

FLIGHT SUMMARY REPORT

Flight #: 91-126
Date: 7 July 1991
Sensor Package: IRIS II Panoramic Camera
Wild-Heerbrug RC-10
Large Area Collector (LAC)
Area(s) Covered: Virginia, West Virginia, Maryland

Investigator(s): Acciavatti, USDA Forest Service
Zolensky, NASA-JSC

Aircraft #: 709

Flight Request: 90R258, 91P243

Julian Date: 188

SENSOR DATA

Accession #:	04250	04251	----
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.20B	----
Spectral Band:	510-900 nm	510-900 nm	----
f Stop:	3.5	4	----
Shutter Speed:	1/250	1/125	----
# of Frames:	462	172	----
% Overlap:	60	60	----
Quality:	Poor	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. 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. 91-126**

Accession # 04250

Sensor # 070

Check Points	Frame Numbers	Time (GMT-hr, min, sec)		Altitude, MSL feet/meters	Cloud Cover/Remarks
		START	END		
A - B	0465-0511	14:53:49	15:00:54	65000/19800	Clear
C - D	0512-0532	15:05:45	15:08:49	"	Clear
E - F	0533-0566	15:25:47	15:30:51	"	10-80% cirrus (frames 0564-0566)
G - H	0567-0604	15:35:59	15:41:42	"	10-80% cirrus (frames 0567-0569)
I - J	0605-0619	15:53:51	15:56:01	"	Clear
K - L	0620-0724	16:07:46	16:23:48	"	10% cirrus (frames 0623-0635, 0639-0644, 0654-0659, 0668-0669); 10-20% cirrus (frames 0675-0697) 10% cirrus (frames 0704-0719)
M - N	0725-0785	16:31:02	16:40:17	"	10-20% cirrus (frames 0725-0748, 0758-0761, 0778-0785)

**CAMERA FLIGHT LINE DATA
FLIGHT NO. 91-126**

Accession # 04250

Sensor # 070

Check Points	Frame Numbers	Time (GMT-hr, min, sec)		Altitude, MSL feet/meters	Cloud Cover/Remarks
		START	END		
O - P	0786-0860	16:46:19	16:57:43	65000/19800	10-40% cirrus and cumulus (frames 0786-0799, 0832-0860)
Q - R	0861-0921	17:02:14	17:11:28	"	10% cumulus (frames 0861-0888, 0907-0908, 0918-0921)
S - T	0922-0926	17:37:18	17:37:54	"	10% cumulus (frames 0922-0926)
TIMES ABOVE ARE GMT. 6 HOURS ADDED TO TIMES RECORDED ON FILM.					

