FLIGHT SUMMARY REPORT

Flight Number: 98-024

Calendar/Julian Date: 10 February 1998 • 041

Sensor Package: Dual Wild Heerbrugg RC-10
Large Area Collectors (LACs)

Area(s) Covered: Las Vegas, Nevada

Investigator(s): Functional Sensor Flight **Aircraft #:** 706

SENSOR DATA

Accession #:	05242	05243	-----
Sensor ID #:	026	035	100
Sensor Type:	RC-10	RC-10	LACs
Focal Length:	12” 304.97 mm	6” 153.05 mm	-----
Film Type:	Aerochrome IR SO-134	Aerochrome IR SO-134	-----
Filtration:	Wratten 12	Wratten 12 + 2.2 AV	-----
Spectral Band:	510-900 nm	510-900 nm	-----
f Stop:	11	8	-----
Shutter Speed:	1/175	1/180	-----
# of Frames:	31	16	-----
% Overlap:	60	60	-----
Quality:	Fair	Poor	-----
Remarks:	Severe emulsion abrasions throughout roll	Severe emulsion abrasions throughout roll	

Airborne Science and Applications Program

The Airborne Science Branch at NASA's Dryden Flight Research Center, Edwards, California, operates two ER-2 high altitude aircraft in support of NASA earth science research. 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(s) and camera(s) used for data collection during this flight.

Large Area Collectors

The Large Area Collectors (LACs) are flown on NASA high altitude ER-2s in support of the NASA-Johnson Space Center Cosmic Dust Program. The LACs are used to collect comparatively unaltered cosmic dust from the stratosphere at ER-2 flight altitudes of 65,000 feet or higher. Sufficient quantities of extraterrestrial materials are collected to allow chemical and mineralogical compositions of individual particles to be determined. Study of these materials whose sources may be comets, asteroid collisions, planetary impacts, and meteorite ablation provide valuable information about the origin and history of the solar system.

Additional information regarding the Large Area Collectors may be obtained from Michael E. Zolensky, NASA-Johnson Space Center, SN2, Houston, Texas 77058 (Telephone: 713- 483-5128).

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-Heerbrugg 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

The U.S. Geological Survey's EROS Data Center at Sioux Falls, South Dakota serves as the archive and product distribution facility for NASA-Ames aircraft acquired photographic and digital imagery. For information regarding photography and digital data (including areas of coverage, products, and product costs) contact EROS Data Center, Customer Services, Sioux Falls, South Dakota 57198 (Telephone: 605-594-6151).

Information regarding ER-2 acquired photographic and digital data is available through the Aircraft Data Facility at Ames Research Center. For specific information regarding flight documentation, sensor parameters, and areas of coverage contact the Aircraft Data Facility, NASA-Ames Research Center, Mail Stop 240-6, Moffett Field, California 94035-1000 (Telephone: 650-604-6252).

CAMERA FLIGHT LINE DATA
FLIGHT NO. 98-024

Accession # 05242

Sensor # 026

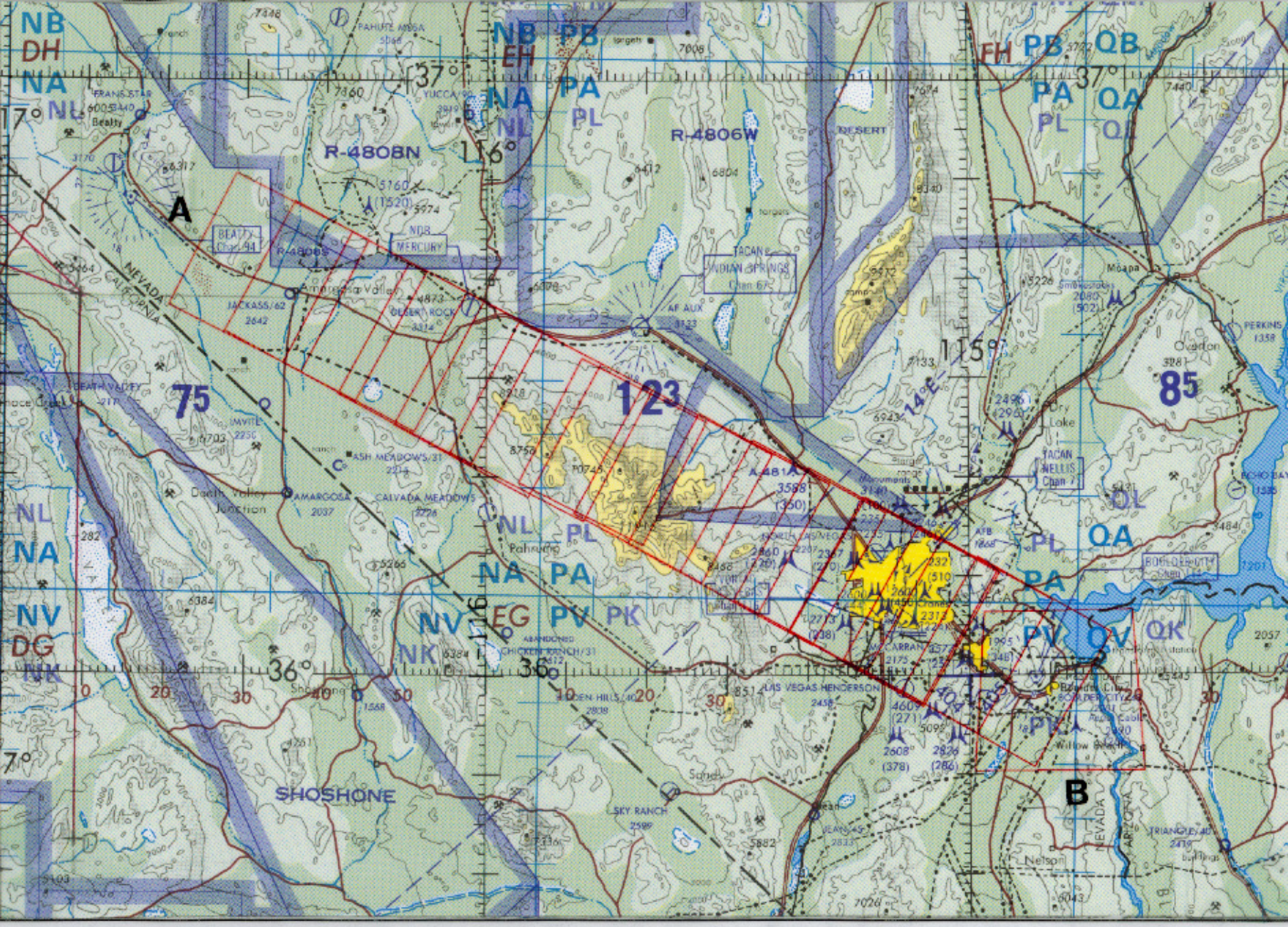
Check Points	Frame Numbers	Time (GMT-hr, min, sec)		Altitude, MSL feet/meters	Cloud Cover/Remarks
		START	END		
A - B	2502-2530	18:53:16	19:05:45	68000/20730	Clear; oblique (frame 2530)
B - C	2531-2532	19:06:12	19:06:40	68000/20730	Clear

