

FLIGHT SUMMARY REPORT

Flight #: 92-003-02
Date: 10 June 1992
Sesnor Package: NS001 Multispectral Scanner
Thermal Infrared Multispectral Scanner (TIMS)
Area(s) Covered: Ellsworth Lake, Cement, Cement Block, OK
Site # 9204, 9205, 9207
Flightline Image Files: [9200302.gif](#)

Investigator(s): Engman and Levine, NASA-GSFC **Aircraft #:** 707

Flight Request: 2P533008

Julian Date: 162

SENSOR DATA

Accession #:	-----	-----
Sensor ID #:	072	086
Sensor Type:	NS001	TIMS
Focal Length:	-----	-----
Film Type:	-----	-----
Filtration:	-----	-----
Spectral Band:	-----	-----
f Stop:	-----	-----
Shutter Speed:	-----	-----
# of frames:	-----	-----
% Overlap:	-----	-----
Quality:	Good	Good
Remarks:		

NS011 Scanner Flight Line Data
 Flight No. 92-003-02

#	Site Line Run	Actual Time (GMT)		Actual Scanline		Altitude		Scan Speed (rps)	total Good Scanlines	total interpolated scanlines	total repeated scanlines
		begin	end	begin	end	feet	meter				
1	Preflight	14:47: 9.5	14:49:11.9	2	1838	0	0	15.00	1803/857	0	34
2	Preflight	12:58:55.0	13:01:45.1	60	2611	0	0	15.00	2546/2552	0	6
3	S204 L1R1	15:14:51.0	15:18: 9.9	50	2039	500	152	10.00	1990	0	0
4	S204 L2R1	15:23:10.3	15:24:56.8	5043	6108	500	152	10.00	1066	0	0
5	S204 L1R2	15:28:46.7	15:31:40.7	8407	10147	500	152	10.00	1741	0	0
6	S205 L1R1	15:36: 8.1	15:39:24.5	12821	14785	500	152	10.00	1965	0	0
7	S205 L1R2	15:45: 9.4	15:49:12.4	18234	20664	500	152	10.00	2431	0	0
8	S205 L2R1	15:58:14.7	16:02:57.2	26087	28912	500	152	10.00	2824/2826	0	2
9	S205 L3R1	16:07:29.6	16:11:36.1	31636	34101	500	152	10.00	2466	0	0
10	S207 L5R1	16:25:23.4	16:36:52.8	44706	54358	7000	2133	14.00	9643/9653	1	9
11	S207 L4R1	16:39:53.2	16:48: 7.7	56883	63806	7000	2133	14.00	6917/6924	0	7
12	S207 L3R1	16:52: 8.9	17:04:26.4	67184	77508	7000	2133	14.00	10317/10305	0	9
13	S207 L2R1	17:13:28.7	17:22:30.2	85100	92681	7000	2133	14.00	7577/7582	0	5
14	S207 L1R1	17:28:40.4	17:40: 4.4	97865	107440	7000	2133	14.00	9565/9576	0	11

TIMS SCANNER FLIGHT LINE DATA

Flight No. 92-003-02

#	Site Line Run	Actual Time (GMT)		Actual Scanline		Altitude		Scan Speed (rps)	total Good Scanlines	total interpolated scanlines	total repeated scanlines
		begin	end	begin	end	feet	meter				
1	S204 L1 R1	15:14:44.0	15:18:11.0	6003	11147	600	182	25.00	4614/5145	0	531
2	S204 L2 R1	15:23: 9.0	15:24:58.0	18571	21267	500	152	25.00	2695/6697	0	2
3	S204 L1 R2	15:28:46.0	15:31:43.0	26945	31358	500	152	25.00	4408/4414	0	6
4	S207 L5 R1	16:25:25.0	16:36:55.0	111492	128678	7200	2194	25.00	17170/17187	1	16
5	S207 L4 R1	16:39:53.0	16:48:10.0	133105	145443	7200	2194	25.00	12332/13344	0	22
6	S207 L3 R1	16:52: 9.0	17:04:28.0	151405	169787	7600	2316	25.00	18197/18388	0	186
7	S207 L2 R1	17:13:31.0	17:22:34.0	183291	196797	7200	2194	25.00	13227/13507	0	230
8	S207 L1 R1	17:28:43.0	17:40:8.0	205985	223021	7500	2286	25.00	16894/17039	0	143

FLIGHT SUMMARY REPORT

Flight#: 92-003-03
Date: 11 June 1992
Sesnor Package: NS001 Multispectral Scanner
Thermal Infrared Multispectral Scanner (TIMS)
Area(s) Covered: Ellsworth Lake, Cement, Cement Block, OK
Site # 9204, 9205, 9207

Flightline Image Files: [9200303.gif](#)

Investigator(s): Engman and Levine, NASA-GSFC **Aircraft #:** 707

Flight Request: 2P53303

Julian Date: 163

SENSOR DATA

Accession #:	-----	-----
Sensor ID #:	072	086
Sensor Type:	NS001	TIMS
Focal Length:	-----	-----
Film Type:	-----	-----
Filtration:	-----	-----
Spectral Band:	-----	-----
f Stop:	-----	-----
Shutter Speed:	-----	-----
# of frames:	-----	-----
% Overlap:	-----	-----
Quality:	Good	Good
Remarks:		

