

FLIGHT SUMMARY REPORT

Flight #: 90-103
Date: 3 July 1990
Sensor Package: IRIS II Panoramic Camera
Area(s) Covered: Pennsylvania, Maryland, and Virginia

Investigator(s): Acciavatti, USFS
Flight Request: 90R258

Aircraft #: 709
Julian Date: 184

SENSOR DATA

Accession #: 04045
Sensor ID #: 070
Sensor Type: IRIS
Focal Length: 24"
609.6 mm
Film Type: High Definition
Aerochrome IR
SO-131
Filtration: cc.30B
Spectral Band: 510-900 nm
f Stop: 3.5
Shutter Speed: 1/175
of Frames: 985
% Overlap: 60
Quality: Excellent
Remarks:

Airborne Science and Applications Program

The Airborne Science and Applications Program (ASAP) is supported by three ER-2 high altitude Earth Resources Survey aircraft. These aircraft are operated by the High Altitude Missions Branch at NASA-Ames Research Center, Moffett Field, California. The ER-2s are used as readily deployable high altitude sensor platforms to collect remote sensing and *in situ* data on earth resources, celestial phenomena, atmospheric dynamics, and oceanic processes. Additionally, these aircraft are used for electronic sensor research and development and satellite investigative support.

The ER-2s are flown from various deployment sites in support of scientific research sponsored by NASA and other federal, state, university, and industry investigators. Data are collected from deployment sites in Kansas, Texas, Virginia, Florida, and Alaska. Cooperative international scientific projects have deployed the aircraft to sites in Great Britain, Australia, Chile, and Norway.

Photographic and digital imaging sensors are flown aboard the ER-2s in support of research objectives defined by the sponsoring investigators. High resolution mapping cameras and digital multispectral imaging sensors are utilized in a variety of configurations in the ER-2s' four pressurized experiment compartments.

Camera Systems

Various camera systems and films are used for photographic data collection. Film types include high definition color infrared, natural color, and black and white emulsions. Available photographic systems are as follows:

- Wild-Heerbrug RC-10 metric mapping camera
 - 9 x 9 inch film format
 - 6 inch focal length lens provides area coverage of 16 x 16 nautical miles from 65,000 feet
 - 12 inch focal length lens provides area coverage of 8 x 8 nautical miles from 65,000 feet
- Hycon HR-732 large scale mapping camera
 - 9 x 18 inch film format
 - 24 inch focal length lens provides area coverage of 4 x 8 nautical miles from 65,000 feet
- IRIS II Panoramic camera
 - 4.5 x 34.7 inch film format
 - 24 inch focal length lens
 - 90 degree field of view provides area coverage of 2 x 21.4 nautical miles from 65,000 feet

