

# FLIGHT SUMMARY REPORT

**Flight Number:** 90-008

**Date:** 10 October 1989

**Julian Date:** 283

**Aircraft #:** 709

**Sensor Package:** Iris II Panoramic  
Wild-Heerbrug RC-10

**Purpose of Flight:** 90X001  
Project Support

**Area(s) Covered:** San Francisco Bay Area

## SENSOR DATA

<b>Accession #:</b>	03959	03960
<b>Sensor ID #:</b>	070	031
<b>Sensor Type:</b>	Iris	RC-10
<b>Focal Length:</b>	24" 609.6 mm	6" 153.05 mm
<b>Film Type:</b>	High Definition Aerochrome IR SO-131	Panatomic-X Aerographic II 2412
<b>Filtration:</b>	cc .20B	Wratten 12 + 2.2AV
<b>Spectral Band:</b>	510-900 nm	510-700 nm
<b>f Stop:</b>	3.5	4
<b>Shutter Speed:</b>	1/125	1/200
<b># of Frames:</b>	400	54
<b>% Overlap:</b>	60	60
<b>Quality:</b>	Excellent	Excellent
<b>Remarks:</b>	Push processed one stop	

## 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. 90-008

Accession No. 03959

Check Points	Frame Numbers	Time (GMT-hr, min, sec)		Altitude, MSL feet/meters	Cloud Cover/Remarks
		START	END		
A - B	0003-0142	22:25:22	22:41:35	65000/19800	10% minor stratus (frames 0005-0021); film splice (frame 0052)
C - D	0143-0278	22:45:32	23:01:17	"	10% coastal stratus (frames 0146-0151, 0185-0200); 10-30% coastal stratus (frames 0259-0278)
E - F	0279-0402	23:06:36	23:20:57	"	10-70% coastal stratus (frames 0279-0402)

