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Airborne Instrumentation Research Project

Flight Summary Report

REVISED

Flight No. 78-083

Date 25 June 1978

FSR- 1147



NASA

National Aeronautics and
Space Administration

Ames Research Center
Moffett Field, California 94035

Airborne Missions and Applications Division

FLIGHT SUMMARY REPORT

Flight No: 78-083

Date: 25 June 1978

FBR No: 1147

Julian Date: 176

Sensor Package: Dual RC-10
Aerosol Particulate Sampler (APS)

Aircraft No: 4

Purpose of Flight: #0685 Support
Requestor: Anderson
#0047 Support
Requestor: Ferry

Area(s) Covered: Alaska

SENSOR DATA

Accession No:	02620	02621	---
Sensor ID No:	026	023	024
Sensor Type:	RC-10	RC-10	APS
Focal Length:	12" 304.97mm	6" 153.21mm	---
Film Type:	Aerochrome Infrared, S0-193	Plus-X, 2402	---
Filtration:	WRATTEN 12	WRATTEN 12+ 2.2AV	---
Spectral Band:	510-900nm	510-700nm	---
f Stop:	11	8	---
Shutter Speed:	1/300	1/500	---
No. of Frames:	288	150	---
% Overlap:	60	60	---
Quality:	Excellent	Excellent	---
Remarks:	---	---	Non-imaging sensor

FLIGHT SUMMARY

78-083

This flight was flown in support of Flight Requests #0685 (Anderson, Federal/State Land Use Planning Commission for Alaska) and #0047 (Ferry, NASA/ARC) under the FY 1978 Airborne Instrumentation Research Program (AIRP) plan. The flight provides photographic data over the Kotzebue Sound area in Alaska (see Track Map). Aerosol Particulate Sampler (APS) data was collected at the beginning of the flight and during descent. Because of the limited area of this collection no track map is provided. This is the fourth in a series of flights involving the deployment of aircraft and support personnel to Eielson Air Force Base, Alaska.

Light to moderate cloud cover was encountered on all flight lines. No processing or camera malfunctions were noted and the quality of the data is excellent.

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. 78-083

Check Points	Frame Numbers	Time (GMT—hr, min, sec)		Altitude, MSL feet/meters	Cloud Cover/Remarks	Line #	
		START	END				
RC-10 #026	A-B	5135-5164	18:48:19	19:01:52	65,000/19800	10% minor cumulus, frs. 5135-5139; 10% minor cumulus, frs. 5154-5158	56
	C-D	5165-5192	19:09:15	19:22:18	"	10% minor cirrus, frs. 5167-5169; 10-20% cumulus, frs. 5189-5192	55
	E-F	5193-5221	19:29:29	19:42:32	"	10% minor cumulus and cirrus, frs. 5193-5197; minor cirrus, frs. 5204-5207; minor cirrus, frs. 5210-5212	54
	G-H	5222-5256	19:49:10	20:05:16	"	Minor cirrus, frs. 5224-5227; minor cumulus, frs. 5238-5242; minor cumulus and cirrus, 5249-5256	53
	I-J	5257-5291	20:13:32	20:29:30	"	10% minor cumulus and cirrus, frs. 5257-5263; 10-20% cumulus, frs. 5268-5273; 10% minor cirrus and cumulus, frs. 5277-5289	52
	K-L	5292-5328	20:37:08	20:54:22	"	10% minor cirrus, frs. 5292-5294; 10-20% minor cirrus, frs. 5301-5307; 10% minor cumulus, frs. 5308-5311; 10% minor cumulus, frs. 5315-5324; 10% minor cirrus and cumulus, frs. 5327-5328	51
	M-N	5329-5353	21:04:28	21:15:37	"	10-20% cumulus, frs. 5329-5332; 10% minor cumulus, frs. 5333-5335; 10-20% cumulus, frs. 5337-5344	57
	O-P	5354-5362	21:24:09	21:27:58	"	10% cumulus, frs. 5361-5362	58
	Q-R	5363-5391	21:36:26	21:49:41	"	10-20% cumulus, frs. 5363-5365; 10% minor cumulus, frs. 5381-5389; 10-20% cumulus, frs.	59