CAMERA FLIGHT LINE DATA
FLIGHT NO. 98-024

Accession # 05243

Sensor # 035

Check Points	Frame Numbers	Time (GMT-hr, min, sec)		Altitude, MSL feet/meters	Cloud Cover/Remarks
		START	END		
A - B	5743-5758	18:53:19	19:06:15	68000/20726	Clear; oblique (frame 5758)



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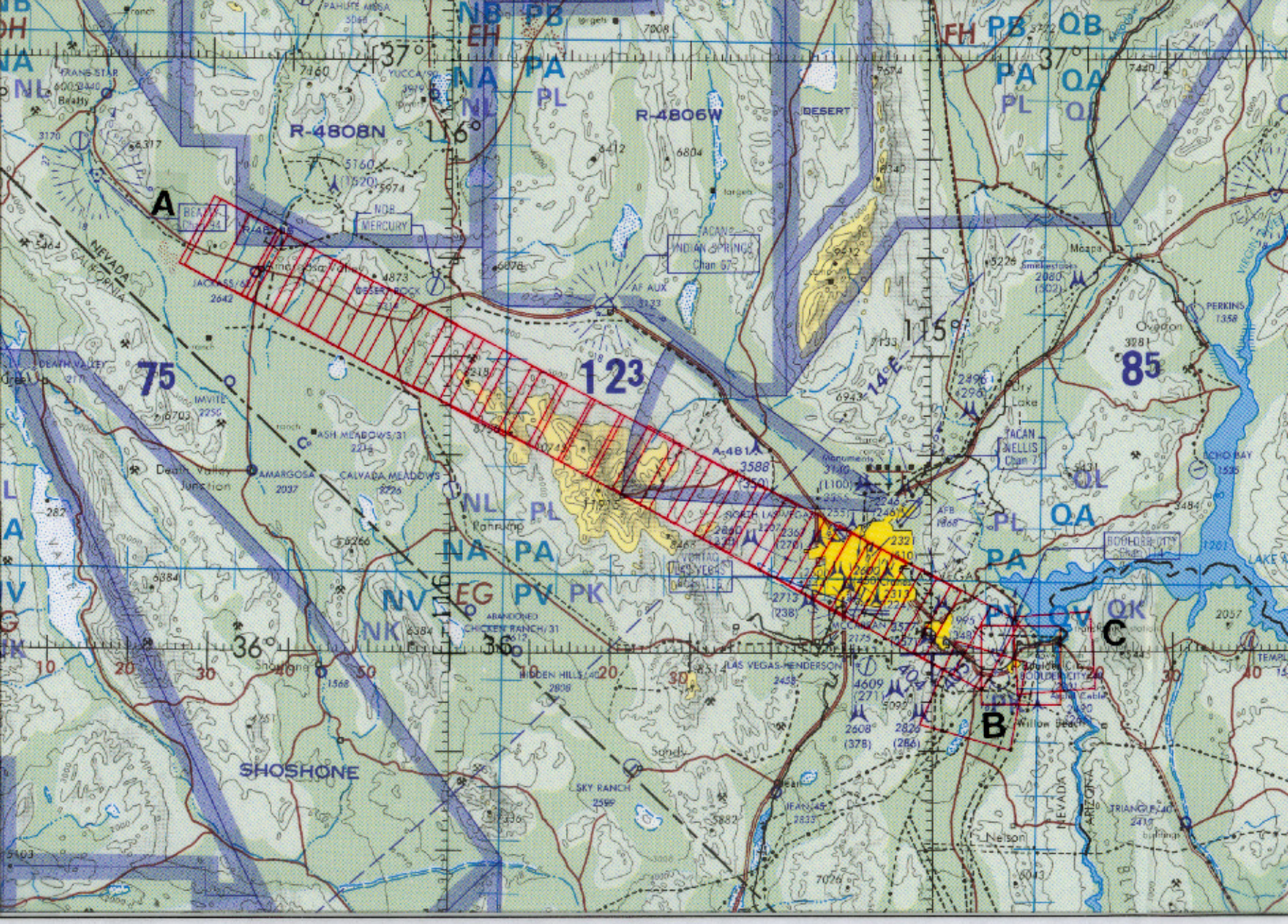

FLIGHT 98-024 10 FEBRUARY 1998 A/C 706 RC-10 (12") ONC G-18