**CAMERA FLIGHT LINE DATA
FLIGHT NO. 90-103**

Accession # 04045

Sensor # 070

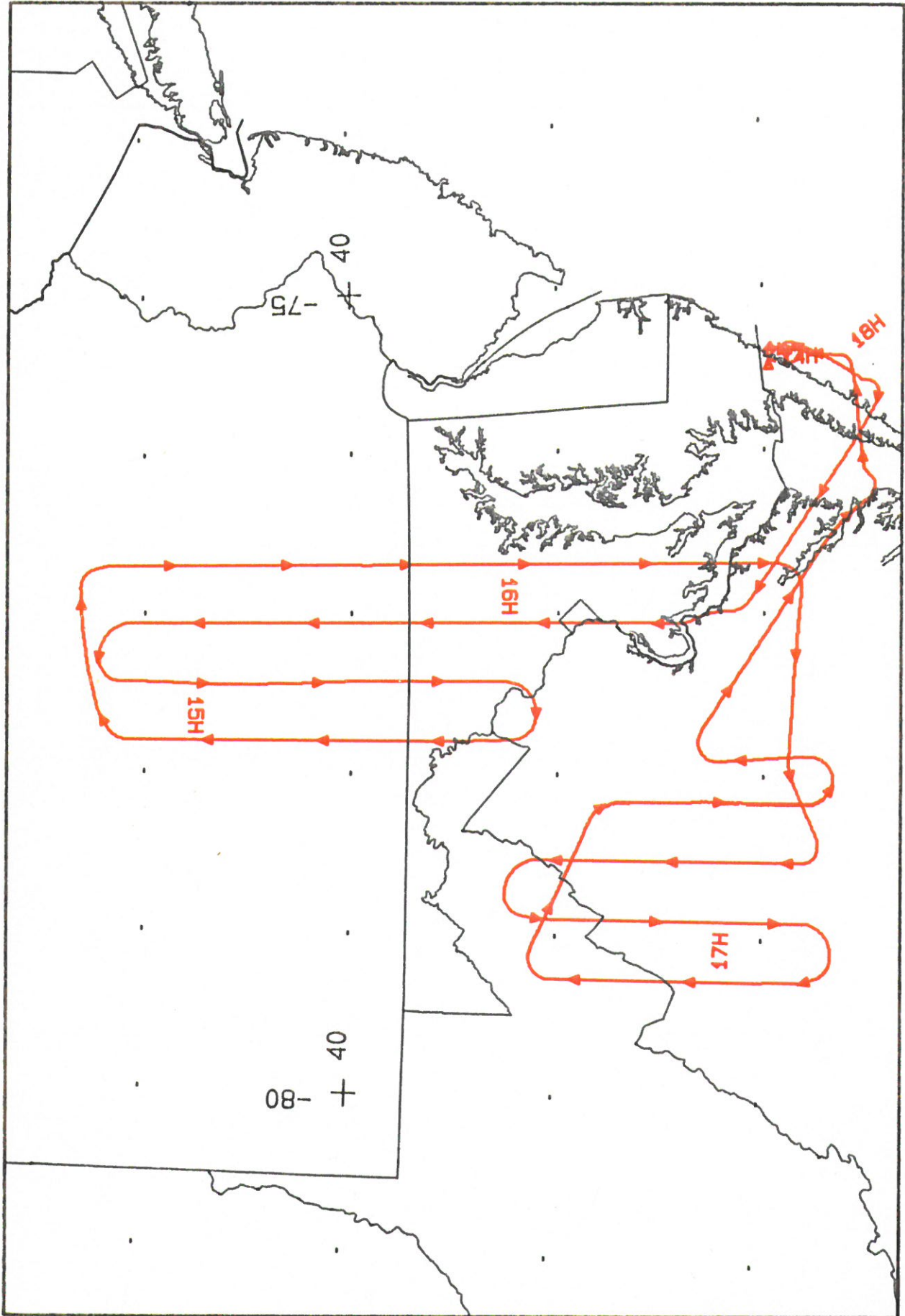
Check Points	Frame Numbers	Time (GMT-hr, min, sec)		Altitude, MSL feet/meters	Cloud Cover/Remarks
		START	END		
A - B	0007-0191	14:31:10	14:52:37	65000/19800	Light to heavy haze (frames 0083-0110); 10-40% moderate cirrus (frames 0111-0121)
C - D	0192-0323	14:57:18	15:12:34	"	10% scattered cumulus (frames 0249-0252, 0270-0280, 0284-0288, 0296-0299); 10-20% scattered cumulus and thin cirrus (frames 0301-0323)
E - F	0324-0457	15:17:42	15:33:13	"	10% minor cumulus (frames 0354-0366, 0370-0397, 0400-0404, 0430-0437)
G - H	0458-0692	15:43:40	16:10:58	"	10% minor cumulus (frames 0493-0510, 0542-0545); 10-50% cumulus and cirrus (frames 0548-0575); 10% minor cumulus (frames 0590-0595, 0608-0614, 0684-0692)
I - J	0693-0784	16:25:30	16:36:06	"	10% minor cumulus (frames 0693-0696, 0746-0754); 10-30% cumulus (frames 0777-0784)