NS011 SCANNERFLIGHT LINE DATA
 FLIGHT NO. 92-003-03

#	Site Line Run	Actual Time (GMT)		Actual Scanline		Altitude		Scan Speed (rps)	total Good Scanlines	total interpolated scanlines	total repeated scanlines
		begin	end	begin	end	feet	meter				
1	Preflight	13:18: 2.8	13:21:54.0	7	3104	0	0	14.00	3087/3098	0	11
2	S204 L2R1	15:55:46.9	15:57:41.5	1	1147	600	182	10.00	1148	0	0
3	S205 L1R1	16:03:49.9	16:07:41.4	4831	7146	620	186	10.00	2314/2316	0	2
4	S205 L1R2	16:12:21.8	16:15:43.2	9950	11964	490	149	10.00	2015	0	0
5	S205 L2R1	16:26: 9.5	16:29:50.0	18227	20432	530	161	10.00	2206	0	0
6	S205 L3R1	16:36: 7.4	16:40: 2.9	24206	26561	520	158	10.00	2352/2356	0	4
7	S205 L3R2	16:43: 3.3	16:46: 2.8	28365	30160	530	161	10.00	1796	0	0
8	S207 L5R1	17:00:23.0	17:12:42.4	41530	51882	7300	2225	14.00	10344/10353	0	9
9	S207 L4R1	17:16:31.8	17:25:20.2	55093	63331	7400	2255	14.00	8231/8239	0	8
10	S207 L3R1	17:30:31.6	17:42:15.0	66850	76698	7400	2255	14.00	9821/9849	0	29
11	S207 L2R1	17:45:33.4	17:55:11.8	79475	87573	7300	2225	14.00	8092/8099	0	7
12	S207 L1R1	17:59: 6.2	18:10:29.6	90854	100422	7500	2286	14.00	9567/9569	0	2

TIMS SCANNER FLIGHT LINE DATA

Flight No. 92-003-03

#	Site Line Run	Actual Time (GMT)		Actual Scanline		Altitude		Scan Speed (rps)	total Good Scanlines	total interpolated scanlines	total repeated scanlines
		begin	end	begin	end	feet	meter				
1	S204 L2 R1	00:00: 0.0	00:00: 0.0	6231	9533	800	243	25.00	3298/3308	0	10
2	S205 L1 R1	00:00: 0.0	00:00: 0.0	18344	24271	600	182	25.00	5906/5928	0	22
3	S205 L1 R2	16:12:19.9	16:15:53.0	31108	36428	1000	304	25.00	5305/5324	0	16
4	S205 L2 R1	16:26:10.0	16:29:57.0	51772	57429	500	152	25.00	5648/5658	0	10
5	S205 L3 R1	16:36: 4.0	16:40: 8.0	66556	72629	500	152	25.00	6068/6074	0	6
6	S205 L3 R2	16:43: 0.0	16:46: 7.0	76905	81557	500	152	25.00	4627/4653	0	26
7	S207 L5 R1	17:00:20.0	17:12:46.0	102783	121339	7300	2225	25.00	18296/18557	0	261
8	S207 L4 R1	17:16:30.0	17:26:29.0	126907	141810	7400	2255	25.00	14801/14904	0	103
9	S207 L3 R1	17:30:39.0	17:42:20.0	148028	165455	7200	2194	25.00	17402/17428	0	26
10	S207 L2 R1	17:45:30.0	17:55:17.0	170201	184802	7300	2225	25.00	14404/14602	0	198
11	S207 L1 R1	17:59: 2.0	18:10:40.0	190395	207750	7500	2286	25.00	17046/17356	0	310

FLIGHT SUMMARY REPORT

Flight#: 92-003-04
Date: 12 June 1992
Sesnor Package: NS001 Multispectral Scanner
Therma Infrared Multispectral Scanner (TIMS)
Area(s) Covered: Ellsworth Lake, Cement, Cement Block, OK
Site # 9204, 9205, 9207

Flightline Image Files: [9200304.gif](#)

Investigator(s): Engman and Levine, NASA-GSFC **Aircraft #:** 707

Flight Request: 2P53303

Juilan Date: 164

SENSOR DATA

Accession #:	-----	-----
Sensor ID #:	072	086
Sensor Type:	NS001	TIMS
Focal Length:	-----	-----
Film Type:	-----	-----
Filtration:	-----	-----
Spectral Band:	-----	-----
f Stop:	-----	-----
Shutter Speed:	-----	-----
# of frames:	-----	-----
% Overlap:	-----	-----
Quality:	Good	Good
Remarks:		

NS011 SCANNER FLIGHT LINE DATA
 FLIGHT NO. 92-003-04

#	Site Line Run	Actual Time (GMT)		Actual Scanline		Altitude		Scan Speed (rps)	total Good Scanlines	total interpolated scanlines	total repeated scanlines
		begin	end	begin	end	feet	meter				
1	S204 L2R1	14:58:18.0	15:01:29.1	2322	4233	400	121	10.00	1901/1912	1	10
2	S205 L1R1	15:08:18.1	15:12:19.5	8323	10737	500	152	10.00	2401/2415	0	14
3	S205 L2R1	15:17:47.2	15:22: 7.8	14014	16620	500	152	10.00	2601/2607	0	6
4	S205 L3R1	15:27:13.6	15:30: 3.8	19678	21380	500	152	10.00	1701/1743	0	2
5	S207 L5R1	15:42:29.4	15:51:47.8	31474	39292	7500	2286	14.00	7801/7819	0	18
6	S207 L4R1	15:57:30.2	16:06:41.2	44085	51793	7200	2194	14.00	7701/7715	0	14
7	S207 L3R1	16:11:35.4	16:20:52.8	55318	63722	7300	2225	14.00	7801/7805	0	4
8	S207 L2R1	16:26: 9.2	16:35:28.0	68151	75974	7100	2164	14.00	7801/7824	1	22
9	S207 L1R1	16:42:17.3	16:51:29.5	81705	89435	7500	2286	14.00	7701/7731	0	30

