -7.9 -49.7
 182/09:19:01 78 53.2 -002 08.6 0425 264.4 047 224 32961 32610 1.6 -0.4 -8.2 -49.6
 182/09:20:01 78 53.0 -002 42.8 0425 264.5 047 225 32958 32615 2.1 -0.2 -8.2 -49.6
 182/09:21:01 78 52.6 -003 20.0 0424 263.5 045 225 32958 32615 2.1 -0.2 -8.2 -49.6
 182/09:22:01 78 52.4 -003 55.9 0423 263.3 045 226 32964 32599 2.0 -0.4 -1.4 -49.2
 182/09:22:27 78 52.1 -004 12.1 0422 263.4 040 229 32959 32586 2.2 -1.0 -2.0 -46.3
 182/09:23:01 78 51.8 -004 31.4 0421 263.3 040 235 32964 32619 1.9 -0.2 -1.9 -46.1
 182/09:23:05 78 51.8 -004 34.9 0421 263.2 042 234 32966 32614 2.1 -0.4 -1.8 -46.6
 182/09:24:51 78 51.4 -005 09.8 0420 263.8 039 243 32965 32589 2.0 -0.2 -1.4 -46.0
 182/09:25:01 78 50.7 -005 43.9 0418 263.3 041 244 32964 32575 1.9 -0.4 -0.5 -47.0
 182/09:25:43 78 50.4 -006 09.0 0418 262.5 039 243 32955 32581 2.1 -0.1 -0.8 -48.0
 182/09:26:01 78 50.2 -006 19.6 0418 262.5 040 244 32949 32587 2.5 -0.9 -0.9 -48.7
 182/09:26:03 78 50.2 -006 21.8 0410 261.8 039 241 32948 32575 3.0 -0.4 -1.1 -48.0
 182/09:27:01 78 46.3 -005 04.1 0410 213.5 036 241 32936 32545 2.3 -0.5 -1.3 -46.5
 182/09:28:01 78 31.2 -007 31.1 0445 159.3 031 239 32959 32626 2.5 -2.4 -1.7 -40.2
 182/09:29:01 78 27.2 -006 49.7 0453 159.6 039 246 32960 32619 2.2 -0.4 -1.2 -46.3
 182/09:31:01 78 21.0 -006 20.1 0462 150.3 040 246 32961 32652 2.0 -0.1 -1.4 -49.3
 182/09:32:01 78 14.6 -006 05.8 0467 157.5 040 255 32973 32656 2.0 -0.0 -1.2 -49.0
 182/09:33:01 78 09.2 -005 45.4 0472 150.5 039 254 32960 32700 1.9 -0.7 -1.1 -49.2
 182/09:33:55 78 02.2 -005 25.8 0475 150.9 040 251 32932 32692 1.9 -0.6 -1.0 -49.4
 182/09:34:01 78 01.8 -005 24.0 0475 150.9 039 254 32969 32692 1.8 -0.6 -0.8 -50.9
 182/09:35:01 77 55.2 -005 01.8 0481 151.8 044 261 32956 32697 1.9 -0.6 -0.9 -50.2
 182/09:36:01 77 48.3 -004 41.7 0486 151.8 045 265 32965 32720 1.8 -0.6 -0.7 -51.4
 182/09:37:01 77 41.6 -004 41.3 0491 151.9 040 270 32975 32747 1.9 -0.7 -0.8 -50.9
 182/09:37:53 77 35.8 -004 01.5 0491 151.8 040 267 32967 32765 1.7 -1.0 -0.5 -53.7
 182/09:39:01 77 27.7 -003 40.7 0490 151.8 035 263 32962 32701 1.7 -0.7 -1.2 -51.1
 182/09:39:05 77 27.3 -003 39.4 0490 151.8 035 269 32969 32704 1.6 -0.7 -1.0 -49.9
 182/09:40:01 77 20.9 -003 21.0 0487 151.4 027 249 32972 32805 1.6 -1.1 -0.5 -50.0
 182/09:41:01 77 14.1 -003 02.0 0484 151.7 024 259 32949 32802 1.7 -0.4 0.5 -51.7
 182/09:41:11 77 13.0 -002 58.6 0482 151.7 024 265 32950 32840 1.3 -0.9 0.4 -51.1
 182/09:42:01 77 07.1 -002 43.6 0477 151.9 026 228 32957 32840 1.4 -0.6 -0.4 -53.4

END OF RUN 4 TIME 09:04:01 LAT 7059.5 N LON C0516.0 E FL 329

START OF RUN 5 AT 09 07 20 LAT 70 50.4N LON 4 55.6E.

10 PERCENT CLOUD COVER AT THE START OF THE RUN.

BACK IN FAIRLY CLEAR CONDITIONS.

CROSSING A STREAMER OF 50 METER FLOES.

EASTERN BOUNDARY OF EDDIE.

CENTER OF THE EDDIE - 3 MILES LEFT

CENTER OF EDDIE - 3 MILES LEFT.

MULTIYEAR FLOES, SMALL SIZES.

END OF RUN 5 TIME 09:26:02 LAT 7050.2 N LON C0521.0 M FL 329

SHALL FIRST YEAR FLOES AND SMALLER SECOND YEAR FLOES.

FRONTAL PATTERN - 10 MILES AHEAD OF AIRCRAFT, 30 MILES LEFT OF TRACK

ICE HAVE STRUCTURE - WATER.

ALMOST AT THE HORIZON ON STARBOARD SIDE - THEY SEE AN EDDIE.

ORIGINAL FACE IS
OF POOR QUALITY

YEAR 1964 APR 5 FLIGHT LOG --- FLIGHT NO. 12 --- ATZEN
 --- TIME --- LAT --- LONG --- ALTITUDE ---
 --- SPD HEAD --- SPD DIR --- PRES --- RADAR --- PITCH --- ROLL --- TEMP --- IR --- AIR ---

182/09:43:01 77 09.5 -002 25.5 0470 152.8 030 225 32940 32944 1.6 0.0 -0.6 -52.8
 182/09:43:15 76 09.4 -002 25.5 0468 153.0 028 225 32956 32956 1.5 -0.7 0.2 -52.4
 182/09:44:01 76 09.3 -002 25.5 0463 153.0 030 230 32940 32940 1.6 -0.8 2.6 -51.5
 182/09:44:11 76 09.2 -001 25.5 0456 154.2 037 222 32962 32962 1.6 -0.7 1.3 -51.0
 182/09:44:31 76 09.1 -001 25.5 0455 154.3 039 222 32955 32955 1.7 -0.7 -3.4 -50.9
 182/09:45:01 76 09.0 -001 25.5 0453 154.6 041 222 32956 32956 1.9 -0.4 -0.3 -51.6
 182/09:45:15 76 08.9 -001 25.5 0451 154.9 039 222 32950 32950 1.7 -0.8 9.1 -52.9
 182/09:45:30 76 08.8 -001 25.5 0450 155.0 039 221 32949 32949 1.8 -0.1 -0.7 -51.0
 182/09:45:45 76 08.7 -001 25.5 0449 155.0 038 215 32943 32943 1.8 -0.4 -1.1 -51.3
 182/09:46:01 76 08.6 -001 25.5 0449 155.0 038 215 32943 32943 1.8 -0.4 -0.8 -51.2
 182/09:46:15 76 08.5 -001 25.5 0448 155.0 037 214 32940 32940 1.6 -0.4 1.5 -52.2
 182/09:46:30 76 08.4 -001 25.5 0447 154.6 033 210 32956 33018 1.6 -0.7 0.0 -49.6
 182/09:46:45 76 08.3 -001 25.5 0446 154.4 030 208 32956 33018 1.8 -0.4 0.0 -49.8
 182/09:47:01 76 08.2 -001 25.5 0445 154.2 029 199 32973 33024 1.8 -0.4 0.2 -51.8
 182/09:47:15 76 08.1 -001 25.5 0445 154.2 026 200 32959 33053 1.8 -0.4 -3.2 -51.1
 182/09:47:30 76 08.0 -001 25.5 0443 154.2 025 198 32964 33055 1.8 -0.6 -4.0 -50.7
 182/09:47:45 76 07.9 -001 25.5 0441 154.5 021 193 33091 33146 1.6 -1.6 -4.5 -51.1
 182/09:48:01 76 07.8 -001 25.5 0441 154.7 020 189 33023 33106 1.0 -1.6 -1.7 -51.1
 182/09:48:15 76 07.7 -001 25.5 0440 155.1 019 186 33055 33037 1.0 -0.1 -4.0 -51.7
 182/09:48:30 76 07.6 -001 25.5 0444 153.1 018 178 33008 33108 1.6 -0.5 0.1 -51.0
 182/09:48:45 76 07.5 -001 25.5 0443 153.6 019 167 32989 33045 1.6 -0.5 -3.4 -51.5
 182/09:49:01 76 07.4 -001 25.5 0446 153.6 023 160 32979 33040 1.5 -0.5 -4.7 -51.7
 182/09:49:15 76 07.3 -001 25.5 0446 153.6 021 152 32981 33033 1.5 -0.5 -4.0 -51.2
 182/09:49:30 76 07.2 -001 25.5 0444 153.3 021 152 32958 33017 1.5 9.1 -2.1 -50.6
 182/09:49:45 76 07.1 -001 25.5 0446 126.1 021 137 32948 33023 1.7 0.2 -2.9 -50.7
 182/09:49:59 76 07.0 -001 25.5 0446 127.2 021 135 32975 33005 1.6 -1.0 -4.1 -51.8
 182/09:50:13 76 06.9 -001 25.5 0446 127.3 022 159 32950 33014 1.6 -0.5 -13.4 -51.0
 182/09:50:27 76 06.8 -001 25.5 0444 128.3 025 151 32989 33028 1.6 -1.0 -23.2 -51.4
 182/09:50:41 76 06.7 -001 25.5 0442 127.9 026 127 32981 33008 1.6 -0.7 -19.9 -50.2
 182/09:50:55 76 06.6 -001 25.5 0440 127.9 027 123 32986 33020 1.8 -0.4 0.1 -49.7
 182/09:51:09 76 06.5 -001 25.5 0440 128.0 026 119 32973 33031 1.6 -0.4 -8.1 -49.7
 182/09:51:23 76 06.4 -001 25.5 0436 128.3 028 111 32980 33000 1.9 -0.4 1.4 -49.7
 182/09:51:37 76 06.3 -001 25.5 0436 128.3 029 116 32976 33032 1.8 -0.4 1.4 -49.7
 182/09:51:51 76 06.2 -001 25.5 0436 128.5 027 112 32970 33005 1.8 -0.4 2.3 -51.3
 182/09:52:05 76 06.1 -001 25.5 0436 128.8 026 109 32972 32997 1.7 -0.5 2.3 -51.3
 182/09:52:19 76 06.0 -001 25.5 0436 128.8 026 109 32950 32959 1.5 -0.5 -0.4 -50.3
 182/09:52:33 76 05.9 -001 25.5 0436 128.5 029 105 32976 33002 1.7 -0.7 -2.3 -50.0
 182/09:52:47 76 05.8 -001 25.5 0436 128.8 029 103 32991 33010 1.7 -0.6 -2.3 -50.0
 182/09:53:01 76 05.7 -001 25.5 0440 129.6 030 102 32975 32955 1.6 -0.3 -1.2 -51.3
 182/09:53:15 76 05.6 -001 25.5 0440 129.6 030 107 32955 32969 1.5 -0.7 2.1 -49.4
 182/09:53:29 76 05.5 -001 25.5 0441 129.9 031 104 32944 32967 1.6 -0.5 3.1 -51.2
 182/09:53:43 76 05.4 -001 25.5 0441 129.9 030 101 32955 32958 1.6 -0.4 2.1 -49.6
 182/09:53:57 76 05.3 -001 25.5 0440 130.0 034 102 32950 32926 1.5 -0.5 2.5 -50.0
 182/09:54:11 76 05.2 -001 25.5 0440 130.2 031 100 32957 32944 1.6 -0.4 2.3 -50.2
 182/09:54:25 76 05.1 -001 25.5 0440 130.6 030 100 32942 32929 1.6 -0.3 2.3 -50.2
 182/09:54:39 76 05.0 -001 25.5 0441 130.7 030 099 32943 32919 1.6 -0.3 1.9 -49.5
 182/09:54:53 76 04.9 -001 25.5 0441 131.0 033 097 32946 32970 1.5 -0.5 2.2 -50.0
 182/09:55:07 76 04.8 -001 25.5 0441 131.1 034 100 32948 32917 1.6 -0.5 1.6 -51.7
 182/09:55:21 76 04.7 -001 25.5 0440 131.1 037 098 32941 32980 1.5 -0.8 1.6 -51.7
 182/09:55:35 76 04.6 -001 25.5 0440 131.5 036 099 32950 32948 1.5 -0.4 1.5 -50.1
 182/09:55:49 76 04.5 -001 25.5 0440 131.7 037 097 32949 32949 1.6 -0.6 1.3 -50.2
 182/09:56:03 76 04.4 -001 25.5 0440 131.9 036 093 32952 32877 1.6 -0.6 1.3 -50.2
 182/09:56:17 76 04.3 -001 25.5 0439 132.1 039 099 32957 32871 1.5 -0.6 0.8 -50.2
 182/09:56:31 76 04.2 -001 25.5 0438 132.2 041 098 32964 32872 1.5 -0.6 0.4 -50.6
 182/09:56:45 76 04.1 -001 25.5 0437 132.4 038 096 32954 32872 1.5 -0.6 2.0 -51.4
 182/09:56:59 76 04.0 -001 25.5 0437 132.6 039 095 32948 32865 1.5 -0.7 0.9 -48.6
 182/09:57:13 76 03.9 -001 25.5 0437 132.5 041 093 32959 32846 1.5 -0.7 1.2 -49.9
 182/09:57:27 76 03.8 -001 25.5 0437 132.7 042 093 32956 32859 1.4 -0.4 0.6 -50.2
 182/09:57:41 76 03.7 -001 25.5 0435 133.4 043 096 32952 32812 1.5 -0.7 0.5 -48.9
 182/09:57:55 76 03.6 -001 25.5 0435 133.4 043 096 32952 32825 1.5 -0.4 2.6 -49.7

LEW LEVEL STRATUS,
 ENTERING 100 PERCENT STRATUS CLOUD COVER.
 CAMERAS OFF.