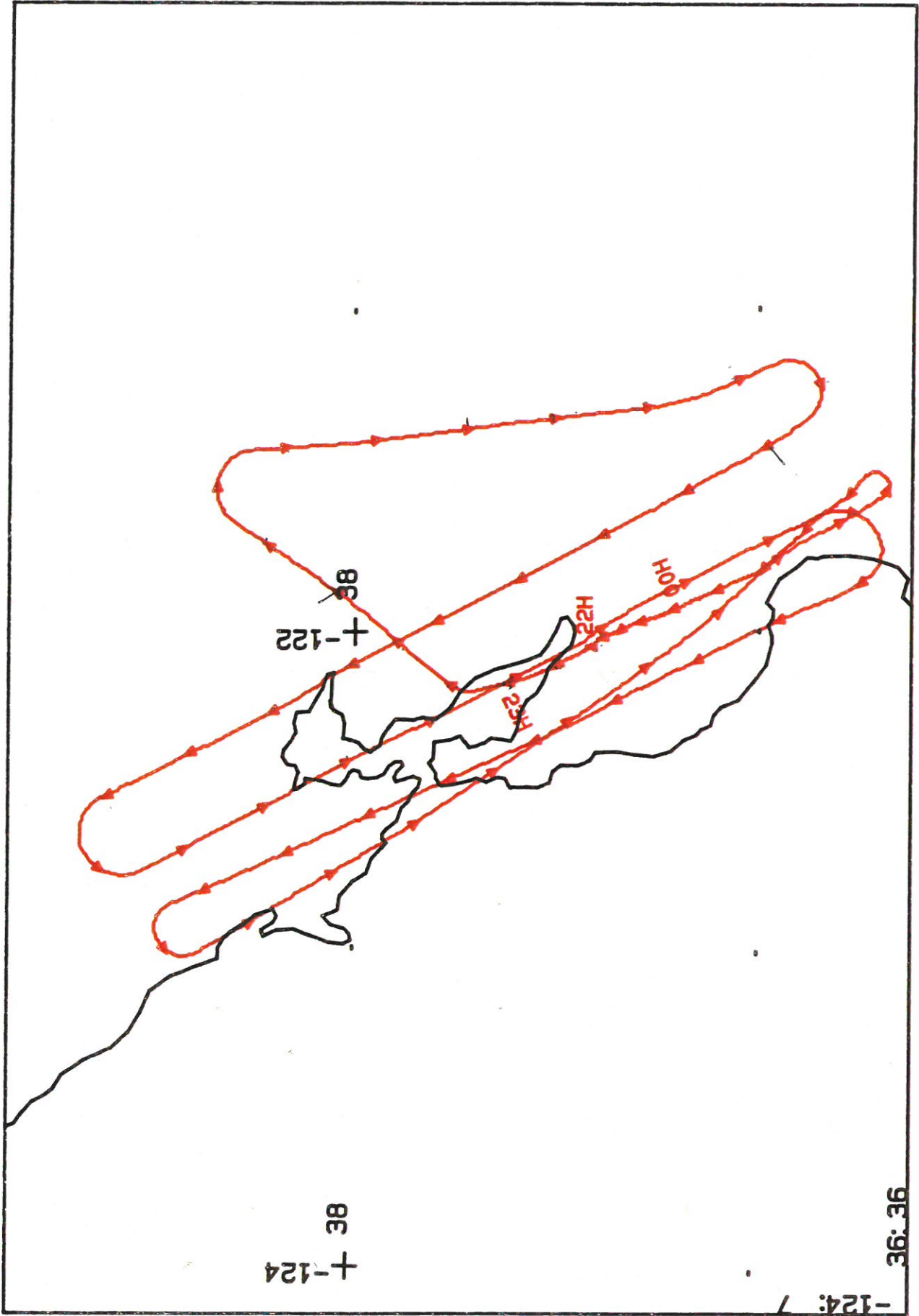
Sensor #  
070

CAMERA FLIGHT LINE DATA  
 FLIGHT NO. 90-008

Accession No. 03960

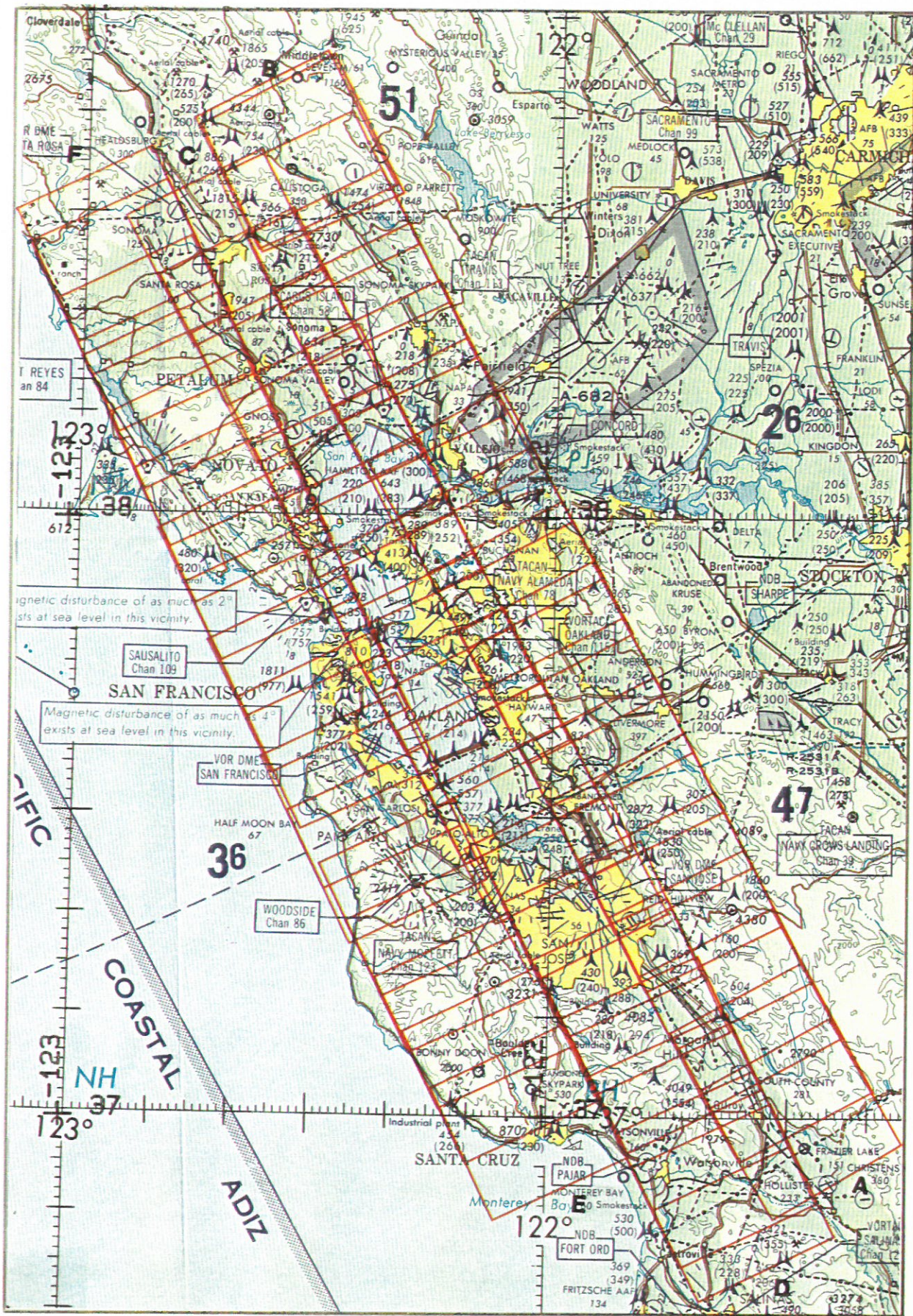
Sensor #  
 031

Check Points	Frame Numbers	Time (GMT-hr, min, sec)		Altitude, MSL feet/meters	Cloud Cover/Remarks
		START	END		
A - B	3635-3653	22:32:58	22:49:16	65000/19800	10% minor stratus (frames 3635-3637)
C - D	3654-3671	22:53:12	23:09:03	"	10% minor stratus (frames 3659-3661, 3665-3666); 10-30% minor stratus (frames 3668-3671)
E - F	3672-3688	23:14:23	23:29:14	"	10-60% stratus (frames 3672-3688)



FLIGHT 90-008    10 October 1989    A/C 709  
 OVERLAY FOR XCMUSA    LAMBERT CONFORMAL PROJECTION    SP1 = 36.3 SP2 = 38.3 CH = -122.1    ROTATED BY 0.0  
 22:00:20 TO 0:07:40 UT    SCALE = 4:4 50E-06    TIME TTCS EVERY 2.00 MINUTES





FLIGHT 90-008  
 10 October 1989  
 A/C 709  
 RC-10  
 EK2412  
 Accession # 03960  
 ONC G-18