FLIGHT SUMMARY REPORT

Flight #: 90-066

Date: 23 March 1990

Sensor Package: Wild-Heerbrug RC-10
Airborne Visible and Infrared Imaging Spectrometer (AVIRIS)

Area(s) Covered: Sierra Nevada Mountains, California

Investigator(s): J. Dozier, University of California
Kyaw Tha Paw U, University of California

Aircraft #: 709

Flight Request: 90L222B and 90L221B

Julian Date: 082

SENSOR DATA

Accession #:	04008	-----
Sensor ID #:	026	099
Sensor Type:	RC-10	AVIRIS
Focal Length:	12" 304.97 mm	-----
Film Type:	High Definition Aerochrome IR SO-131	-----
Filtration:	cc .10B	-----
Spectral Band:	510-900 nm	-----
f Stop:	4	-----
Shutter Speed:	1/150	-----
# of Frames:	58	-----
% Overlap:	60	-----
Quality:	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. The following provides a description of the digital multispectral sensor used for data collection during this flight.

Airborne Visible and Infrared Imaging Spectrometer

The Airborne Visible and Infrared Imaging Spectrometer (AVIRIS) is the second in the series of imaging spectrometer instruments developed at the Jet Propulsion Laboratory (JPL) for earth remote sensing. This instrument uses scanning optics and a four-line arrays of detectors to image a 614 pixel swath simultaneously in 224 contiguous spectral bands (0.4-2.4 *um*).

AVIRIS parameters are as follows:

IFOV:	1 mrad
GIFOV (at 20 km):	20 m
FOV:	30°
GFOV (at 20 km):	11 km
Spectral Coverage:	0.41 - 2.45 *um*
Number of Spectral Bands:	224
Digitization:	10 Bits
Data Rate:	17 MBPS

Spectrometer	Wavelength Range	Number of Bands	Sampling Interval
1	0.41 - 0.70 *um*	31	9.4 nm
2	0.68 - 1.27 *um*	63	9.4 nm
3	1.25 - 1.86 *um*	63	9.7 nm
4	1.84 - 2.45 *um*	63	9.7 nm

