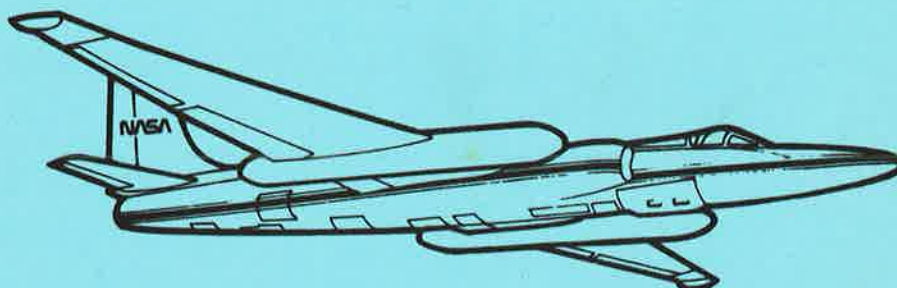
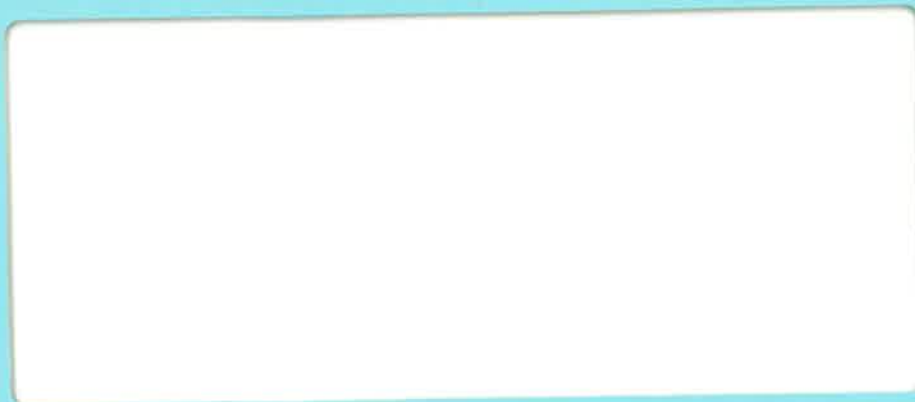


**SCIENCE AND APPLICATIONS AIRCRAFT DIVISION  
AIRBORNE SCIENCE AND APPLICATIONS PROGRAM**

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F58



**ER-2  
FLIGHT SUMMARY REPORT**

**NASA**

National Aeronautics and  
Space Administration

**Ames Research Center**  
Moffett Field, California 94035-1000

**Aircraft Data Facility  
NASA-Ames Research Center  
Mail Stop 240-6  
Moffett Field, California 94035-1000  
(415) 604-6252 • FTS 464-6252**

# FLIGHT SUMMARY REPORT

**Flight #:** 90-080  
**Date:** 18 May 1990  
**Sensor Package:** Dual HR-732  
Wild-Heerbrug RC-10  
**Area(s) Covered:** Central California Coast

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

**Aircraft #:** 709  
**Julian Date:** 138

## SENSOR DATA

<b>Accession #:</b>	04025	04027
<b>Sensor ID #:</b>	018	026
<b>Sensor Type:</b>	HR-732	RC-10
<b>Focal Length:</b>	24" 609.6 mm	12" 304.97 mm
<b>Film Type:</b>	High Definition Aerochrome IR SO-131	Panatomic-X Aerographic II EK-2412
<b>Filtration:</b>	cc.30B	Wratten-12
<b>Spectral Band:</b>	510-900 nm	510-700 nm
<b>f Stop:</b>	8	4
<b>Shutter Speed:</b>	1/75	1/200
<b># of Frames:</b>	220	69
<b>% Overlap:</b>	60	10
<b>Quality:</b>	Excellent	Excellent
<b>Remarks:</b>		

## 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. 90-080**

Accession # 04025

Sensor # 018

Page 1/2

Check Points	Frame Numbers	Time (GMT-hr, min, sec)		Altitude, MSL feet/meters	Cloud Cover/Remarks
		START	END		
A - B	0001-0004	18:24:12	18:24:54	65000/19800	Clear
C - D	0005-0015	18:42:58	18:45:12	"	10-20% coastal stratus (frames 0009-0012)
E - F	0016-0027	18:48:45	18:51:19	"	Clear
G - H	0028-0045	18:55:41	18:59:48	"	10% cumulus (frames 0039-0041)
I - J	0046-0089	19:03:37	19:13:51	"	Clear
K - L	0090-0116	19:17:10	19:23:28	"	10% coastal stratus (frames 0112-0116)
M - N	0130-0134	19:26:52	19:27:50	"	10% coastal stratus (frames 0130)
O - P	0135-0147	19:34:33	19:37:27	"	10% coastal stratus (frames 0143-0147)
Q - R	0155-0180	19:39:23	19:45:20	"	Clear
S - T	0181-0205	19:48:49	19:54:37	"	10% coastal stratus (frames 0204-0205)

