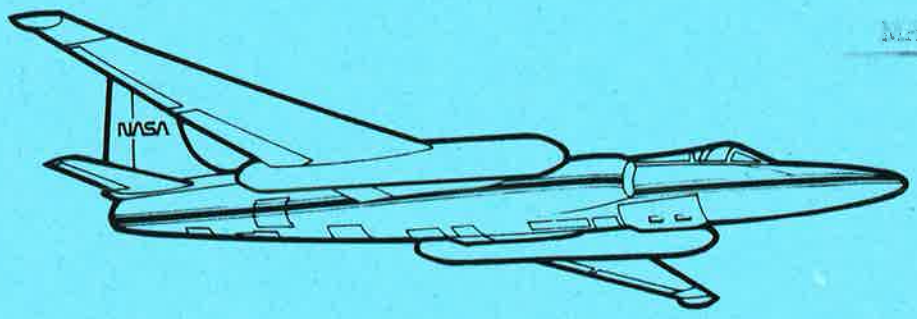
Airborne Instrumentation Research Project

Flight Summary Report

Flight No. 87-113
Date 18 June 1987



Science and Applications Aircraft Division

NASA
National Aeronautics and
Space Administration

Ames Research Center
Moffett Field, California 94035

FLIGHT SUMMARY REPORT

Flight Number: 87-113

Date: 18 June 1987

Julian Date: 169

Sensor Package: IRIS Panoramic Camera;
Cosmic Particulate Sampler

Aircraft No: 708

Purpose of Flight: #87R245 Support
Requestor: Weber
#87P223 Support
Requestor: Zolensky

Area(s) Covered: Maryland, Delaware

SENSOR DATA

Accession No:	03633	---
Sensor ID No:	070	081
Sensor Type:	IRIS Panoramic Camera	CPS
Focal Length:	24" 609.6mm	---
Film Type:	High Definition Aerochrome Infrared, SO-131	---
Filtration:	cc.30c	---
Spectral Band:	510-900nm	---
f Stop:	3.5	---
Shutter Speed:	1/125	---
No. of Frames:	704	---
% Overlap:	60%	---
Quality:	Excellent	---
Remarks:	---	see write-up

FLIGHT SUMMARY

87-113

This flight was flown in support of Flight Request #87R245 (Weber, USDA F.S.) and 87P223 (Zolensky, ARC) under the FY 1987 Airborne Instrumentation Research Program (AIRP) plan. Iris panoramic photography were collected over portions of Maryland and Delaware to survey defoliation caused by the gypsy moth (see Track Map). Cosmic Particulate sampling was also conducted during the flight.