TIMS SCANNER FLIGHT LINE DATA

Flight No. 92-003-04

#	Site Line Run	Actual Time (GMT)		Actual Scanline		Altitude		Scan Speed (rps)	total Good Scanlines	total interpolated scanlines	total repeated scanlines
		begin	end	begin	end	feet	meter				
1	S204 L2 R1	14:58:11.0	15:01:44.0	7078	12385	400	121	25.00	5286/5308	0	22
2	S205 L1 R1	15:07:55.0	15:12:29.0	21596	28433	500	152	25.00	6832/6838	0	6
3	S205 L2 R1	15:17:35.0	15:22:14.0	36038	42975	500	152	25.00	6925/6938	3	10
4	S205 L3 R1	15:27:3.0	15:30:16.0	50154	54949	500	152	25.00	4785/4796	0	11
5	S207 L5 R1	15:42:23.0	15:51:55.0	73041	87285	7500	2286	25.00	14215/14245	2	28
6	S207 L4 R1	15:57:26.0	16:06:48.0	95512	109498	7200	2194	25.00	13940/13987	1	46
7	S207 L3 R1	16:11:28.0	16:21:1.0	116443	130707	7300	2225	25.00	14230/14265	0	35
8	S207 L2 R1	16:26:3.0	16:35:38.0	138221	152536	7100	2164	25.00	14278/14316	0	38
9	S207 L1R1	16:42:52.0	16:51:48.0	163325	176644	7500	2286	25.00	13284/13320	0	36

FLIGHT SUMMARY REPORT

Flight #: 92-003-05
Date: 13 June 1992
Sesnor Package: Dual Zeiss Cameras
NS001 Multispectral Scanner
Thermal Infrared Multispectral Scanner (TIMS)
Area(s) Covered: Ellsworth Lake, Cement, and Oklahoma High,
Oklahoma
Site # 204, 205, 207, 206

Flightline Image Files: [9200305.gif](#)

Investigator(s): Engman and LeVine, NASA-GSFC **Aircraft #:** 707

Flight Request: 2P53303

Juilan Date: 165

SENSOR DATA

Accession #:	04416	04417	04418
Sensor ID #:	077	087	077
Sensor Type:	Zeiss	Zeiss	Zeiss
Focal Length:	6" 153.40mm	12" 305.30mm	6" 153.40mm
Film Type:	Aerochrome MS 2448	Aerochrome IR 2443	Aerochrome IR 2443
Filtration:	Clear	Wratten-12	Wartten-12
Spectral Band:	400-700 nm	510-900 nm	510-900 nm
f Stop:	4	5.6	4
Shutter Speed:	1/400	1/500	1/400
# of frames:	89	60	88
% Overlap:	Variable	Variable	Variable
Quality:	Excellent	Fair	Fair
Remarks:		Quality degraded due to processing residue and chemical stains.	Quality degraded due to processing residue.

SENSOR DATA continued

Accession #:	04419	-----	-----
Sensor ID #:	087	072	086
Sensor Type:	Zeiss	NS011	TIMS
Focal Length:	12"	-----	-----
	305.30 mm		
Film Type:	Aerochrome MS	-----	-----
	2448		
Filtration:	Clear	-----	-----
Spectral Band:	400-700 nm	-----	-----
f Stop:	5.6	-----	-----
Shutter Speed:	1/600	-----	-----
# of frames:	81	-----	-----
% Overlap:	Variable	-----	-----
Quality:	Good	Poor	Good
Remarks:	Slightly overexposed.		

FLIGHT NO. 92-003-05

#	Site Line Run	Actual Time (GMT)		Actual Scanline		Altitude		Scan Speed (rps)	total Good Scanlines	total interpolated scanlines	total repeated scanlines
		begin	end	begin	end	feet	meter				
1	S205 L1 R1	13:55: 4.9	15:05:12.9	8852	9751	500	152	10.00	896	0	4
2	S205 L2 R1	15:10:11.2	15:15:43.2	12734	16054	500	152	10.00	3301	0	20
3	S205 L3 R1	15:20:22.7	15:23:53.3	18849	20955	500	152	10.00	2101	0	6
4	S205 L2 R2	15:29:28.6	15:33:49.2	24308	26914	500	152	10.00	2601	0	6
5	S205 L1 R2	15:54:59.0	15:59:13.0	42663	46469	7000	2133	15.00	3708	0	6
6	S207 L5 R1	16:12:46.2	16:23:34.5	58660	68384	7000	2133	15.00	9701	0	24
7	S207 L4 R1	16:26:30.2	16:35:18.6	71020	78946	7000	2133	15.00	7901	0	26
8	S207 L3 R1	16:37:32.5	16:48: .4	80955	90373	7000	2133	15.00	9401	0	18
9	S207 L2 R1	16:50:23.5	16:59:31.6	92520	100741	7000	2133	15.00	8201	0	21
10	S205 L3 R2	17:04:31.3	17:07:38.3	105237	108041	7000	2133	15.00	2801	0	4
11	S207 L1 R1	17:10:26.5	17:21: 3.6	110565	120121	7000	2133	15.00	9104	0	453
12	S206 L2 R1	17:58:22.0	17:59:55.0	91	1207	15000	4572	12.00	1104	0	13
13	S206 L1 R1	18:05:31.6	18:07:54.1	5246	6956	15000	4572	12.00	1697	0	14
14	S206 L4 R2	18:17:57.3	18:23:53.8	14195	18473	15000	4572	12.00	4272	0	7
15	S207 L2 R2	18:25:51.2	18:31:51.7	19882	24208	15000	4572	12.00	4327	0	0
16	S206 L3 R1	18:38:41.1	18:41:19.7	29120	31024	15000	4572	12.00	1905	0	0

