

FLIGHT SUMMARY REPORT

Flight #: 90-075
Date: 20 April 1990
Sensor Package: Airborne Ocean Color Imager (AOCI)
Area(s) Covered: Point Sur to Morro Bay, California

Investigator(s): Functional Check Flight

Aircraft #: 709

Flight Request: 90X001

Julian Date: 110

SENSOR DATA

Accession #: ----
Sensor ID #: 103
Sensor Type: AOCI
Focal Length: ----
Film Type: ----
Filtration: ----
Spectral Band: ----
f Stop: ----
Shutter Speed: ----
of Frames: ----
% Overlap: ----
Quality: ----
Remarks: Mag Tape Data

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 ^o
Swath Width:	18 nmi (33.3 km)
Pixels/Scan Line:	716
Scan Rate:	6.25 scans/second
Ground Speed:	400 kts (206 m/second)

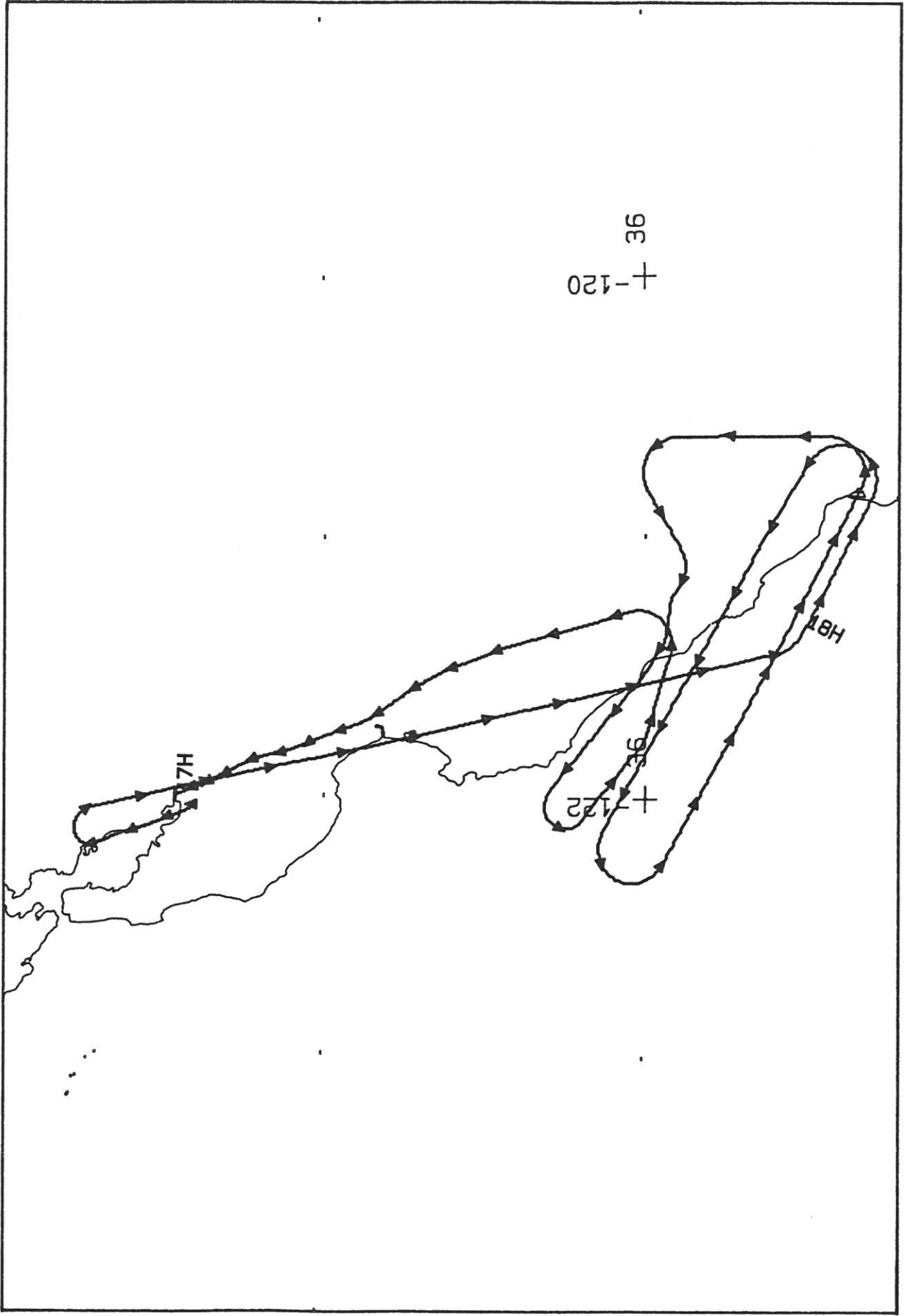
NOTE: Information on data tape format, logical record format, and scanner calibration data may be obtained from the NASA-Ames Aircraft Data Facility at (415) 604-6252 or FTS 464-6252.