FLIGHT LINE DATA
FLIGHT NO. 78-083

Check Points	Frame Numbers	Time (GMT—hr, min, sec)		Altitude, MSL feet/meters	Cloud Cover/Remarks	Line #
		START	END			
S-T	5392-5422	21:56:57	22:10:58	65,000/19800	5390-5391 30% cumulus, fr. 5392; 10% minor cumulus, frs. 5393-5398; 10-20% cumulus, frs. 5399-5401; 10% minor cumulus, frs. 5415-5416; 10% minor cumulus, frs. 5418-5422	60
RC-10 #023	A-B	18:48:17	19:01:47	65,000/19800	10-30% cumulus, frs. 6179-6181; 0-10% cirrus and cumulus, frs. 6187-6194	56
	C-D	19:09:15	19:22:18	"	0-10% cirrus, frs. 6195-6203; 0-10% cumulus, frs. 6206-6208; 30% cumulus, fr. 6209	55
	E-F	19:29:29	19:42:25	"	30% cumulus, fr. 6210; 0-10% cumulus, frs. 6211-6213; 0-10% cirrus, frs. 6215-6224	54
	G-H	19:49:11	20:05:18	"	0-10% cirrus, frs. 6225-6233; 0-10% scattered cumulus, frs. 6234-6235; 0-30% cumulus, frs. 6239-6242	53
	I-J	20:13:34	20:29:19	"	0-10% cumulus, frs. 6243-6251; 0-10% cirrus frs. 6252-6255; 10-30% cirrus, frs. 6256-6260	52
	K-L	20:37:09	20:54:21	"	10-20% cirrus, frs. 6261-6271; 0-10% cumulus, frs. 6272-6279	51
	M-N	21:04:31	21:15:29	"	10-30% cumulus, frs. 6280-6288	57
	O-P	21:24:12	21:27:59	"	10-30% cumulus, frs. 6296-6297	58