TIMS SCANNER FLIGHT LINE DATA
 FLIGHT NO. 92-003-05

#	Site Line Run	Actual Time (GMT)		Actual Scanline		Altitude		Scan Speed (rps)	total Good Scanlines	total interpolated scanlines	total repeated scanlines
		begin	end	begin	end	feet	meter				
1	S204 L2R1	14:48:57.0	14:52:54.0	3052	8959	500	152	25.00	5906/5908	0	2
2	S205 L1R1	15:00:15.0	15:05:30.0	19935	27765	500	152	25.00	7831	0	0
3	S205 L2R1	15:10: 7.0	15:15:58.0	34644	43377	500	152	25.00	8734	0	0
4	S205 L3R1	15:20:17.0	15:24: 5.0	49817	55488	500	152	25.00	5672	0	0
5	S205 L2R2	15:29:22.0	15:34 6.0	63386	70435	500	152	25.00	7045/7050	0	5
6	S205 L1R2	15:54:59.0	15:59:25.0	101628	108227	7000	2133	25.00	6600	0	0
7	S207 L5R1	16:12:42.0	16:23:48.0	128058	144634	7000	2133	25.00	16543/16577	0	34
8	S207 L4R1	16:26:29.0	16:35:27.0	148621	162022	7000	2133	25.00	13397/13402	0	5
9	S207 L3R1	16:37:29.0	16:48:17.0	165047	181166	7000	2133	25.00	16120	0	0
10	S207 L2R1	16:50:22.0	16:59:45.0	184290	198279	7000	2133	25.00	13976/13990	0	14
11	S205 L3R2	17:05:49.0	17:07:51.0	207348	210365	7000	2133	25.00	3018	0	0
12	S207 L1R1	17:10:25.0	17:20:52.0	214204	229811	7000	2133	25.00	15599/15608	0	9
13	S206 L1R1	18:06:21.0	18:08:12.0	19551	20882	15000	4572	12.00	1332	0	0
14	S206 L4R2	18:17:57.0	18:24:0.0	27904	32252	15000	4572	12.00	4347/4349	0	2
15	S207 L2R2	18:25:50.0	18:32: 2.0	3375	38039	15000	4572	12.00	4465	0	0
16	S206 L3R1	18:38:43.0	18:41:54.0	42844	45133	15000	4572	12.00	2290	0	0

**CAMERA FLIGHT LINE DATA
FLIGHT NO. 92-003-05**

Accession # 04416

Sensor # 077

Site #	Line #	Run #	Frame #	Time (GMT-hr, min, sec)		Altitude MSL feet/meters	Cloud Cover /Remarks
				START	END		
205	1	2	0001-0047	15:55:33	15:59:52	7400/2260	Minor to 10% cumulus (frames 0022-0029)
205	3	2	0048-0060	17:05:08	17:08:08	7600/2320	Minor cumulus (frame 0049); 10-20%cumulus (frames 0057-0060)
207	1	1	0061-0089	17:11:14	17:18:14	7500/2290	Minor to 10% cumulus (frames 0076-0079); minor cumulus (frames 0082-0083)

Note: Digital Clock is Set To Local Time. Add 5 Hours To Obtain Correct GMT Time.

**CAMERA FLIGHT LINE DATA
FLIGHT NO. 92-003-05**

Accession # 04417

Sensor # 087

Site #	Line #	Run #	Frame #	Time (GMT-hr, min, sec)		Altitude MSL feet/meters	Cloud Cover /Remarks
				START	END		
205	1	2	0003-0019	15:55:48	15:59:57	7400/2260	Minor light streak (frame 0003); 10% cumulus (frame 0012)
205	3	2	0020-0033	17:05:23	17:08:23	7600/2320	Specular reflection (frame 0021); 20% cumulus (frames 0032-0033)
207	1	1	0034-0062	17:11:29	17:18:29	7500/2290	Clear

Note: Digital Clock is Set To Local Time. Add 5 Hours To Obtain Correct GMT Time.

