FLIGHT SUMMARY REPORT

Flight Number: 95-040

Calendar/Julian Date: 03 January 1995 • 003

Sensor Package: Wild-Heerbrug RC-10
Modis Airborne Simulator (MAS)

Area(s) Covered: Grand Ronde, Oregon

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

SENSOR DATA

Accession #:	04848	-----
Sensor ID #:	034	108
Sensor Type:	RC-10	MAS
Focal Length:	12" 304.66 mm	-----
Film Type:	Aerochrome IR SO-060	-----
Filtration:	Wratten 12	-----
Spectral Band:	510-900 nm	-----
f Stop:	8	-----
Shutter Speed:	1/150	-----
# of Frames:	4	-----
% Overlap:	Variable	-----
Quality:	Good	-----
Remarks:	Emulsion abrasions throughout	

Modis Airborne Simulator

The Modis Airborne Simulator (MAS) is a modified Daedalus multispectral scanner configured to replicate the capabilities of the Moderate-Resolution Imaging Spectrometer (MODIS), an instrument to be orbited on an EOS platform. MODIS is designed for the measurement of biological and physical processes and atmospheric temperature sounding. The Modis Airborne Simulator records fifty 12-bit channels of multispectral data and is configured as follows:

Spectral Channel	Band center (μm)	Bandwidth (μm)	Spectral Range
1	0.547	0.043	0.529-0.572
2	0.664	0.055	0.635-0.688
3	0.707	0.042	0.688-0.729
4	0.745	0.04	0.729-0.769
5	0.786	0.04	0.770-0.810
6	0.834	0.042	0.810-0.852
7	0.875	0.041	0.852-0.893
8	0.91	0.031	0.896-0.927
9	0.945	0.043	0.926-0.969
10	1.623	0.057	1.595-1.652
11	1.68	0.05	1.655-1.705
12	1.73	0.05	1.705-1.755
13	1.78	0.05	1.755-1.805
14	1.83	0.05	1.805-1.855
15	1.88	0.05	1.855-1.905
16	1.93	0.05	1.905-1.955
17	1.98	0.05	1.955-2.005
18	2.03	0.05	2.005-2.055
19	2.08	0.05	2.055-2.105
20	2.142	0.047	2.126-2.173
21	2.18	0.05	2.155-2.205
22	2.23	0.05	2.205-2.255
23	2.28	0.05	2.255-2.305
24	2.33	0.05	2.305-2.355
25	2.38	0.05	2.355-2.405

Spectral Channel	Band center (μm)	Bandwidth (μm)	Spectral Range
26	3	0.15	2.925-3.075
27	3.15	0.15	3.075-3.225
28	3.3	0.15	3.225-3.375
29	3.45	0.15	3.375-3.525
30	3.6	0.15	3.525-3.675
31	3.725	0.151	3.659-3.810
32	3.9	0.15	3.825-3.975
33	4.05	0.15	3.975-4.125
34	4.2	0.15	4.125-4.275
35	4.35	0.15	4.275-4.325
36	4.503	0.142	4.436-4.578
37	4.651	0.15	4.582-4.732
38	4.8	0.15	4.725-4.875
39	4.95	0.15	4.875-5.025
40	5.1	0.15	5.025-5.175
41	5.25	0.15	5.175-5.325
42	8.563	0.396	8.342-8.738
43	9.642	0.426	9.451-9.877
44	10.438	0.466	10.259-10.725
45	11.002	0.448	10.791-11.239
46	12.032	0.447	11.799-12.246
47	12.775	0.447	12.539-12.986
48	13.186	0.352	13.023-13.375
49	13.952	0.517	13.630-14.147
50	14.302	0.358	14.163-14.521

Sensor/Aircraft Parameters:

Spectral Bands:	50 (12-bit resolution)
IFOV:	2.5 mrad
Ground Resolution:	163 feet (50 meter at 65,000 feet)
Swath Width:	22.9 mi/19.9 nmi (36 km)
Total Scan Angle:	85.92°
Pixels/Scan Line:	716
Scan Rate:	6.25 scans/second
Ground Speed:	400 kts (206 m/second)
Roll Correction:	Plus or minus 3.5 degrees (approx.)

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).