182 10.13.16 ACAS TAPES SWITCHED, EDT

YEAR 1984 ADDAS FLIGHT LOG

TIME	LAT	LONG	FLIGHT NO.	12	12	12	12	12	12	12	INDEX	12	12	12	12	12	12	12	12	12	12	12	TEMP	IR	AIR
			SPD	HEAD	DIR	PRES	RADAR	PITCH	ROLL		DIR	ALTIMETER	PRES	RADAR	PITCH	ROLL									
182/10:38:00	72 00.0	013 40.5	0434	133.6	047	100	32950	32776	1.4	-0.3														1.6	-50.7
182/10:39:00	71 54.8	013 56.3	0433	133.8	046	099	32955	32797	1.5	-0.2														1.1	-51.0
182/10:40:00	71 49.3	013 48.8	0432	133.8	048	097	32950	32799	1.4	-0.5														0.5	-49.2
182/10:41:00	71 44.1	014 27.3	0431	133.8	047	095	32938	32796	1.5	-0.6														0.4	-49.0
182/10:42:00	71 38.9	014 42.1	0430	134.0	050	097	31947	32770	1.5	-0.6														0.7	-51.6
182/10:43:00	71 33.5	014 57.9	0429	134.4	052	100	32947	32778	1.4	-0.4														0.3	-49.6
182/10:44:00	71 28.2	015 13.7	0428	135.0	052	101	32814	32612	0.8	-1.4														1.5	-48.5
182/10:45:00	71 22.7	015 30.4	0427	136.4	049	092	31970	31567	0.6	0.0														2.9	-48.4
182/10:46:00	71 17.2	015 47.1	0426	137.8	042	089	29576	29337	0.6	0.0														3.5	-43.7
182/10:47:00	71 10.5	015 58.2	0425	135.3	042	100	26044	26314	0.5	1.7														3.2	-35.4
182/10:48:00	71 03.0	015 43.5	0428	200.4	041	113	22612	22047	4.7	1.4														2.8	-26.4
182/10:49:00	71 05.9	015 36.0	0427	155.1	055	098	25579	24921	16.1	63.9														1.0	-21.4
182/10:50:00	70 52.6	015 03.0	0426	127.7	036	100	20063	19764	0.7	-1.3														1.0	-21.4
182/10:51:00	70 48.4	015 58.1	0396	176.4	031	102	20019	19749	1.2	2.7														0.2	-21.7
182/10:52:00	70 47.5	015 58.5	0397	170.6	031	101	20011	19700	1.2	-11.3														1.1	-21.4
182/10:53:00	70 43.0	015 59.9	0393	172.9	029	103	20031	19737	1.4	2.0														3.2	-22.7
182/10:54:00	70 34.6	016 00.9	0388	175.6	030	100	20059	19756	1.5	0.0														6.2	-21.8
182/10:55:00	70 28.2	016 05.3	0373	167.4	026	104	20082	19784	2.0	29.9														1.7	-22.3
182/10:56:00	70 22.5	016 05.2	0379	178.5	026	096	20057	19757	1.7	-5.2														1.3	-22.7
182/10:57:00	70 16.3	016 04.6	0379	175.6	024	098	20039	19728	1.6	-0.3														1.6	-24.8
182/10:58:00	70 10.1	016 04.7	0382	178.6	020	091	20047	19740	2.0	2.4														0.3	-23.5
182/10:59:00	70 03.6	016 04.1	0365	180.0	015	039	20049	19729	1.6	0.7														1.5	-24.6
182/10:59:00	69 57.2	016 03.0	0369	180.9	016	070	20061	19716	1.4	-0.4														1.7	-24.6
182/11:00:00	69 50.7	016 02.7	0393	180.1	007	089	20050	19705	1.4	-0.4														1.3	-27.0
182/11:01:00	69 44.2	016 02.5	0394	179.5	003	089	20051	19703	1.4	-0.8														1.3	-24.6
182/11:02:00	69 37.5	016 02.2	0396	179.5	007	100	20069	19706	1.4	-0.8														1.3	-25.8
182/11:03:00	69 31.1	016 02.1	0396	179.7	006	107	20044	19684	1.3	-0.4														1.6	-26.1
182/11:04:00	69 24.9	016 02.0	0397	180.0	000	000	20054	19709	1.2	-0.9														1.5	-26.5
182/11:05:00	69 18.0	016 01.9	0397	180.2	006	112	20032	19717	1.3	-0.6														0.8	-25.6
182/11:05:00	69 17.6	016 01.5	0397	170.6	008	115	20028	19704	1.3	-1.1														0.8	-25.0
182/11:05:05	69 17.6	016 01.8	0397	178.6	007	134	20031	19757	1.2	-0.5														1.7	-25.4
182/11:05:11	69 16.8	016 01.8	0397	178.6	005	112	20032	19765	1.3	-0.7														1.5	-24.3
182/11:06:44	69 00.0	000 00.0	000	000	000	000	20048	19654	1.3	-0.5														1.3	-24.3
182/11:06:50	69 05.7	016 01.3	0397	180.8	008	120	20045	19659	1.3	-0.9														1.5	-25.4
182/11:07:00	69 04.8	016 01.3	0397	180.8	003	127	20047	19682	1.2	-0.9														1.3	-25.4
182/11:07:10	69 03.6	016 01.1	0397	182.1	007	142	20049	19696	2.8	22.8														1.4	-25.4
182/11:07:25	69 01.8	015 59.6	0396	212.1	005	155	20025	19766	0.9	-0.9														1.6	-25.7
182/11:08:00	69 00.0	000 00.0	000	270.7	004	197	20076	19698	1.6	33.1														1.6	-25.7
182/11:09:00	69 00.0	000 00.0	000	270.7	004	197	20076	19698	1.6	33.1														1.6	-25.7
182/11:10:00	69 11.3	015 38.3	0409	358.5	008	070	20045	19686	1.0	-0.5														1.1	-26.0
182/11:10:00	69 11.3	015 38.3	0409	358.5	008	070	20045	19686	1.1	4.5														1.0	-26.9
182/11:11:00	69 18.2	015 38.0	0412	359.7	004	070	20047	19676	1.0	-1.0														1.4	-25.7
182/11:11:00	69 18.2	015 38.0	0412	359.7	004	070	20047	19676	1.0	-1.0														1.4	-25.7
182/11:12:00	69 14.8	015 37.3	0414	359.6	004	070	20055	19686	0.9	-0.9														1.9	-26.3
182/11:13:00	69 11.3	015 36.3	0415	357.4	005	055	20052	19685	0.9	-1.0														1.8	-26.6
182/11:14:00	69 09.8	015 35.0	0415	356.1	005	055	20052	19685	0.9	-0.6														1.6	-25.6
182/11:15:00	69 05.6	015 33.9	0412	009.2	009	084	20085	19730	1.1	29.9														1.6	-26.3
182/11:16:00	69 09.2	015 47.5	0396	096.5	012	099	20068	19720	1.6	28.8														1.5	-25.0
182/11:17:00	69 09.2	015 47.5	0396	096.5	012	099	20068	19720	1.6	28.8														1.5	-25.0
182/11:18:00	69 09.2	015 47.5	0396	096.5	012	099	20068	19720	1.6	28.8														1.5	-25.0
182/11:19:00	69 09.2	015 47.5	0396	096.5	012	099	20068	19720	1.6	28.8														1.5	-25.0
182/11:19:10	69 30.5	015 02.2	0396	179.1	008	134	20050	19696	1.2	-0.2														1.7	-26.2
182/11:20:00	69 25.1	016 02.5	0396	179.3	007	126	20050	19688	1.2	-0.2														2.0	-27.0
182/11:21:00	69 18.5	016 02.5	0396	178.5	010	140	20057	19700	1.2	0.0														1.2	-25.5
182/11:21:00	69 17.5	016 02.3	0396	178.5	009	140	20037	19780	1.1	0.1														2.0	-26.5
182/11:21:46	69 13.4	016 02.1	0396	180.3	009																				

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OF POOR QUALITY

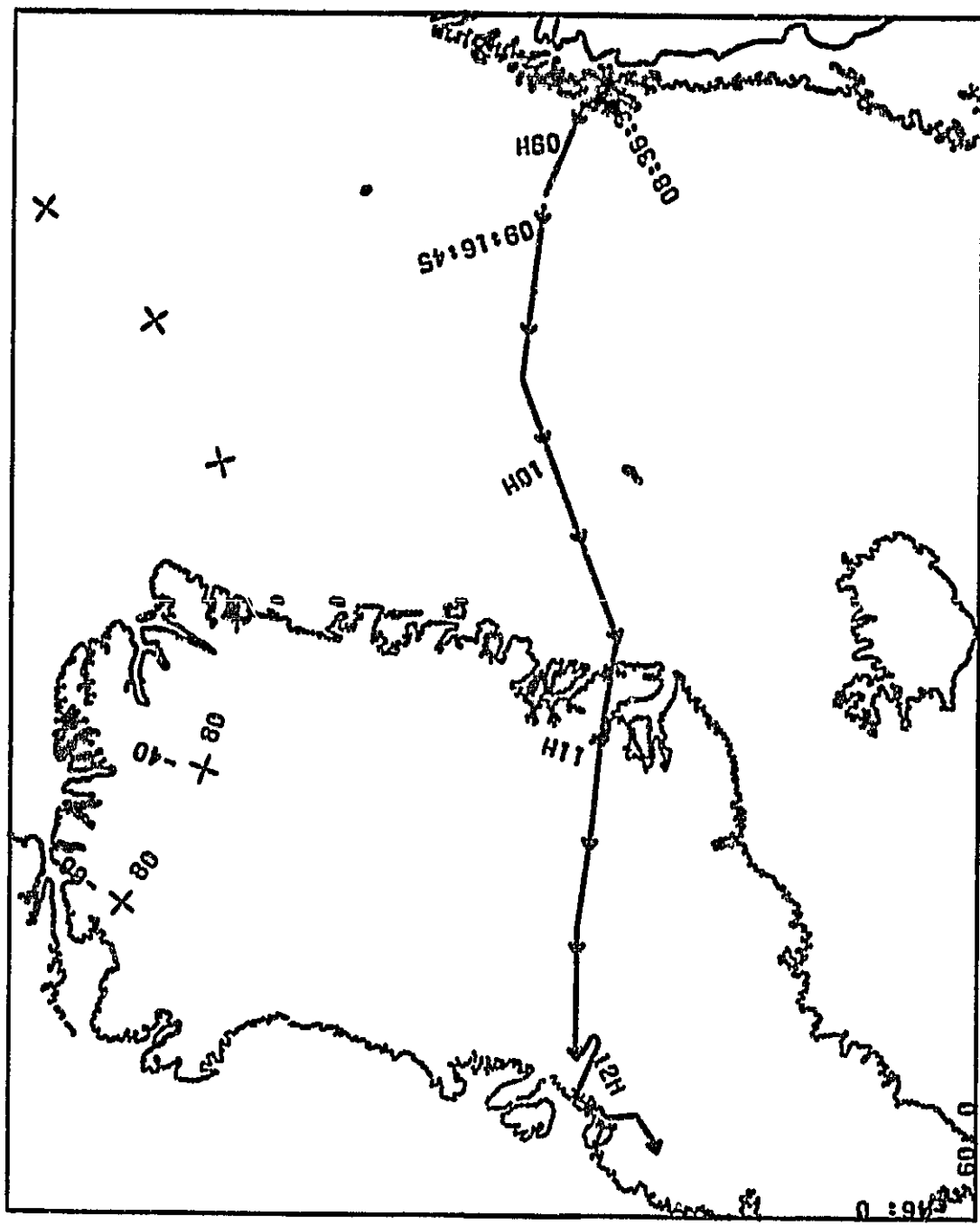
YEAR 1984	ADDRAS	FLIGHT NO.	12	MIKEX	TIME	LAT	LONG	SPD	DIR	SPD	DIR	PRES	RADAR	ALTITUDE	PITCH	ROLL	IR	AIR	
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
182/11:26:00	68	45.9	01.3	0389	180.7	002	250	13266	13069	-2.9	-0.8	-1.8	-12.4						
182/11:27:00	68	39.6	01.2	0375	180.9	003	258	10809	10154	-3.1	-0.7	-1.4	-7.8						
182/11:28:00	68	33.8	00.9	0344	181.8	004	300	9181	6703	-2.2	2.9	-1.3	-4.5						
182/11:29:00	68	28.1	01.6	00.5	0320	184.1	010	292	7016	-2.4	-1.0	0.0	-2.9						
182/11:30:00	68	23.6	01.6	02.9	0280	123.5	025	359	5659	1.3	-23.3	0.4	-0.4						
182/11:31:00	68	23.6	01.6	02.7	020.1	007	078	6320	4159	1.0	-11.4	-0.2	0.0						
182/11:32:00	68	25.4	01.8	02.6	012.6	002	046	3715	2854	-1.0	-4.8	12.5	0.0						
182/11:33:00	68	27.2	01.6	01.2	0126	062.1	002	246	2446	-1.1	-3.6	12.6	5.9						
182/11:34:00	68	27.9	01.6	01.2	0122	077.0	006	276	1515	0.9	-13.7	12.8	8.1						
182/11:35:00	68	27.9	01.6	02.1	0150	051.0	005	326	770										

3.10 Transit Flight—Day 183—Evenes/Sondrestromfjord/Malstrom AFB

This flight plan afforded only a brief encounter with the Greenland MIZ—10-15 minutes worth. Some ice was observed in Hudson Bay.

During our refueling stop at Sondrestromfjord, we were unable to determine the reason for the sudden cancellation of our overnight reservations there. The base seemed largely abandoned, with no large contingents of crews scheduled on the arrivals board. We were left with the uncomfortable impression that the base decided not to accomodate us because of the impending July 4 holiday.

ORIGINAL PAGE IS
OF POOR QUALITY



RISEN 1984 FT-21A JULY 1, 1984 EVENS TO BOMBESTON
8:56:25 TO 12:01:42 UT SCALE = 1:1-20E:07 TIME TICS EVERY 20.00 MINUTES