CAMERA FLIGHT LINE DATA**FLIGHT NO. 92-003-05**

Accession # 04418

Sensor # 077

Site #	Line #	Run #	Frame #	Time (GMT-hr, min, sec)		Altitude MSL feet/meters	Cloud Cover /Remarks
				START	END		
206	2	1	0093-0104	17:58:55	18:00:12	16200/4940	50-70% cumulus
206	1	1	0105-0126	18:05:59	18:08:26	16400/5000	30-60% cumulus
207	4	2	0127-0145	18:18:34	18:24:34	16100/4910	10-80% cumulus and strato-cumulus
207	2	2	0146-0164	18:26:27	18:32:28	16200/4940	10-80% cumulus and strato-cumulus
206	3	1	0165-0180	18:39:16	18:41:56	15900/4850	Minor cumulus (frames 0165-0168, 0173-0176, 0180)

Note: Digital Clock is Set To Local Time. Add 5 Hours To Obtain Correct GMT Time.**CAMERA FLIGHT LINE DATA****FLIGHT NO. 92-003-05**

Accession # 04419

Sensor # 087

Site #	Line #	Run #	Frame #	Time (GMT-hr, min, sec)		Altitude MSL feet/meters	Cloud Cover /Remarks
				START	END		
206	2	1	0065-0073	17:59:10	18:00:29	16200/4940	30-60% cumulus
206	1	1	0074-0089	18:06:13	18:08:43	16400/5000	20-50% cumulus
207	4	2	0090-0108	18:18:49	18:24:49	16100/4910	Minor to 90% cumulus and strato-cumulus
207	2	2	0109-0127	18:26:41	18:32:41	16200/4940	10-50% cumulus (frames 0109-0112); 10-80% cumulus and strato-cumulus (frames 0116-0127)
206	3	1	0128-0145	18:39:31	18:42:20	15900/4850	10% cumulus (frames 0128-0129, 0135-0136, 0144-0145)

Note: Digital Clock is Set To Local Time. Add 5 Hours To Obtain Correct GMT Time.

FLIGHT SUMMARY REPORT

Flight #: 92-003-06
Date: 14 June 1992
Sesnor Package: Dual Zeiss Cameras
NS001 Multispectral Scanner
Thermal Infrared Multispectral Scanner (TIMS)

Area(s) Covered: Ellsworth Lake, Cement, and Oklahoma
Sites # 204, 205, 207, 206

Flightline Image Files: [9200306.gif](#)

Investigator(s): Engman and LeVine, NASA-GSFC **Aircraft #:** 707

Flight Request: 2P53303

Julian Date: 166

SENSOR DATA

Accession #:	04420	04421	-----	-----
Sensor ID #:	077	087	072	086
Sensor Type:	Zeiss	Zeiss	NS001	TIMS
Focal Length:	6"	12"	-----	-----
	153.40 mm	305.30 mm	-----	-----
Film Type:	Aerochrome IR	Aerochrome MS	-----	-----
	2443	2448		
Filtration:	Wratten-12	Clear	-----	-----
Spectral Band:	510-900 nm	400-700 nm	-----	-----
f Stop:	4	5.6	-----	-----
Shutter Speed:	1/400	1/600	-----	-----
# of frames:	88	93	-----	-----
% Overlap:	Variable	Variable	-----	-----
Quality:	Fair	Excellent	Good	Good
Remarks:	Quality degraded due to processing residue and chemical stains.			

CAMERA FLIGHT LINE DATA
FLIGHT NO. 92-003-06

Accession # 04420
Sensor # 077

Site #	Line #	Run #	Frame #	Time (GMT- hr, min, sec)		Altitude MSL feet/meters	Cloud Cover /Remarks
				START	END		
207	1	1	0181-0208	15:19:10	15:26:29	7600/2320	Minor to 30% cumulus (frames 0181-0198); 10% cumulus (frames 0207-0208)
207	2	2	0209-0245	15:46:44	15:53:06	16200/4940	
207	4	2	0246-0260	15:56:18	16:01:58	16300/4970	Minor to 60% cumulus
206	2	1	0261-0268	16:21:24	16:22:39	16400/5000	30-50% cumulus (frames 0246-248); minor to 20% cumulus (frames 0249-0260) 10-50% cumulus

Note: Digital Clock is Set To Local Time. Add 5 Hours To Obtain Correct GMT Time.

**CAMERA FLIGHT LINE DATA
FLIGHT NO. 92-003-06**

Accession # 04421
Sensor # 087

Site #	Line #	Run #	Frame #	Time (GMT- hr, min, sec)		Altitude MSL feet/meters	Cloud Cover /Remarks
				START	END		
207	1	1	0146-0199	15:19:24	15:26:45	7600/2320	Minor to 30% cumulus (frames 0148-0175); minor cumulus (frames 0178-0179, 0196); 10-20% cumulus (frames 0197-0199)
207	2	2	0200-0219	15:46:58	15:53:18	16200/4940	Minor to 50% cumulus
207	4	2	0220-0234	15:56:32	16:02:12	16300/4970	10-40% cumulus (frames 0220-0224); minor cumulus (frame 0226); minor to 10% cumulus (frames 0228-0234)
206	2	1	0235-0238	16:21:39	16:22:39	16400/5000	Minor 50% cumulus

Note: Digital Clock is Set To Local Time. Add 5 Hours To Obtain Correct GMT Time.

