FLIGHT SUMMARY REPORT

Flight #: 91-125

Date: 6 July 1991

Sensor Package: IRIS II Panoramic Camera
Wild-Heerbrug RC-10
Large Area Collector (LAC)

Area(s) Covered: West Virginia, Virginia, Maryland

Investigator(s): Acciavatti, USDA Forest Service

Flight Request: 90R258

Aircraft #: 709

Julian Date: 187

SENSOR DATA

Accession #:	04248	04249	-----
Sensor ID #:	070	076	100
Sensor Type:	IRIS II	RC-10	LAC
Focal Length:	24" 609.6 mm	12" 304.89 mm	-----
Film Type:	High Definition Aerochrome IR SO-131	High Definition Aerochrome IR SO-131	-----
Filtration:	cc.20C	cc.10B	-----
Spectral Band:	510-900 nm	510-900 nm	-----
f Stop:	3.5	4	-----
Shutter Speed:	1/250	1/125	-----
# of Frames:	457	166	-----
% Overlap:	60	60	-----
Quality:	Poor	Excellent	-----

Remarks:

Exposed at 1450, sealed at 1903, exposure time 4 hrs. 13 min.

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. The following provides descriptions of the camera systems flown onboard the ER-2s.

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

The U.S. Geological Survey's EROS Data Center at Sioux Falls, South Dakota serves as the archive and product distribution facility for NASA-Ames aircraft acquired photographic and digital imagery. For information regarding photography and digital data (including areas of coverage, products, and product costs) contact EROS Data Center, Customer Services, Sioux Falls, South Dakota 57198 (Telephone: (605) 594-6151).

Additional information regarding ER-2 acquired photographic and digital data is available through the Aircraft Data Facility at Ames Research Center. For specific information regarding flight documentation, sensor parameters, and areas of coverage contact the Aircraft Data Facility, NASA-Ames Research Center, Mail Stop 240-6, Moffett Field, California 94035-1000 (Telephone: (415) 604-6252).