Figure 26. Flight tracks: Evens/Sondre 7/1

YEAR 1964 ADDAS FLIGHT LOG IS MIKEX
 ---TIME--- --LAT-- --LONG-- FLIGHT NO. IS --- ALTITUDE --- HZEX
 GND TRUE SPD DIR SPD DIR SPD DIR SPD DIR SPD DIR SPD DIR SPD DIR
 ---FBT---
 IR AIR
 183/09:16:01 71 22.3 010 15.0 0459 307.0 037 024 30932 30867 2.3 -0.2 2.0 -47.9
 183/09:18:01 71 26.3 010 15.0 0459 308.0 039 024 30927 30862 2.5 -0.4 3.0 -47.0
 183/09:20:01 71 30.3 010 15.0 0459 309.0 039 024 30913 30878 2.3 -0.2 2.0 -47.1
 183/09:22:01 71 34.3 010 15.0 0460 309.0 039 025 31000 31035 2.0 -0.3 3.0 -47.1
 183/09:24:01 71 38.3 010 15.0 0460 305.7 039 025 31033 30997 1.9 -0.2 0.5 -45.0
 183/09:26:01 71 42.3 010 15.0 0461 305.1 035 026 30979 30990 2.2 -0.4 0.0 -44.5
 183/09:28:01 71 46.3 010 15.0 0461 304.6 034 026 30955 31034 2.0 -0.4 2.1 -45.9
 183/09:30:01 71 50.3 010 15.0 0461 308.2 034 024 30953 31028 2.3 -0.4 0.0 -46.0
 183/09:32:01 71 54.3 010 15.0 0461 303.9 032 025 30984 31061 2.1 -0.4 3.0 -47.0
 183/09:34:01 71 58.3 010 15.0 0462 303.1 031 022 30953 31059 2.1 -0.4 3.5 -45.6
 183/09:36:01 72 02.3 010 15.0 0463 302.4 029 019 30939 31052 2.2 -0.4 4.4 -45.9
 183/09:38:01 72 06.3 010 15.0 0463 301.5 028 020 30953 31032 2.1 -0.4 2.9 -45.6
 183/09:40:01 72 10.3 010 15.0 0463 301.7 027 019 30937 31094 2.1 -0.5 2.3 -46.0
 183/09:42:01 72 14.3 010 15.0 0464 301.0 025 022 30956 31104 1.9 -0.4 2.7 -46.2
 183/09:44:01 72 18.3 010 15.0 0464 300.5 024 018 30951 31035 2.0 -0.2 2.1 -48.0
 183/09:46:01 72 22.3 010 15.0 0464 299.8 023 017 30978 31102 2.1 -0.6 3.1 -46.6
 183/09:48:01 72 26.3 010 15.0 0465 299.4 021 016 30950 31093 2.2 -0.5 4.2 -47.0
 183/09:50:01 72 30.3 010 15.0 0465 293.8 018 016 30955 31116 2.1 -0.7 4.1 -47.0
 183/09:52:01 72 34.3 010 15.0 0465 293.5 019 012 30992 31107 2.2 -1.0 4.2 -46.6
 183/09:54:01 72 38.3 010 15.0 0465 293.1 017 010 30952 31117 2.0 -0.6 3.5 -46.0
 183/09:56:01 72 42.3 010 15.0 0465 297.2 015 010 30960 31159 2.0 -1.0 2.1 -46.6
 183/09:58:01 72 46.3 010 15.0 0465 296.7 014 010 30952 31112 2.1 -0.5 1.6 -48.0
 183/09:00:01 72 50.3 010 15.0 0465 295.1 012 003 30997 31127 1.6 -0.6 1.0 -46.3
 183/09:02:01 72 54.3 010 15.0 0465 295.5 012 350 30960 31100 2.1 -0.3 0.0 -45.7
 183/09:04:01 72 58.3 010 15.0 0466 295.0 011 354 30954 31132 2.1 -0.0 1.3 -47.1
 183/09:06:01 72 02.3 010 15.0 0466 294.6 011 346 30955 31139 2.0 -0.8 1.4 -45.8
 183/09:08:01 72 06.3 010 15.0 0465 294.2 011 327 30957 31142 1.9 -0.0 1.2 -45.2
 183/09:10:01 72 10.3 010 15.0 0465 293.6 012 325 30977 31135 2.0 -0.5 0.9 -46.3
 183/09:12:01 72 14.3 010 15.0 0465 293.0 010 311 30983 31161 2.0 -0.6 0.9 -47.0
 183/09:14:01 72 18.3 010 15.0 0465 288.6 010 311 30995 31197 2.0 -3.8 1.0 -46.1
 183/09:16:01 72 22.3 010 15.0 0459 266.7 014 312 30992 31152 2.0 -1.0 0.7 -46.7
 183/09:18:01 72 26.3 010 15.0 0459 266.2 016 315 30974 31139 2.1 -0.4 0.9 -46.9
 183/09:20:01 72 30.3 010 15.0 0457 265.7 014 311 30993 31143 2.0 0.0 1.2 -47.3
 183/09:22:01 72 34.3 010 15.0 0457 264.8 011 313 30977 31124 2.2 -0.7 1.8 -46.8
 183/09:24:01 72 38.3 010 15.0 0464 265.0 012 307 31571 31720 3.2 -1.3 1.9 -48.6
 183/09:26:01 72 42.3 010 15.0 0451 263.0 015 282 32097 33062 3.4 -0.4 2.6 -51.2
 183/09:28:01 72 46.3 010 15.0 0443 263.2 012 279 32064 34047 3.4 -0.9 2.7 -54.4
 183/09:30:01 72 50.3 010 15.0 0443 262.6 011 275 34023 34910 2.4 -0.5 2.6 -53.9
 183/09:32:01 72 54.3 010 15.0 0443 261.1 011 255 34954 35103 2.7 -0.1 1.0 -56.2
 183/09:34:01 72 58.3 010 15.0 0453 261.4 011 251 34955 35103 2.7 -0.1 1.0 -56.2
 183/09:36:01 72 02.3 010 15.0 0450 260.7 011 250 34937 35099 2.7 -0.2 2.0 -53.7
 183/09:38:01 72 06.3 010 15.0 0445 260.8 011 264 34947 35117 2.6 -0.7 1.7 -56.9
 183/09:40:01 72 10.3 010 15.0 0441 260.9 014 271 34966 35127 2.7 -1.1 0.1 -55.9
 183/09:42:01 72 14.3 010 15.0 0438 260.1 013 262 34940 35124 2.9 -1.0 0.1 -55.6
 183/09:44:01 72 18.3 010 15.0 0437 259.5 016 256 34948 35123 2.9 -1.0 0.5 -55.0
 183/09:46:01 72 22.3 010 15.0 0435 259.0 019 251 34957 35122 2.9 -0.7 1.5 -55.3
 183/09:48:01 72 26.3 010 15.0 0432 258.1 019 250 34960 35116 2.7 0.0 0.2 -56.0
 183/09:50:01 72 30.3 010 15.0 0432 257.9 019 249 34960 35117 2.6 0.0 0.2 -56.9
 183/09:52:01 72 34.3 010 15.0 0431 257.5 027 240 34961 35117 2.7 -0.9 0.5 -55.9
 183/09:54:01 72 38.3 010 15.0 0429 255.9 030 236 34951 35114 2.8 -0.5 0.2 -55.8
 183/09:56:01 72 42.3 010 15.0 0429 255.3 030 233 34945 35099 2.7 -0.4 0.1 -57.2
 183/09:58:01 72 46.3 010 15.0 0427 254.9 034 229 34953 35093 2.6 -0.4 0.4 -57.4
 183/10:00:01 72 50.3 010 15.0 0426 254.1 035 226 34959 35094 2.6 -0.4 0.1 -56.7
 183/10:02:01 72 54.3 010 15.0 0426 253.6 031 223 34953 35077 2.6 -0.5 0.3 -54.7
 183/10:04:01 72 58.3 010 15.0 0425 253.1 027 213 34945 35097 2.8 0.2 0.6 -54.0
 183/10:06:01 72 02.3 010 15.0 0424 252.6 027 210 34945 35097 2.9 -0.8 0.6 -55.1
 183/10:08:01 72 06.3 010 15.0 0423 252.1 011 209 34957 35091 2.7 -0.6 1.0 -57.1
 183/10:10:01 72 10.3 010 15.0 0423 251.5 011 208 34957 35091 2.9 -0.7 1.7 -54.5
 183/10:12:01 72 14.3 010 15.0 0423 251.0 012 207 34954 35073 2.9 -0.7 1.7 -54.5

ACDAS CHECKLIST CODE NOTI MCC - EVENTS/DCS IS GRAY.

YEAR 1924 AECAS FLIGHT LOG --- FLIGHT NO. 15 --- HIZEX

TIME	LAT	LONG	FLIGHT NO. 15		HIZEX		ALTITUDE	TEMP AIR	
			SPD	DIR	PRES	RADAR			
185/10:17:01	72 19.5-012	29.7 0420	250.4	032	203	34943	26035	1.4	-51.7
185/10:18:01	72 17.5-012	29.7 0420	250.0	032	203	34945	26039	1.5	-51.2
185/10:19:01	72 16.5-012	29.7 0420	249.8	032	203	34947	26043	1.6	-51.0
185/10:20:01	72 15.5-011	29.6 0420	249.8	032	203	34949	26047	1.7	-50.8
185/10:21:01	72 14.5-011	29.5 0420	249.3	032	203	34951	26051	1.8	-50.6
185/10:22:01	72 08.9-014	30.8 0431	249.7	029	213	34953	26055	1.9	-50.4
185/10:23:01	72 06.7-014	33.6 0432	249.0	031	211	34955	26059	1.9	-50.3
185/10:24:01	72 04.5-015	36.5 0433	248.5	033	209	34957	26063	1.6	-50.2
185/10:25:01	72 02.1-015	37.3 0434	248.1	034	214	34959	26067	1.2	-50.1
185/10:26:01	71 59.6-015	39.3 0435	248.3	034	219	34961	26071	0.9	-50.0
185/10:27:01	71 57.2-016	41.6 0436	248.2	032	218	34963	26075	1.1	-50.3
185/10:28:01	71 55.0-016	43.5 0437	248.3	034	225	34972	26086	1.3	-50.9
185/10:29:01	71 52.9-017	45.4 0438	248.2	032	225	34977	26094	1.0	-50.7
185/10:30:01	71 50.7-017	47.3 0439	247.6	032	225	34981	26102	1.0	-50.7
185/10:31:01	71 48.2-017	49.0 0440	247.4	032	229	34985	26110	1.1	-51.5
185/10:32:01	71 45.0-018	04.0 0429	247.2	034	231	34989	26118	1.1	-51.7
185/10:33:01	71 44.5-018	09.8 0428	247.3	034	232	34992	26126	1.1	-51.2
185/10:34:01	71 42.0-018	10.7 0427	247.2	032	236	34998	26134	0.6	-51.3
185/10:35:01	71 39.4-018	11.3 0427	247.0	035	235	34999	26142	0.9	-51.1
185/10:36:01	71 36.6-019	12.5 0426	246.7	036	236	34999	26150	1.6	-51.7
185/10:37:01	71 33.6-019	13.4 0426	246.7	036	237	34994	26158	2.4	-51.6
185/10:38:01	71 32.7-019	18.6 0426	247.0	034	240	34994	26166	2.4	-51.2
185/10:39:01	71 32.0-019	24.2 0426	246.2	035	236	34990	26174	1.7	-51.2
185/10:40:01	71 31.3-019	29.8 0426	246.4	034	241	34987	26182	2.8	-51.2
185/10:41:01	71 31.5-019	35.4 0426	247.7	033	251	34956	26190	1.3	-51.1
185/10:42:01	71 30.9-019	41.0 0426	246.5	032	250	34952	26198	0.3	-51.5
185/10:43:01	71 30.9-019	46.6 0426	246.5	032	247	34952	26206	0.6	-51.4
185/10:44:01	71 31.2-020	52.2 0426	247.9	031	246	34953	26214	0.4	-51.6
185/10:45:01	71 31.3-020	57.8 0426	247.0	032	244	34953	26222	0.7	-51.4
185/10:46:01	71 31.3-020	63.4 0426	246.7	032	246	34953	26230	0.4	-51.8
185/10:47:01	71 31.3-020	69.0 0426	246.7	031	246	34953	26238	1.0	-52.1
185/10:48:01	71 31.3-020	74.6 0426	247.1	031	246	34953	26246	1.0	-52.1
185/10:49:01	71 31.3-020	80.2 0426	247.2	031	246	34953	26254	1.0	-52.1
185/10:50:01	71 31.3-020	85.8 0426	247.3	031	246	34953	26262	2.7	-52.1
185/10:51:01	71 31.3-021	91.4 0426	247.4	030	250	34953	26270	2.7	-52.1
185/10:52:01	71 31.3-021	97.0 0426	247.5	030	250	34953	26278	2.8	-52.1
185/10:53:01	71 31.3-021	102.6 0426	247.6	030	250	34953	26286	2.8	-52.1
185/10:54:01	71 31.3-021	108.2 0426	247.7	030	250	34953	26294	2.8	-52.1
185/10:55:01	71 31.3-021	113.8 0426	247.8	030	250	34953	26302	2.8	-52.1
185/10:56:01	71 31.3-021	119.4 0426	247.9	030	250	34953	26310	2.8	-52.1
185/10:57:01	71 31.3-021	125.0 0426	248.0	030	250	34953	26318	2.8	-52.1
185/10:58:01	71 31.3-021	130.6 0426	248.1	030	250	34953	26326	2.8	-52.1
185/10:59:01	71 31.3-021	136.2 0426	248.2	030	250	34953	26334	2.8	-52.1
185/10:00:01	71 31.3-021	141.8 0426	248.3	030	250	34953	26342	2.8	-52.1
185/10:01:01	71 31.3-021	147.4 0426	248.4	030	250	34953	26350	2.8	-52.1
185/10:02:01	71 31.3-021	153.0 0426	248.5	030	250	34953	26358	2.8	-52.1
185/10:03:01	71 31.3-021	158.6 0426	248.6	030	250	34953	26366	2.8	-52.1
185/10:04:01	71 31.3-021	164.2 0426	248.7	030	250	34953	26374	2.8	-52.1
185/10:05:01	71 31.3-021	169.8 0426	248.8	030	250	34953	26382	2.8	-52.1
185/10:06:01	71 31.3-021	175.4 0426	248.9	030	250	34953	26390	2.8	-52.1
185/10:07:01	71 31.3-021	181.0 0426	249.0	030	250	34953	26398	2.8	-52.1
185/10:08:01	71 31.3-021	186.6 0426	249.1	030	250	34953	26406	2.8	-52.1
185/10:09:01	71 31.3-021	192.2 0426	249.2	030	250	34953	26414	2.8	-52.1
185/10:10:01	71 31.3-021	197.8 0426	249.3	030	250	34953	26422	2.8	-52.1
185/10:11:01	71 31.3-021	203.4 0426	249.4	030	250	34953	26430	2.8	-52.1
185/10:12:01	71 31.3-021	209.0 0426	249.5	030	250	34953	26438	2.8	-52.1
185/10:13:01	71 31.3-021	214.6 0426	249.6	030	250	34953	26446	2.8	-52.1
185/10:14:01	71 31.3-021	220.2 0426	249.7	030	250	34953	26454	2.8	-52.1
185/10:15:01	71 31.3-021	225.8 0426	249.8	030	250	34953	26462	2.8	-52.1
185/10:16:01	71 31.3-021	231.4 0426	249.9	030	250	34953	26470	2.8	-52.1
185/10:17:01	71 31.3-021	237.0 0426	250.0	030	250	34953	26478	2.8	-52.1
185/10:18:01	71 31.3-021	242.6 0426	250.1	030	250	34953	26486	2.8	-52.1
185/10:19:01	71 31.3-021	248.2 0426	250.2	030	250	34953	26494	2.8	-52.1
185/10:20:01	71 31.3-021	253.8 0426	250.3	030	250	34953	26502	2.8	-52.1
185/10:21:01	71 31.3-021	259.4 0426	250.4	030	250	34953	26510	2.8	-52.1
185/10:22:01	71 31.3-021	265.0 0426	250.5	030	250	34953	26518	2.8	-52.1
185/10:23:01	71 31.3-021	270.6 0426	250.6	030	250	34953	26526	2.8	-52.1
185/10:24:01	71 31.3-021	276.2 0426	250.7	030	250	34953	26534	2.8	-52.1
185/10:25:01	71 31.3-021	281.8 0426	250.8	030	250	34953	26542	2.8	-52.1
185/10:26:01	71 31.3-021	287.4 0426	250.9	030	250	34953	26550	2.8	-52.1
185/10:27:01	71 31.3-021	293.0 0426	251.0	030	250	34953	26558	2.8	-52.1
185/10:28:01	71 31.3-021	298.6 0426	251.1	030	250	34953	26566	2.8	-52.1
185/10:29:01	71 31.3-021	304.2 0426	251.2	030	250	34953	26574	2.8	-52.1
185/10:30:01	71 31.3-021	309.8 0426	251.3	030	250	34953	26582	2.8	-52.1
185/10:31:01	71 31.3-021	315.4 0426	251.4	030	250	34953	26590	2.8	-52.1
185/10:32:01	71 31.3-021	321.0 0426	251.5	030	250	34953	26598	2.8	-52.1
185/10:33:01	71 31.3-021	326.6 0426	251.6	030	250	34953	26606	2.8	-52.1
185/10:34:01	71 31.3-021	332.2 0426	251.7	030	250	34953	26614	2.8	-52.1
185/10:35:01	71 31.3-021	337.8 0426	251.8	030	250	34953	26622	2.8	-52.1
185/10:36:01	71 31.3-021	343.4 0426	251.9	030	250	34953	26630	2.8	-52.1
185/10:37:01	71 31.3-021	349.0 0426	252.0	030	250	34953	26638	2.8	-52.1
185/10:38:01	71 31.3-021	354.6 0426	252.1	030	250	34953	26646	2.8	-52.1
185/10:39:01	71 31.3-021	360.2 0426	252.2	030	250	34953	26654	2.8	-52.1
185/10:40:01	71 31.3-021	365.8 0426	252.3	030	250	34953	26662	2.8	-52.1
185/10:41:01	71 31.3-021	371.4 0426	252.4	030	250	34953	26670	2.8	-52.1
185/10:42:01	71 31.3-021	377.0 0426	252.5	030	250	34953	26678	2.8	-52.1
185/10:43:01	71 31.3-021	382.6 0426	252.6	030	250	34953	26686	2.8	-52.1
185/10:44:01	71 31.3-021	388.2 0426	252.7	030	250	34953	26694	2.8	-52.1
185/10:45:01	71 31.3-021	393.8 0426	252.8	030	250	34953	26702	2.8	-52.1
185/10:46:01	71 31.3-021	399.4 0426	252.9	030	250	34953	26710	2.8	-52.1
185/10:47:01	71 31.3-021	405.0 0426	253.0	030	250	34953	26718	2.8	-52.1
185/10:48:01	71 31.3-021	410.6 0426	253.1	030	250	34953	26726	2.8	-52.1
185/10:49:01	71 31.3-021	416.2 0426	253.2	030	250	34953	26734	2.8	-52.1
185/10:50:01	71 31.3-021	421.8 0426	253.3	030	250	34953	26742	2.8	-52.1
185/10:51:01	71 31.3-021	427.4 0426	253.4	030	250	34953	26750	2.8	-52.1
185/10:52:01	71 31.3-021	433.0 0426	253.5	030	250	34953	26758	2.8	-52.1
185/10:53:01	71 31.3-021	438.6 0426	253.6	030	250	34953	26766	2.8	-52.1
185/10:54:01	71 31.3-021	444.2 0426	253.7	030	250	34953	26774	2.8	-52.1
185/10:55:01	71 31.3-021	449.8 0426	253.8	030	250	34953	26782	2.8	-52.1
185/10:56:01	71 31.3-021	455.4 0426	253.9	030	250	34953	26790	2.8	-52.1
185/10:57:01	71 31.3-021	461.0 0426	254.0	030	250	34953	26798	2.8	-52.1
185/10:58:01	71 31.3-021	466.6 0426	254.1	030	250	34953	26806	2.8	-52.1
185/10:59:01	71 31.3-021	472.2 0426	254.2	030	250	34953	26814	2.8	-52.1
185/10:00:01	71 31.3-021	477.8 0426	254.3	030	250	34953	26822	2.8	-52.1
185/10:01:01	71 31.3-021	483.4 0426	254.4	030	250	34953	26830	2.8	-52.1
18									

