171 @ 12.5 = 2137.5

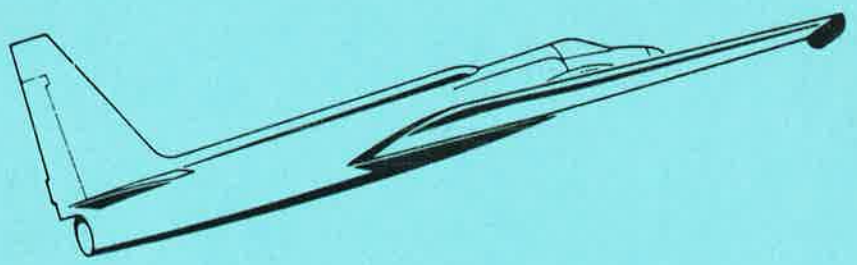
Airborne Instrumentation Research Project

Flight Summary Report

Flight No. 83-149

Date 14 July 1983

FSR- 1774



National Aeronautics and
Space Administration

Ames Research Center
Moffett Field, California 94035

Airborne Missions and Applications Division

FLIGHT SUMMARY REPORT

Flight No: 83-149 **Date:** 14 July 1983

FSR No: 1774 **Julian Date:** 195

Sensor Package: RC-10 Camera
Aerosol Particulate Sampler (APS) **Aircraft No:** 709

Purpose of Flight: #0666 Support
Requestor: Lumb
#0792 Support
Requestor: Pollack

Area(s) Covered: Central Valley, California

SENSOR DATA

Accession No:	03238	---
Sensor ID No:	031	024
Sensor Type:	RC-10	APS
Focal Length:	6" 153.05mm	---
Film Type:	High Definition Aerochrome Infrared, SO-131	---
Filtration:	CC .30B + 2.2AV	---
Spectral Band:	510-900nm	---
f Stop:	4.0	---
Shutter Speed:	1/110	---
No. of Frames:	171	---
% Overlap:	60	---
Quality:	Excellent	---
Remarks:	---	Non-imaging sensor

FLIGHT SUMMARY

83-149

This flight was flown in support of Flight Requests #0666 (Lumb, NASA/ARC) and #0792 (Pollack, NASA/ARC) under the FY 1983 Airborne Instrumentation Research Program (AIRP) plan. Color infrared photography was acquired over the Central Valley in California (see track map). Additionally, aerosol particulate sampling was acquired throughout the flight above 60,000 feet, but is not depicted on the track map.

Light to moderate cirrus clouds were encountered during portions of the flight. No camera or processing malfunctions were noted, and the quality of the data is rated as excellent.

Aerosol Particulate Sampler

The APS has been developed and is operated by Dr. Guy Ferry of the NASA-Ames Research Center Atmospheric Experiments Branch. The sampler is a non-imaging sensor designed to gather high altitude dust particles for laboratory research.

FLIGHT LINE DATA

FLIGHT NO. 83-149

	Check Points	Frame Numbers	Time (GMT—hr, min, sec) START	Time (GMT—hr, min, sec) END	Altitude, MSL feet/meters	Cloud Cover/Remarks
031	A-B	5522-5535	18:25:56	18:38:22	65,000/19800	10% cirrus, fr. 5522
	C-D	5536-5581	18:41:45	19:24:42	"	5-40% cirrus, frs. 5550-5554
	E-F	5582-5620	19:27:54	20:03:58	"	Clear
	G-H	5621-5659	20:07:26	20:43:23	"	10% cirrurs, frs. 5638-5640
	I-J	5660-5689	20:46:35	21:13:58	"	10% light cirrus, frs. 5678-5681
	---	5690-5692	21:24:51	21:25:47	"	Clear, 37°34'N, 121°47'W; Fire, Livermore, California
024	---	---	18:20:00	21:25:00	65,000/19800	APS #1 and #2 exposed for 3 hours and 5 minutes above 60,000 feet

FLIGHT 83-149
14 JULY 1983
Data Run
RC-10