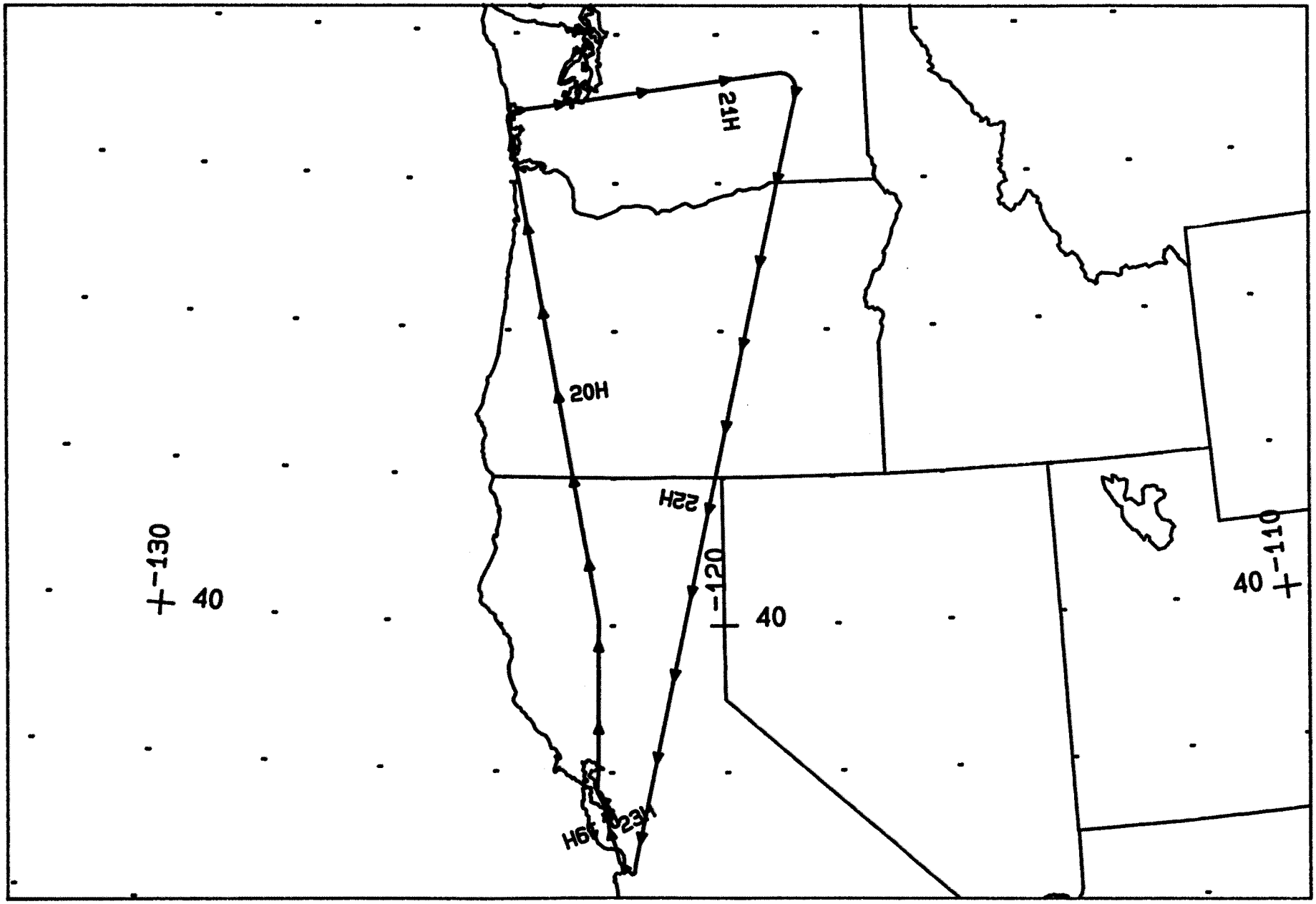
For specific information regarding flight documentation, sensor parameters, and areas of coverage contact the Aircraft Data Facility, NASA-Ames Research Center, Mail Stop 240-6, Moffett Field, California 94035-1000 (Telephone: 415-604-6252). Additional information regarding ER-2 acquired photographic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