YEAR 1954 ARCADES FLIGHT LOGS --- FLIGHT NO. IR --- WIZKX --- TIME --- LAT --- LONG --- SPD HEAD --- ALTITUDE --- PITCH ROLL IR TEMP AIR ---

183/10-55:01 71 36.2-026 41.1 0426 266.4 058 232 24955 28759 2.5 -0.2 0.7 -43.2
183/10-55:01 71 36.2-026 41.1 0427 266.4 058 232 24960 28760 2.5 -0.4 0.1 -43.9
183/10-55:01 71 36.2-027 40.7 0427 266.4 058 232 24960 28759 2.5 -0.4 0.1 -43.9
183/10-55:35 71 36.1-027 17.1 0427 266.1 058 224 24951 24251 2.4 -2.1 -0.1 -49.6
183/10-55:37 71 36.1-027 18.3 0427 265.0 053 224 24949 24745 2.4 -2.2 -0.1 -49.6
183/10-57:01 71 35.7-027 27.5 0427 266.0 053 230 24945 24745 2.4 -1.2 -0.1 -49.5
183/10-58:01 71 36.4-023 06.4 0428 263.3 053 232 24955 24937 2.3 -0.7 -1.2 -47.7
183/10-58:43 71 36.9-023 06.4 0428 262.8 053 232 24956 24937 2.3 -0.7 -1.2 -47.7
183/10-58:53 71 36.8-023 09.8 0428 265.8 053 229 24958 24556 2.6 -0.6 -3.0 -47.2
183/10-59:01 71 36.7-023 15.1 0428 262.7 054 234 24958 24943 2.4 -0.6 -2.9 -43.5
183/11-00:01 71 36.1-028 26.0 0426 262.0 053 228 24959 24928 2.4 -0.5 16.9 -49.5
183/11-00:01 71 36.1-028 27.4 0426 261.7 053 227 24958 24928 2.4 -0.1 2.7 -49.5
183/11-00:01 71 36.1-028 28.0 0426 261.7 053 227 24958 24928 2.4 -0.1 2.7 -49.5
183/11-03:01 71 31.5-029 41.7 0425 260.1 051 224 24953 24543 2.4 -0.4 -2.9 -47.8
183/11-03:31 71 31.5-029 53.1 0425 260.4 041 225 24948 24745 2.4 -0.4 -3.0 -43.2
183/11-04:01 71 31.1-030 05.7 0425 260.3 045 232 24974 24953 2.4 -0.1 -4.2 -47.1
183/11-05:01 71 31.2-030 28.1 0421 259.5 046 229 24940 27633 2.6 -0.7 -7.3 -49.4
183/11-06:01 71 29.3-030 49.7 0420 257.8 047 233 24955 27197 2.5 -0.8 -8.4 -46.8
183/11-07:01 71 29.4-031 10.9 0419 259.6 046 236 24954 24572 2.6 -0.4 -9.0 -47.7
183/11-08:01 71 27.4-031 32.7 0418 259.4 047 235 24953 24312 2.5 -0.0 10.1 -47.5
183/11-09:01 71 26.4-031 54.1 0417 259.0 046 237 24961 24111 2.6 -0.7 10.6 -47.2
183/11-09:01 71 25.4-032 15.5 0417 258.8 049 236 24952 24587 2.7 -0.8 10.9 -47.5
183/11-10:01 71 24.5-032 27.9 0415 259.2 047 237 24948 24597 2.2 -0.2 11.4 -46.7
183/11-10:01 71 23.5-032 50.2 0414 257.9 050 230 24948 24597 2.2 -0.2 11.4 -46.7
183/11-13:01 71 21.5-033 19.8 0414 257.9 050 230 24949 24580 2.5 -1.1 12.5 -47.8
183/11-13:25 71 21.6-033 28.2 0415 258.5 049 242 24972 24223 2.4 0.5 12.4 -43.0
183/11-13:27 71 21.5-033 50.5 0416 258.6 048 241 24940 24916 2.6 -0.6 12.3 -46.6
183/11-13:31 71 21.3-033 30.5 0416 258.6 048 241 24940 24916 2.6 -0.6 12.3 -46.6
183/11-13:37 71 21.0-033 41.1 0415 259.3 046 238 24951 24549 2.5 0.6 12.5 -47.3
183/11-14:01 71 21.0-033 41.1 0415 259.3 046 238 24951 24549 2.5 0.6 12.5 -47.3
183/11-15:01 71 19.9-034 02.2 0419 259.1 049 234 24959 25106 2.6 -0.4 12.7 -47.0
183/11-16:01 71 18.9-034 16.8 0420 258.8 047 233 24959 24931 2.6 -0.6 13.8 -46.1
183/11-17:01 71 18.0-034 45.4 0420 258.8 047 234 24969 24816 2.6 -0.7 13.8 -46.1
183/11-18:01 71 18.9-035 08.8 0422 258.5 044 234 24955 24951 2.5 -0.7 16.0 -45.4
183/11-19:01 71 18.8-035 28.2 0424 258.8 046 242 24953 24566 2.5 -0.6 16.5 -45.7
183/11-19:55 71 18.4-035 47.3 0425 258.4 045 241 24957 24517 2.3 -0.8 16.6 -44.5
183/11-20:01 71 18.5-036 50.0 0425 258.4 045 241 24958 24487 2.4 -0.9 16.6 -44.5
183/11-21:01 71 17.6-036 11.5 0426 258.2 043 240 24951 24934 2.6 -0.5 16.5 -45.2
183/11-21:31 71 17.6-036 22.7 0427 257.5 043 237 24953 24931 2.3 -1.7 16.6 -47.6
183/11-22:01 71 15.1-036 32.9 0428 257.6 041 238 24958 24332 2.4 0.0 14.4 -48.0
183/11-23:01 71 10.8-036 55.3 0431 257.5 038 230 24955 24273 2.5 -0.1 14.9 -47.3
183/11-24:01 71 09.4-037 16.8 0433 257.7 039 242 24946 24212 2.2 -0.3 14.4 -45.3
183/11-25:01 71 08.0-037 38.4 0435 257.4 035 241 24962 24261 2.1 -0.5 14.0 -46.7
183/11-26:01 71 08.6-038 00.5 0438 257.4 031 244 24967 24322 2.3 -0.5 14.6 -48.5
183/11-27:01 71 05.0-038 22.5 0439 256.8 033 241 24943 24370 2.1 -0.7 12.6 -43.0
183/11-28:01 71 05.5-038 44.1 0439 256.3 033 240 24959 24441 2.4 -0.4 12.3 -43.9
183/11-29:01 71 05.2-039 28.1 0439 256.4 033 240 24958 24487 2.4 -0.4 12.2 -43.8
183/11-30:01 71 05.2-039 49.9 0441 256.4 031 239 24975 24466 1.1 -0.3 12.3 -43.8
183/11-32:01 70 57.2-040 12.4 0441 255.2 040 240 24948 24915 0.8 -0.3 15.3 -49.9
183/11-33:01 70 55.5-040 34.1 0437 254.6 047 238 24930 24726 3.0 -10.9 15.0 -53.2
183/11-33:55 70 55.3-040 54.3 0433 243.7 043 234 24946 24948 1.9 -5.5 16.5 -52.1
183/11-34:01 70 53.2-040 54.3 0428 242.6 042 235 24949 24971 2.0 -2.2 14.6 -52.1
183/11-35:01 70 50.2-041 13.9 0421 245.4 040 240 24947 24545 2.2 0.2 14.6 -51.5
183/11-35:01 70 47.3-041 33.0 0418 246.2 039 234 24952 24322 2.1 -0.7 14.9 -52.4
183/11-37:01 70 44.8-041 52.4 0421 245.9 039 229 24957 24316 2.1 -0.6 13.8 -50.5
183/11-38:01 70 42.1-042 41.2 0422 242.5 039 230 24969 24251 2.5 -0.6 13.9 -51.9
183/11-40:01 70 37.7-042 51.3 0424 242.0 038 228 24966 24250 1.9 -0.7 13.9 -52.2
183/11-41:01 70 33.6-043 11.1 0422 244.6 034 223 24981 24603 1.9 -0.8 13.9 -52.6

PASSING OVER AN AREA THAT IS ALMOST CIRCULAR IN SHAPE - HAS ED CORN ON IT.
OPEN WATER WITH ICE BEHIND AND POSSIBLY SEA ICE.
SEE 10-55.25 LAT 72.6.1 N LONG C2719.1 W FL 249
SEE 10-58.25 LAT 72.6.3 N LONG C2719.1 W FL 249
STAYED CLOSE TO A FEW ICE CAPS OFF IN THE DISTANCE. BUT BELOW 45 DEGREES OUT.
IT IS ENTIRELY BARE UNDO.

OVER MAIN ICE CAP.

ICE CAPS OFF.

VOID ABOVE CAMERA'S OFF.

