

FLIGHT SUMMARY REPORT

Flight #: 91-029
Date: 16 November 1990
Sensor Package: Wild-Heerbrug RC-10
Advanced Microwave Precipitation
Radiometer (AMPR)
Area(s) Covered: Pacific Ocean

Investigator(s): Spencer, NASA-MSFC
Ledbetter, Lockheed

Aircraft #: 706

Flight Request: 91T245 and 90R256

Julian Date: 320

SENSOR DATA

Accession #:	04163	-----
Sensor ID #:	076	105
Sensor Type:	RC-10	AMPR
Focal Length:	12" 304.89 mm	-----
Film Type:	Aerial Color SO-242	-----
Filtration:	None	-----
Spectral Band:	400-700 nm	-----
f Stop:	4	-----
Shutter Speed:	1/200	-----
# of Frames:	10	-----
% Overlap:	60	-----
Quality:	Excellent	-----
Remarks:	Film transport failure	

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.

Advanced Microwave Precipitation Radiometer

The Advanced Microwave Precipitation Radiometer (AMPR) is a scanning passive microwave radiometer operating at frequencies of 10, 19, 37, and 85 GHz. The AMPR is configured to fit into the Q-bay of the ER-2 and scans cross-track +/- 45° to the left and right of nadir. The instrument's principle use is for gathering microwave image data of cloud water and precipitation primarily over the ocean. Some data collected also will be used for studies of vegetation, ground moisture, sea surface state, and snow cover. The AMPR is sponsored by Dr. Roy W. Spencer, NASA/MSFC, ES43, Huntsville, Alabama 35812, FTS 824-1686.

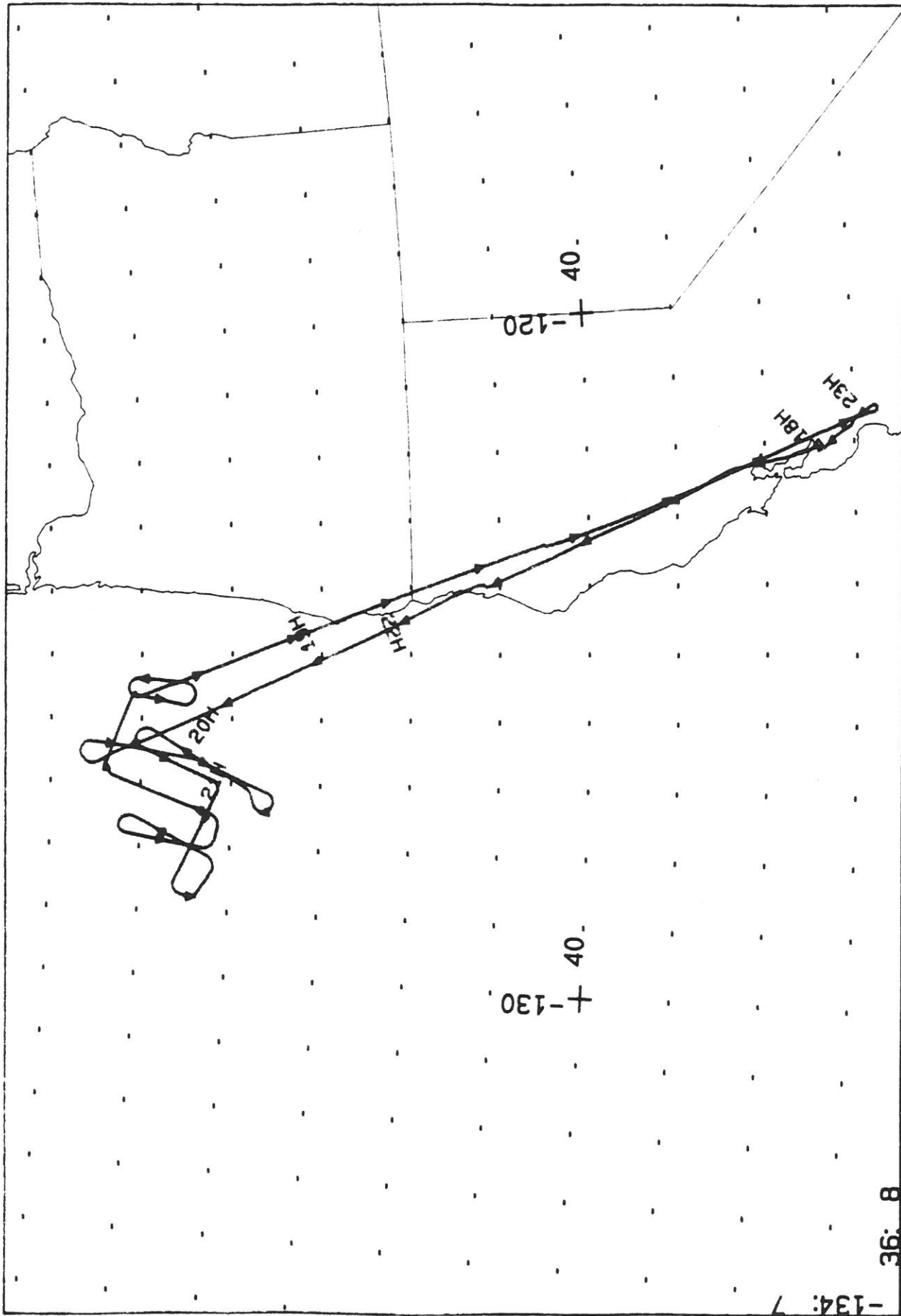
NOTE: Information on data tape format, logical record format, and scanner calibration data may be obtained from the NASA-Ames Aircraft Data Facility at (415) 604-6252 or FTS 464-6252.

**CAMERA FLIGHT LINE DATA
FLIGHT NO. 91-029**

Accession # 04163

Sensor # 076

Check Points	Frame Numbers	Time (GMT-hr, min, sec)		Altitude, MSL feet/meters	Cloud Cover/Remarks
		START	END		
A - B	5316-5325	19:31:12	19:34:54	65000/19800	100% cumulus cloud cover



FLIGHT 91-029

OVERLAY FOR XCMUSA LAMBERT CONFORMAL PROJECTION: SP1 = 35.2 SP2 = 44.2 CM = -125.1 ROTATED BY 0.0

18: 00: 20 TO 23: 17: 55 UT SCALE = 1: 6.72E+06 LB

SCALE = 1: 6.72E+06 TIME TICS EVERY 10.00 MINU