

FLIGHT SUMMARY REPORT

Flight Number: 95-028
Calendar/Julian Date: 13 November 1994 • 317
Sensor Package: Wild-Heerbrug RC-1
NASA Aircraft Satellite Instrument
Calibration (NASIC)
Area(s) Covered: White Sands, NM

Investigator(s): Abel, GSFC

Aircraft #: 706

SENSOR DATA

Accession #:	04837	----
Sensor ID #:	034	104
Sensor Type:	RC-10	NASIC
Focal Length:	12" 304.66 mm	----
Film Type:	Panatomic-X Aerographic II 2412	----
Filtration:	Wratten 12	----
Spectral Band:	510-700 nm	----
f Stop:	11	----
Shutter Speed:	1/150	----
# of Frames:	31	----
% 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(s) and camera(s) used for data collection during this flight.

NASA Aircraft Satellite Instrument Calibration

The NASA Aircraft Satellite Instrument Calibration (NASIC) is a scanner developed to calibrate research and operational instruments in orbit onboard NOAA and NASA satellites. The NASIC consists of a double Ebert Monochromator flown on NASA-Ames ER-2 aircraft. Airborne Satellite Calibration System missions are flown coincident with satellite overpasses and fly the same view vector as the satellite instrument over a selected ground scene. The system is used to calibrate instruments such as the Advanced Very High Resolution Radiometer (AVHRR), the Thematic Mapper (TM), and the Coastal Zone Color Scanner (CZCS).

Sensor parameters are as follows:

Detector:	Double Monochromator with Holographic Grating
Across Track FOV:	8°
Along Track FOV:	4°
Ground Swath Dimensions:	1.5 x 0.75 nmi (2.8 x 1.4 km)
Spectral Range:	400-1035 nm
Scans/Data Collection Leg:	36 + 2 Baseline Housekeeping
Data Points/Scan Line:	184
Data Point Spectral Range:	3.5 nm

For information regarding the NASIC project and data contact Peter Abel, Laboratory for Terrestrial Physics, Code 920.1, NASA-Goddard Space Flight Center, Greenbelt, Maryland 20771. (Telephone: 301-286-7754).

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

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).

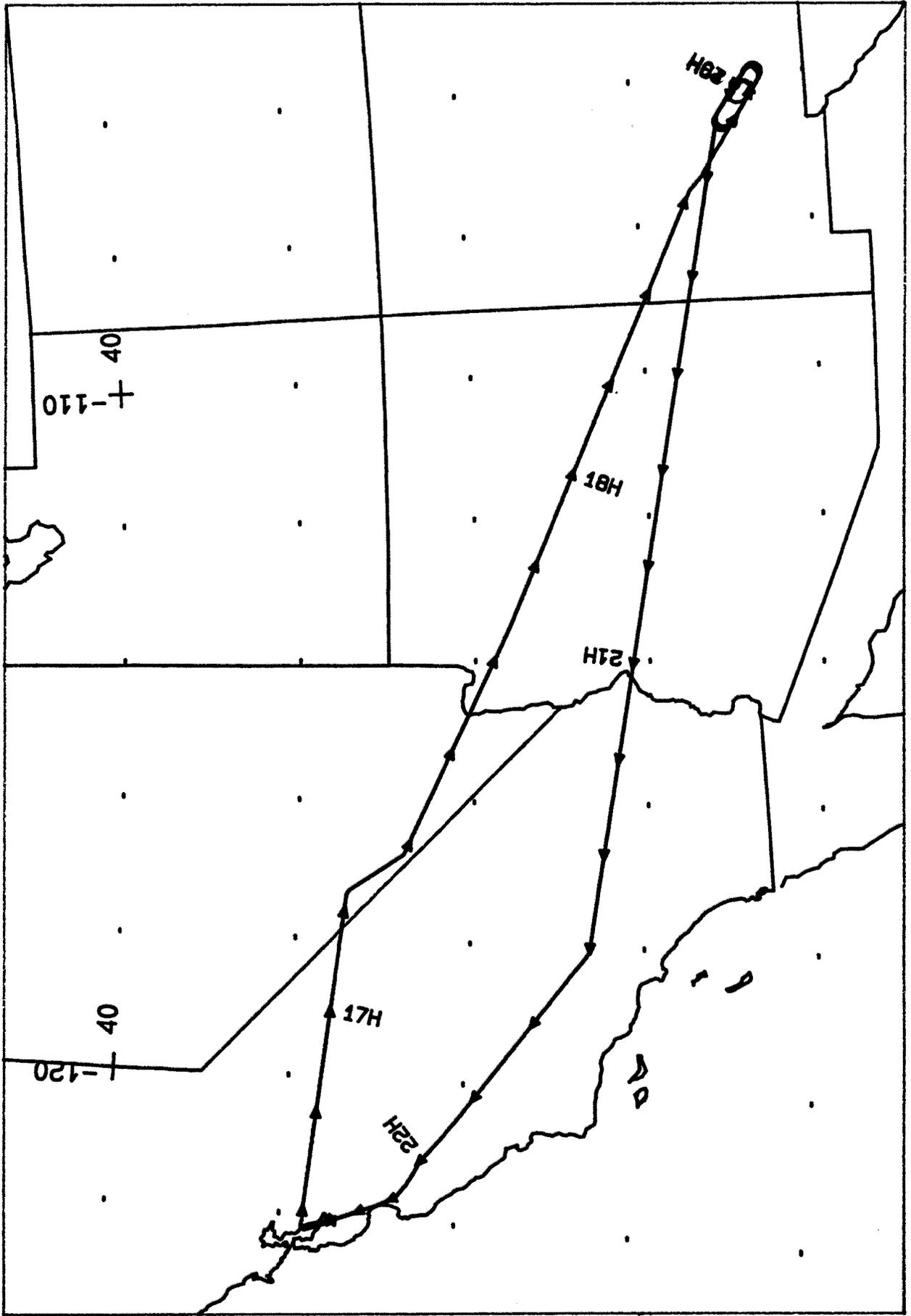
For specific information regarding flight documentation, sensor parameters, and areas of coverage contact the Aircraft Data Facility, NASA-Ames Research Center, Mail Stop 240-6, Moffett Field, California 94035-1000 (Telephone: 415-604-6252). Additional information regarding ER-2 acquired photographic and digital data is also available through the Aircraft Data Facility.

