FLIGHT SUMMARY REPORT

Flight #: 90-109
Date: 17 July 1990
Sensor Package: Dual Hycon HR-732
Wild-Heerbrug RC-10
Area(s) Covered: South Eastern Ohio

Investigator(s): Weber, USDA
Flight Request: 90R258

Aircraft #: 709
Julian Date: 198

SENSOR DATA

Accession #: 04056 04057 04058
Sensor ID #: 018 019 076
Sensor Type: HR-732 HR-732 RC-10
Focal Length: 24" 24" 12"
609.6 mm 609.6 mm 304.89 mm
Film Type: High Definition Aerial Color High Definition
Aerochrome IR SO-242 Aerochrome IR SO-131
Filtration: cc.30B ----- cc.10B
Spectral Band: 510-900 nm 400-700 nm 510-900 nm
f Stop: 8 8 4
Shutter Speed: 1/75 1/75 1/250
# of Frames: 156 156 100
% Overlap: 60 60 60
Quality: Excellent Excellent 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.

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
## CAMERA FLIGHT LINE DATA
### FLIGHT NO. 90-109

**Accession #** 04056  
**Sensor #** 018

<table>
<thead>
<tr>
<th>Check Points</th>
<th>Frame Numbers</th>
<th>Time (GMT-hr, min, sec)</th>
<th>Altitude, MSL feet/meters</th>
<th>Cloud Cover/Remarks</th>
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<tbody>
<tr>
<td>A - B</td>
<td>0001-0013</td>
<td>14:47:48</td>
<td>14:50:45</td>
<td>65000/19800</td>
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<tr>
<td>C - D</td>
<td>0014-0031</td>
<td>14:55:56</td>
<td>15:00:06</td>
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<tr>
<td>E - F</td>
<td>0032-0052</td>
<td>15:06:53</td>
<td>15:11:47</td>
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<tr>
<td>G - H</td>
<td>0053-0070</td>
<td>15:16:09</td>
<td>15:20:19</td>
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<tr>
<td>K - L</td>
<td>0080-0098</td>
<td>15:35:33</td>
<td>15:39:57</td>
<td>Minor-10% cumulus (frames 0088-0097)</td>
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<tr>
<td>M - N</td>
<td>0099-0111</td>
<td>15:43:06</td>
<td>15:46:02</td>
<td>10% cumulus</td>
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<tr>
<td>O - P</td>
<td>0112-0119</td>
<td>15:50:59</td>
<td>15:52:42</td>
<td>10-20% cumulus; emulsion abrasion (frame 0119)</td>
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<tr>
<td>Q - R</td>
<td>0120-0129</td>
<td>16:00:29</td>
<td>16:02:41</td>
<td>10-30% cumulus (frames 0120-0126)</td>
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<td>S - T</td>
<td>0130-0147</td>
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<td>16:10:48</td>
<td>10-30% cumulus (frames 0135-0147)</td>
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<tr>
<td>U - V</td>
<td>0148-0156</td>
<td>16:17:24</td>
<td>16:19:21</td>
<td>Minor-10% cumulus (frames 0153-0156)</td>
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### FLIGHT NO. 90-109

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# Camera Flight Line Data

**Flight No. 90-109**

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