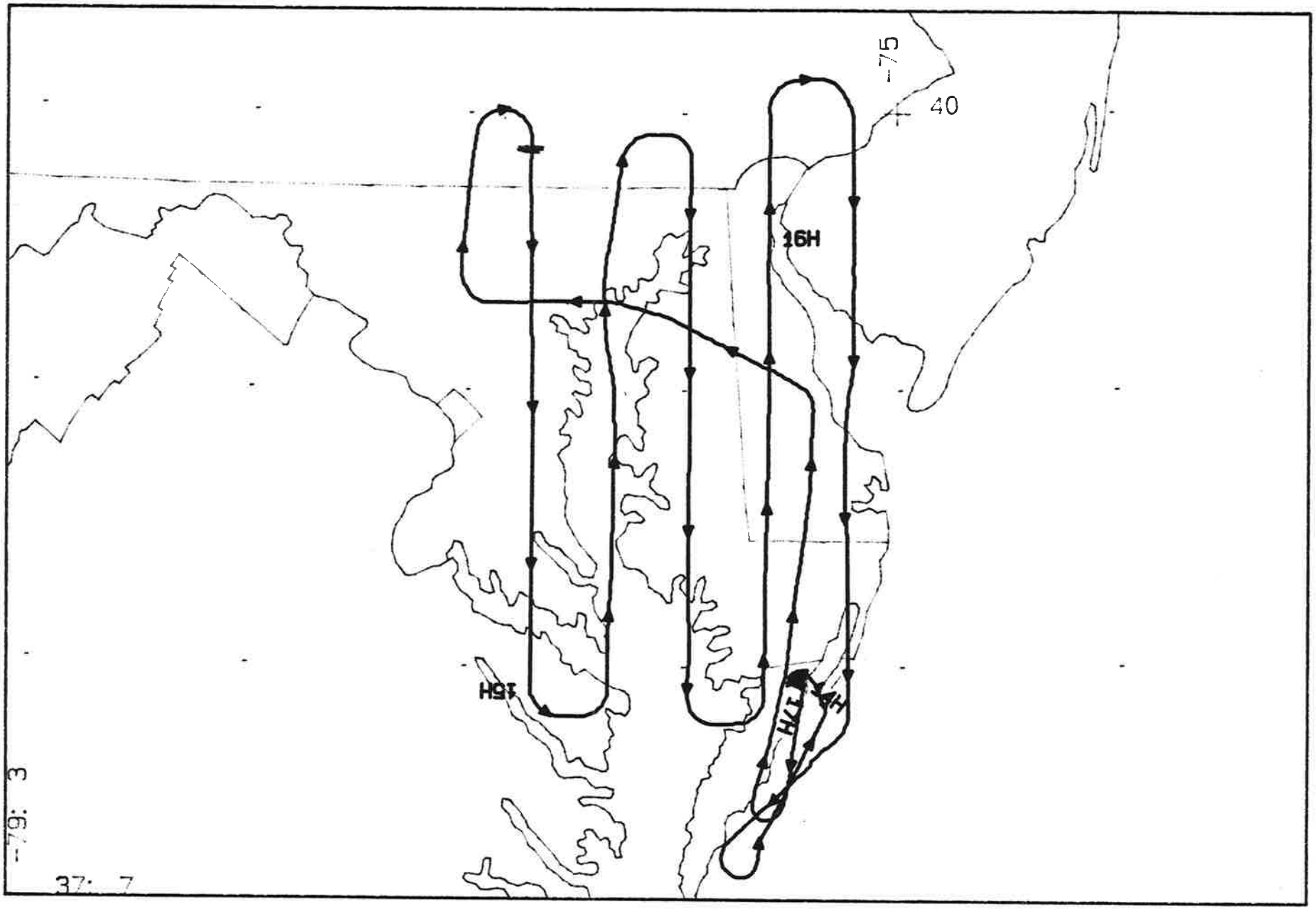
Minor to heavy cirrus, haze and cloud cover was encountered during the flight. Some emulsion stains were noted, and frames at the end of flightlines were light struck. No other processing or camera malfunctions were noted and the quality of the data is rated excellent.

Cosmic Particulate Sampler

The Cosmic Particulate Sampler (CPS) is an impact sampler utilizing an oil coated impact collection plate exposed to the atmosphere for long durations. The sampler is designed to collect extraterrestrial particles in the upper atmosphere from comets, asteroid collisions, planetary impacts, etc.

