FLIGHT SUMMARY REPORT

Flight #: 91-168

Date: 11 September 1991

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

Area(s) Covered: Harvard Forest, Massachusetts

Investigator(s): Aber, University of New Hampshire **Aircraft #:** 706

Flight Request: 91L234 **Julian Date:** 254

SENSOR DATA

Accession #:	-----	04299
Sensor ID #:	099	034
Sensor Type:	AVIRIS	RC-10
Focal Length:	-----	12" 304.66 mm
Film Type:	-----	High Definition Aerochrome IR SO-131
Filtration:	-----	cc.20B
Spectral Band:	-----	510-900 nm
f Stop:	-----	4
Shutter Speed:	-----	1/125
# of Frames:	-----	20
% 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 four spectrometers to image a 614 pixel swath simultaneously in 224 contiguous spectral bands (0.4-2.4 μm).

AVIRIS parameters are as follows:

IFOV:	1 mrad
Ground Resolution:	66 feet (20 meters) at 65,000 feet
Total Scan Angle:	30°
Swath Width:	5.7 nmi (10.6 km) at 65,000 feet
Spectral Coverage:	0.41-2.45 μm
Pixels/Scan Line:	614
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 μm	31	9.4 nm
2	0.68 - 1.27 μm	63	9.4 nm
3	1.25 - 1.86 μm	63	9.7 nm
4	1.84 - 2.45 μm	63	9.7 nm

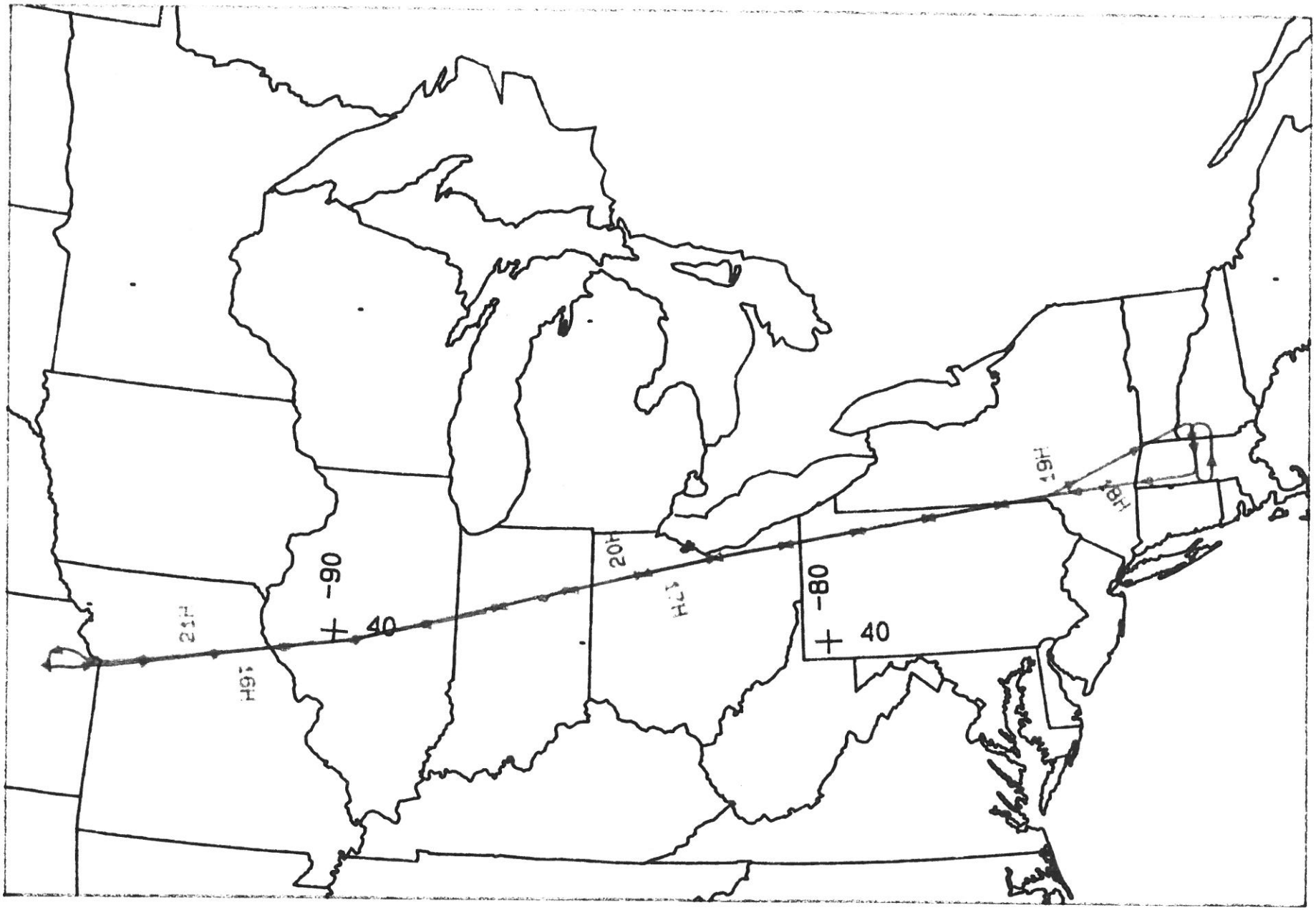
All AVIRIS data is decommutated and archived at JPL and not currently available for public distribution. For further information contact Rob Green at Jet Propulsion Laboratory, 4800 Oak Grove Drive, Mail Stop 183-501, Pasadena, California 91109-8099.