TIME 11-13.24 LAT 72.21.6 N LONG C3332.2 W FL 249
TIME 11-13.53 LAT 72.21.3 N LONG C3332.9 W FL 249

TIME 11.33.56 LAT 72.33.3 N LONG C3333.1 W FL 249

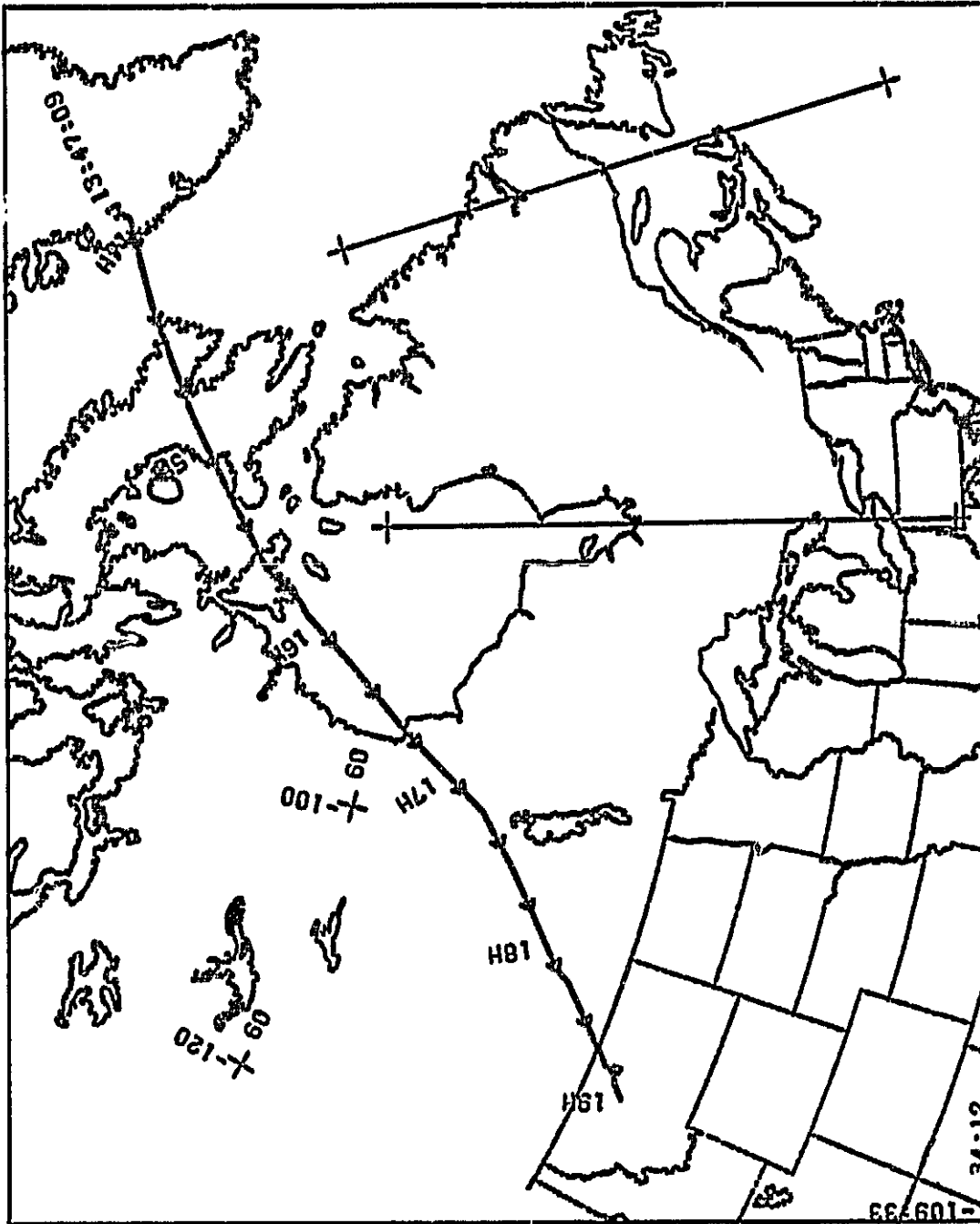
YEAR 1954		ADIDAS FLIGHT LOG		FLIGHT NO. 13		MIZEX		---LAT---		---LONG---		---ALTITUDE---		---TEMP---	
TIME	---	LAT	---	LONG	---	SPD	DIR	SPD	DIR	FRES	RADAR	PITCH	ROLL	IR	AIR
183/12:23:01	68	14.3-050	59.7	0422	139.7	027	102	18964	19473			0.9	-1.4	13.6	-23.0
183/12:23:11	68	13.4-050	56.6	0421	139.4	029	099	19564	19642			1.1	-0.8	12.4	-26.2
183/12:23:27	68	11.7-050	53.2	0415	139.5	020	103	19571	19750			1.2	-0.1	14.5	-25.3
183/12:23:35	68	10.9-050	50.2	0403	139.9	020	103	19559	19594			1.2	-0.3	13.9	-25.4
183/12:24:01	68	08.0-050	27.1	0407	139.9	026	099	19571	19472			1.3	-0.3	12.0	-24.0
183/12:24:55	68	04.0-050	17.3	0376	141.0	026	113	19569	19107			-0.2	-0.7	12.4	-24.9
183/12:25:01	68	03.5-050	16.3	0363	141.0	026	116	19540	19783			-0.4	-1.1	12.1	-25.7
183/12:25:17	68	02.1-050	13.5	0362	140.9	024	114	19173	19278			-1.2	-0.1	13.2	-25.5
183/12:26:01	67	53.6-050	06.1	0377	141.4	024	114	17425	15062			-1.9	-0.4	0.6	-19.8
183/12:27:01	67	53.4-049	56.1	0370	140.7	026	099	15043	15419			0.5	-0.5	0.7	-15.2
183/12:27:35	67	50.5-049	50.5	0370	139.4	027	101	14971	12355			1.5	9.5	0.4	-19.5
183/12:28:01	67	48.2-049	47.6	0375	141.3	023	113	14539	12203			1.3	19.0	-0.6	-19.4
183/12:28:16	67	46.8-049	44.9	0380	141.6	022	105	14533	12441			1.4	1.6	0.9	-13.4
183/12:29:09	67	38.6-049	21.2	0380	141.6	022	105	14530	12750			1.4	-0.1	-1.0	-11.8
183/12:29:39	67	36.7-049	26.6	0377	140.0	023	123	14971	12255			1.4	-0.1	-1.7	-13.1
183/12:30:01	67	36.7-049	59.2	0371	140.2	024	123	14965	12372			1.7	-0.5	-1.0	-13.6
183/12:31:01	67	31.4-050	05.0	0357	140.1	018	110	13359	15031			-4.0	-0.9	-1.3	-11.6
183/12:32:01	67	26.0-050	12.0	0364	140.8	012	121	10376	0572			-0.7	-0.1	-0.4	-6.0
183/12:33:01	67	20.7-050	19.1	0302	140.4	037	106	9789	0545			2.1	-0.8	-0.5	-6.1
183/12:34:01	67	16.6-050	26.4	0281	140.4	032	109	6553	6505			0.2	0.0	-0.2	-7.3
183/12:35:01	67	12.4-050	29.6	0273	140.5	033	101	6040	5661			-0.2	-0.7	0.9	-1.9
183/12:36:01	67	08.2-050	41.6	0285	140.5	035	342	4350	2864			0.0	-0.2	10.9	-3.0
183/12:37:01	67	02.7-050	49.0	0282	140.6	035	342	4350	2864			2.1	6.8	11.3	2.1
183/12:38:01	67	02.7-050	53.6	0179	159.0	037	072	2054	1620			-0.4	-27.5	11.8	5.2
183/12:40:01	66	59.9-050	47.5	0169	061.4	005	252	669	697			0.7	-4.9	12.0	8.0

END START OF RUN 5
CAN SEE TOWERS OF CLAMPEX FROM OUR TERRACE SIDE.
FL 159

STARTED RECORDING AGAIN.
LOOKS LIKE TOWERS OF CLAMPEX IS TO THE FRONT OF THE AIRCRAFT.

END OF RUN 5
CAMERAS OFF AGAIN.
LAT 67E0.5 N LONG 140E0.2 W FL 149

ORIGINAL PAGE IS
OF POOR QUALITY



MIX 1986 FLI 139 JULY 1 1836 SCORESTACH TO MELSTRON
19:48:59 TO 19:54:07 DT SCALE = 1:1,000,000 TIME TICS EVERY 20.00 MINUTES

Figure 27. Flight tracks: Sondre/Malstr 7/1

YEAR	1984	AUDAS	FLIGHT	LOC	13	FLIGHT	NO.	13	MIXER	ALTIMETER	IR	AIR	
TIME	LAT	LONG	TRK	TRK	TRK	TRK	TRK	TRK	TRK	TRK	TRK	TRK	
TIME	LAT	LONG	TRK	TRK	TRK	TRK	TRK	TRK	TRK	TRK	TRK	TRK	
183/13:46:51	09 00.0	000 00.0	0000	000.0	000	000	000	156	24380	-0.2	-0.1	36.5	14.0
183/13:47:01	67 00.5	050 42.4	0000	061.7	118	061	156	24341	-0.3	0.0	30.7	13.3	
183/13:48:01	67 00.5	050 42.4	0006	015.1	114	018	156	56	1.5	0.0	50.7	11.5	
183/13:49:01	67 00.5	050 42.4	0011	061.7	109	061	152	56	0.5	-0.9	26.3	12.5	
183/13:50:01	67 00.5	050 42.0	0015	030.7	102	039	149	56	-0.9	-1.5	22.7	7.1	
183/13:51:01	67 00.7	050 41.6	0015	037.5	103	037	155	56	-0.4	-1.4	21.5	10.1	
183/13:52:01	67 00.6	050 41.7	0016	241.9	035	241	155	56	-0.4	-1.4	21.5	10.1	
183/13:53:01	66 59.8	050 45.9	0175	234.9	003	331	155	56	-0.4	-1.4	21.5	10.1	
183/13:54:01	66 59.6	050 46.3	0178	233.6	002	350	155	56	-0.4	-1.4	21.5	10.1	
183/13:55:01	66 59.6	050 46.8	0182	232.6	002	350	155	56	-0.4	-1.4	21.5	10.1	
183/13:56:01	66 59.4	050 47.1	0183	232.4	002	350	155	56	-0.4	-1.4	21.5	10.1	
183/13:57:01	66 59.2	050 47.1	0183	232.1	003	350	155	56	-0.4	-1.4	21.5	10.1	
183/13:58:01	66 59.2	050 47.6	0185	232.0	002	313	155	56	-0.4	-1.4	21.5	10.1	
183/13:59:01	66 58.8	050 48.9	0193	231.8	001	016	155	56	-0.4	-1.4	21.5	10.1	
183/14:00:01	66 58.1	050 51.2	0209	231.5	009	057	155	56	-0.4	-1.4	21.5	10.1	
183/14:01:01	66 57.7	050 53.1	0225	231.9	005	053	155	56	-0.4	-1.4	21.5	10.1	
183/14:02:01	66 57.8	050 53.8	0230	232.6	006	026	155	56	-0.4	-1.4	21.5	10.1	
183/14:03:01	66 57.8	050 53.8	0230	232.6	006	026	155	56	-0.4	-1.4	21.5	10.1	
183/14:04:01	66 57.8	050 53.8	0230	232.6	006	026	155	56	-0.4	-1.4	21.5	10.1	
183/14:05:01	66 57.8	050 53.8	0230	232.6	006	026	155	56	-0.4	-1.4	21.5	10.1	
183/14:06:01	66 57.8	050 53.8	0230	232.6	006	026	155	56	-0.4	-1.4	21.5	10.1	
183/14:07:01	66 57.8	050 53.8	0230	232.6	006	026	155	56	-0.4	-1.4	21.5	10.1	
183/14:08:01	66 57.8	050 53.8	0230	232.6	006	026	155	56	-0.4	-1.4	21.5	10.1	
183/14:09:01	66 57.8	050 53.8	0230	232.6	006	026	155	56	-0.4	-1.4	21.5	10.1	
183/14:10:01	66 57.8	050 53.8	0230	232.6	006	026	155	56	-0.4	-1.4	21.5	10.1	
183/14:11:01	66 57.8	050 53.8	0230	232.6	006	026	155	56	-0.4	-1.4	21.5	10.1	
183/14:12:01	66 57.8	050 53.8	0230	232.6	006	026	155	56	-0.4	-1.4	21.5	10.1	
183/14:13:01	66 57.8	050 53.8	0230	232.6	006	026	155	56	-0.4	-1.4	21.5	10.1	
183/14:14:01	66 57.8	050 53.8	0230	232.6	006	026	155	56	-0.4	-1.4	21.5	10.1	
183/14:15:01	66 57.8	050 53.8	0230	232.6	006	026	155	56	-0.4	-1.4	21.5	10.1	

TAKE OFF TIME 13 52 21
 JUNE 1, 1984

FLIGHT 13B
 SORRESTRON/MALMSTROM.
 PHRENIX FIGHT CLUB CN TAXI.
 M/P 6 67-01 51-43 SORRESTRON

M/P 1 66-56.2 53-42.3
 M/P 2 67-00 60-00
 M/P 3 66-30 70-00
 M/P 4 64-11.7 83-21.3 YZS
 M/P 5 61-00

M/P 5 61-00 50-00
 M/P 6 58-44.5 84-03.6 VTC
 M/P 7 55-49.7 97-49.5 VTH
 M/P 8 53-50.4 101-05.9 VCD

M/P 1 50-17.8 107-41.4 YTN
 M/P 2 49-04.9 109-35.2
 M/P 3 47-27 111-24.6
 M/P 4 47-30.3 111-11.0 WGA.

YEAR 1984 AIRCRAFT FLIGHT LOG																
TIME	LAT	LONG	FLIGHT NO.	DIR	FLIGHT	IND.	IS	MIXED	DIR	DIR	DIR	DIR	DIR	DIR	DIR	DIR
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183/19:16:00	66 55.2	057.04	1	0487	275.4	026	094	30976	30421	2.4	-0.3	-18.7	-50.3			
183/19:17:00	66 56.0	057.25	1	0489	274.9	027	093	30996	30433	2.1	-0.4	-19.0	-50.1			
183/19:18:00	66 56.6	057.57	1	0489	274.6	026	093	30996	30421	2.3	-0.4	-22.8	-50.1			
183/19:19:00	66 57.3	058.05	1	0490	274.1	025	100	30981	30446	2.4	-0.3	-20.7	-50.3			
183/19:20:00	66 57.9	058.27	1	0490	273.8	026	097	31003	30442	2.2	-0.3	-11.8	-50.3			
183/19:21:00	66 58.4	058.47	1	0490	273.9	024	092	30936	30430	2.1	-0.4	-10.0	-51.2			
183/19:22:00	66 59.1	059.09	1	0491	273.9	026	089	30933	30415	2.2	-0.2	-12.4	-50.6			
183/19:23:00	66 59.5	059.33	1	0492	274.5	028	090	30939	30426	2.1	-0.3	-10.2	-49.9			
183/19:24:00	66 59.9	059.58	1	0493	274.8	028	091	30940	30428	2.1	-0.3	-10.4	-51.7			
183/19:25:00	66 59.9	060.11	1	0493	277.2	029	088	30960	30390	2.2	-0.3	-9.4	-51.4			
183/19:26:00	66 59.9	060.32	1	0496	266.1	028	095	30996	30416	2.0	-0.4	-10.0	-50.4			
183/19:27:00	66 59.9	060.53	1	0497	266.2	028	093	30964	30403	2.0	-0.3	-9.9	-51.9			
183/19:28:00	66 59.4	061.14	1	0496	265.6	029	095	30992	30412	2.0	-0.4	-7.8	-50.4			
183/19:29:00	66 59.4	061.35	1	0494	265.2	027	096	30979	30410	2.1	-0.3	-7.3	-52.8			
183/19:29:36	66 57.4	061.48	1	0493	265.2	027	096	30991	30501	1.9	-0.2	-8.9	-50.8			
183/19:30:00	66 57.2	061.56	1	0493	265.2	027	094	30935	30415	1.9	-0.4	-9.3	-51.8			
183/19:31:00	66 56.6	062.17	1	0492	264.7	028	094	30931	30418	2.3	-0.4	-10.4	-52.0			
183/19:31:52	66 56.4	062.21	1	0492	264.6	028	094	30991	30562	2.0	-0.4	-9.2	-52.2			
183/19:32:00	66 55.9	062.26	1	0492	264.3	025	093	30994	28350	2.1	-0.2	-9.5	-52.9			
183/19:33:00	66 55.9	062.28	1	0491	263.8	027	097	30990	28983	2.2	-0.5	-8.1	-52.4			
183/19:33:10	66 55.0	063.00	1	0491	264.0	029	095	30965	28645	2.2	-0.5	-6.6	-57.3			
183/19:34:00	66 54.4	063.19	1	0491	263.9	026	093	30933	30422	2.1	-0.5	-8.0	-52.3			
183/19:35:00	66 53.6	063.40	1	0491	263.7	025	092	30974	28216	2.2	-0.4	-7.3	-51.9			
183/19:36:00	66 52.6	064.00	1	0490	263.3	025	090	30971	27615	2.1	-0.1	-10.0	-52.7			
183/19:36:32	66 52.1	064.12	1	0490	263.3	027	088	30938	27326	2.2	-0.2	2.3	-50.0			
183/19:37:00	66 51.7	064.21	2	0489	263.6	024	082	30993	25135	1.9	-0.3	-1.6	-51.0			
183/19:38:00	66 50.7	064.82	1	0488	263.3	023	081	30975	29778	2.2	-0.3	15.4	-51.9			
183/19:39:00	66 49.8	065.02	1	0488	263.7	023	082	30997	25650	2.1	-0.5	-0.3	-51.3			
183/19:40:00	66 48.9	065.22	1	0486	263.8	019	044	30995	25507	2.2	-0.2	-0.8	-50.5			
183/19:41:00	66 48.7	065.43	1	0485	263.5	025	051	30973	25683	2.0	-0.8	-0.3	-52.2			
183/19:42:00	66 46.5	066.03	1	0484	264.0	025	088	30972	27109	2.3	-0.7	3.1	-51.3			
183/19:43:00	66 44.4	066.33	1	0484	264.9	022	086	30971	28289	2.3	-0.7	15.2	-51.3			
183/19:44:00	66 44.2	066.43	1	0482	264.1	023	079	30976	29250	2.1	-0.6	13.6	-50.0			
183/19:45:00	66 42.9	067.03	1	0480	264.5	033	074	30990	28975	2.3	-0.6	13.6	-50.2			
183/19:46:00	66 41.6	067.27	1	0479	263.5	031	028	30982	29496	2.3	-0.2	14.7	-50.7			
183/19:47:00	66 40.2	067.43	1	0478	263.2	028	074	30979	30035	2.1	-0.3	15.9	-49.2			
183/19:48:00	66 38.9	068.02	1	0478	262.7	030	050	30991	29760	2.2	-0.3	12.3	-49.5			
183/19:49:00	66 37.6	068.22	1	0477	262.6	026	072	30930	29909	2.2	-0.5	13.1	-50.4			
183/19:50:00	66 36.1	068.42	1	0476	262.1	025	016	30976	29885	2.1	-0.5	19.1	-50.7			
183/19:51:00	66 34.7	069.01	1	0475	261.5	022	023	30987	30026	2.1	-0.6	19.2	-50.2			
183/19:52:00	66 33.2	069.21	1	0474	261.0	019	014	30986	30025	2.0	-0.8	14.3	-50.9			
183/19:53:00	66 31.5	069.40	1	0473	260.4	017	006	30990	30439	2.0	-0.5	15.2	-49.6			
183/19:54:00	66 29.9	069.59	1	0473	259.7	016	020	30975	30423	2.2	-0.7	0.4	-49.5			
183/19:54:40	66 18.9	070.12	1	0473	256.3	017	019	30981	30430	2.2	-1.9	0.2	-51.0			
183/19:55:00	66 28.0	070.18	1	0473	255.2	016	023	30984	30432	2.0	-1.0	0.3	-49.4			
183/19:56:00	66 25.6	070.37	1	0471	255.4	021	006	31001	30437	2.1	-0.2	0.0	-48.4			
183/19:57:00	66 23.6	070.56	1	0472	256.3	026	006	30993	30452	2.1	-0.8	0.2	-49.8			
183/19:58:00	66 21.2	071.14	1	0474	255.5	025	009	30992	30431	2.0	-0.7	15.5	-49.5			
183/19:59:00	66 18.9	071.33	1	0475	254.6	020	037	30993	30383	2.0	-0.8	15.6	-50.0			
183/19:00:00	66 16.3	071.52	1	0475	254.1	018	054	31004	30297	1.8	-0.5	18.8	-49.5			
183/15:01:00	66 13.9	072.09	1	0473	253.8	015	038	30974	30305	1.6	-0.9	18.0	-48.4			
183/15:02:00	66 11.5	072.28	1	0472	253.3	015	038	30984	30379	2.0	-0.5	18.7	-50.4			
183/15:03:00	66 08.2	072.47	1	0469	252.8	015	031	30935	30369	1.8	-0.6	18.9	-51.0			
183/15:04:00	66 06.9	072.05	1	0466	252.3	012	007	30925	30471	1.9	-0.7	16.8	-51.2			
183/15:05:00	66 04.0	072.24	1	0464	251.7	012	014	30977	30502	1.8	-0.2	15.0	-50.4			
183/15:06:00	66 01.8	072.41	1	0459	252.5	021	024	32109	31653	3.7	0.1	16.9	-50.7			
183/15:07:00	66 58.8	073.58	1	0455	256.0	031	034	32101	32779	3.3	0.7	16.5	-49.4			
183/15:08:00	66 56.1	074.16	1	0454	254.0	035	034	32609	33269	3.2	0.5	0.1	-45.1			
183/15:09:00	66 53.9	074.34	1	0456	254.2	039	037	34065	33756	3.1	-0.5	0.1	-47.1			
183/15:10:00	66 50.7	074.51	1	0465	259.2	033	041	34468	34229	3.1	-1.0	-0.2	-45.0			

