

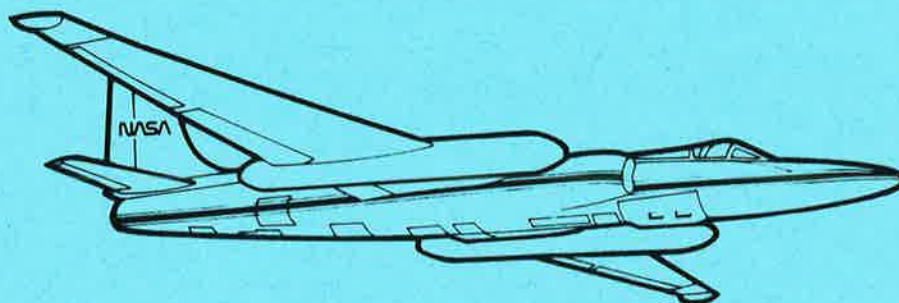
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Airborne Instrumentation Research Project

Flight Summary Report

Flight No. 88-093

Date 13 July 1988



Science and Applications Aircraft Division

NASA

National Aeronautics and
Space Administration

Ames Research Center
Moffett Field, California 94035

FLIGHT SUMMARY REPORT

Flight Number: 88-093

Date: 13 July 1988

Julian Date: 195

Aircraft No: 706

Sensor Package: IRIS II Panoramic Camera
 Wild-Heerbrug RC-10 Camera
 Airborne Ocean Color Imager (AOCI)

Purpose of Flight: # 88L205
 Requestor: Wrigley, NASA / ARC

Area(s) Covered: New York, New Jersey, and Maryland

SENSOR DATA

Accession No:	03755	03756	-----
Sensor ID No:	070	076	090
Sensor Type:	IRIS II	RC-10	AOCI
Focal Length:	24-inch 609.6 mm	12-inch 304.89 mm	----- -----
Film Type:	High Definition Aerochrome Infrared, SO-131	High Definition Aerochrome Infrared, SO-131	----- ----- -----
Filtration:	cc .20B	None	-----
Spectral Band:	510-900 nm	510-900 nm	See write up.
f Stop:	3.5	4	-----
Shutter Speed:	1/250	1/350	-----
No. of Frames:	296	139	-----
% Overlap:	60	60	-----
Quality:	Good	Good	Good
Remarks:	See write up.	See write up.	See write up.

FLIGHT SUMMARY

88-093

This flight was flown in support of Flight Request # 88L205, (Wrigley, NASA/Ames Research Center) under the FY 1988 Airborne Instrumentation Research Program (AIRP) Plan. IRIS II and RC-10 color infrared photographic data and AOCI scanner data were acquired over New Jersey. Additional RC-10 color infrared photographic data and AOCI scanner data were also acquired over New York and Maryland (See Track Map).

Minor to moderate cirrus and cumulus were encountered during portions of the flight. No processing or camera malfunctions were noted and the quality of the data is rated good.

Airborne Ocean Color Imager

The AOCI is a high altitude multispectral scanner designed for oceanographic remote sensing. It provides 10-bit digitization of 8 bands in the visible/near-IR region of the spectrum, plus 2 8-bit bands in the near and thermal IR. The bandwidths are as follows:

<u>Channel</u>	<u>Wavelength (um)</u>
1	0.436 - 0.455
2	0.481 - 0.501
3	0.511 - 0.531
4	0.554 - 0.575
5	0.610 - 0.631
6	0.655 - 0.676
7	0.741 - 0.800
8	0.831 - 0.897
9	0.989 - 1.054
10	8.423 - 12.279

Sensor/Aircraft Parameters are:

IFOV: 2.5 mrad
Ground Resolution: 163 ft. (50 meters) at 65,000 ft.
Total Scan Angle: 85°
Swath Width: 18nmi (33.3km)
Pixels/Scanline: 716
Scan Rate: 6.25 scans/sec
Aircraft Velocity: 390 kts (200 m/sec)