CAMERA FLIGHT LINE DATA
FLIGHT NO. 87-113

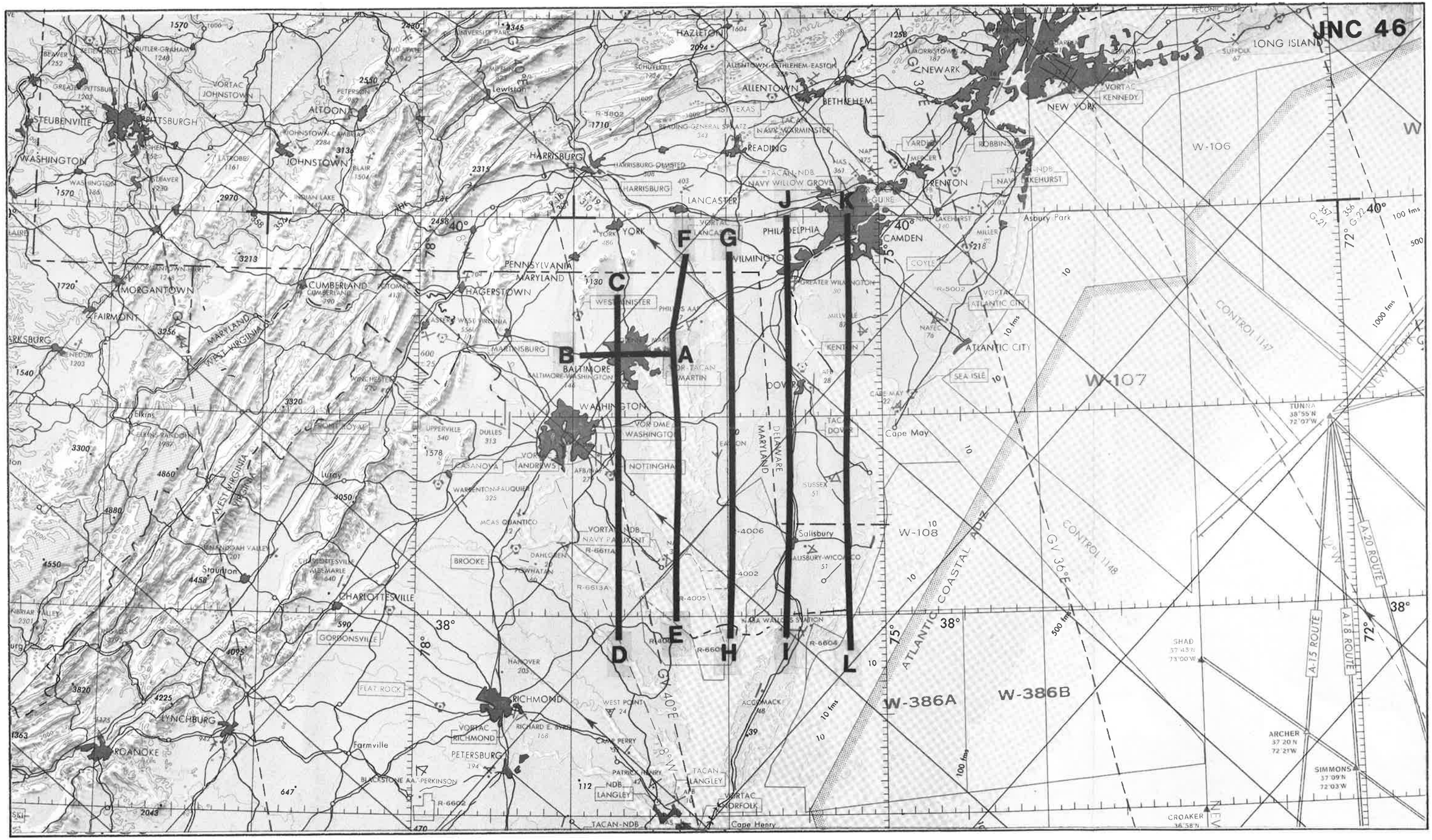
Sensor #	Check Points	Frame Numbers	Time (GMT-hr, min, sec) START	Time (GMT-hr, min, sec) END	Altitude, MSL feet/meters	Cloud Cover/Remarks
070	A-B	0001-0024	14:29:58	14:32:41	65000/19800	frs. 0004-0024 minor- heavy cumulus; fr. 0089 film splice
	C-D	0025-0158	14:42:04	14:58:23	"	frs. 0025-0158 minor-moderate cumulus
	E-F	0159-0298	15:02:31	15:19:35	"	frs. 0253-0272 minor-moderate cloud cover
	G-H	0299-0431	15:23:41	15:40:49	"	frs. 0299-0331 minor cloud cover; frame 0375 film splice
	I-J	0432-0585	15:44:10	16:03:53	"	frs. 0531-0585 minor - moderate cumulus
	K-L	0586-0704	16:12:02	16:26:32	"	frs. 0586-0588 minor cumulus
081	---	---	14:13:00	16:30:00	"	CPS #2 and #3 exposed at 65000 ft. for 2 hours and 17 minutes



FLIGHT 87-113 FLIGHT DATE 6/18/87

OVERLAY FOR %CUSA LAMBERT CONFORMAL PROJECTION: SP1 = 36.8 SP2 = 39.6 CM = -76.1 ROTATED BY 0.0

14: 00: 11 TO 17: 09: 07 UT SCALE = 1: 2.16E+06 TIME TICS EVERY 5.00 MINUTES



IRIS DATA ——— FLIGHT 87-113 DATE 6/18/87

LAMBERT CONFORMAL PROJECTION: SP1 = 33.0 SP2 = 45.0 CM = -77.5

14:00:11 TO 17:09:07 UT SCALE = 1:2.00E+06