FLIGHT SUMMARY REPORT

Flight #: 90-074

Date: 18 April 1990

Sensor Package: Dual Wild-Heerbrug RC-10

Area(s) Covered: Central Valley, California

Investigator(s): Functional Check Flight

Flight Request: 90X001

Aircraft #: 706

Julian Date: 108

SENSOR DATA

Accession #:	04023	04024
Sensor ID #:	036	034
Sensor Type:	RC-10	RC-10
Focal Length:	6" 153.19 mm	12" 304.66 mm
Film Type:	High Definition Aerochrome IR SO-131	High Definition Aerochrome IR SO-131
Filtration:	cc.10B	cc.10B
Spectral Band:	510-900 nm	510-900 nm
f Stop:	4	4
Shutter Speed:	1/100	1/150
# of Frames:	66	133
% 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.

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. 90-074

Accession # 04023

Sensor # 036

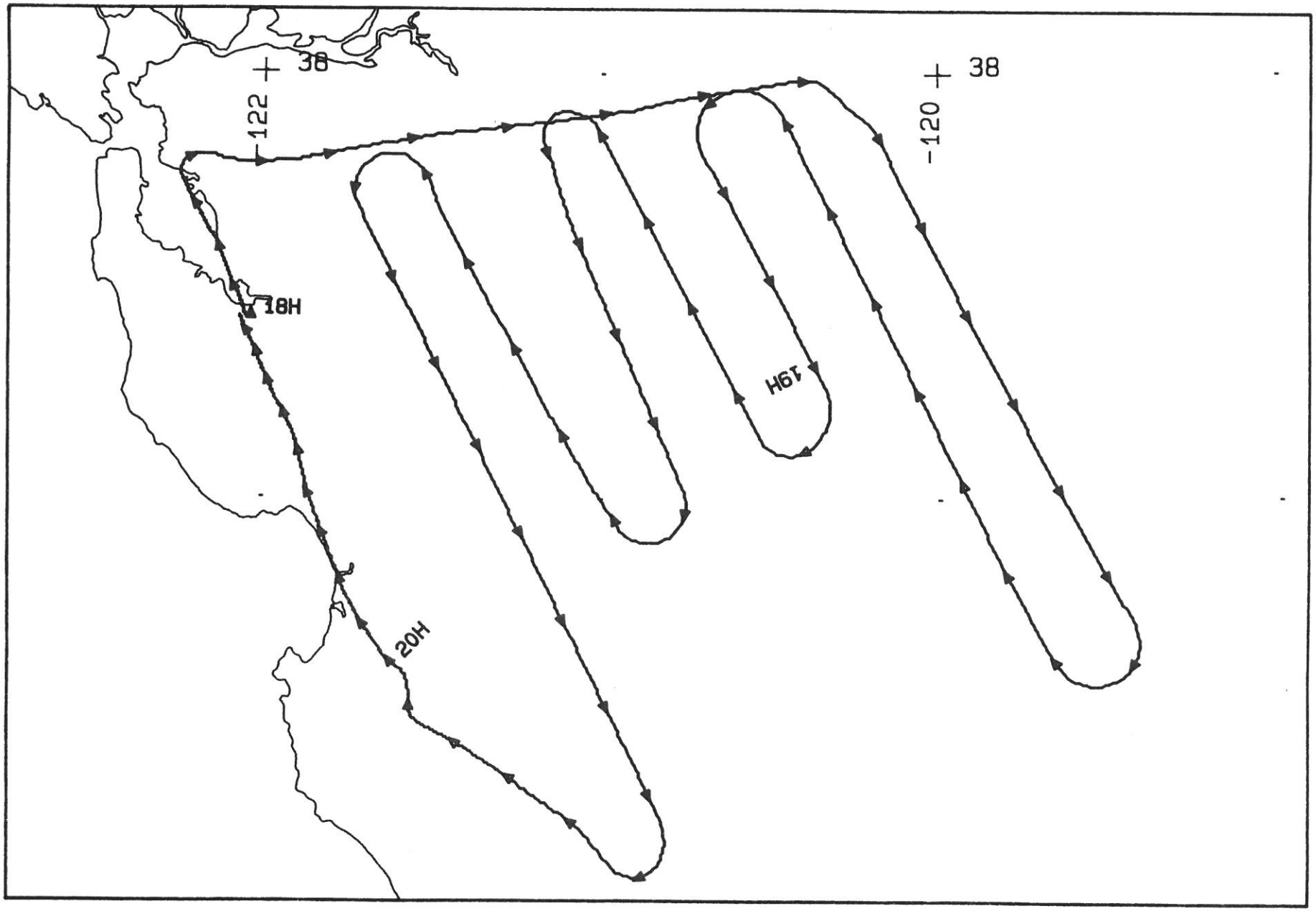
Check Points	Frame Numbers	Time (GMT-hr, min, sec) START	Time (GMT-hr, min, sec) END	Altitude, MSL feet/meters	Cloud Cover/Remarks
A - B	2841-2852	18:26:08	18:36:33	65000/19800	10-70% cumulus (frames 2841-2852)
C - D	2853-2860	18:44:03	18:50:39	"	10-30% cumulus (frames 2853-2860)
E - F	2861-2867	18:55:20	19:00:25	"	10% cumulus (frames 2861-2867)
G - H	2868-2875	19:03:51	19:09:34	"	10-20% cumulus (frames 2871-2875)
I - J	2876-2884	19:13:14	19:20:13	"	10-20% cumulus (frames 2876-2884)
K - L	2885-2892	19:23:24	19:29:59	"	10% cumulus (frames 2885); 10-30% cumulus (frames 2887-2892)
M - N	2893-2906	19:34:15	19:46:20	"	10-70% cumulus (frames 2893-2906)