CAMERA FLIGHT LINE DATA
FLIGHT NO. 91-168

Accession # 04299

Sensor # 034

Check Points	Frame Numbers	Time (GMT-hr, min, sec)		Altitude, MSL feet/meters	Cloud Cover/Remarks
		START	END		
A - B	4223-4233	18:17:05	18:21:45	65000/19800	10-20% minor cumulus (frames 4223-4233)
A - B	4234-4242	18:35:15	18:39:20	"	10-20% minor cumulus (frames 4234-4242)



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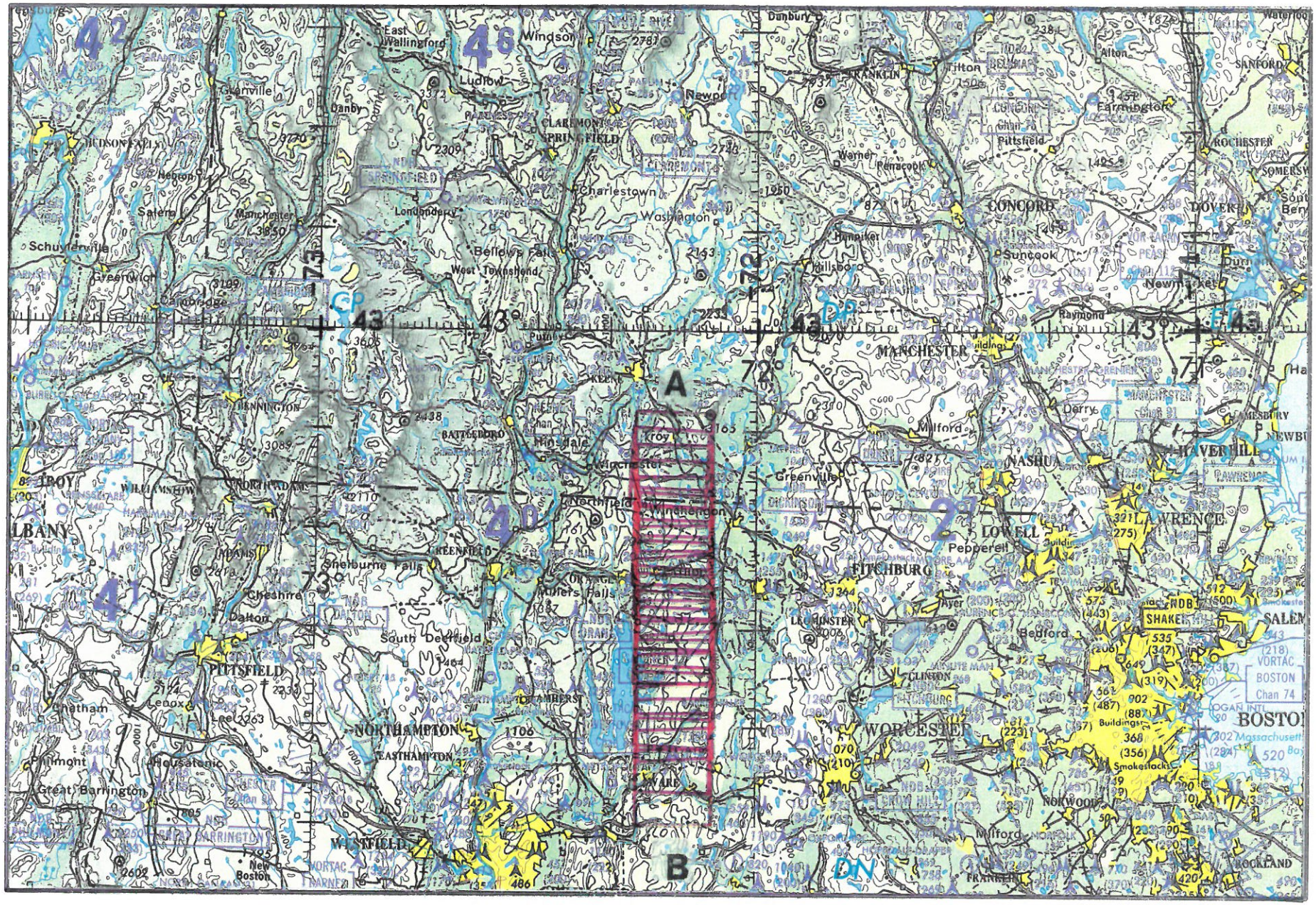

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