SEA ICE ON STARBOARD SIDE.
 SERVED - THE 18 MACHINIS IS DOWN TO AMBULE.
 CAMERAS ON 14 33 00.
 PASSING OVER MOUNTAINS WITH LIGHT CLOUD COVER.

N/P 3 AT 14 54 00.

YEAR 1984 ADDAS FLIGHT LOG		FLIGHT NO. 13		NIZEK		TEMP					
TIME	LAT	LONG	GND BRZ		ALTITUDE		IR AIR				
			SPD	DIR	PRES	RADAR	PITCH	ROLL			
183/15:11:00	65 48.0-075	27 0.0	0468	254.8	047	337	34573	3.2	-0.5	-0.6	-45.6
183/15:12:00	65 48.2-075	27 2.0	0470	254.4	048	338	34923	2.7	-0.7	-0.7	-46.7
183/15:13:00	65 48.5-075	27 4.0	0472	254.7	052	339	34944	2.7	-0.6	-0.8	-46.4
183/15:14:00	65 49.5-076	27 6.0	0465	254.7	051	338	34954	2.8	-0.4	-0.8	-47.0
183/15:15:00	65 50.6-076	27 8.0	0464	254.7	056	335	34950	2.7	-0.5	-0.8	-45.3
183/15:16:00	65 51.8-076	27 10.0	0462	254.8	057	335	34957	2.9	-0.2	-0.6	-45.8
183/15:17:00	65 52.7-076	27 12.0	0461	255.0	057	335	34956	2.7	-0.6	-0.7	-44.2
183/15:18:00	65 53.5-076	27 14.0	0461	255.1	059	334	34954	2.9	-0.7	-2.3	-44.8
183/15:19:00	65 54.1-076	27 16.0	0461	255.1	059	333	34977	2.6	-0.9	-3.1	-47.0
183/15:20:00	65 54.8-077	27 18.0	0462	254.9	064	331	34955	2.7	-0.4	-1.5	-47.7
183/15:21:00	65 55.4-077	27 20.0	0462	254.9	068	327	34950	2.6	-0.7	-3.1	-46.7
183/15:22:00	65 56.0-078	27 22.0	0458	255.4	072	317	34964	2.8	-0.2	-2.7	-48.3
183/15:23:00	65 56.5-078	27 24.0	0458	255.4	076	311	34949	2.9	-0.3	-2.9	-48.3
183/15:24:00	65 57.2-078	27 26.0	0456	255.9	080	329	34954	2.5	-1.0	-2.9	-47.4
183/15:25:00	65 58.1-078	27 28.0	0454	257.5	085	329	34952	2.6	-0.4	-2.9	-46.7
183/15:26:00	65 59.4-078	27 30.0	0454	259.0	101	332	34955	2.5	-0.3	-3.0	-49.7
183/15:27:00	65 60.5-079	27 32.0	0454	259.0	101	332	34949	2.5	-0.9	-0.8	-49.5
183/15:28:00	65 61.5-079	27 34.0	0455	257.5	101	331	34954	2.5	-0.4	-0.4	-48.7
183/15:29:00	65 62.5-079	27 36.0	0455	257.1	101	330	34961	2.4	-0.7	-1.0	-51.3
183/15:30:00	65 63.5-079	27 38.0	0456	257.0	101	331	34963	2.4	-0.6	-2.4	-49.9
183/15:31:00	64 53.6-080	27 40.0	0458	256.6	099	329	34955	2.3	-0.7	0.9	-49.7
183/15:32:00	64 54.5-080	27 42.0	0458	256.5	097	329	34962	2.4	-0.9	1.9	-50.1
183/15:33:00	64 55.4-080	27 44.0	0457	256.2	099	329	34967	2.4	-0.4	0.9	-50.7
183/15:34:00	64 56.3-080	27 46.0	0457	256.3	100	330	34949	2.3	-0.6	1.8	-51.1
183/15:35:00	64 57.2-080	27 48.0	0457	256.3	100	330	34955	2.5	-0.6	1.1	-51.5
183/15:36:00	64 58.1-081	27 50.0	0447	254.7	094	326	34948	2.7	-0.7	2.0	-50.8
183/15:37:00	64 59.0-081	27 52.0	0447	254.1	089	326	34942	2.6	-1.1	2.0	-50.5
183/15:38:00	64 59.9-082	27 54.0	0443	253.5	087	325	34957	2.7	-0.8	2.6	-49.4
183/15:39:00	64 60.8-082	27 56.0	0442	252.8	083	325	34956	2.8	-0.4	3.0	-50.6
183/15:40:00	64 61.7-082	27 58.0	0442	252.8	083	325	34956	2.8	-0.6	3.5	-51.4
183/15:41:00	64 62.6-083	27 60.0	0440	251.1	079	322	34958	2.7	-0.7	4.6	-49.9
183/15:42:00	64 63.5-083	27 62.0	0440	251.1	076	318	34956	2.7	-0.7	4.3	-50.0
183/15:43:00	64 64.4-083	27 64.0	0442	247.6	070	317	34950	2.9	-16.9	4.0	-50.4
183/15:44:00	64 65.3-083	27 66.0	0462	230.6	067	316	34944	2.6	-1.9	3.9	-50.6
183/15:45:00	64 66.2-083	27 68.0	0462	230.2	067	318	34946	2.7	-0.5	4.0	-49.6
183/15:46:00	63 56.5-083	27 70.0	0461	229.9	065	316	34962	2.6	-0.5	4.6	-50.4
183/15:47:00	63 57.4-084	27 72.0	0461	229.2	061	317	34965	2.6	-0.7	5.9	-49.6
183/15:48:00	63 58.3-084	27 74.0	0461	228.7	057	318	34944	2.9	-0.8	4.8	-50.1
183/15:49:00	63 59.2-084	27 76.0	0461	228.2	054	318	34961	2.7	-0.7	5.6	-49.4
183/15:50:00	63 60.1-084	27 78.0	0462	227.9	054	315	34962	2.5	-0.7	5.6	-50.6
183/15:51:00	63 61.0-085	27 80.0	0462	227.9	052	312	34952	2.5	-1.6	4.7	-50.5
183/15:52:00	63 61.9-085	27 82.0	0464	224.8	049	312	34960	2.6	-0.4	4.6	-48.5
183/15:53:00	63 62.8-085	27 84.0	0464	226.4	047	306	34951	2.4	-0.4	5.0	-50.4
183/15:54:00	63 63.7-085	27 86.0	0466	226.2	046	303	34954	2.2	-0.7	4.7	-49.0
183/15:55:00	63 64.6-085	27 88.0	0461	225.9	046	299	34948	2.5	-1.3	4.3	-51.3
183/15:56:00	62 59.3-085	27 90.0	0444	221.7	044	302	34934	2.4	-0.9	2.2	-48.8
183/15:57:00	62 59.3-086	27 92.0	0442	221.2	043	296	34952	2.4	-0.0	3.6	-50.8
183/15:58:00	62 59.3-086	27 94.0	0440	221.0	042	292	34942	2.6	-0.1	2.8	-50.3
183/15:59:00	62 59.3-086	27 96.0	0439	221.0	038	294	34959	2.5	-1.1	2.8	-49.5
183/16:00:00	62 59.3-086	27 98.0	0445	221.1	034	296	34942	2.7	-3.9	2.7	-49.3
183/16:01:00	62 58.2-087	27 100.0	0445	227.8	035	280	34966	2.9	-0.6	2.9	-50.0
183/16:02:00	62 57.1-087	27 102.0	0445	227.8	035	280	34960	2.5	-0.6	2.4	-50.4
183/16:03:00	62 56.0-087	27 104.0	0443	226.5	032	276	34953	2.7	-0.7	3.3	-50.4
183/16:04:00	62 54.9-087	27 106.0	0443	225.5	029	274	34951	2.6	-0.6	3.4	-51.5

IB IS BACK UP - GOODARD.
OVER SOLID SEA ICE, STARTING TO CLOUD OVER UNDEREATH US.

CROSSING A CLEAR PATCH IN THE ICE.
BROKEN UP OF THE SOLID CLOUD COVER.
OVER FIRST YEAR ICE SOLID CONCENTRATION SAY 95 PERCENT.

CROSSING ON THE ICE.
OVER 100 PERCENT CLOUDS.