CAMERA FLIGHT LINE DATA
FLIGHT NO. 91-125

Accession # 04248

Sensor # 070

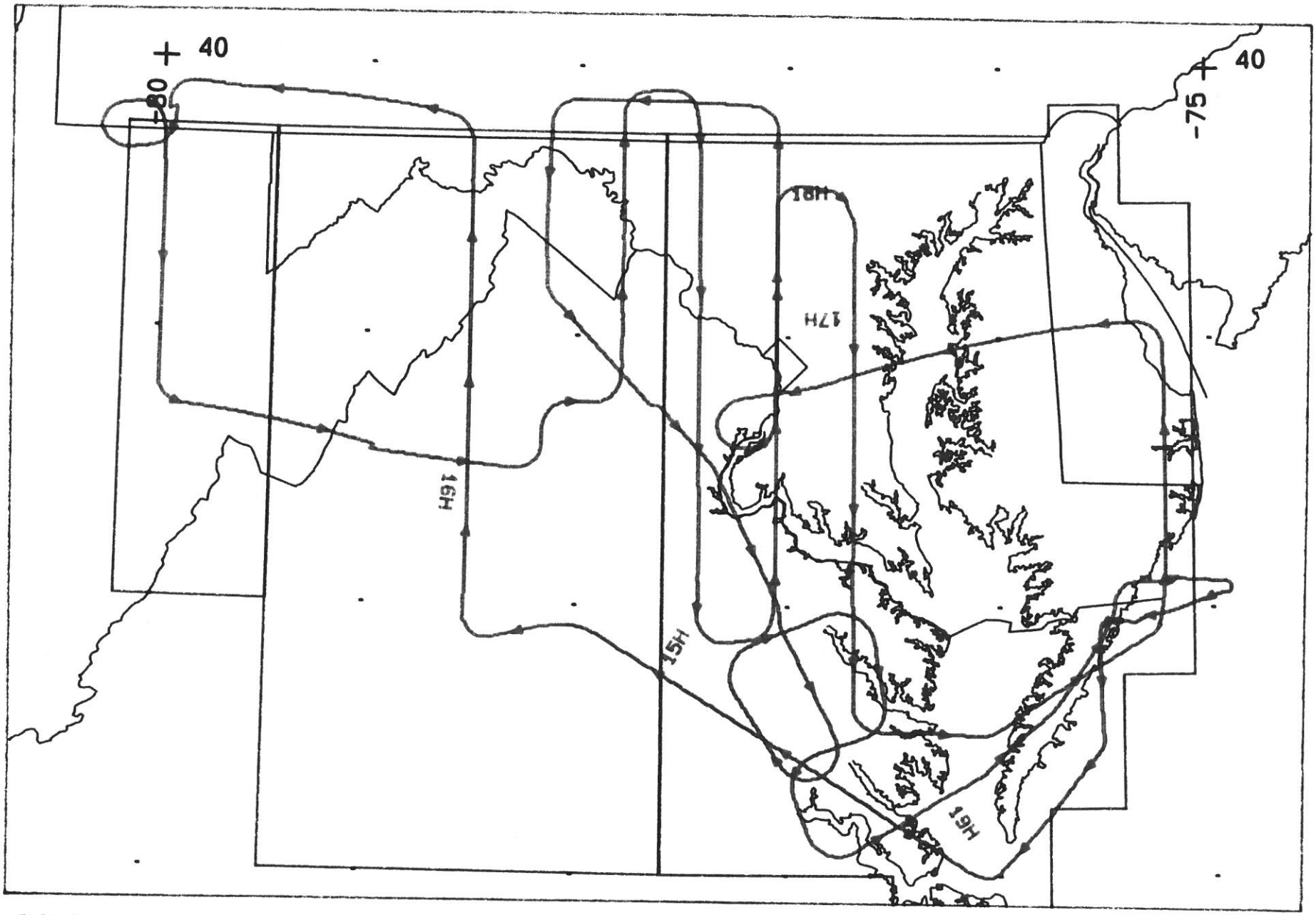
Check Points	Frame Numbers	Time (GMT-hr, min, sec) START	Time (GMT-hr, min, sec) END	Altitude, MSL feet/meters	Cloud Cover/Remarks
A - B	0003-0102	15:06:33	15:21:46	65000/19800	10-50% cumulus (frames 0054-0081)
C - D	0103-0151	15:40:19	15:47:42	"	10% cumulus (frames 0088-0102); 10% scattered cumulus (frames 0105-0148); 20-30% cumulus (frames 0149-0151)
E - F	0152-0194	16:07:28	16:13:58	"	10% scattered cumulus (frames 0152-0185); 20-80% scattered cumulus (frames 0186-0194)
G - H	0195-0291	16:19:49	16:34:36	"	20-40% cumulus (frames 0195-0201); 10-20% cumulus (frames 0202-0273); 20-40% cumulus (frames 0274-0291)
I - J	0292-0372	16:39:23	16:51:41	"	10% cumulus (frames 0292-0342, 0360-0372)
K - L	0373-0440	17:00:55	17:11:15	"	10-20% cumulus (frames 0373-0426); 20-40% cumulus (frames 0427-0440)
J - M	0441-0459	17:57:13	17:59:59	"	10-50% cumulus (frames 0441-0459)
	TIMES ABOVE ARE GMT. 6 HOURS ADDED TO TIMES RECORDED ON FILM.				