**CAMERA FLIGHT LINE DATA  
FLIGHT NO. 90-080**

Accession # 04025

Sensor # 018

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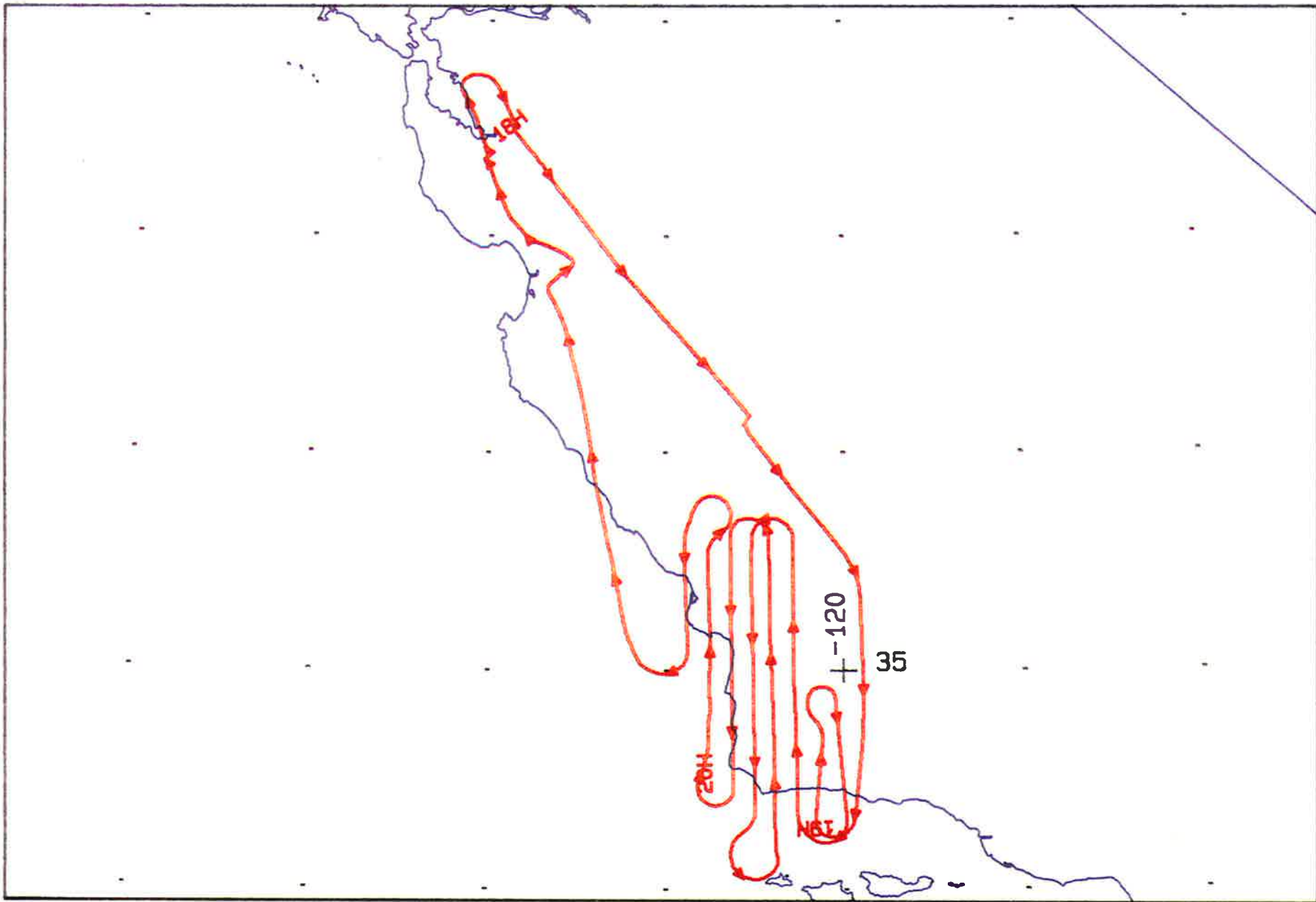
Check Points	Frame Numbers	Time (GMT-hr, min, sec)		Altitude, MSL feet/meters	Cloud Cover/Remarks
		START	END		
U - V	0222-0238	20:06:28	20:10:19	65000/19800	10% coastal stratus (frames 0226-0229)
W - X	0239-0256	20:16:22	20:20:16	"	10% coastal stratus (frames 0250--256)
NOTE: TIME LISTED ON FILM ARE PDT; ADD 7 HOURS FOR GMT					

