

FLIGHT SUMMARY REPORT

Flight #: 91-030
Date: 16 November 1990
Sensor Package: Dual Wild-Heerbrug RC-10
Area(s) Covered: Northern California

Investigator(s): Functional Check Flight
Flight Request: 91X003

Aircraft #: 708
Julian Date: 320

SENSOR DATA

Accession #:	04164	04165
Sensor ID #:	023	034
Sensor Type:	RC-10	RC-10
Focal Length:	6" 153.21 mm	12" 304.66 mm
Film Type:	High Definition Aerochrome IR SO-131	Aerial Color SO-242
Filtration:	cc.10B	None
Spectral Band:	510-900 nm	400-700 nm
f Stop:	4	4
Shutter Speed:	1/75	1/200
# of Frames:	11	22
% Overlap:	60	60
Quality:	Excellent	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. 91-030**

Accession # 04164

Sensor # 023

Check Points	Frame Numbers	Time (GMT-hr, min, sec)		Altitude, MSL feet/meters	Cloud Cover/Remarks
		START	END		
A - B	7908-7918	20:45:24	20:54:53	65000/19800	20-30% cirrus (frames 7908-7909); 10% smoke obstruction (frames 7913-7915); 10- 30% strato-cumulus (frames 7916-7918); oblique (frame 7916)