SCANNER FLIGHT LINE DATA

FLIGHT NO. 88-093

DAEDALUS FLIGHT DATA FLIGHT NUMBER: 88-093

flightline number	Actual time (GMT)		Actual scanline		Altitude feet/meter	Scan Speed (fps)	total Good scanlines	total Interpolated scanlines	total Repeated scanlines	total Zero-fill scanlines
	begin	end	begin	end						
A-B	14:02:52.0	14:05:44.0	37738	38800	65000/19812	6.25	1047	1	21	0
C-D	14:15: 4.0	14:17:52.0	42305	43350	65000/19812	6.25	1038	1	7	0
E-F	14:24:50.0	14:26: 2.0	45964	46412	65000/19812	6.25	443	0	6	0
G-H	14:32: 6.0	14:34:47.0	48682	49686	65000/19812	6.25	996	1	8	0
I-J	15:07:20.0	15:12: 2.0	61866	63627	65000/19812	6.25	1698	3	61	0
K-L	16:31:31.0	16:33:30.0	93331	94070	65000/19812	6.25	732	2	6	0
M-N	16:40:57.0	16:44: 3.0	96854	98012	65000/19812	6.25	1150	3	6	0

CAMERA FLIGHT LINE DATA
 FLIGHT NO. 88-093

Accession No. 03755

Sensor #
070

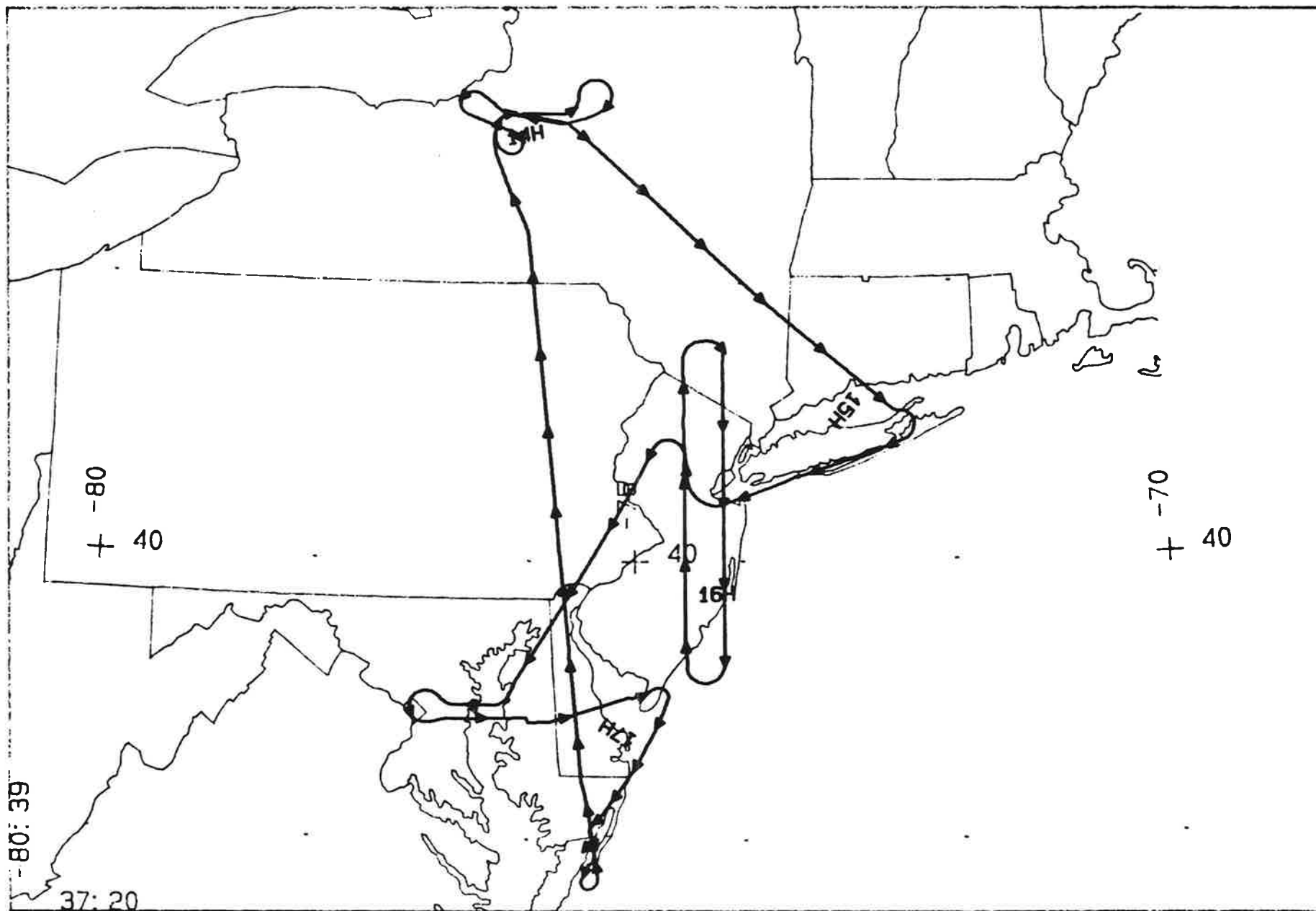
Check Points	Frame Numbers	Time (GMT-hr, min, sec)		Altitude, MSL feet/meters	Cloud Cover/Remarks
		START	END		
H - I	0006-0058	15:15:47	15:21:43	65000/19800	Minor to 50% cirrus and cumulus, frames 0006-0036; Minor to 10% cirrus and cumulus, frames 0047-0058
J - K	0059-0194	15:27:51	15:43:35	"	Minor cirrus and cumulus, frames 0081-0089; 10-70% cirrus and cumulus, frames 0090-0168
L - H	0195-0301	15:49:58	16:02:19	"	10-80% cirrus and cumulus