CAMERA FLIGHT LINE DATA
FLIGHT NO. 91-125

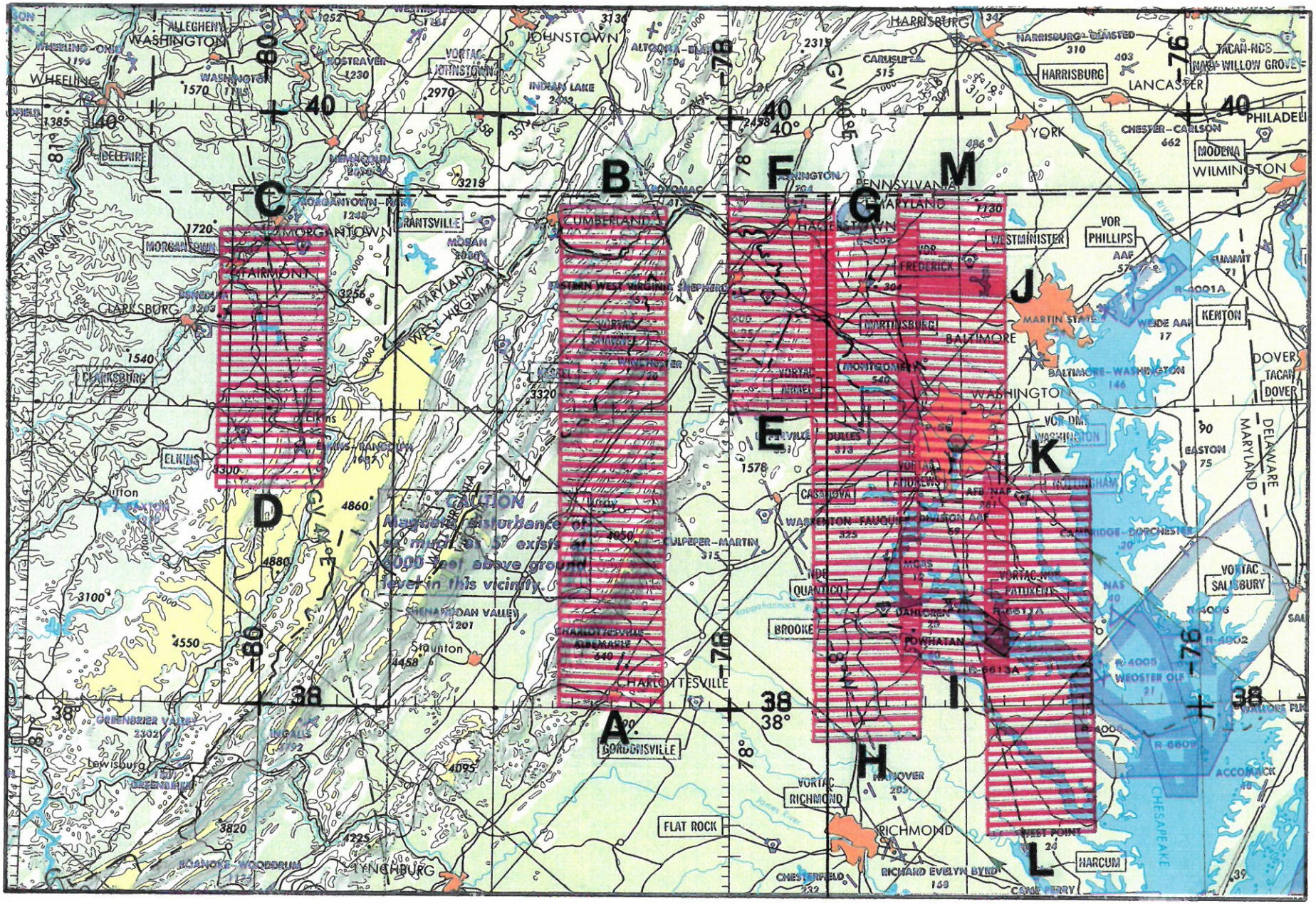
Accession # 04249

Sensor # 076

Check Points	Frame Numbers	Time (GMT-hr, min, sec)		Altitude, MSL feet/meters	Cloud Cover/Remarks
		START	END		
A - B	6021-6054	15:08:25	15:23:48	65000/19800	Very minor cumulus (frames 6031-6033); 10-40% cumulus (frames 6039-6048 and 6050-6054)
C - D	6055-6072	15:42:01	15:49:39	"	10% cumulus (frames 6055-6057 and 6059-6063); 10-30% cumulus (frames 6065-6072)
E - F	6073-6089	16:09:13	16:15:50	"	10-20% cumulus (frames 6073-6079); 10% cumulus (frames 6081-6085); 30-70% strato-cumulus (frames 6086-6089)
G - H	6090-6123	16:21:28	16:36:32	"	10-30% strato-cumulus (frames 6090-6094 and 6096-6099); 10-40% cumulus (frames 6102-6123)
I - J	6124-6152	16:40:47	16:53:30	"	10-20% cumulus (frames 6124-6142 and 6148-6152)
K - L	6153-6177	17:02:26	17:13:02	"	10-30% cumulus (frames 6153-6165); 10-20% cumulus (frames 6167-6173); 20-60% cumulus and strato-cumulus (frames 6174-6177)
J - M	6178-6186	17:59:38	18:02:40	"	10-60% cumulus and strato-cumulus (frames 6178-6186)



FLIGHT 91-125 6 July 1991 A/C 709 IRIS / RC-10 / LAC's Gypsy Moth



FLIGHT 91-125 6 July 1991 A/C 709 IRIS Accession # 04248 JNC 45