NS011 SCANNER FLIGHT LINE DATA
 FLIGHT NO. 92-003-06

#	Site Line Run	Actual Time (GMT)		Actual Scanline		Altitude		Scan Speed (rps)	total Good Scanlines	total interpolated scanlines	total repeated scanlines
		begin	end	begin	end	feet	meter				
1	Preflight	12:46:55.4	12:49:56.7	1	2176	0	0	12.00	2176	0	0
2	S204 L2R1	13:44:25.1	13:47:22.9	1	1956	800	243	11.00	1957	0	0
3	S205 L1R1	13:54:39.2	13:58:46.7	6755	9478	700	213	11.00	2720	0	4
4	S205 L2R1	14:06:35.6	14:09:19.5	14636	16439	700	213	11.00	1804	0	0
5	S205 L3R1	14:13:58.9	14:17:24.4	19512	21773	800	243	11.00	2262	0	0
6	S207 L5R1	14:29:57.6	14:39:58.1	30616	39023	7700	2346	14.00	8408	0	0
7	S207 L4R1	14:42: 2.5	14:50:32.9	40764	47910	7300	2225	14.00	7135	0	12
8	S207 L3R1	14:52: 8.3	15:02:38.8	49245	58072	7400	2255	14.00	8808	0	20
9	S207 L2R1	15:07:23.1	15:16:11.6	62052	69451	7200	2194	14.00	7370	0	30
10	S207 L1R1	15:18:30.9	15:29:10.4	71402	80355	7700	2346	14.00	8926	0	28
11	S207 L2R2	15:46:15.0	15:52:28.6	6529	11012	16200	4937	12.00	4484	0	0
12	S207 L4R2	15:55:42.9	16:01:34.4	13344	17562	16300	4968	12.00	4217	0	2
13	S206 L2R1	16:20:26.6	16:21:58.2	31148	32247	16300	4968	12.00	1100	0	0

TIMS SCANNER FLIGHT LINE DATA
 FLIGHT NO. 92-003-06

#	Site Line Run	Actual Time (GMT)		Actual Scanline		Altitude		Scan Speed (rps)	total Good Scanlines	total interpolated scanlines	total repeated scanlines
		begin	end	begin	end	feet	meter				
1	S204 L2 R1	13:44:23.0	13:47:30.0	17963	22636	500	152	25.00	4672	0	2
2	S205 L1 R1	13:54:41.0	13:58:54.0	33355	39635	500	152	25.00	6279	0	2
3	S205 L2 R1	14:04:14.0	14:09:26.0	47612	55352	500	152	25.00	7739	0	2
4	S205 L3 R1	14:13:59.0	14:17:32.0	62156	67441	500	152	25.00	5284	0	2
5	S207 L5 R1	14:29:58.0	14:40: 6.0	86017	101128	7000	2133	25.00	15015/15112	0	97
6	S207 L4 R1	14:42: 3.0	14:50: 39.0	104035	116886	7000	2133	25.00	12701/12852	0	151
7	S207 L3 R1	14:52: 9.0	15:02:45.0	119128	134934	7000	2133	25.00	15709/15807	0	98
8	S207 L2 R1	15:07:25.0	15:16:23.0	141901	155288	7000	2133	25.00	13386/13388	0	2
9	S207 L1 R1	15:18:33.0	15:29:27.0	153520	174801	7000	2133	25.00	16264/16282	1	17
10	S207 L2 R2	15:46:15.0	15:52:40.0	5007	9626	15000	4572	12.00	4617/4620	0	3
11	S207 L4 R2	15:55:44.0	16:02: 6.0	11834	16414	15000	4572	12.00	4578/4581	0	3
12	S206 L2 R1	16:20:28.0	16:22: 5.0	129623	30786	15000	4572	12.00	1164	0	0

FLIGHT SUMMARY REPORT

Flight #: 92-003-07
Date: 16 June 1992
Sesnor Package: NS001 Multispectral Scanner
Thermal Infrared Multispectral Scanner (TIMS)
Area(s) Covered: Ellsworth Lake and Cement, OK
Site # 9204, 9205
Flightline Image Files: [9200307.gif](#)

Investigator(s): Engman and LeVine, NASA-GSFC **Aircraft #:** 707

Flight Request: 2P53303

Julian Date: 168

SENSOR DATA

Accession #:	-----	-----
Sensor ID #:	072	086
Sensor Type:	NS001	TIMS
Focal Length:	-----	-----
Film Type:	-----	-----
Filtration:	-----	-----
Spectral Band:	-----	-----
f Stop:	-----	-----
Shutter Speed:	-----	-----
# of frames:	-----	-----
% Overlap:	-----	-----
Quality:	Good	Good
Remarks:		

NS011 SCANNERFLIGHT LINE DATA
 FLIGHT NO. 92-003-07

#	Site Line Run	Actual Time (GMT)		Actual Scanline		Altitude		Scan Speed (rps)	total Good Scanlines	total interpolated scanlines	total repeated scanlines
		begin	end	begin	end	feet	meter				
1	Preflight	13:43:13.9	13:46:38.2	1	2177	0	0	12.00	2153/2177	0	24
2	S204 L2R1	15:27: 5.0	15:29:47.5	41	1991	500	152	12.00	1951	0	0
3	S205 L1R1	15:34:53.8	15:38:26.3	5667	8217	500	152	12.00	2547/2551	0	4
4	S205 L2R1	15:43:51.7	15:48: 2.2	12121	15127	500	152	12.00	3007	0	0
5	S205 L3R1	15:52:35.6	15:55:39.4	18408	20614	500	152	12.00	2205/2207	0	2