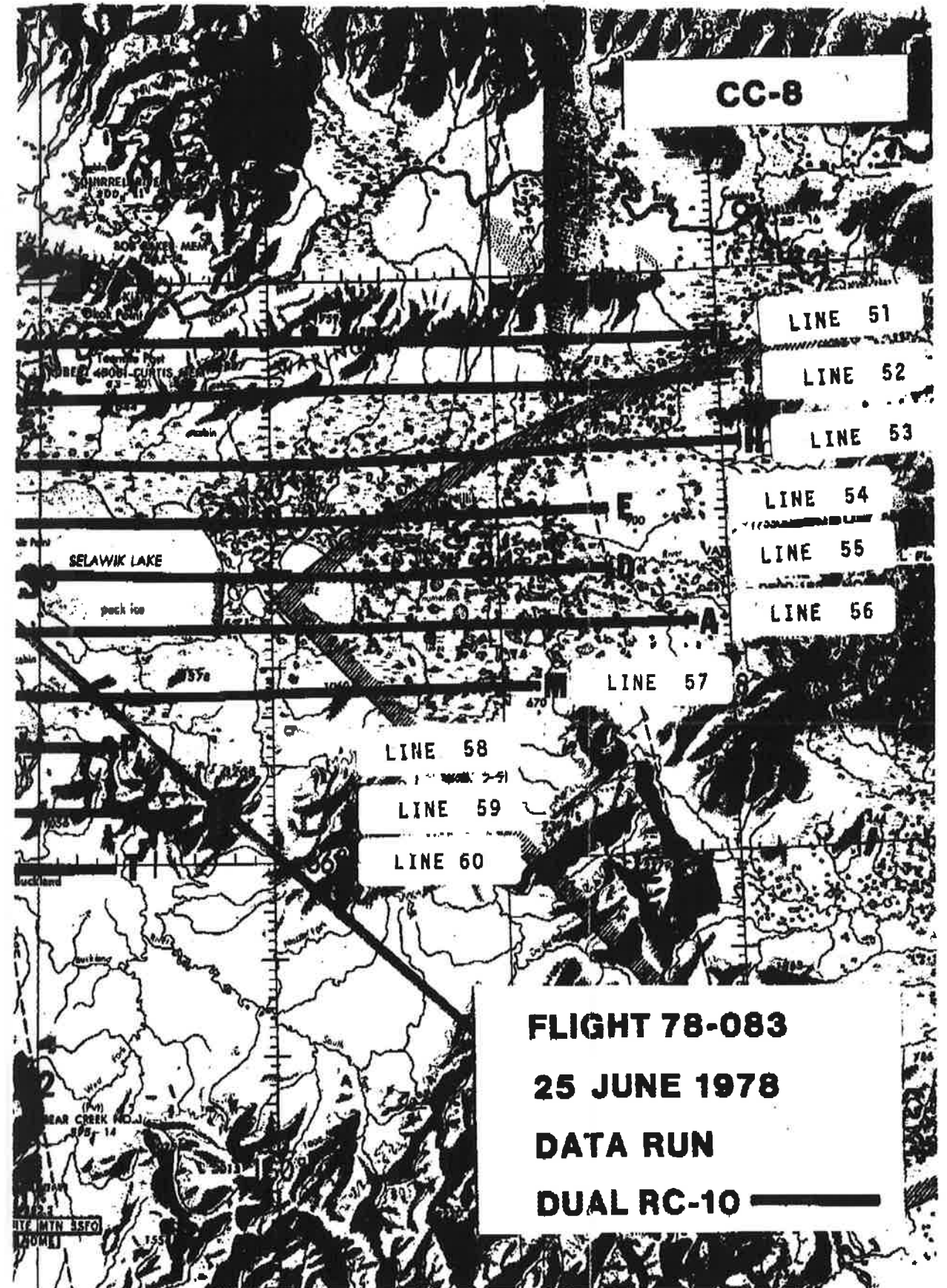
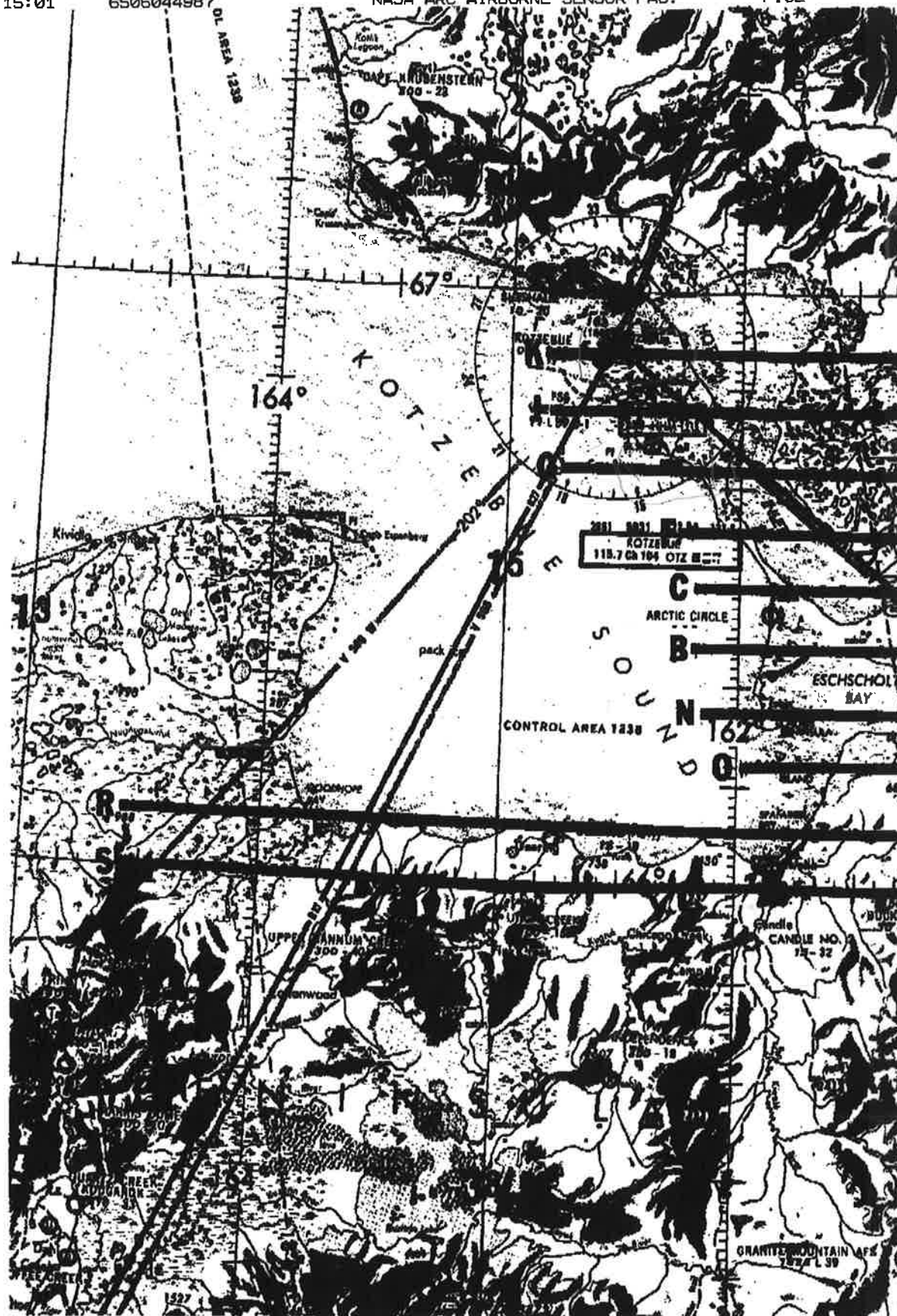
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Check Points	Frame Numbers	Time (GMT--hr, min, sec)		Altitude, MSL feet/meters	Cloud Cover/Remarks
		START	END		
Q-R	6298-6312	21:36:30	21:49:44	65,000/19800	10-50% cumulus, frs. 6298-6299; 0-10% minor cumulus, frs. 6300-6301; 0-10% cumulus, frs. 6308-6311; 40% cumulus, fr. 6312
S-T	6313-6328	21:57:01	22:10:54	"	50% cumulus, fr. 6313; 10% cumulus, frs. 6314-6318; 0-10% minor cumulus, frs. 6324-6326; 10-30% cumulus, frs. 6327-6328
APS	---	18:32:00	18:34:00	65,000/19800	APS #3 exposed for 2 minutes IOAT -20°C
	---	22:41:00	22:43:00	60,000/18300	APS #2 exposed for 2 minutes IOAT -25°C
	---	22:51:00	22:53:00	50,000/15250	APS #1 exposed for 2 minutes IOAT -30°C

Line #

59

60



CC-8

LINE 51

LINE 52

LINE 53

LINE 54

LINE 55

LINE 56

LINE 57

LINE 58

LINE 59

LINE 60

FLIGHT 78-083
25 JUNE 1978
DATA RUN
DUAL RC-10