SCANNER FLIGHT LINE DATA

FLIGHT NO. 90-075

DORVALUS FLIGHT DATA
FLIGHT NUMBER: 90-075

Check Points	Act u a l t i m e (GMT) b e g i n e n d	Act 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 / A c t e r	Sc a n S p e e d (rps)	t o t a l G 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
G-B	17:16:25.0 17:29: 0.0	9470 14187	65000/19812	6.25	4694	0	34
G-D	17:31: 0.0 17:33:20.0	14937 16187	65000/19812	6.25	1162	4	35
G-F	17:38: 0.0 17:49: 0.0	17562 21697	65000/19812	6.25	4031	1	74
G-H	17:53: 0.0 18:04: 0.0	23187 27312	65000/19812	6.25	4074	0	52
I-J	18:13:30.0 18:21:30.0	32750 33875	65000/19812	6.25	1123	0	3
K-L	18:24:30.0 18:25:20.0	35000 35637	65000/19812	6.25	589	0	0

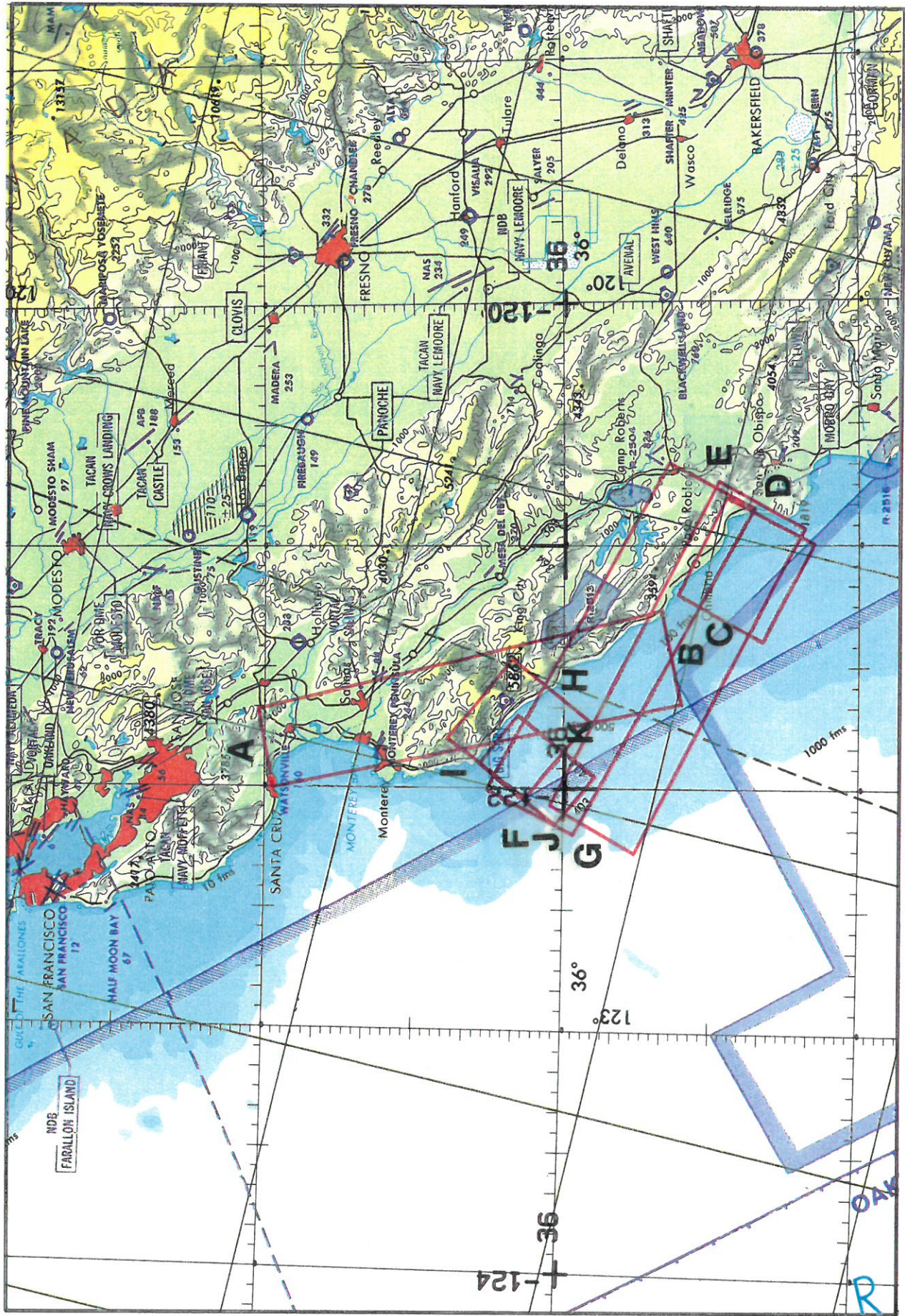


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20 April 1990

A/C 709

AOCI Functional Check Flight



FLIGHT 90-075 20 Apr 11 1990 AOCI Coastal California --- Ft Sur to Morro Bay JNC 49

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