**CAMERA FLIGHT LINE DATA
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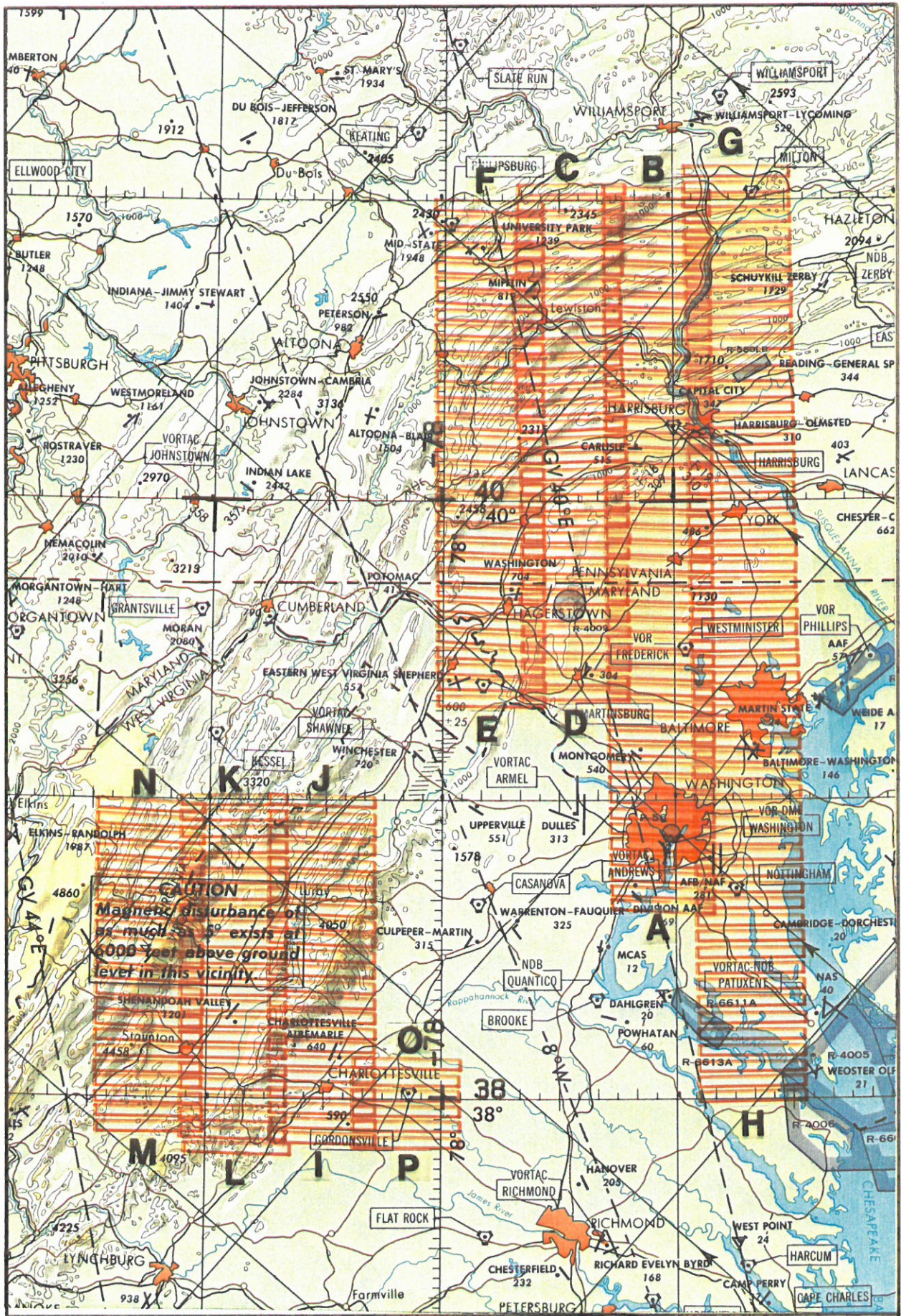
Accession # 04045

Sensor # 070

Check Points	Frame Numbers	Time (GMT-hr, min, sec)		Altitude, MSL feet/meters	Cloud Cover/Remarks
		START	END		
K - L	0785-0875	16:41:40	16:52:11	65000/19800	10% cumulus (frames 0792-0796, 0834-0840, 0855-0870)
M - N	0876-0964	16:56:57	17:07:13	"	10% cumulus (frames 0876-0885, 0890-0902, 0916-0920, 0953-0964)
O - P	0965-0991	17:22:05	17:25:08	"	10-20% thin cirrus and cumulus (frames 0965-0988)



FLIGHT 90-103 3 July 1990 A/C 709 Itek IRIS Panoramcam -- Gypsy Moth



JNC 45

Itek IRIS Panoramic Camera SO-131

A/C 709

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