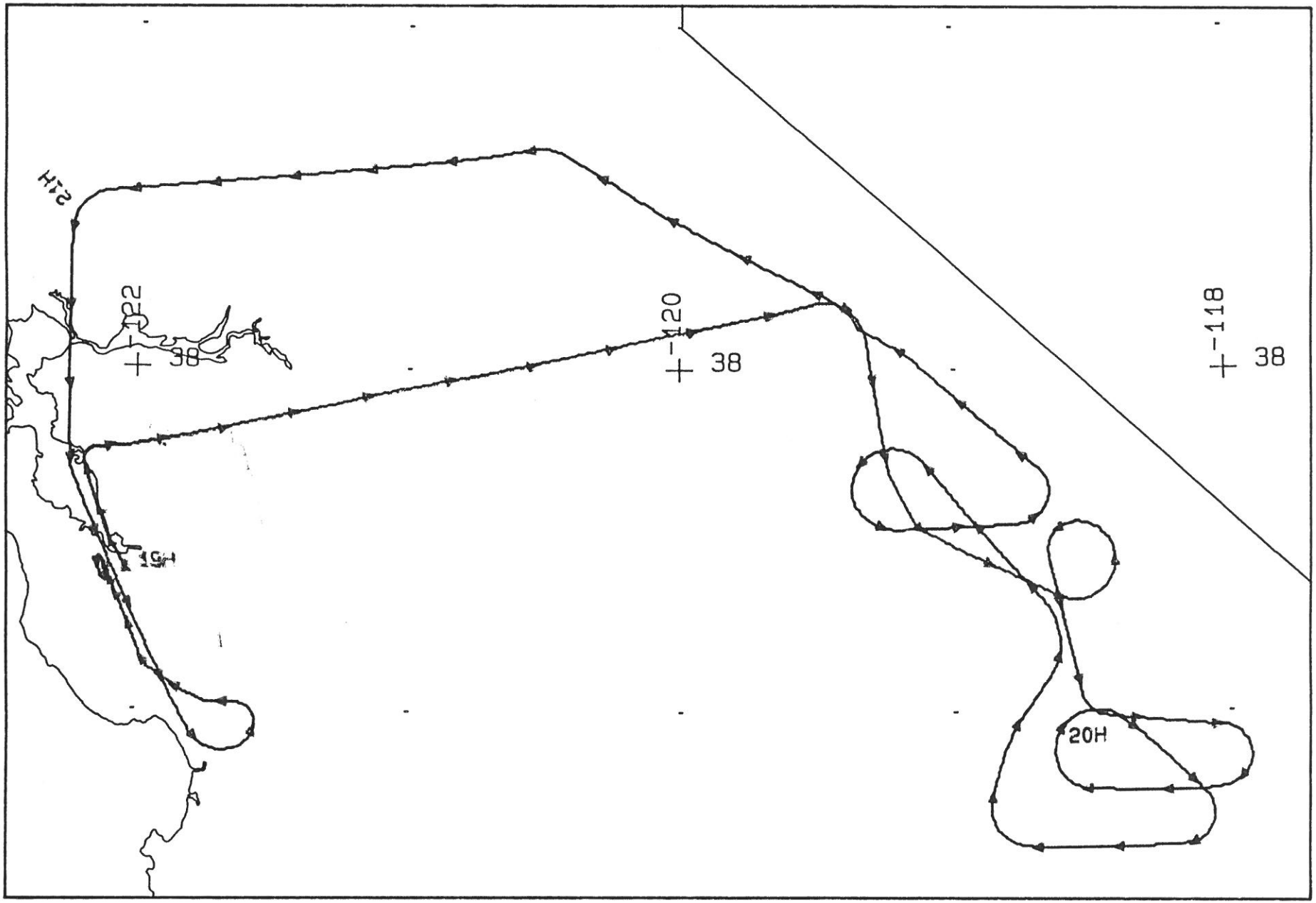
All AVIRIS data is decommutated and archived at JPL and not currently available for public distribution. For further information contact Rob Greene at Jet Propulsion Laboratory, 4800 Oak Grove Drive, Mail Stop 11-116, Pasadena, California 91109-8099.

CAMERA FLIGHT LINE DATA
FLIGHT NO. 90-066

Accession # 04008

Sensor # 026

Check Points	Frame Numbers	Time (GMT-hr, min, sec)		Altitude, MSL feet/meters	Cloud Cover/Remarks
		START	END		
A - B	0706-0709	19:32:56	19:34:22	65000/19800	Clear
C - D	0710-0723	19:37:32	19:49:02	"	Clear
E - F	0724-0729	19:56:49	19:58:46	"	Clear
G - H	0730-0736	20:09:01	20:11:26	"	Clear
I - J	0737-0745	20:20:38	20:23:57	"	Clear
K - L	0746-0752	20:35:31	20:37:55	"	Clear
M - N	0753-0761	20:56:08	20:59:27	"	10-60% cirrus (frames 0753-0756)
O - P	0762-0763	21:10:44	21:10:50	"	Clear