**CAMERA FLIGHT LINE DATA**  
**FLIGHT NO. 90-080**

Accession # 04027

Sensor # 026

Check Points	Frame Numbers	Time (GMT-hr, min, sec)		Altitude, MSL feet/meters	Cloud Cover/Remarks
		START	END		
C - D	2921-2924	18:43:13	18:45:34	65000/19800	10% minor coastal stratus (frames 2922-2923)
E - F	2925-2928	18:48:56	18:50:52	"	Clear
G - H	2929-2935	18:55:51	18:59:39	"	10% minor cumulus (frames 2933-2934)
I - J	2936-2948	19:03:48	19:14:05	"	Clear
K - L	2949-2956	19:17:21	19:22:59	"	10% minor cumulus (frame 2956)
M - N	2961-2961	19:27:37	19:27:37	"	10% minor cumulus (frame 2961)
O - P	2962-2965	19:34:44	19:36:40	"	10% coastal stratus (frame 2965)
Q - R	2968-2974	19:39:26	19:44:59	"	Clear
S - T	2975-2982	19:49:00	19:54:37	"	Clear
U - V	2987-2993	20:06:40	20:10:40	"	10% coastal stratus (frames 2989-2990)
W - X	2994-2999	20:16:33	20:20:18	"	10-20% coastal stratus (frames 2998-2999)