TIMS SCANNERFLIGHT LINE DATA
 FLIGHT NO. 92-003-07

#	Site Line Run	Actual Time (GMT)		Actual Scanline		Altitude		Scan Speed (rps)	total Good Scanlines	total interpolated scanlines	total repeated scanlines
		begin	end	begin	end	feet	meter				
1	S204 L2R1	15:27: 5.0	15:29:51.0	16136	20270	500	152	25.00	4129/4135	0	6
2	S205 L1R1	15:34:57.0	15:38:28.0	27872	33131	500	152	25.00	5260	0	0
3	S205 L2R1	15:43:54.0	15:48: 4.0	41242	47455	500	152	25.00	6214	0	0
4	S205 L3R1	15:52:38.0	15:55:39.0	54276	58773	500	152	25.00	4498	0	0

FLIGHT SUMMARY REPORT

Flight #: 92-003-08
Date: 17 June 1992
Sesnor Package: NS001 Multispectral Scanner
Thermal Infrared Multispectral Scanner (TIMS)

Area(s) Covered: Ellsworth Lake Cement, Cement Block, OK
Site # 9204, 9205, 9207

Flightline Image Files: [9200308.gif](#)

Investigator(s): Engman and Levine, NASA-GSFC **Aircraft #:** 707

Flight Request: 2P53303

Julian Date: 169

SENSOR DATA

Accession #:	-----	-----
Sensor ID #:	072	086
Sensor Type:	NS001	TIMS
Focal Length:	-----	-----
Film Type:	-----	-----
Filtration:	-----	-----
Spectral Band:	-----	-----
f Stop:	-----	-----
Shutter Speed:	-----	-----
# of frames:	-----	-----
% Overlap:	-----	-----
Quality:	Good	Good
Remarks:		

NS011 SCANNER FLIGHT LINE DATA
 FLIGHT NO. 92-003-08

#	Site Line Run	Actual Time (GMT)		Actual Scanline		Altitude		Scan Speed (rps)	total Good Scanlines	total interpolated scanlines	total repeated scanlines
		begin	end	begin	end	feet	meter				
1	Preflight	13:31:31.1	13:34: 3.9	85	2224	0	0	14.00	2134/2140	0	6
2	S204 L2R1	14:48: 4.0	14:51:54.7	54	2823	500	152	12.00	2770	0	0
3	S204 L2R2	14:54:46.1	14:55:58.7	4880	5751	500	152	12.00	872	0	0
4	S205 L1R1	14:58:57.0	15:02: 9.5	7891	10201	500	152	12.00	2311	0	0
5	S205 L2R1	15:06:16.0	15:10:31.5	13158	16224	500	152	12.00	3048/3007	0	19
6	S205 L3R1	15:14:40.8	15:17: 7.4	19216	20975	500	152	12.00	1722/1720	1	37
7	S207 L5R1	15:27:48.6	15:40:48.1	29905	40818	7000	2133	14.00	10887/10914	0	27

TIMS SCANNER FLIGHT LINE DATA
 FLIGHT NO. 92-003-08

#	Site Line Run	Actual Time (GMT)		Actual Scanline		Altitude		Scan Speed (rps)	total Good Scanlines	total interpolated scanlines	total repeated scanlines
		begin	end	begin	end	feet	meter				
1	S024 L2R1	14:48: 2.0	14:52: 4.0	10678	16697	500	152	25.00	6020	0	0
2	S204 L2R2	14:54:49.0	14:56: 5.0	20809	22689	500	152	25.00	1881	0	0
3	S205 L1R1	14:59:17.0	15:02:17.0	27468	31944	500	152	25.00	4475/4477	0	2
4	S205 L2R1	15:06:19.0	15:10:39.0	37969	44434	500	152	25.00	6466	0	0
5	S205 L3R1	15:14:44.0	15:17:16.0	50537	54295	500	152	25.00	3757/3759	0	2
6	S207 L5R1	15:27:51.0	15:41:12.0	70103	90029	7000	2133	25.00	19902	0	25

FLIGHT SUMMARY REPORT

Flight #: 92-003-09
Date: 18 June 1992
Sesnor Package: Dual Zeiss Cameras
NS001 Multispectral Scanner
Thermal Infrared Multispectral Scanner (TIMS)

Area(s) Covered: Ellsworth Lake and Cement, Oklahoma
Sites # 204, 205, 207

Flightline Image Files: [9200309.gif](#)

Investigator(s): Engman and LeVine, NASA-GSFC **Aircraft #:** 707
Kahle, JPL
Flight Request: 2P53303 **Julian Date:** 170

SENSOR DATA

Accession #:	04420	04423	-----	-----
Sensor ID #:	077	087	072	086
Sensor Type:	Zeiss	Zeiss	NS001	TIMS
Focal Length:	6"	12"	-----	-----
	153.40 mm	305.30 mm	-----	-----
Film Type:	Aerochrome IR	Aerochrome MS	-----	-----
	2443	2448		
Filtration:	Wratten-12	Clear	-----	-----
Spectral Band:	510-900 nm	400-700 nm	-----	-----
f Stop:	4	5.6	-----	-----
Shutter Speed:	1/400	1/500	-----	-----
# of frames:	84	57	-----	-----
% Overlap:	60	25	-----	-----
Quality:	Fair	Excellent	Good	Good
Remarks:	Quality degraded due to processing residue and chemical stains.			