CAMERA FLIGHT LINE DATA
FLIGHT NO. 95-040

Accession # 04848

Sensor # 034

Check Points	Frame Numbers	Time (GMT-hr, min, sec)		Altitude, MSL feet/meters	Cloud Cover/Remarks
		START	END		
A - B	9149-9152	20:17:07	20:18:11	65000/19812	10-20% cumulus; severe emulsion abrasions throughout



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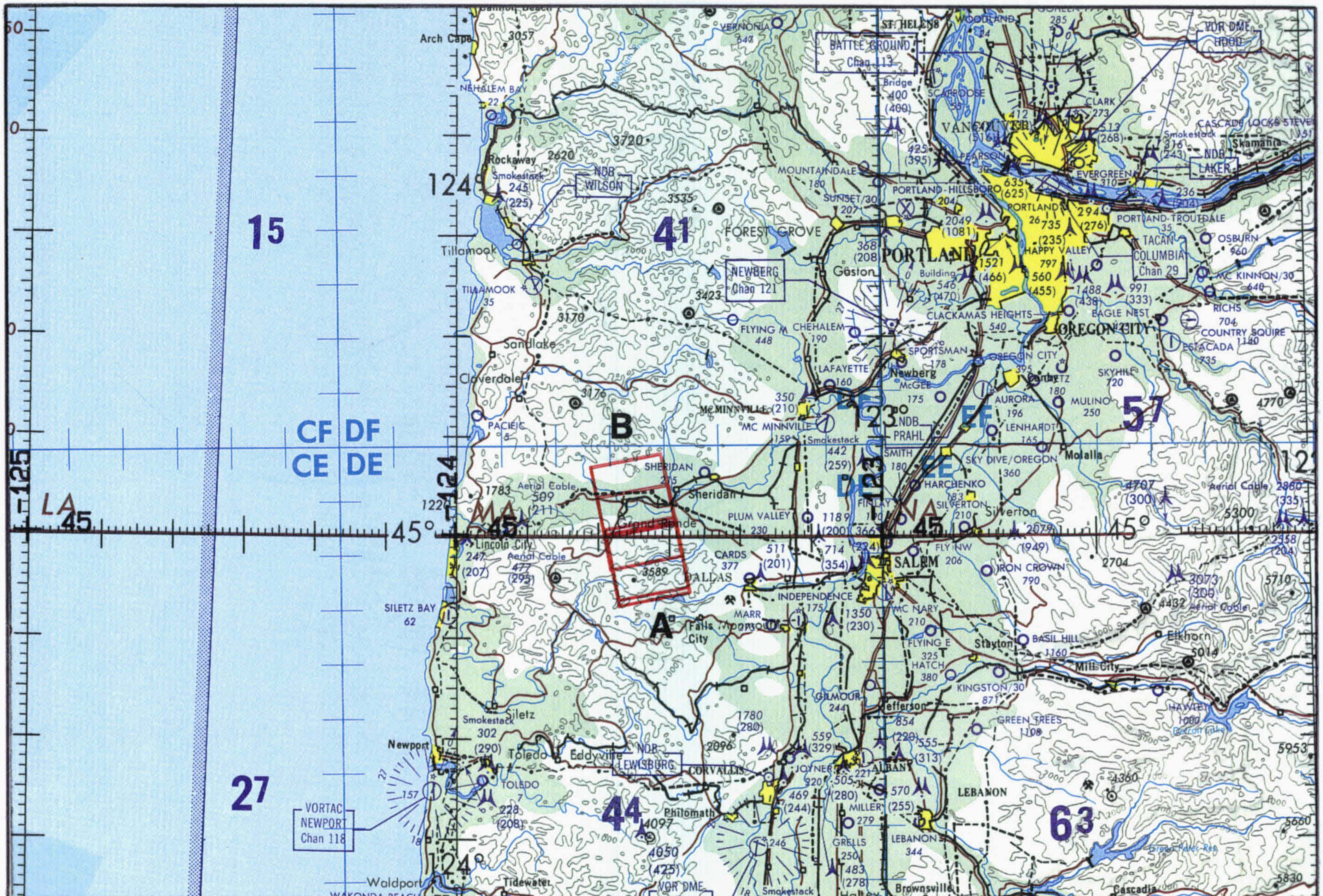

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