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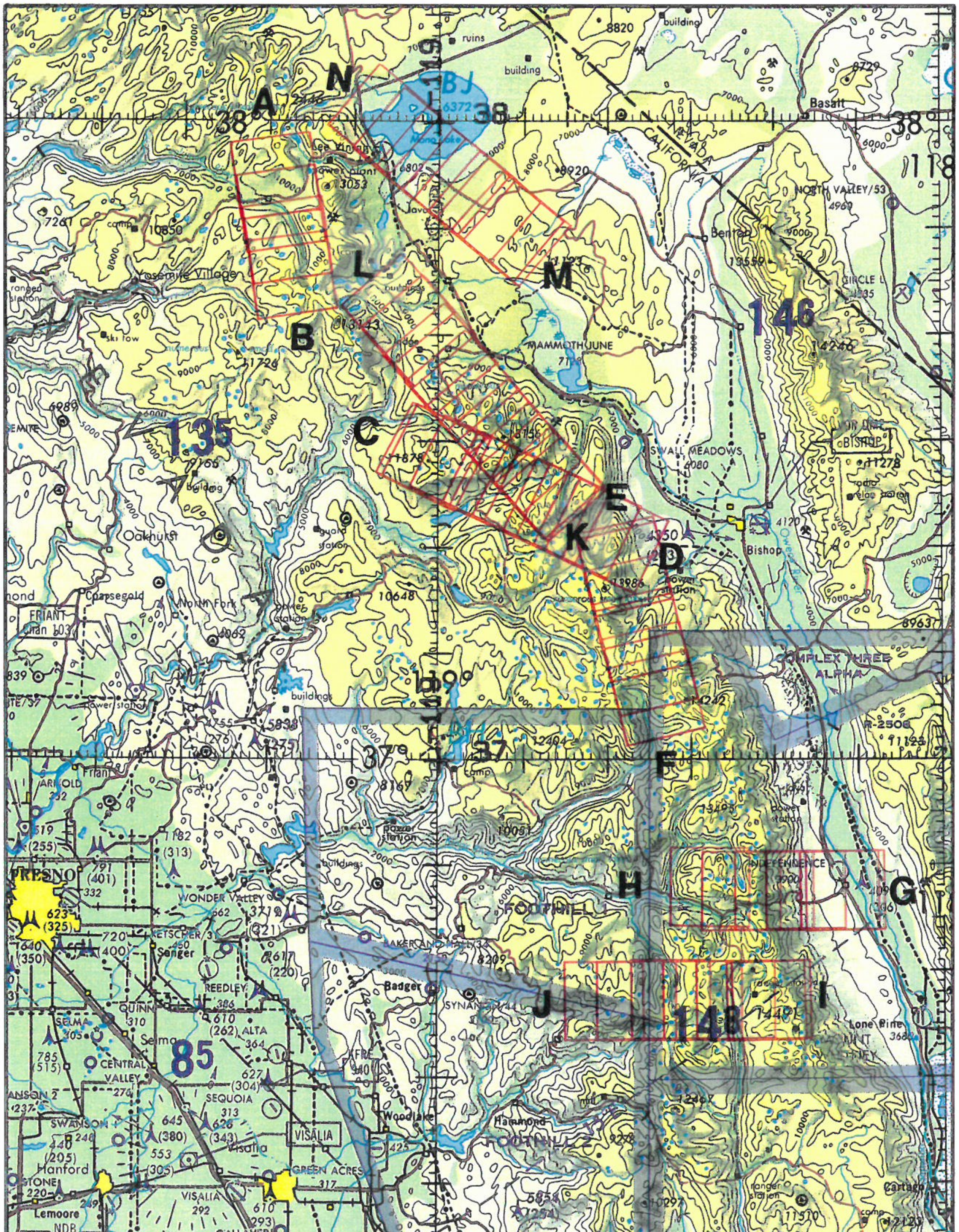

A
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D
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Lee Vining
Yosemite Village
Oakhurst
North Fork
Benton
Bishop
Basalt
MAMMOTH JUNE
SWALL MEADOWS
NORTH VALLEY/53
CIRCLE L
FRIANT
Friant
FRESNO
Sanger
REEDLEY
Selma
SELMA
CENTRAL VALLEY
SEQUOIA
VISALIA
Visalia
Hanford
Lemoore
NAVY LEMOORE
Tulare
GALLAHER
GREEN ACRES
PRUNER
MEFFORD
ECKERT
Porterville
Corcoran
SALYER
STRATFORD
SWANSON
ALTA
QUINN
WONDER VALLEY
KETSCHER
ARNOLD
Badger
Woodlake
Hammond
FOOTHILL
BAKER AND HALL
SYNANON
INDEPENDENCE
Lone Pine
Cartago
COMPLEX THREE ALPHA
R-2506
R-2508
COMPLEX TWO
135
146
148
85
38
37
119
118

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