CAMERA FLIGHT LINE DATA
 FLIGHT NO. 88-093

Accession No. 03756

Sensor #
076

Check Points	Frame Numbers	Time (GMT-hr, min, sec)		Altitude, MSL feet/meters	Cloud Cover/Remarks
		START	END		
A - B	3948-3955	14:03:30	14:06:15	65000/19800	Clear
C - A	3956-3964	14:15:31	14:18:29	"	Clear
D - E	3965-3970	14:25:23	14:26:37	"	Clear
A - C	3971-3979	14:32:40	14:35:23	"	Clear
F - G	3980-3991	15:07:53	15:12:36	"	10-40% cirrus and cumulus
H - I	3992-4007	15:22:27	15:28:42	"	10-30% cumulus, frames 3992-4000
J - K	4008-4043	15:34:41	15:50:32	"	10-60% cirrus and cumulus, frames 4016-4036
L - H	4044-4071	15:56:45	16:08:54	"	10-60% cirrus and cumulus
M - N	4072-4077	16:32:05	16:34:00	"	Clear
O - P	4078-4086	16:41:30	16:44:46	"	Clear

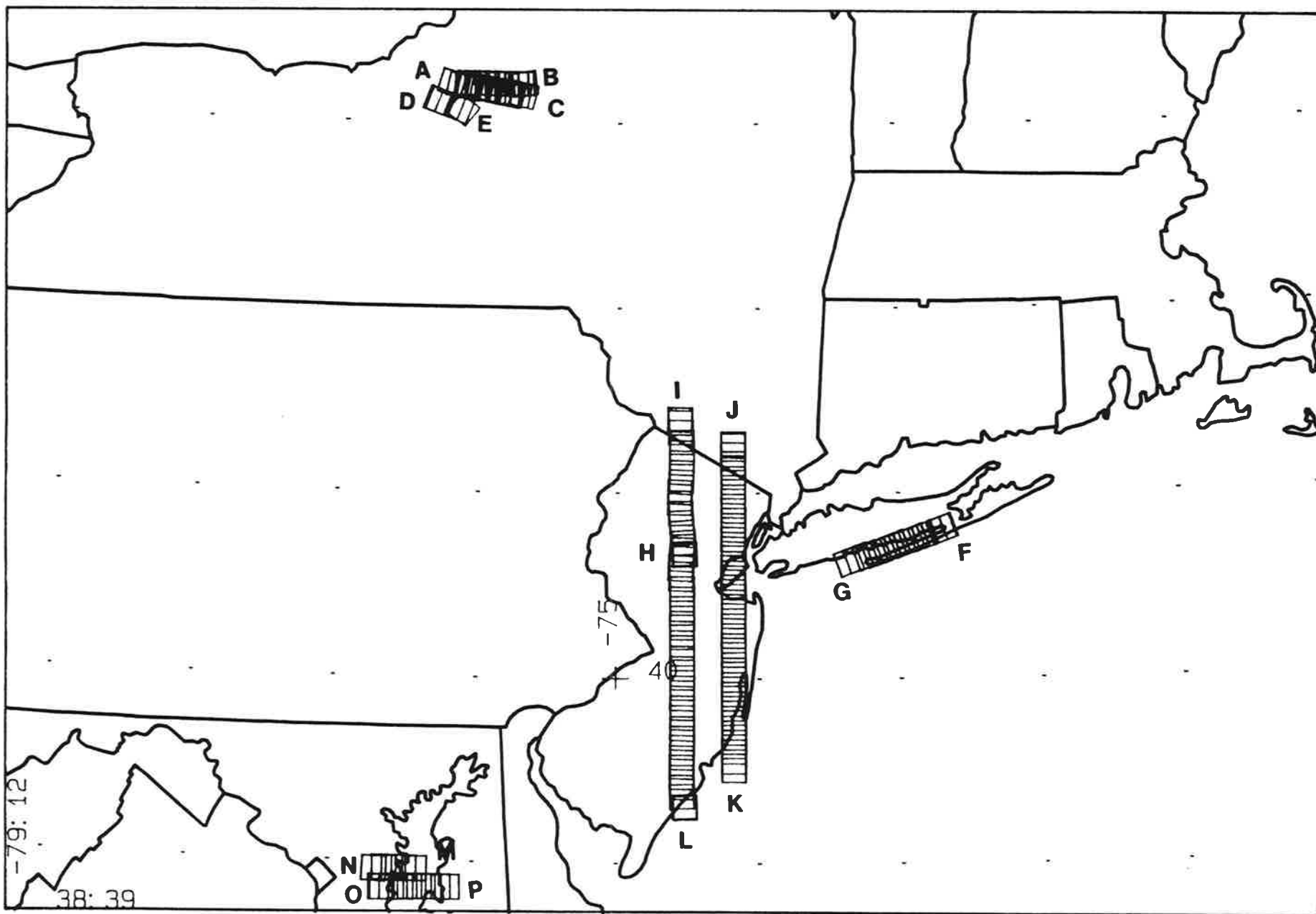


88-093

07/13/88 A/C 706

OVERLAY FOR %CUSA LAMBERT CONFORMAL PROJECTION: SP1 = 36.7 SP2 = 42.5 CM = -74.7 ROTATED BY 0.0

13:01:05 TO 17:21:25 UT SCALE = 1:4.36E+06 TIME TICS EVERY 5.00 MINUTES



FLIGHT 89-093

13 JULY 1988

A/C 708 AOCI / RC-10

OVERLAY FOR %CEUSA

LAMBERT CONFORMAL PROJECTION:

SP1 = 38.1 SP2 =

42.5 CM = -74.7 ROTATED BY

0.0

0:00:00 TO 0:00:00 UT

SCALE = 1:3.27E+06

TIME TICS EVERY

5.00 MINUTES