**CAMERA FLIGHT LINE DATA
FLIGHT NO. 91-126**

Accession # 04251

Sensor # 076

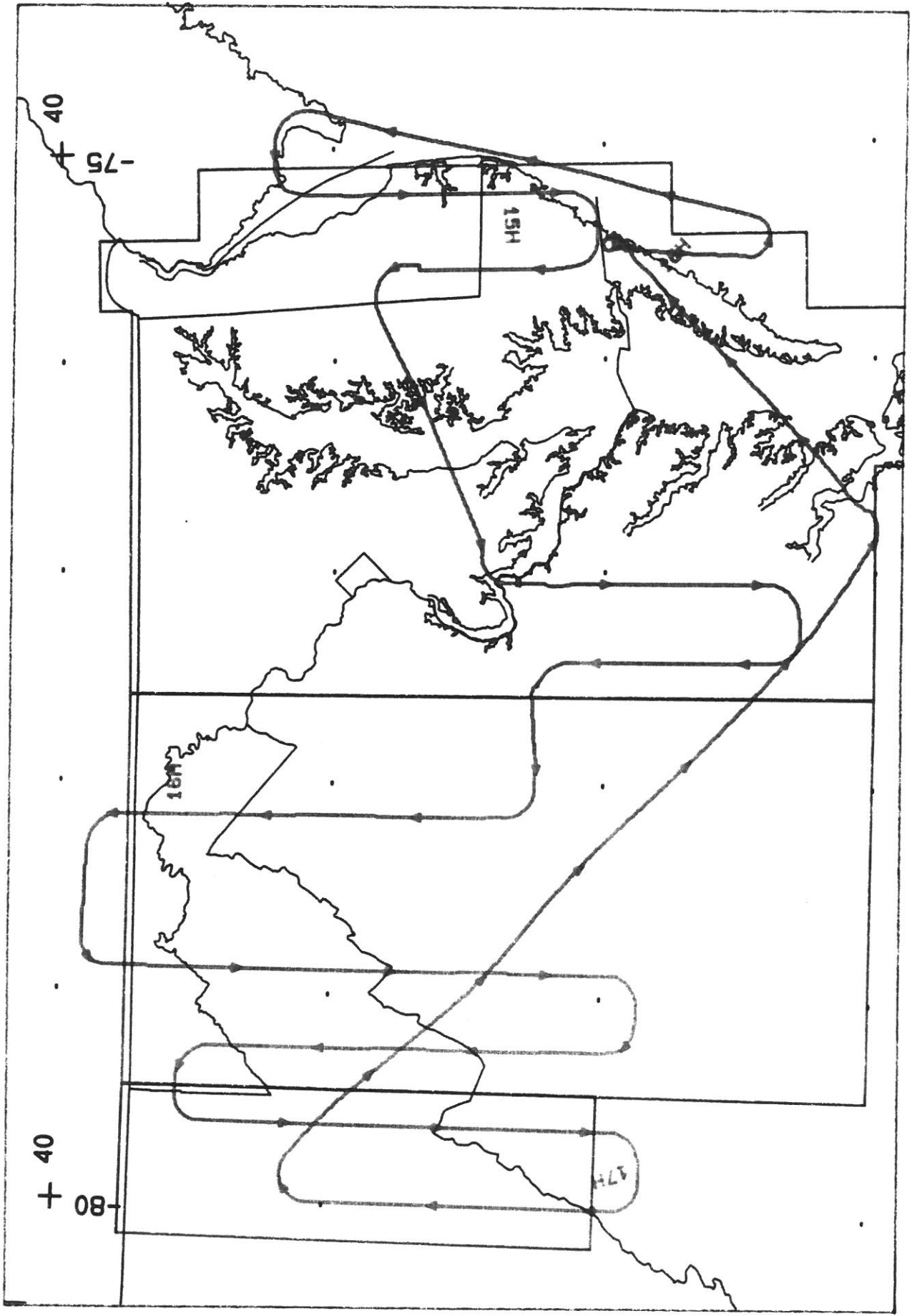
Check Points	Frame Numbers	Time (GMT-hr, min, sec)		Altitude, MSL feet/meters	Cloud Cover/Remarks
		START	END		
A - B	6189-6205	14:55:03	15:02:23	65000/19800	Clear
C - D	6206-6214	15:06:54	15:10:21	"	Clear
E - F	6215-6227	15:26:47	15:32:06	"	10-40% cumulus (frames 6215-6218); 20% cirrus (frame 6227)
G - H	6228-6242	15:36:58	15:43:01	"	10-20% cirrus (frames 6228-6230); 10% cirrus and cumulus (frames 6241-6242)
I - J	6243-6250	15:54:41	15:57:16	"	10% minor cumulus (frame 6250).
K - L	6251-6287	16:08:37	16:24:52	"	10% minor cumulus (frames 6254-6257, 6259-6262, 6263-6287)
M - N	6288-6310	16:31:41	16:41:17	"	10-20% cumulus (frames 6288-6302, 6308-6310)

**CAMERA FLIGHT LINE DATA
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Accession # 04251

Sensor # 076

Check Points	Frame Numbers	Time (GMT-hr, min, sec)		Altitude, MSL feet/meters	Cloud Cover/Remarks
		START	END		
O - P	6311-6332	16:46:56	16:56:23	65000/19800	10-50% cumulus and strato-cumulus (frames 6311-6317); 10% cumulus (frames 6326-6332)
Q - R	6333-6337	16:56:50	16:58:43	"	10-20% cumulus (frames 6333-6337)
S - T	6338-6360	17:02:47	17:12:19	"	10% cumulus and strato-cumulus (frames 6338-6360)



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