ORIGINAL PAGE IS
OF POOR QUALITY

YEAR 1984 AADAS FLIGHT LOG --- FLIGHT NO. 13 --- MIZEX													
	TIME	LAT	LONG	GND TRUE			ALTITUDE			TEMP			
				SPD	DIR	HDG	PRES	RADAR	IR		AIR		
183/16:04:00	62	11.3-087	47.2	0443	225.1	027	263	34960	35737	2.5	-0.6	-6.9	-48.2
183/16:05:00	62	11.3-087	58.2	0443	226.8	027	261	34950	35736	2.7	-0.6	-12.7	-49.1
183/16:06:00	62	11.3-088	09.6	0442	228.3	029	259	34960	35741	2.3	-0.6	-8.6	-50.4
183/16:07:00	61	11.3-089	19.0	0442	223.9	027	250	34941	35739	2.5	-0.6	-13.2	-50.8
183/16:08:00	61	11.3-089	29.0	0441	223.5	029	244	34936	35740	2.3	-0.2	-17.4	-50.0
183/16:09:00	61	11.3-088	40.0	0440	223.2	028	238	34932	35739	2.4	-0.5	-24.4	-49.5
183/16:10:00	61	11.3-089	50.2	0440	222.2	028	236	34935	35739	2.3	-0.0	-16.4	-51.8
183/16:11:00	61	11.3-089	00.5	0440	222.0	028	228	34942	35739	2.3	-0.0	-16.4	-51.8
183/16:12:00	61	11.3-089	10.5	0440	221.1	028	219	34937	35771	2.4	-0.7	-18.7	-49.9
183/16:13:00	61	11.3-089	20.5	0440	221.1	026	217	34958	35744	2.2	-0.6	-23.5	-50.1
183/16:14:00	61	11.3-089	30.9	0440	220.7	025	212	34956	35745	2.4	-0.7	-15.4	-50.0
183/16:15:00	61	11.3-089	41.0	0440	220.8	032	210	34953	35728	2.4	-0.7	-16.1	-49.1
183/16:16:00	61	11.3-089	50.6	0439	220.4	030	210	34954	35729	2.3	-0.2	-20.4	-49.6
183/16:17:00	61	11.3-089	00.7	0439	220.2	034	208	34955	35732	2.2	-1.1	-26.7	-50.8
183/16:18:00	60	11.3-090	10.7	0439	220.8	033	209	34959	35726	2.3	-0.3	-13.3	-49.6
183/16:19:00	60	11.3-090	21.0	0438	222.5	036	204	35707	36582	2.9	-0.5	-20.2	-52.5
183/16:20:00	60	11.3-090	31.2	0438	221.7	040	197	36424	37030	3.2	-0.5	-45.2	-53.7
183/16:21:00	60	11.3-091	41.1	0438	221.1	040	190	36976	37735	2.4	-0.5	-52.1	-54.6
183/16:22:00	60	11.3-091	51.0	0438	221.1	040	190	36976	37735	2.4	-0.5	-52.1	-54.6
183/16:23:00	60	11.3-091	01.2	0431	220.9	040	191	36900	37652	2.7	-0.2	-1.7	-54.3
183/16:24:00	60	11.3-091	11.3	0431	220.4	045	191	36911	37693	2.4	-0.3	-11.0	-55.4
183/16:25:00	60	11.3-091	21.1	0431	219.7	043	182	36509	37681	2.5	-0.7	-9.5	-53.6
183/16:26:00	60	11.3-091	31.2	0432	219.1	043	181	36914	37667	2.5	-0.3	-1.2	-53.8
183/16:27:00	60	11.3-091	40.8	0431	218.9	050	183	36917	37658	2.6	-0.4	-6.4	-55.9
183/16:28:00	60	11.3-091	50.6	0430	218.4	053	179	36918	37645	2.5	-0.1	-0.6	-55.9
183/16:29:00	59	11.3-092	00.4	0429	219.2	059	184	36897	37610	2.5	-0.3	-0.6	-54.4
183/16:30:00	59	11.3-092	10.6	0429	217.9	062	180	36908	37611	2.2	-0.3	-12.0	-54.5
183/16:31:00	59	11.3-092	20.9	0428	217.5	060	183	36914	37580	2.3	-0.8	-12.0	-54.8
183/16:32:00	59	11.3-092	31.2	0428	217.5	060	183	36914	37580	2.3	-0.8	-12.0	-54.8
183/16:33:00	59	11.3-092	41.1	0419	216.6	071	181	36911	37579	2.2	-0.3	-0.1	-54.7
183/16:34:00	59	11.3-092	51.2	0418	216.6	069	182	36897	37570	2.5	-0.3	-11.6	-55.4
183/16:35:00	59	11.3-092	01.2	0418	215.7	075	177	36902	37557	2.4	-0.7	-7.8	-54.7
183/16:36:00	59	11.3-093	11.3	0417	215.3	076	178	36899	37516	2.5	-0.8	-17.9	-54.0
183/16:37:00	59	11.3-093	21.6	0414	215.6	075	180	36901	37512	2.5	-0.8	-1.3	-54.2
183/16:38:00	59	11.3-093	31.6	0413	215.3	078	181	36911	37486	2.3	-0.1	-8.4	-55.2
183/16:39:00	59	11.3-093	41.1	0412	215.1	079	180	36903	37485	2.3	-0.6	-19.3	-54.0
183/16:40:00	59	11.3-093	51.1	0412	215.0	079	178	36893	37464	2.4	-0.4	-23.1	-54.8
183/16:41:00	58	11.3-093	01.1	0411	214.9	079	181	36897	37462	2.3	-0.1	-18.4	-54.9
183/16:42:00	58	11.3-093	11.2	0409	213.6	078	181	36901	37449	2.5	-1.2	-22.7	-53.7
183/16:43:00	58	11.3-094	21.6	0409	213.6	080	180	36895	37420	2.4	-2.8	-19.7	-52.9
183/16:44:00	58	11.3-094	31.6	0404	211.4	081	186	36921	37377	3.2	-0.7	-2.0	-54.6
183/16:45:00	58	11.3-094	41.6	0404	211.4	089	189	36910	37313	2.2	-1.0	-4.5	-52.1
183/16:46:00	58	11.3-094	51.6	0395	210.8	083	188	36892	37254	2.5	-1.0	-16.0	-52.1
183/16:47:00	58	11.3-094	01.6	0390	210.6	083	187	36884	37179	2.6	-0.1	-16.0	-52.1
183/16:48:00	58	11.3-094	11.6	0389	209.6	083	184	36894	37109	2.7	-0.4	-20.2	-51.1
183/16:49:00	58	11.3-094	21.6	0388	209.7	083	183	36890	37029	2.8	-0.7	-8.4	-51.4
183/16:50:00	58	11.3-094	31.6	0389	209.4	083	182	36886	36937	2.8	-0.7	-9.2	-49.7
183/16:51:00	58	11.3-095	41.6	0390	209.7	081	183	36906	36800	2.4	-1.0	-21.3	-49.3
183/16:52:00	57	11.3-095	51.6	0391	210.0	079	184	36903	36802	2.7	-0.5	-25.0	-47.9
183/16:53:00	57	11.3-095	01.6	0394	210.1	079	186	36905	36695	2.5	-0.3	-21.2	-47.7
183/16:54:00	57	11.3-095	11.6	0393	210.0	076	184	36905	36671	2.5	-0.5	-8.0	-47.8
183/16:55:00	57	11.3-095	21.6	0400	209.5	077	183	36899	36603	2.4	-0.7	-14.6	-46.9
183/16:56:00	57	11.3-095	31.6	0402	209.4	078	182	36904	36630	2.4	-0.7	-16.6	-46.9
183/16:57:00	57	11.3-095	41.6	0403	209.3	076	183	36902	36617	2.5	-0.4	-34.0	-45.4
183/16:58:00	57	11.3-095	51.6	0404	209.3	075	181	36902	36499	2.5	-0.4	-41.1	-44.8
183/16:59:00	57	11.3-095	01.6	0404	209.1	073	180	36907	36467	2.6	-0.5	-44.1	-44.4
183/17:00:00	57	11.3-095	11.6	0405	210.0	071	187	36918	36542	2.6	-0.4	13.3	-46.4
183/17:01:00	57	11.3-096	21.6	0406	210.5	071	190	36909	36501	2.5	-0.6	19.6	-46.3
183/17:02:00	57	11.3-096	31.6	0400	211.4	073	195	36911	36560	2.4	-0.6	20.2	-45.9
183/17:03:00	57	11.3-096	41.6	0409	211.4	070	195	36902	36586	2.6	-0.2	21.5	-46.6

CAMERAS OFF AT 16 59 15.
CAMERAS ARE STAYING ON - CLEARING UP AHEAD.

YEAR 1984 ADDAS FLIGHT LOG --- FLIGHT NO. 13 --- MIXEX
 ---TIME--- --LAT--- --LONG--- GRD TRKE ---HOLD--- ALTITUDE---
 SPD DIR PRES RADAR PITCH ROLL IR AIR

183/17:00:52	57	09.6-096	16.5	0408	211.4	068	195	36900	36619	2.4	-0.6	20.2	-46.7
183/17:01:00	57	07.3-096	15.4	0408	211.4	070	195	36900	36677	2.5	-0.3	21.9	-47.2
183/17:02:00	57	02.1-096	22.5	0410	211.5	066	195	36900	36595	2.4	-0.5	16.2	-47.3
183/17:03:00	56	09.0-096	29.3	0410	211.1	088	194	36914	36404	2.4	-0.5	21.4	-46.0
183/17:04:00	56	05.0-096	36.2	0411	211.0	086	194	36910	36454	2.2	0.0	21.6	-45.5
183/17:05:00	56	05.1-106	43.4	0413	211.6	062	195	36901	36380	2.5	-0.3	20.4	-46.7
183/17:06:00	56	03.3-106	50.4	0414	211.5	061	194	36900	36409	2.5	-0.2	20.3	-46.7
183/17:07:00	56	03.6-106	57.1	0416	210.7	060	191	36905	36486	2.2	-0.3	22.2	-45.9
183/17:08:00	56	02.0-097	64.1	0418	210.2	056	192	36913	36500	2.5	-0.9	20.9	-42.9
183/17:09:00	56	21.9-097	11.0	0421	211.8	051	193	36911	36448	2.4	-0.5	21.2	-45.6
183/17:10:00	56	16.1-097	17.8	0425	211.4	053	195	36912	36511	2.4	-0.8	20.2	-43.8
183/17:11:00	56	10.3-097	25.0	0428	211.7	049	201	36906	36416	2.3	-0.3	16.9	-43.5
183/17:12:00	56	04.0-097	31.9	0430	211.6	057	201	36908	36479	2.2	-0.7	22.2	-42.6
183/17:13:00	56	05.8-097	38.7	0429	211.5	057	201	36910	36556	2.2	-0.6	21.6	-43.6
183/17:14:00	55	05.3-097	45.6	0427	211.6	052	204	36903	36550	2.4	-0.5	19.9	-43.6
183/17:15:00	55	06.1-097	52.4	0428	212.1	054	208	36910	36604	2.4	-0.6	21.4	-43.1
183/17:16:00	55	04.2-097	59.2	0429	212.2	053	208	36908	36604	2.5	-0.6	21.1	-45.1
183/17:17:00	55	04.2-098	67.4	0430	218.9	048	210	36902	36386	2.7	-1.4	20.8	-44.7
183/17:18:00	55	04.5-098	75.3	0432	227.5	050	211	36906	36385	2.2	-1.3	20.4	-44.7
183/17:19:00	55	23.6-098	23.2	0434	227.5	044	214	36900	36423	2.4	-0.5	21.7	-44.2
183/17:20:00	55	19.1-098	32.9	0436	227.5	051	216	36924	36241	2.1	-0.7	20.7	-43.2
183/17:21:00	55	14.2-098	42.5	0437	227.5	051	218	36923	36277	2.1	-0.4	21.7	-41.1
183/17:22:00	55	09.4-098	51.8	0436	227.8	054	223	36903	36250	2.2	-0.7	21.4	-43.2
183/17:23:00	55	04.7-099	61.6	0436	227.9	051	222	36896	36178	2.1	-0.6	20.0	-44.2
183/17:24:00	54	05.8-099	70.9	0436	227.4	050	221	36905	36143	2.2	-0.3	20.4	-43.2
183/17:25:00	54	05.6-099	80.3	0433	227.4	057	221	36918	36238	2.0	-0.5	20.1	-42.6
183/17:26:00	54	02.6-099	87.8	0431	227.5	056	225	36905	36228	2.0	-0.7	18.1	-42.9
183/17:27:00	54	01.5-099	95.9	0429	228.9	054	223	36901	36280	2.4	-0.8	19.3	-43.9
183/17:28:00	54	01.8-099	104.0	0429	228.9	057	220	36901	36220	2.5	-0.9	21.7	-44.1
183/17:29:00	54	01.7-099	112.2	0429	227.0	055	222	36906	36103	2.0	-0.6	21.7	-44.2
183/17:30:00	54	06.0-100	05.1	0430	227.0	053	225	36906	36077	2.2	-0.5	21.3	-44.4
183/17:31:00	54	26.0-100	15.2	0431	227.1	051	226	36901	36079	2.2	-0.6	21.2	-45.4
183/17:32:00	54	21.3-100	24.4	0432	227.4	049	229	36900	36065	2.3	-0.6	21.3	-46.2
183/17:33:00	54	16.3-100	33.3	0434	227.2	041	226	36899	36115	2.3	-0.8	21.3	-46.4
183/17:34:00	54	11.4-100	42.3	0436	227.2	041	227	36914	36236	2.1	-0.9	13.5	-44.7
183/17:35:00	54	06.6-100	51.6	0440	227.6	036	233	36912	36151	2.2	-0.8	21.0	-44.0
183/17:36:00	54	01.4-101	60.7	0441	227.1	041	230	36907	36216	2.1	-0.8	12.3	-46.7
183/17:37:00	53	06.8-101	69.8	0443	231.7	036	238	36909	36222	2.2	0.1	21.2	-46.3
183/17:38:00	53	21.7-101	79.1	0444	232.1	044	245	36914	36179	2.0	-0.9	17.8	-45.5
183/17:39:00	53	47.0-101	89.2	0445	232.0	046	248	36903	36172	2.0	-0.9	23.8	-46.6
183/17:40:00	53	42.4-101	98.6	0443	232.0	048	252	36907	36195	1.9	-0.6	20.6	-46.3
183/17:41:00	53	37.7-101	107.3	0443	232.0	048	258	36897	36145	2.1	-0.9	19.5	-47.0
183/17:42:00	53	32.8-101	116.0	0442	232.3	050	259	36897	36152	2.2	-0.9	19.5	-47.0
183/17:43:00	53	28.0-102	124.7	0442	233.3	057	262	36917	36444	1.9	-0.9	17.7	-47.8
183/17:44:00	53	23.3-102	133.4	0441	233.0	056	261	36896	36469	2.0	-0.7	17.7	-47.0
183/17:45:00	53	18.5-102	142.1	0439	233.1	053	266	36904	36689	2.0	-0.4	19.1	-48.6
183/17:46:00	53	13.6-102	150.8	0439	233.6	059	269	36894	35145	2.0	-0.8	19.4	-47.0
183/17:47:00	53	09.1-102	159.4	0438	233.8	050	269	36895	35134	1.9	-1.0	17.3	-47.6
183/17:48:00	53	04.2-102	168.1	0438	233.5	058	269	36898	35166	2.2	-0.8	18.3	-48.6
183/17:49:00	53	04.2-102	176.8	0433	233.5	067	264	36918	35400	2.0	-1.0	18.3	-48.2
183/17:50:00	53	04.7-102	185.5	0429	233.7	064	268	36907	35401	2.1	-0.6	18.0	-48.4
183/17:51:00	53	04.0-102	194.2	0425	233.7	064	269	36913	35401	2.1	-0.7	18.2	-48.7
183/17:52:00	53	03.4-102	202.9	0425	232.3	062	267	36915	35401	2.2	-0.3	19.9	-48.3
183/17:53:00	53	03.0-102	211.6	0424	232.9	061	266	36904	35401	2.2	-0.7	20.9	-48.5
183/17:54:00	53	02.5-102	220.3	0424	233.7	067	270	36904	35402	2.2	-0.7	22.3	-47.6
183/17:55:00	53	02.0-102	229.0	0422	234.1	073	270	36922	35321	2.1	-0.8	25.2	-47.8
183/17:56:00	53	01.6-104	237.7	0421	233.4	076	263	36927	35321	1.8	-0.5	25.6	-48.2
183/17:57:00	53	01.2-104	246.4	0420	233.0	080	260	36919	35275	1.7	-0.4	8.7	-49.8
183/17:57:36	52	19.0-104	18.2	0418	233.1	079	259	36893	35264	2.0	-0.8	2.5	-50.0
183/17:58:00	52	17.3-104	20.4	0416	232.6	079	259	36900	35248	1.9	-0.9	-18.8	-51.6

183 17.57.36 ADDAS TAPES SKIPPED, EDT

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YEAR 1984 ADDAS FLIGHT LOG --- FLIGHT NO. 13 --- MIKEX
GRD TRGE --- ALTITUDE ---
---TIME---L---LONG---H---M---S---SPD DIR PRES RADAR PITCH ROLL IR ---TEMP--- AIR

