

FLIGHT SUMMARY REPORT

Flight #: 90-035
Date: 9 January 1990
Sensor Package: Wild-Heerbrug RC-10
Airborne Ocean Color Imager (AOCI)
Area(s) Covered: Monterey Bay, California

Investigator(s): Functional Check Flight
Flight Request: 90X001

Aircraft #: 709
Julian Date: 009

SENSOR DATA

Accession #:	03987	-----
Sensor ID #:	076	090
Sensor Type:	RC-10	AOCI
Focal Length:	12" 304.89 mm	-----
Film Type:	Aerial Color SO-242	-----
Filtration:	None	-----
Spectral Band:	400-700 nm	
f Stop:	4	-----
Shutter Speed:	1/200	-----
# of Frames:	41	-----
% Overlap:	60	-----
Quality:	Excellent	-----
Remarks:	-----	See write up

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 a description of the digital multispectral sensor used for data collection during this flight.

Airborne Ocean Color Imager

The Airborne Ocean Color Imager (AOCI) is a high altitude multispectral scanner designed for oceanographic remote sensing. It provides 10-bit digitization of eight bands in the visible/near-infrared region of the spectrum, plus two 8-bit bands in the near and thermal infrared. The bandwidths are as follows:

<u>Channel</u>	<u>Wavelength, μm</u>
1	0.436 - 0.455
2	0.481 - 0.501
3	0.511 - 0.531
4	0.554 - 0.575
5	0.610 - 0.631
6	0.655 - 0.676
7	0.741 - 0.800
8	0.831 - 0.897
9	0.989 - 1.054
10	8.423 - 12.279

Sensor/aircraft parameters are as follows:

IFOV:	2.5 mrad
Ground Resolution:	163 feet (50 meters at 65,000 feet)
Total Scan Angle:	85°
Swath Width:	18 nmi (33.3 km)
Pixels/Scan Line:	716
Scan Rate:	6.25 scans/second
Ground Speed:	400 kts (206 m/second)

NOTE: Information on data tape format, logical record format, and scanner calibration data may be obtained from the NASA-Ames Aircraft Data Facility at (415) 604-6252 or FTS 464-6252.

**CAMERA FLIGHT LINE DATA
FLIGHT NO. 90-035**

Accession No. 03987

Sensor # 076

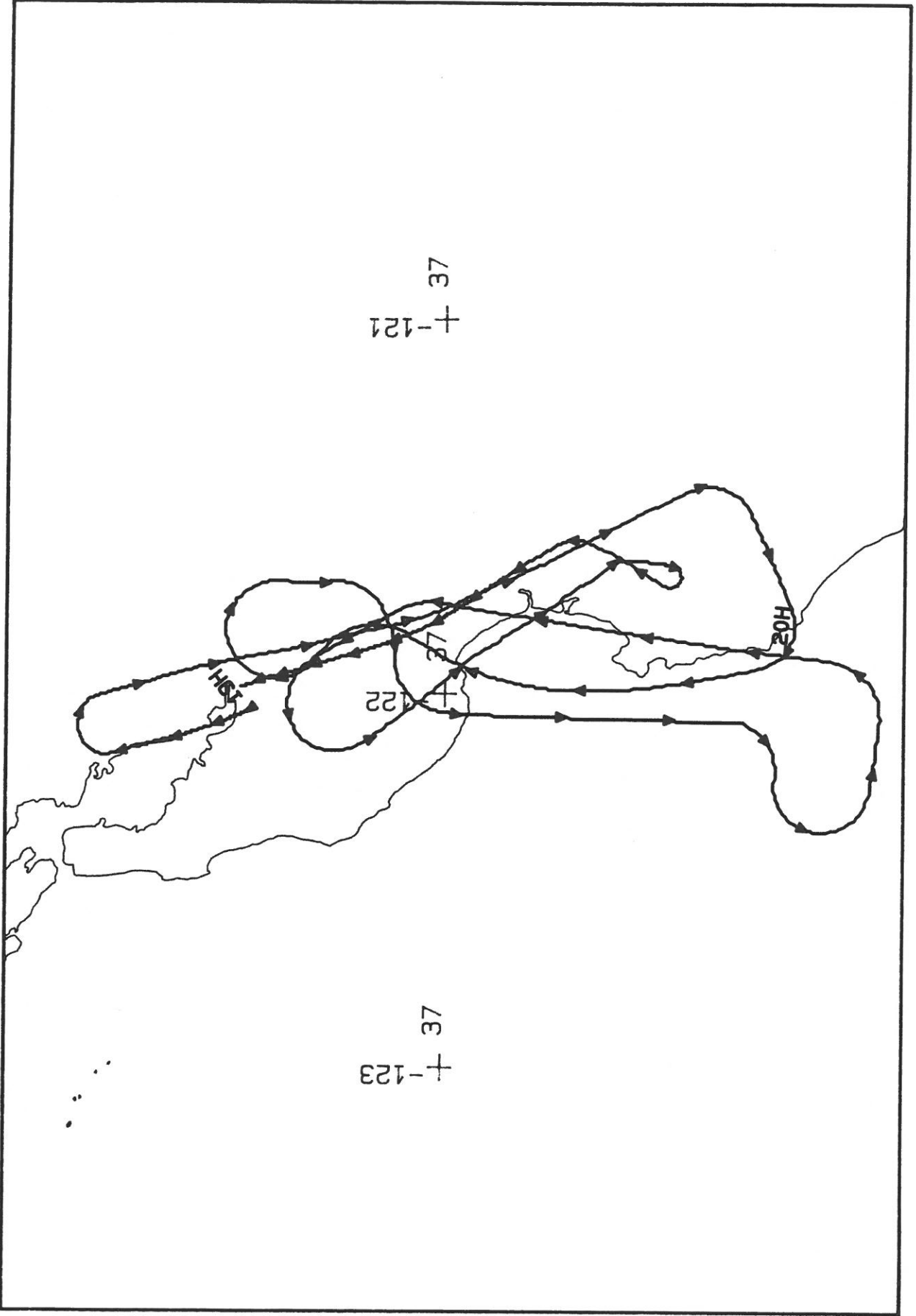
Check Points	Frame Numbers	Time (GMT-hr, min, sec)		Altitude, MSL feet/meters	Cloud Cover/Remarks
		START	END		
A - B	1403-1415	19:29:17	19:34:48	65000/19800	Clear
C - D	1416-1426	19:47:19	19:52:05	"	Clear
E - F	1427-1443	20:00:10	20:07:20	"	Clear