CAMERA FLIGHT LINE DATA
FLIGHT NO. 90-074

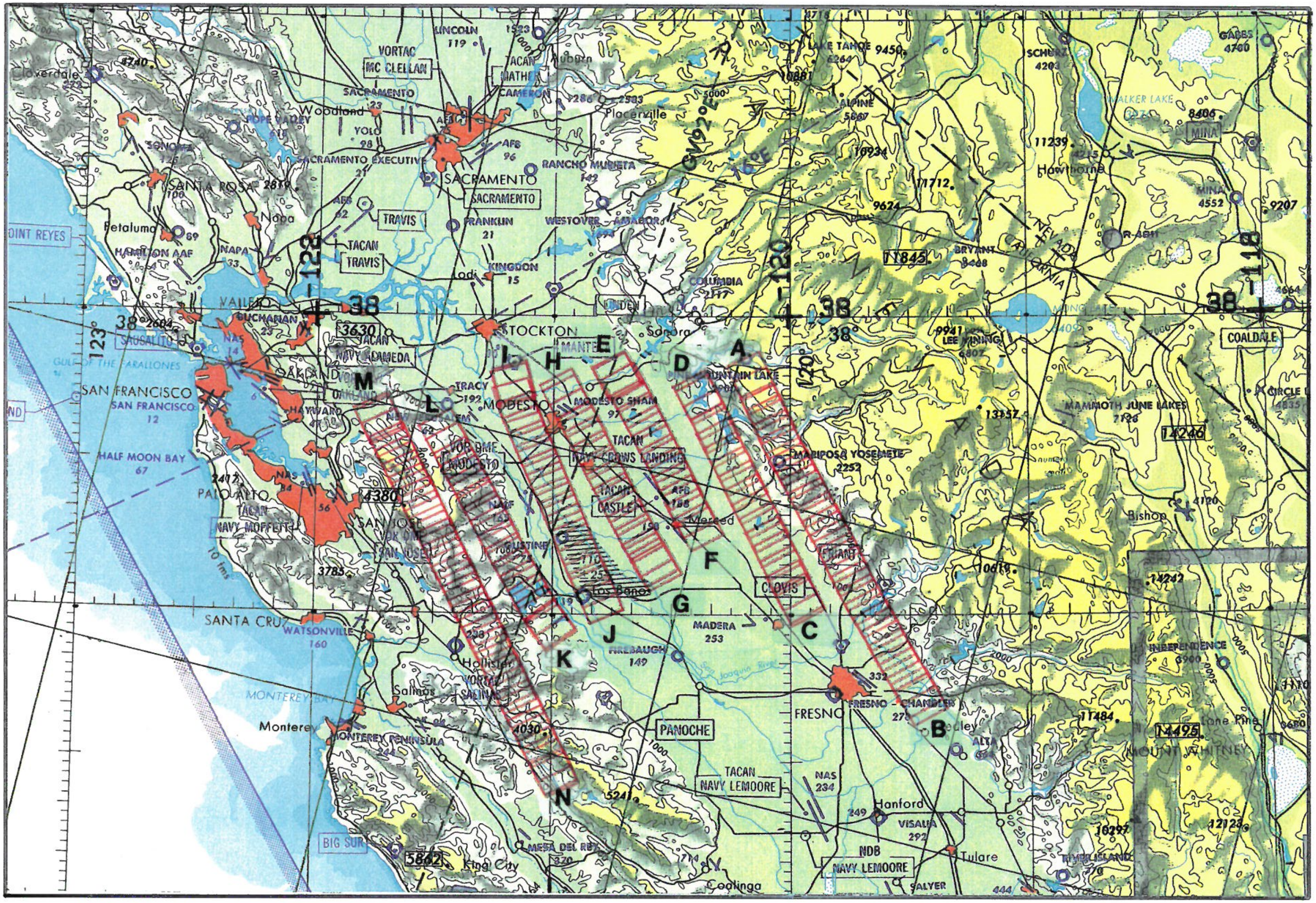
Accession # 04024

Sensor # 034

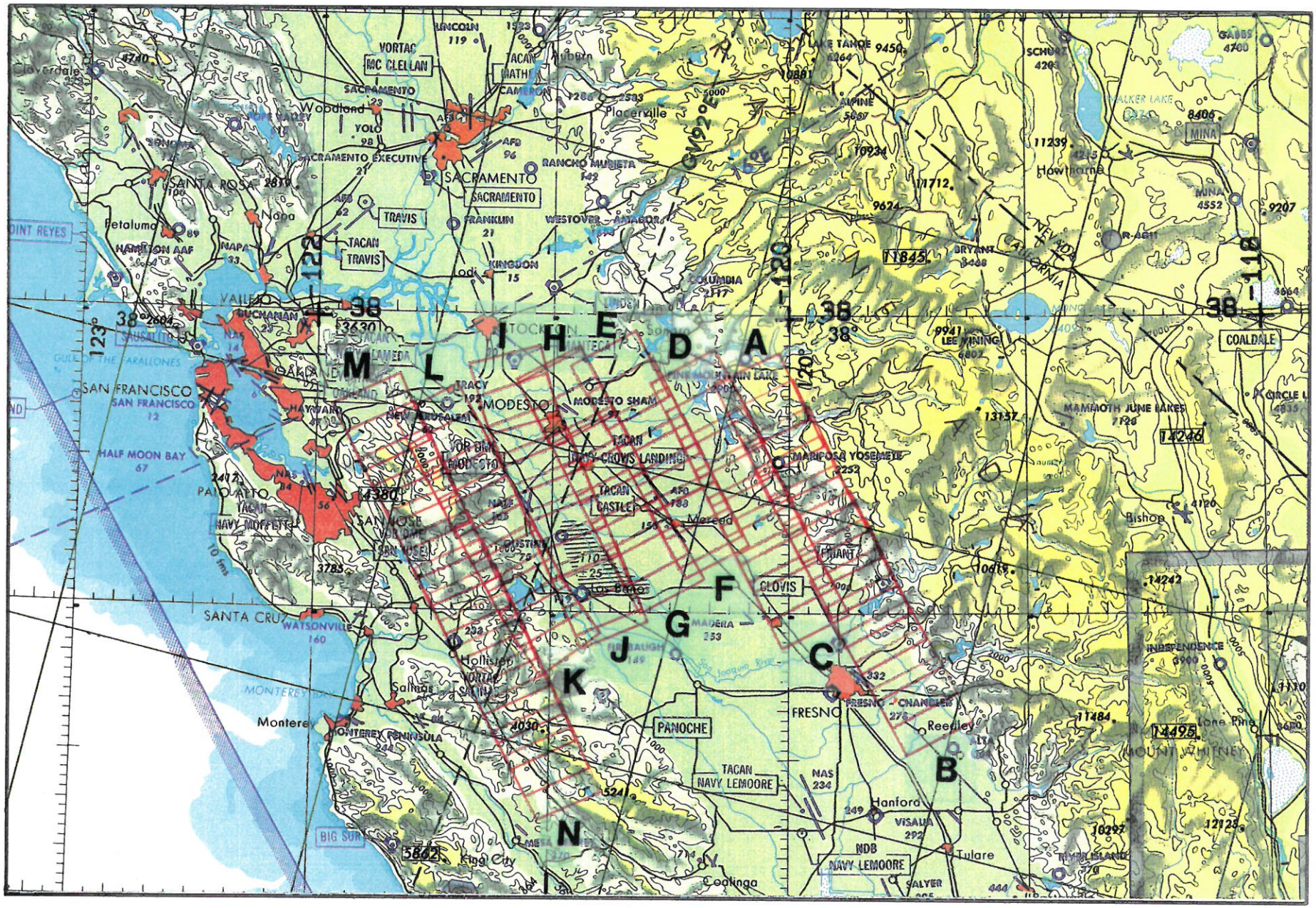
Check Points	Frame Numbers	Time (GMT-hr, min, sec) START	Time (GMT-hr, min, sec) END	Altitude, MSL feet/meters	Cloud Cover/Remarks
A - B	1948-1972	18:25:32	18:36:35	65000/19800	10-80% cumulus (frames 1948-1972)
C - D	1973-1989	18:43:59	18:50:44	"	10-30% cumulus (frames 1973-1989)
E - F	1990-2002	18:55:17	19:00:27	"	10% cumulus (frames 1990-2002)
G - H	2003-2017	19:03:47	19:09:36	"	10% cumulus (frames 2010-2017)
I - J	2018-2035	19:13:10	19:20:14	"	10-20% cumulus (frames 2018-2035)
K - L	2036-2051	19:23:23	19:29:56	"	10-30% cumulus (frames 2041-2051)
M - N	2052-2080	19:34:13	19:46:23	"	10-80% cumulus (frames 2052-2070); 10-20% cumulus (frames 2075-2080)



FLIGHT 90-074 | 18 April 1990 | A/C 706 | RC-10 | Central California



FLIGHT 90-074 18 April 1990 RC-10 (12-inch focal length) Accession # 04024 JNC 43



FLIGHT 90-074 18 April 1990 RC-10 (6-inch focal length) Accession # 04023 JNC 43