

FLIGHT SUMMARY REPORT

Flight #: 90-144
Date: 07 September 1990
Sensor Package: Dual Hycon HR-732
Wild-Heerbrug RC-10
Area(s) Covered: Cumberland Island

Investigator(s): Patterson, University of Virginia
Flight Request: 89R247

Aircraft #: 706
Julian Date: 250

SENSOR DATA

Accession #:	04111	04112	04113
Sensor ID #:	018	019	076
Sensor Type:	HR-732	HR-732	RC-10
Focal Length:	24" 609.6 mm	24" 609.6 mm	12" 304.89 mm
Film Type:	High Definition Aerochrome IR SO-131	Panatomic-X Aerial EK-3400	High Definition Aerochrome IR SO-131
Filtration:	cc.20B	None	cc.10B
Spectral Band:	510-900 nm	400-700 nm	510-900 nm
f Stop:	8	8	4
Shutter Speed:	1/75	1/75	1/150
# of Frames:	52	52	32
% Overlap:	60	60	60
Quality:	Excellent	Fair	Excellent
Remarks:	Clock inoperative		

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. 90-144

Accession # 04111

Sensor # 018

Check Points	Frame Numbers	Time (GMT-hr, min, sec)		Altitude, MSL feet/meters	Cloud Cover/Remarks
		START	END		
A - B	0001-0023	15:17:35	15:22:55	65000/19800	Clear
C - D	0024-0026	15:30:55	15:31:05	"	Thin cirrus (frames 0024-0026)
E - F	0027-0052	15:32:45	15:38:26	"	10% very minor cumulus (frames 0027-0028); "soft" (frame 0052)
Camera's clock inoperative -- times generated from Navigation Data					

CAMERA FLIGHT LINE DATA
FLIGHT NO. 90-144

Accession # 04112

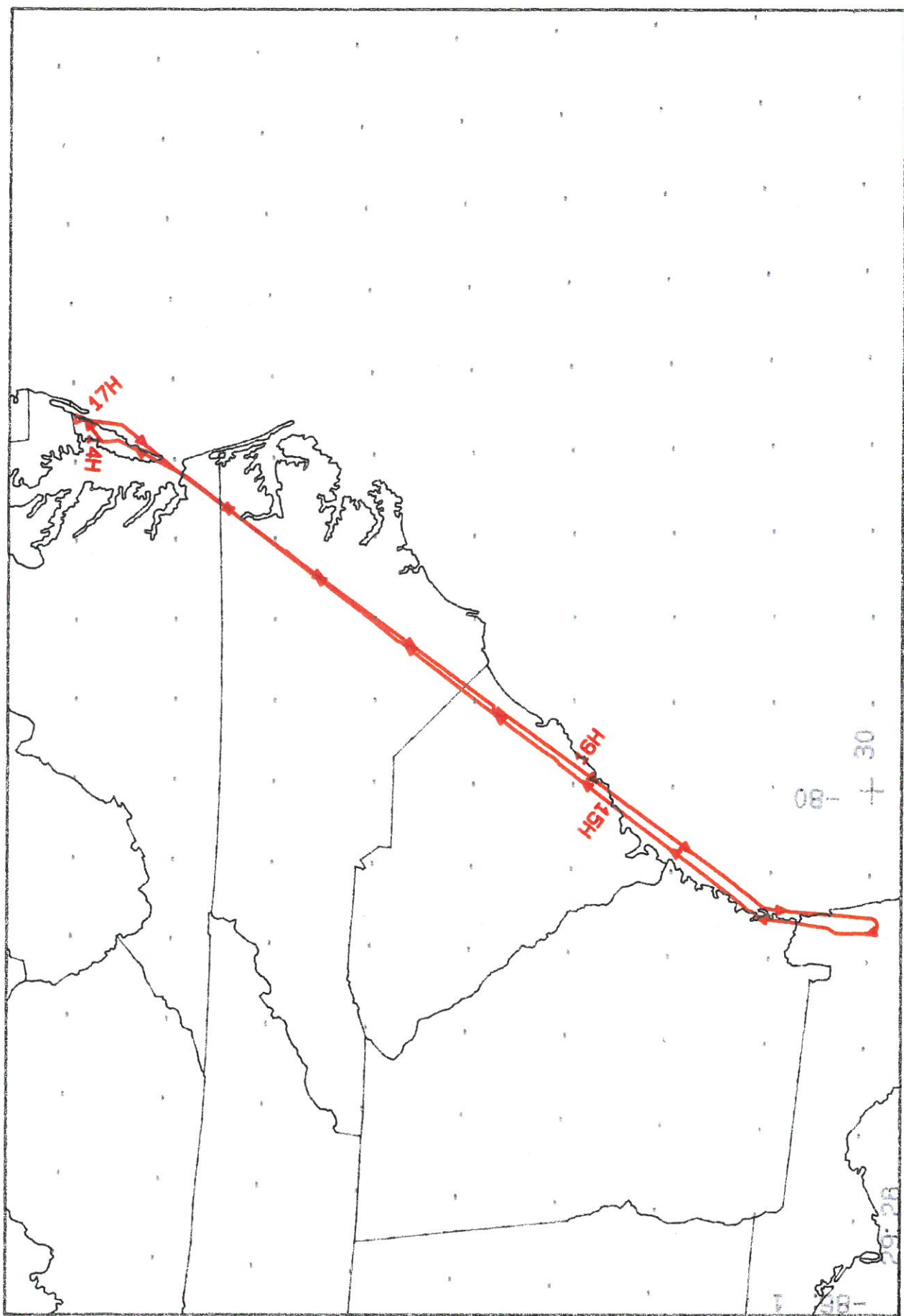
Sensor # 019

Check Points	Frame Numbers	Time (GMT-hr, min, sec)		Altitude, MSL feet/meters	Cloud Cover/Remarks
		START	END		
A - B	0001-0023	15:17:29	15:22:51	65000/19800	Clear
C - D	0024-0026	15:30:38	15:31:07	"	Thin cirrus (frames 0024-0026)
E - F	0027-0052	15:32:46	15:38:52	"	10% minor cumulus (frames 0027-0028); "soft" (frame 0052)

**CAMERA FLIGHT LINE DATA
FLIGHT NO. 90-144**

Accession # 04113
Sensor # 076

Check Points	Frame Numbers	Time (GMT-hr, min, sec)		Altitude, MSL feet/meters	Cloud Cover/Remarks
		START	END		
A - B	7223-7235	15:17:36	15:23:12	65000/19800	Clear
C - D	7236-7239	15:30:45	15:31:20	"	10% cirrus (frames 7236-7239)
E - F	7240-7254	15:32:53	15:39:14	"	Clear; "soft" (frame 7253)



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OVERLAY FOR 20EUSA LAMBERT CONFORMAL PROJECTION: SP1 = 28.6 SP2 = 36.6 CM = -78.5 ROTATED BY 0.0

18:08:00 TO 17:02:55 UT SCALE = 1:6,025,000 TIME TICS EVERY 10.00 MINUTES