**CAMERA FLIGHT LINE DATA
FLIGHT NO. 91-030**

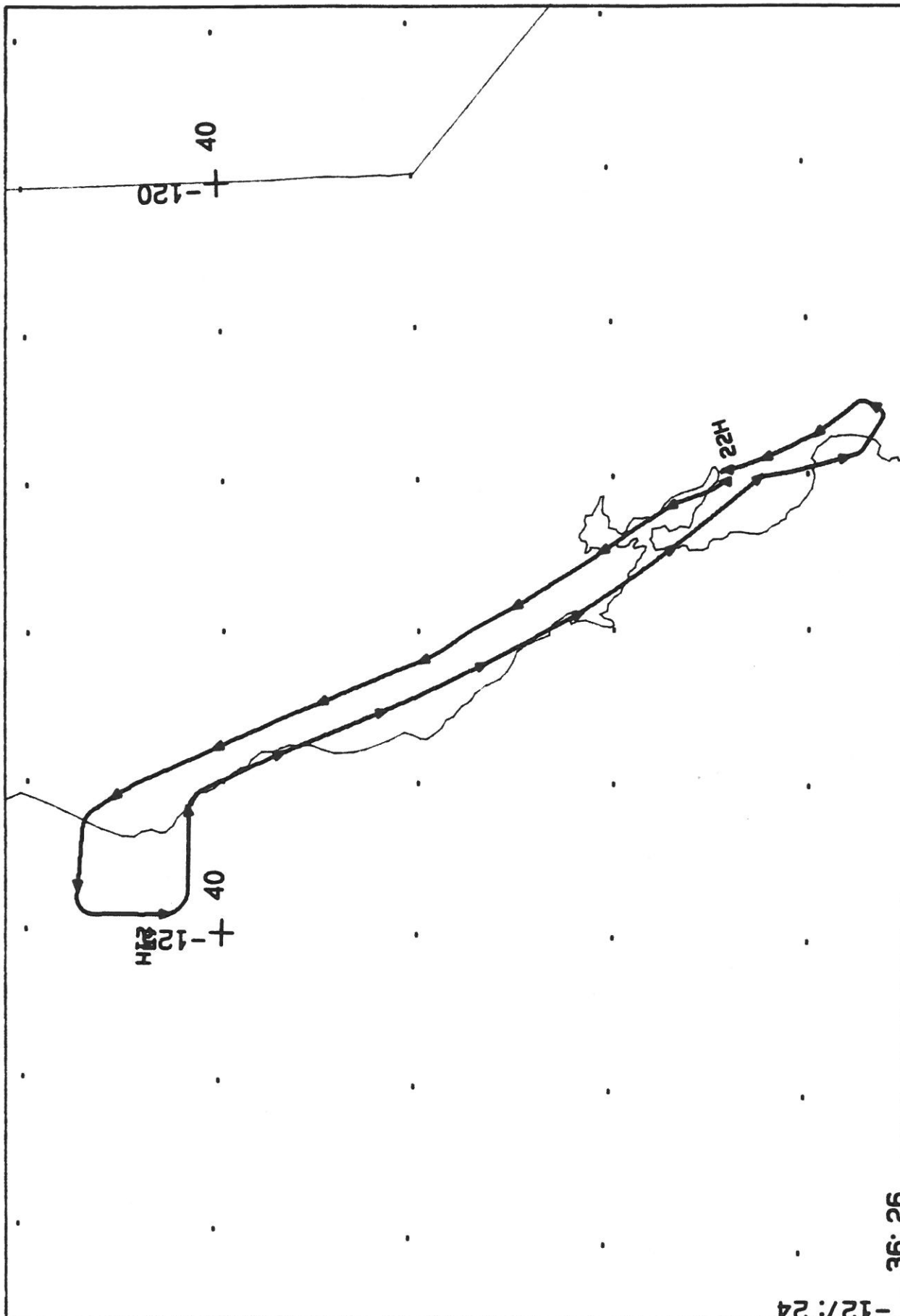
Accession # 04165

Sensor # 034

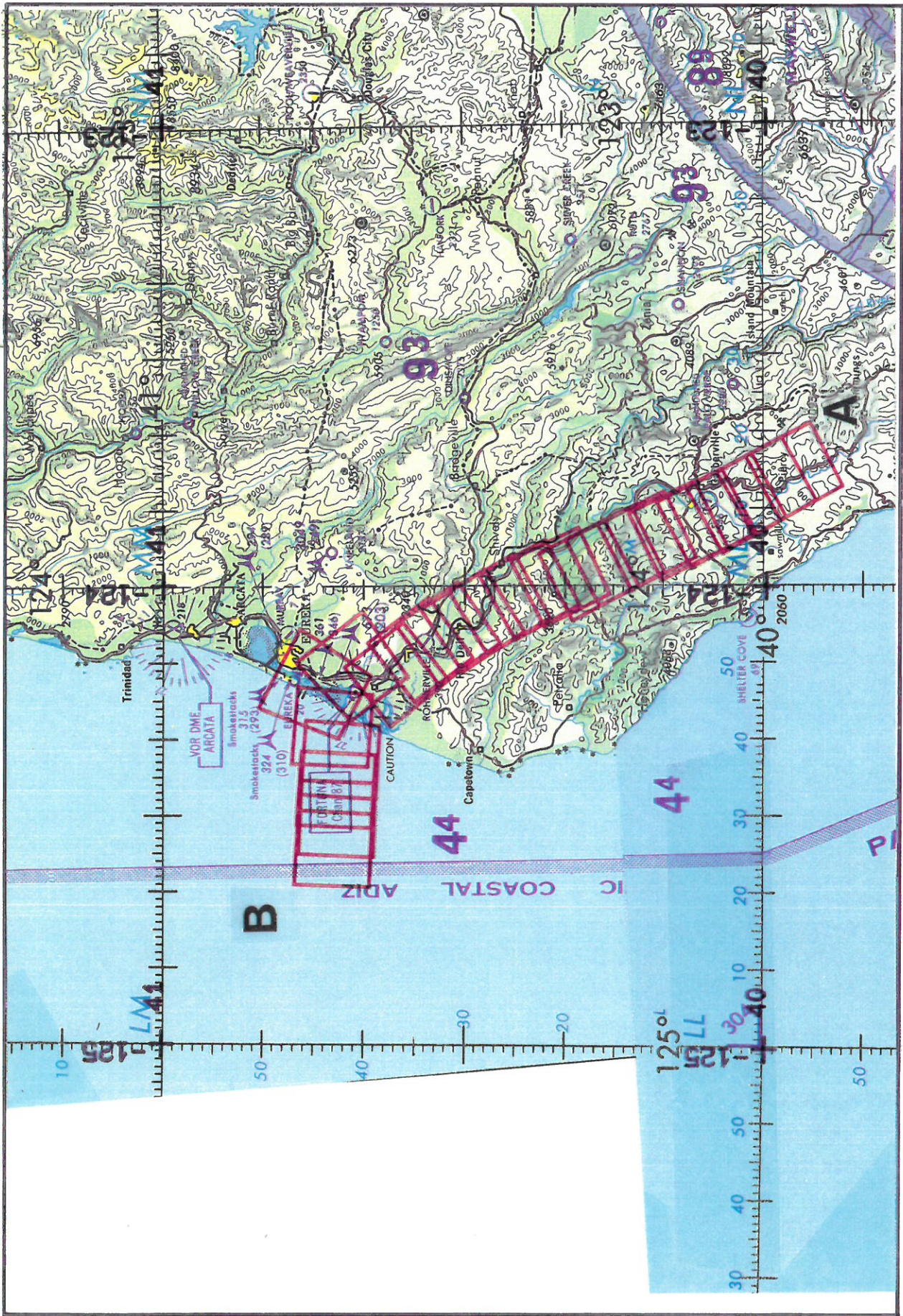
Check Points	Frame Numbers	Time (GMT-hr, min, sec)		Altitude, MSL feet/meters	Cloud Cover/Remarks
		START	END		
A - B	1592-1613	20:45:24	20:55:12	65000/19800	10-30% cirrus (frames 1592-1594); 10% smoke obstruction (frames 1603-1606); 10-30% strato-cumululus (frames 1608-1610); oblique (frames 1607-1609)

NOTE: SECONDS ILLEGIBLE; SECONDS TAKEN FROM ROLL #04164

17dd 23 minutes
to lat: 40



FLIGHT 91-030
OVERLAY FOR XCMUSA LAMBERT CONFORMAL PROJECTION: SP1 = 35.9 SP2 = 40.1 CM = -123.2 ROTATED BY 0.0
20: 18: 40 TO 22: 03: 30 UT SCALE = 1: 3.10E+06 TIME TICS EVERY 5.00 MINUTES



FLIGHT 91-030 16 November 1990 A/C 706 Dual RC-10 Accession # 04165 ONC 8-18