SCANNER FLIGHT LINE DATA

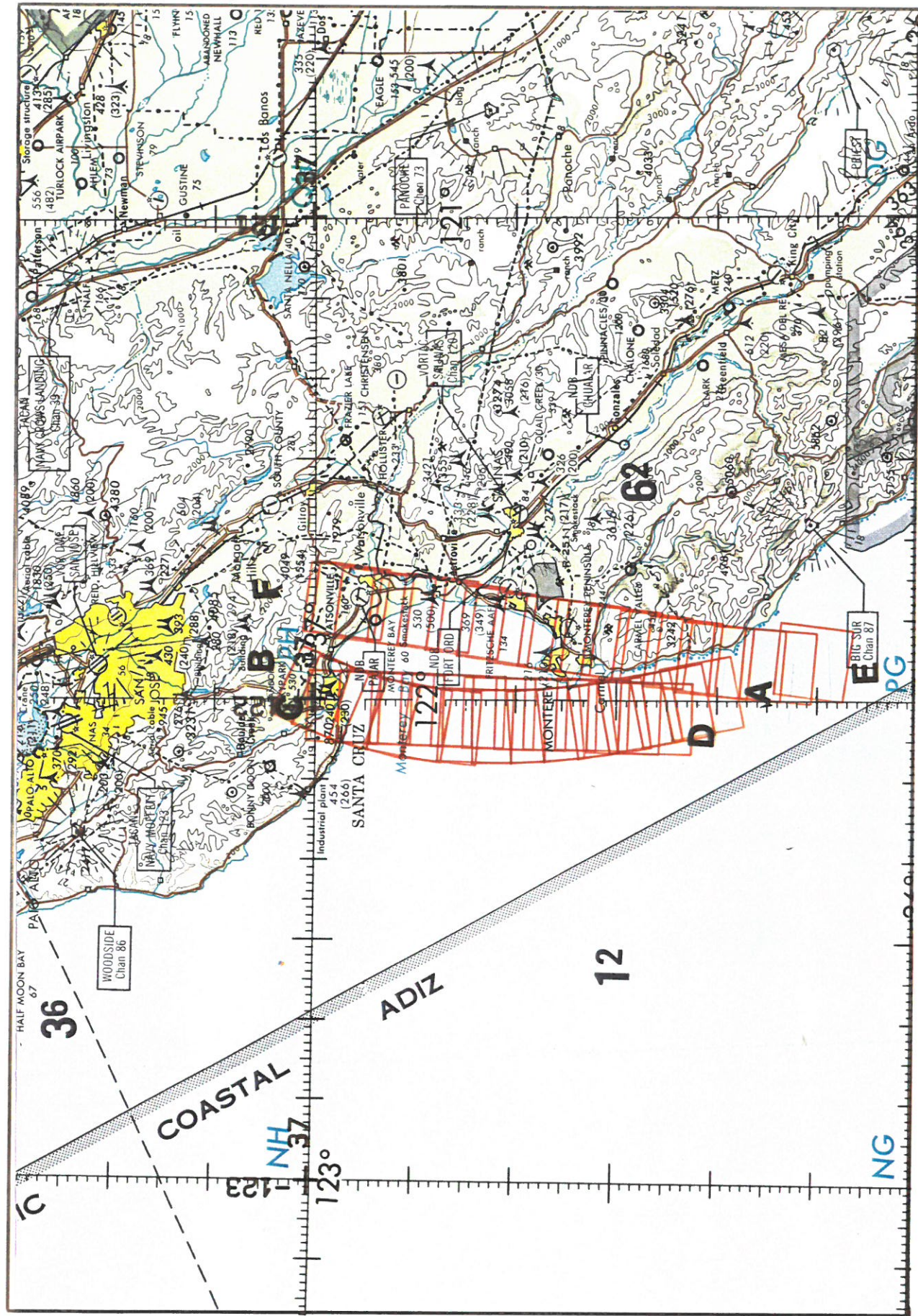
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DAEDALUS FLIGHT DATA FLIGHT NUMBER: 90-035

Check Points	A c t u a l t i m e b e g i n e n d (GMT)	A c t u a l s c a n l i n e b e g i n e n d	A l t i t u d e f e e t / m e t e r	S c a n S p e e d (rps)	t o t a l G o o d s c a n l i n e s	t o t a l I n t e r p o l a t e d s c a n l i n e s	t o t a l R e p e a t e d s c a n l i n e s
A-B	19:28:22.0 19:34:30.0	23454 25756	65000/19812	6.25	2301	0	2
C-D	19:47: 5.0 19:51:21.0	30469 32071	65000/19812	6.25	1601	0	2
E-F	20:00: 9.0 20:06:35.0	35373 37783	65000/19812	6.25	2407	0	4



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A/C 709

RC-10 / AOCI

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