NS011 SCANNER FLIGHT LINE DATA
 FLIGHT NO. 92-003-09

#	Site Line Run	Actual Time (GMT)		Actual Scanline		Altitude		Scan Speed (rps)	total Good Scanlines	total interpolated scanlines	total repeated scanlines
		begin	end	begin	end	feet	meter				
1	S204 L2R1	15:05:39.5	15:07:48.2	87	2018	500	152	15.00	1932	0	0
2	S205 L1R1	15:14:34.5	15:18: 6.1	8112	11286	500	152	15.00	3172	0	3
3	S205 L2R1	15:22:14.4	15:27: 7.0	15010	19399	500	152	15.00	4390	0	0
4	S205 L3R1	15:31:57.2	15:35:21.8	23753	26822	500	152	15.00	3070	0	0
5	S205 L3R2	15:42:26.0	15:45:49.8	37696	44826	3000	914	35.00	7131	0	0
6	S207 L5R1	15:56: 7.9	16:06:14.4	55200	63690	7000	2133	14.00	8487	0	4
7	S207 L4R1	16:11: 6.7	16:20:42.2	67783	75840	7000	2133	14.00	8026	0	32
8	S207 L3R1	16:26:14.5	16:36: 9.9	80492	88828	7000	2133	14.00	8319	0	18
9	S207 L2R1	16:40:25.3	16:49:38.8	92403	100152	7000	2133	14.00	7724	0	26
10	S207 L1R1	16:54: .2	17:03:35.6	103810	111867	7000	2133	14.00	8047	0	11
11	S207 L6R1	17:08:57.9	17:11:58.4	116379	118907	7000	2133	14.00	2529	0	0
12	S207 L5R2	17:30:43.0	17:36:54.2	79	4534	15000	4572	12.00	4456	0	0
13	S207 L3R2	17:42:45.5	17:48:51.0	8750	13136	15000	4572	12.00	4387	0	0
14	S207 L1R2	17:54:45.4	18:01: 6.0	17388	21955	15000	4572	12.00	4568	0	0

TIMS SCANNER FLIGHT LINE DATA
 FLIGHT NO. 92-003-09

#	Site Line Run	Actual Time (GMT)		Actual Scanline		Altitude		Scan Speed (rps)	total Good Scanlines	total interpolated scanlines	total repeated scanlines
		begin	end	begin	end	feet	meter				
1	S204 L2R1	15:05:34.0	15:07:54.0	12297	15777	500	152	25.00	3393	0	88
2	S205 L1R1	15:14:37.0	15:18:14.0	25808	31200	500	152	25.00	5388	0	5
3	S205 L2R1	15:22:16.0	15:27:14.0	37220	44631	500	152	25.00	7410	0	2
4	S205 L3R1	15:31:58.0	15:35:30.0	51688	56957	500	152	25.00	5270	0	0
5	S205 L3R2	15:42:26.0	15:45:57.0	67308	72556	3000	914	25.00	5247	0	2
6	S207 L5R1	15:56: 7.0	16:06:20.0	87734	102990	7000	2133	25.00	15221	1	35
7	S207 L4R1	16:11: 7.0	16:20:56.0	110117	124773	7000	2133	25.00	14619	0	38
8	S207 L3R1	16:26:14.0	16:36:18.0	132687	147723	7000	2133	25.00	15017	0	20
9	S207 L2R1	16:40:28.0	16:49:47.0	153929	167839	700	213	25.00	13911	0	0
10	S207 L1R1	16:54: 1.0	17:03:43.0	174163	188648	7000	2133	25.00	14450	0	36
11	S207 L6R1	17:08:58.0	17:12: 7.0	196479	201183	7000	2133	25.00	4699	0	6
12	S207 L5R2	17:30:45.0	17:37: 2.0	7018	11540	15000	4572	12.00	4515	0	8
13	S207 L3R2	17:42:47.0	17:48:57.0	15687	20119	15000	4572	12.00	4422	0	11
14	S207 L1R2	17:54:44.0	18:01:16.0	24284	28975	15000	4572	12.00	4669	0	23

**CAMERA FLIGHT LINE DATA
FLIGHT NO. 92-003-09**

Accession # 04422

Sensor # 077

Site #	Line #	Run #	Frame #	Time (GMT-hr, min, sec)		Altitude MSL feet/meters	Cloud Cover /Remarks
				START	END		
205	3	2	0269-0295	15:43:24	15:46:26	3100/940	Clear
207	5	2	0296-0314	17:31:15	17:37:	16400/5000	Minor cumulus (frames 0296-300, 0305-0307)
207	3	2	0315-0333	17:43:24	17:49:24	16200/4940	Clear
207	1	2	0334-0352	17:55:39	18:01:42	16300/4970	Clear

Note: Digital Clock is Set To Local Time. Add 5 Hours To Obtain Correct GMT Time.

**CAMERA FLIGHT LINE DATA
FLIGHT NO. 92-003-09**

Accession # 04423

Sensor # 087

Site #	Line #	Run #	Frame #	Time (GMT-hr, min, sec)		Altitude MSL feet/meters	Cloud Cover /Remarks
				START	END		
207	5	2	0239-0257	17:31:28	17:37:28	16400/5000	Minor cumulus (frames 0240-0242, 0249)
207	3	2	0258-0276	17:43:36	17:49:37	16200/4940	Clear
207	1	2	0277-0295	17:55:51	18:01:54	16300/4970	Clear

Note: Digital Clock is Set To Local Time. Add 5 Hours To Obtain Correct GMT Time.