CAMERA FLIGHT LINE DATA
FLIGHT NO. 95-028

Accession # 04837

Sensor # 034

Check Points	Frame Numbers	Time (GMT-hr, min, sec)		Altitude, MSL feet/meters	Cloud Cover/Remarks
		START	END		
A - B	8505-8513	18:59:46	19:03:28	65000/19800	Minor-20% scattered cumulus (frames 8505-8510); minor cumulus (frame 8513)
A - B	8514-8524	19:28:51	19:33:29	"	Minor-20% scattered cumulus (frames 8514-8521); minor cumulus (frame 8523-8524)
A - B	8525-8535	19:59:01	20:03:39	"	10-30% scattered cumulus (frames 8525-8531); minor-10% cumulus (frame 8534-8535)

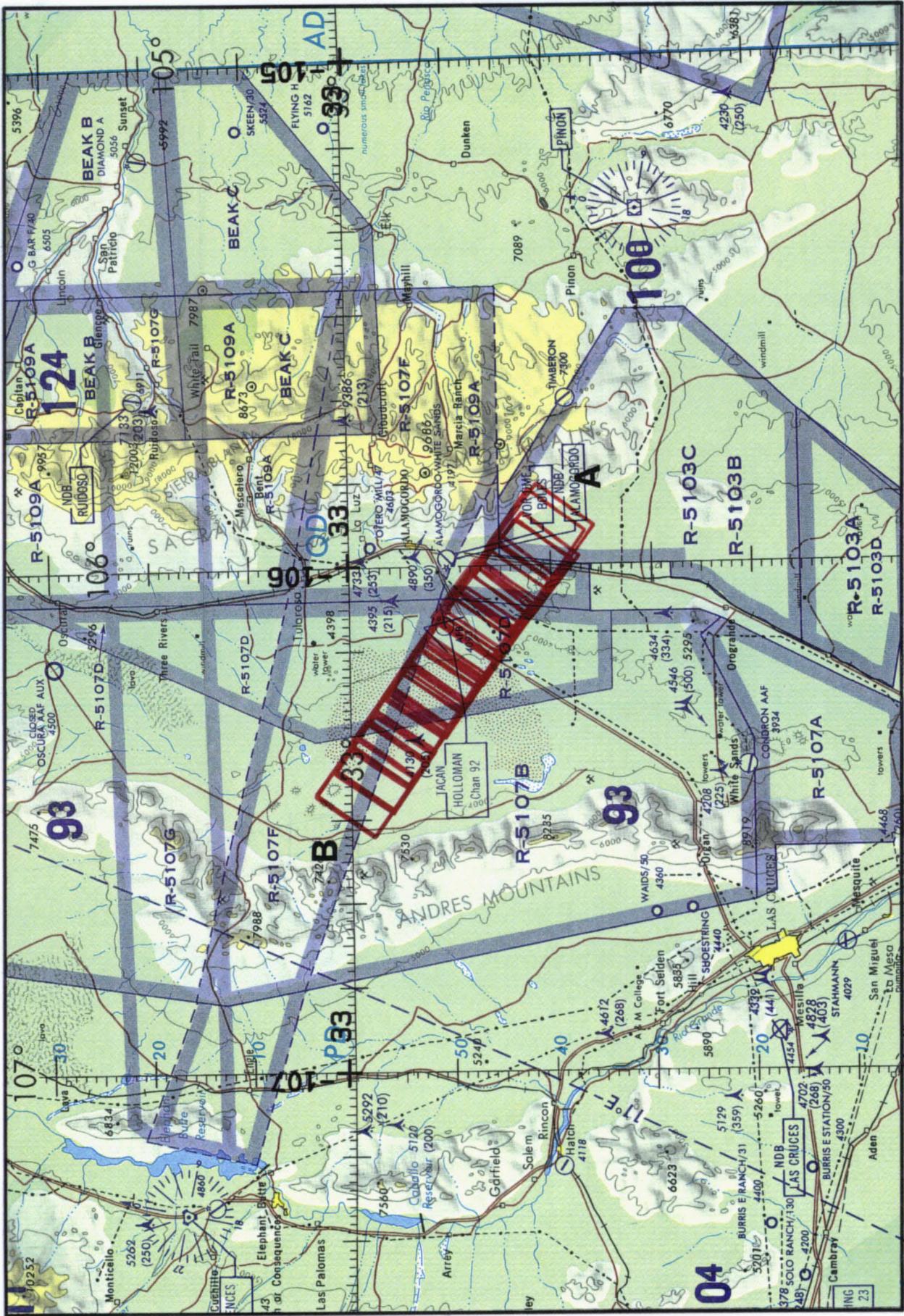


FLIGHT 95-028

13 NOVEMBER 1994

A/C 706

NASIC (PC-10)



FLIGHT 95-028

13 NOVEMBER 1994

A/C 706

RC-10

ONC 6-19