183/18:00:00 02 12.7-104 29.1 0415 232.6 080 259 36900 35240 1.8 -0.6 -39.8 -51.2
183/18:01:00 02 12.7-104 29.1 0415 232.6 080 259 36900 35240 1.9 -0.6 -39.8 -51.2
183/18:02:00 02 12.7-104 29.1 0415 232.6 080 259 36900 35240 2.0 -0.9 -16.0 -51.0
183/18:03:00 01 59.3-105 01.5 0407 231.6 075 258 36893 35435 2.1 -0.5 -15.6 -51.8
183/18:04:00 01 59.3-105 01.5 0407 231.6 075 258 36893 35435 2.1 -0.5 -15.6 -51.9
183/18:05:00 01 59.3-105 01.5 0407 231.6 075 258 36893 35435 2.1 -0.5 -15.6 -51.9
183/18:06:00 01 59.3-105 01.5 0407 231.6 075 258 36893 35435 2.1 -0.5 -15.6 -51.9
183/18:07:00 01 59.3-105 01.5 0407 231.6 075 258 36893 35435 2.1 -0.5 -15.6 -51.9
183/18:08:00 01 59.3-105 01.5 0407 231.6 075 258 36893 35435 2.1 -0.5 -15.6 -51.9
183/18:09:00 01 59.3-105 01.5 0407 231.6 075 258 36893 35435 2.1 -0.5 -15.6 -51.9
183/18:10:00 01 59.3-105 01.5 0407 231.6 075 258 36893 35435 2.1 -0.5 -15.6 -51.9
183/18:11:00 01 59.3-105 01.5 0407 231.6 075 258 36893 35435 2.1 -0.5 -15.6 -51.9
183/18:12:00 01 59.3-105 01.5 0407 231.6 075 258 36893 35435 2.1 -0.5 -15.6 -51.9
183/18:13:00 01 59.3-105 01.5 0407 231.6 075 258 36893 35435 2.1 -0.5 -15.6 -51.9
183/18:14:00 00 56.7-106 19.3 0427 219.0 080 270 36896 35473 2.0 -0.7 -32.0 -54.5
183/18:15:00 00 56.7-106 19.3 0427 219.0 080 270 36896 35473 2.0 -0.7 -32.0 -54.5
183/18:16:00 00 45.4-106 32.1 0408 234.6 090 270 36883 35324 2.0 -1.0 -30.3 -55.2
183/18:17:00 00 45.4-106 32.1 0408 234.6 090 270 36883 35324 1.6 -0.6 -27.9 -54.2
183/18:18:00 00 45.4-106 32.1 0408 234.6 090 270 36883 35324 1.7 -0.7 -32.3 -55.1
183/18:19:00 50 30.9-106 54.8 0405 233.2 105 271 36911 35249 1.5 -0.7 -27.1 -55.4
183/18:20:00 50 27.4-107 02.3 0399 233.5 109 270 36906 34765 1.9 0.0 -20.8 -56.5
183/18:21:00 50 26.4-107 02.3 0399 233.5 109 270 36906 34765 1.9 0.0 -20.8 -56.5
183/18:22:00 50 26.4-107 02.3 0399 233.5 109 270 36906 34765 1.9 0.0 -20.8 -56.5
183/18:23:00 50 26.4-107 02.3 0399 233.5 109 270 36906 34765 1.9 0.0 -20.8 -56.5
183/18:24:00 50 26.4-107 02.3 0399 233.5 109 270 36906 34765 1.9 0.0 -20.8 -56.5
183/18:25:00 50 26.4-107 02.3 0399 233.5 109 270 36906 34765 1.9 0.0 -20.8 -56.5
183/18:26:00 50 26.4-107 02.3 0399 233.5 109 270 36906 34765 1.9 0.0 -20.8 -56.5
183/18:27:00 50 26.4-107 02.3 0399 233.5 109 270 36906 34765 1.9 0.0 -20.8 -56.5
183/18:28:00 50 26.4-107 02.3 0399 233.5 109 270 36906 34765 1.9 0.0 -20.8 -56.5
183/18:29:00 49 35.3-108 21.4 0402 232.4 101 270 36906 34402 1.8 -0.5 -45.5 -54.8
183/18:30:00 49 35.3-108 21.4 0402 232.4 101 270 36906 34402 1.8 -0.5 -45.5 -54.8
183/18:31:00 49 35.3-108 21.4 0402 232.4 101 270 36906 34402 1.8 -0.5 -45.5 -54.8
183/18:32:00 49 28.8-108 28.6 0401 232.4 103 271 36900 34414 2.0 -1.9 -48.0 -56.1
183/18:33:00 49 28.8-108 28.6 0401 232.4 103 271 36900 34414 2.0 -1.9 -48.0 -56.1
183/18:34:00 49 19.0-109 02.7 0401 233.7 108 274 36902 34686 2.1 -0.4 -21.2 -56.0
183/18:35:00 49 17.9-109 02.7 0401 233.7 108 274 36902 34686 1.6 -1.2 -50.5 -55.3
183/18:36:00 49 14.1-109 02.7 0401 233.8 110 276 36912 34783 1.7 -0.6 -43.9 -54.7
183/18:37:00 09 1.1-108 56.7 0399 234.1 109 277 36911 34809 1.9 -0.5 -35.0 -52.9
183/18:38:00 09 1.1-108 56.7 0399 234.1 109 277 36911 34809 1.9 -0.5 -35.0 -52.9
183/18:39:00 09 1.1-108 56.7 0399 234.1 109 277 36911 34809 1.9 -0.5 -35.0 -52.9
183/18:40:00 09 1.1-108 56.7 0399 234.1 109 277 36911 34809 1.9 -0.5 -35.0 -52.9
183/18:41:00 09 1.1-108 56.7 0399 234.1 109 277 36911 34809 1.9 -0.5 -35.0 -52.9
183/18:42:00 09 1.1-108 56.7 0399 234.1 109 277 36911 34809 1.9 -0.5 -35.0 -52.9
183/18:43:00 09 1.1-108 56.7 0399 234.1 109 277 36911 34809 1.9 -0.5 -35.0 -52.9
183/18:44:00 09 1.1-108 56.7 0399 234.1 109 277 36911 34809 1.9 -0.5 -35.0 -52.9
183/18:45:00 08 29.2-109 52.5 0414 217.0 061 263 223.2 26.5 -1.4 -29.5 16.1 -20.0
183/18:46:00 08 29.2-109 52.5 0414 217.0 061 263 223.2 26.5 -1.4 -29.5 16.1 -20.0
183/18:47:00 08 15.2-109 50.5 0320 191.8 032 211 22667 16849 10.5 -90.3 -20.9 -18.6
183/18:48:00 08 12.2-109 48.9 0358 209.7 054 268 18058 13751 -1.3 61.4 13.2 -10.7
183/18:49:00 08 08.9-109 50.4 0318 250.4 048 268 18666 15925 0.8 0.2 21.1 -11.0
183/18:50:00 08 08.9-109 50.4 0318 250.4 048 268 18666 15925 0.8 0.2 21.1 -11.0
183/18:51:00 08 08.9-109 50.4 0318 250.4 048 268 18666 15925 0.8 0.2 21.1 -11.0
183/18:52:00 08 08.9-109 50.4 0318 250.4 048 268 18666 15925 0.8 0.2 21.1 -11.0
183/18:53:00 08 08.9-109 50.4 0318 250.4 048 268 18666 15925 0.8 0.2 21.1 -11.0

AFTER M/P 8 TO 1: NE DIVERTED AND WENT DIRECTLY TO M/P 9.
NE BYPASSED M/P 2: AND 3.

CAMERAS OFF..

STARTED DESCEND.
BACK IN THE USA.

YEAR 1984 ADAS FLIGHT LOG --- FLIGHT NO. 13

TIME	LAT	LONG	GRD HEAD	DIR	SPD	DIR	RADAR	PRES	RADAR	PITCH	ROLL	IR	TEMP	AID
183/18:54:00	47	57.0-110	35.2	0271	231.5	032	567	11887	9459	3.7	-4.2	15.1	15.1	0.5
183/18:55:00	47	56.6-110	39.8	0285	225.2	031	575	11946	9270	2.2	0.3	16.0	16.0	1.6
183/18:56:00	47	49.5-110	44.6	0296	227.3	031	576	11848	9342	1.0	0.7	16.2	16.2	2.1
183/18:57:00	47	48.5-110	49.6	0265	228.9	034	571	10604	8016	-0.2	-1.6	16.2	16.2	2.1
183/18:58:00	47	48.6-110	53.3	0253	228.4	034	583	8817	6035	-1.1	2.5	15.2	15.2	8.1
183/18:59:00	47	41.0-110	57.0	0195	230.0	027	274	7662	6729	2.2	-3.3	15.8	15.8	10.9
183/19:00:00	47	38.8-111	61.0	0150	227.1	029	243	6565	7377	1.7	-1.7	16.2	16.2	9.6
183/19:01:00	47	36.4-111	63.5	0169	229.9	032	239	5507	7371	2.2	-1.3	16.5	16.5	13.5
183/19:02:00	47	34.5-111	66.1	0169	225.4	036	230	4710	1631	2.7	0.6	16.9	16.9	13.1
183/19:03:00	47	32.7-111	68.6	0143	225.7	028	229	4038	762	2.0	-0.5	17.4	17.4	17.1
183/19:04:00	47	31.1-111	10.8	0140	224.3	013	238	3324	24372	4.3	-0.6	10.0	10.0	20.1

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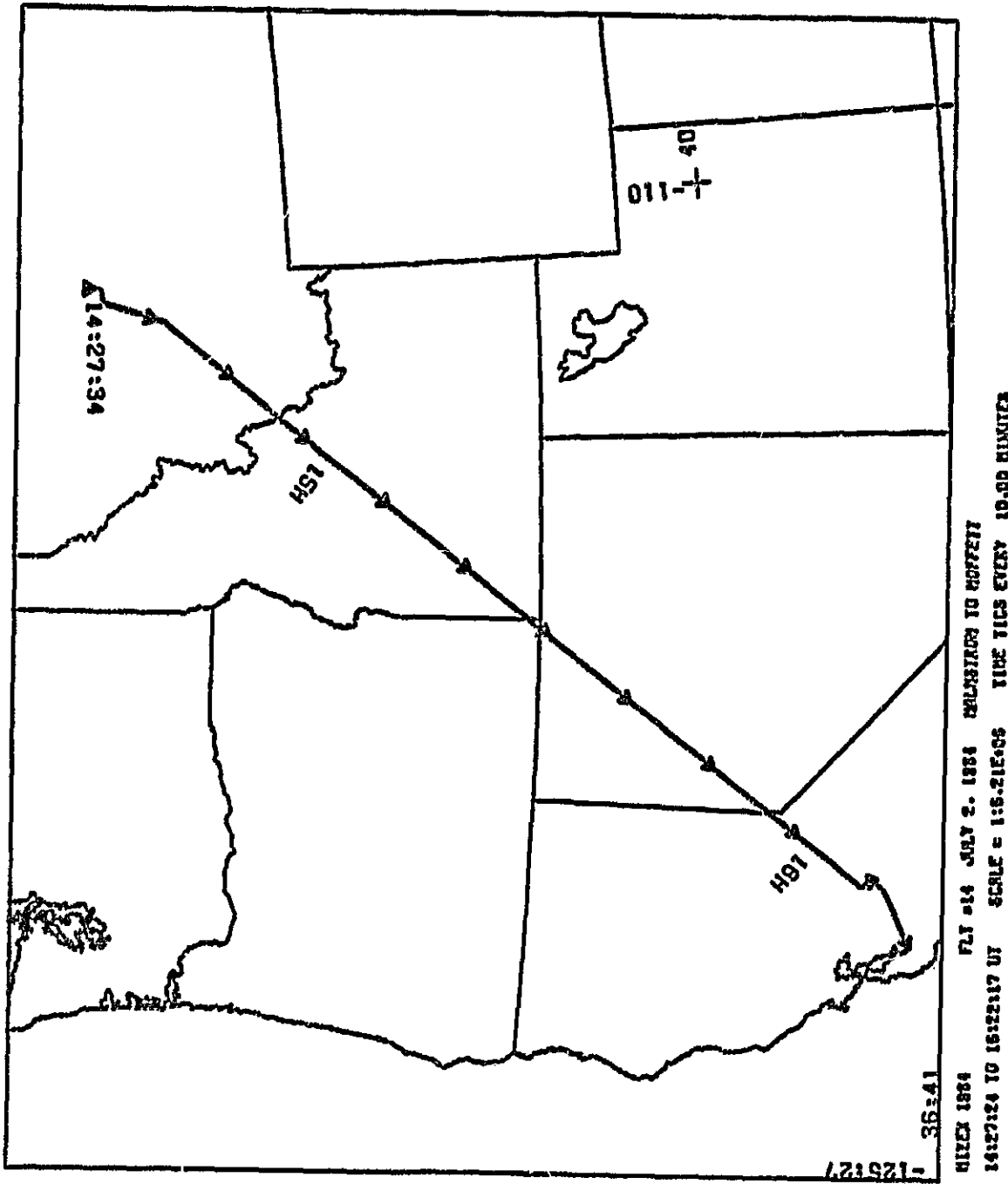


Figure 28. Flight tracks: Malmstrom/Ames 7/2

4. Concluding Remarks

This mission is estimated to have been over 90% successful in terms of infrequent malfunctions of instruments, appropriate timing and locations of flights, and the total time spent over the MIZEX area. A preliminary review of the data has indicated that a number of important eddy events may be followed in a time sequence. While a number of unfortunate circumstances prevented obtaining seasonal extremes in the sea ice surface temperatures during our several flights, it is believed that sufficiently varied data were obtained to aid greatly in improving our knowledge of microwave radiometric properties near the melt point of sea ice. The MIZEX workshops held so far have indicated that these data acquired onboard the CV-990 Airborne Laboratory form, along with the data acquired at the surface, onboard the other research aircraft, and from the Nimbus-7 SMMR, the most comprehensive combination of such data ever obtained in a MIZ during a summer period. This is true both from the standpoint of ice dynamics and thermodynamics and from the point of view of microwave radiative transfer.

5. Acknowledgements

This effort was jointly supported by the Oceanic Process Branch of NASA Headquarters, the Office of Naval Research, and the European Space Agency. We also wish to commend the participants from the Ames Research Center for their excellent spirit of cooperation and skillful execution of this mission. A noteworthy example of this was the research and selection of a new base of operations for us in Norway, which proved not only more efficient than our earlier base at Bodo, but also more delightful and less expensive.

6. Reference

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BIBLIOGRAPHIC DATA SHEET

1. Report No. TM-86216		2. Government Accession No.		3. Recipient's Catalog No.	
4. Title and Subtitle MIZEX '84 NASA CV-990 Flight Report				5. Report Date May 1985	
				6. Performing Organization Code 671	
7. Author(s) Per Gloersen, Erik Mollo-Christensen, Tom Wilhelm, Tom Dod, Richard Kutz and William J. Campbell				8. Performing Organization Report No.	
9. Performing Organization Name and Address Oceans and Ice Branch, Laboratory for Oceans, Goddard Space Flight Center National Aeronautics and Space Administration Greenbelt, Maryland 20771				10. Work Unit No. 85B0399	
				11. Contract or Grant No.	
12. Sponsoring Agency Name and Address National Aeronautics and Space Administration Greenbelt, Maryland 20771				13. Type of Report and Period Covered Technical Memorandum	
				14. Sponsoring Agency Code	
15. Supplementary Notes					
16. Abstract <p>During June/July 1984, the NASA CV-990 Airborne Laboratory was utilized in a mission to overfly the Fram Strait/East Greenland Sea marginal ice zone (MIZ) during the main summer marginal ice zone experiment (MIZEX '84). The eight data flights were coordinated where possible with overpasses of the Nimbus-7 satellite, and with measurement of sea ice, open ocean, and atmospheric properties at the surface. The surface research teams were based on seven research vessels, some with helicopters: M/V Kvitbjorn, M/V Polarqueen, M/S Haakon Mosby, and M/S H.U. Sverdrup, all from Norway, F/S Polarstern from the Federal Republic of Germany, and the USNS Lynch from the USA. There were also coordinated flights with the NRL P3, NOAA P3, Canadian CV580, and the French B-17 during the overlap portions of their respective missions. Analysis of the real-time data acquired during the mission and uncalibrated data stored on tape has served to indicate the mission was over 90% successful.</p>					
17. Key Words (Selected by Author(s))			18. Distribution Statement Category 43		
19. Security Classif. (of this report) Unclassified		20. Security Classif. (of this page) Unclassified		21. No. of Pages	22. Price*