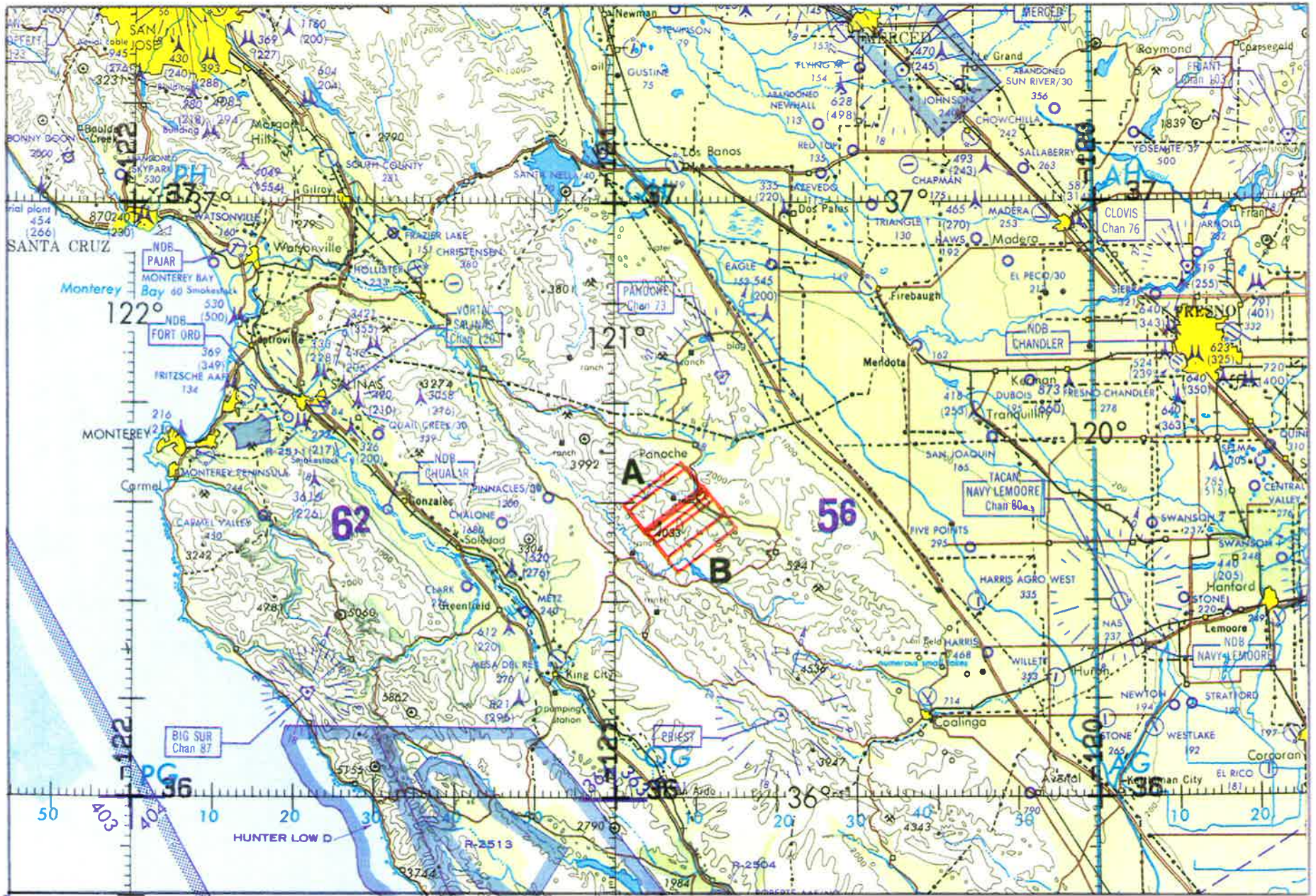
FLIGHT 90-080

18 May 1990

A/C 709

Dual HR-732 / RC-10

Central California



FLIGHT 90-080

18 May 1980

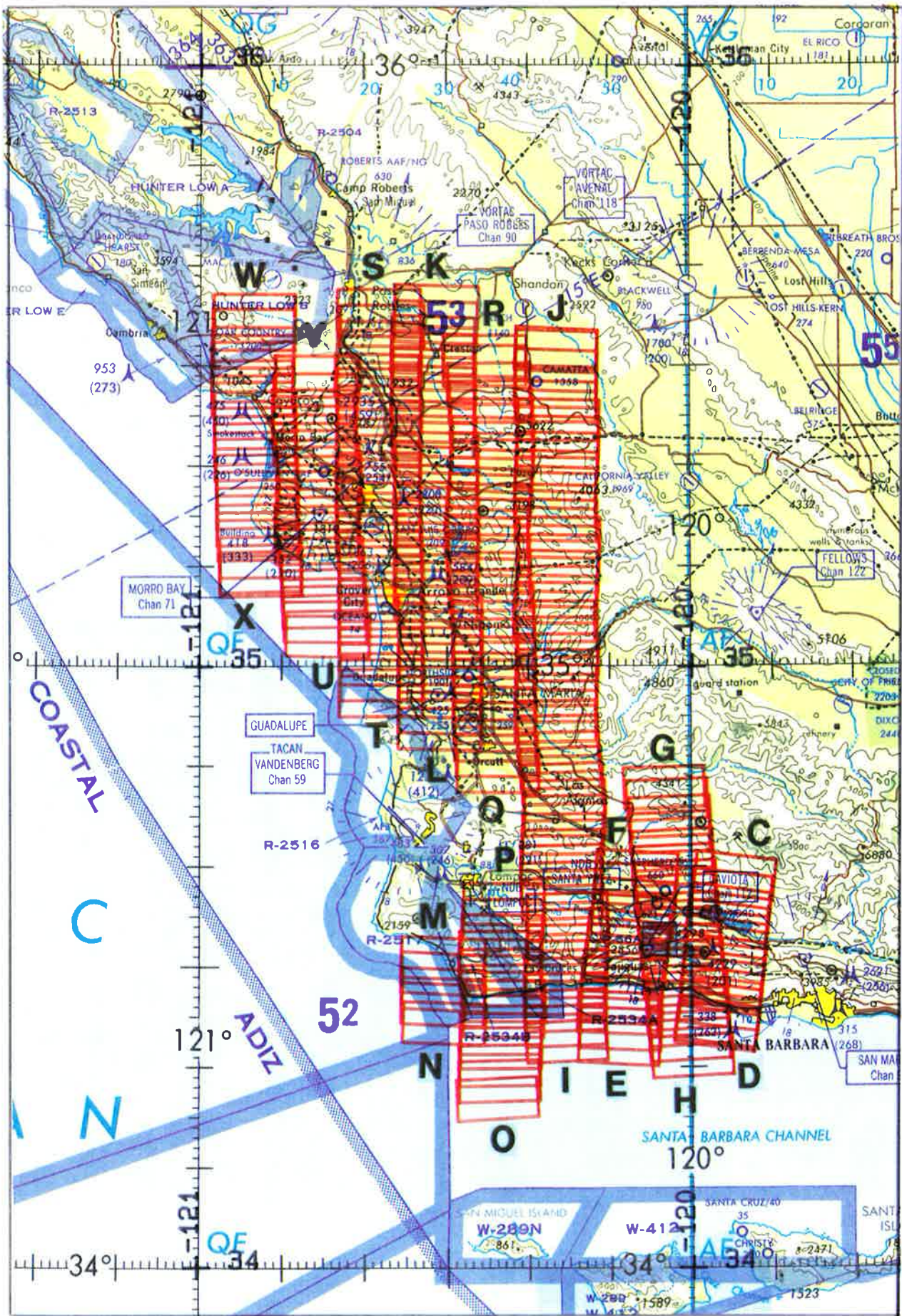
A/C 709

Dual HR-732 / RC-10

Accession #04025

ONC 6-18





ONC 6-18

Accession #04025

Dual HR-732 / RC-10

A/C 709

18 May 1990

FLIGHT 90-080