

Illumination Conditions for Spectral Data Collection

Flight Line	Roll Film Numbers		Time Period (GMT)		Solar Zenith Angle Range (degrees)	Solar Azimuth Angle Range (degrees)	Cloud Cover (%)
	NASA/JSC	Purdue/LARS	Start	Stop	max-min-max		
Date: 5/15/79							
1	1	7ORF79-066	14:06	14:23	56 - 54	95-97	?
2	2	7ORF79-067	14:31	14:47	52 - 50	100-102	?
3	3	7ORF79-068	14:55	15:09	48 - 46	104-107	?
4	4	7ORF79-069	15:17	15:28	44 - 42	109-111	?
5	5	7ORF79-070	15:36	15:45	40 - 39	114-115	?
Date: 5/23/79							
1	6	7ORF79-071	18:59	19:15	24 - 25	209-214	?
2	7	7ORF79-072 & 7ORF79-073	19:23	19:50	27 - 30	220-230	?
3	8	7ORF79-075	20:34	20:47	37 - 39	245-248	?
4	9	7ORF79-074	20:55	21:06	40 - 42	250-252	?
5	10	7ORF79-074	21:11	21:18	43 - 44	254-255	?
Date: 6/11/79							
1	13	7ORF79-076	13:56	14:12	56 - 54	89-91	?
2	14	7ORF79-077	14:22	14:38	51 - 49	93-95	?
3	15	7ORF79-001	14:55	15:19	44 - 41	101-104	?
4	16	7ORF79-078	15:28	15:40	40 - 38	106-108	?
5	17	7ORF79-079	15:47	15:55	36 - 35	110-112	?
Date: 6/29/79							
1	21	7ORF79-080	14:12	14:28	54 - 52	90-92	?
2	22	7ORF79-081	14:38	14:53	49 - 47	95-97	?
3	23	7ORF79-082	14:53	15:02	47 - 45	97-99	?
4	24	7ORF79-083	15:02	15:13	45 - 43	99-101	?
5	25	7ORF79-084	15:13	15:15	43 - 43	101-101	?

Illumination Conditions for Spectral Data Collection

Flight Line	Roll Film Numbers		Time Period (GMT)		Solar Zenith Angle Range (degrees)	Solar Azimuth Angle Range (degrees)	Cloud Cover (%)
	NASA/JSC	Purdue/LARS	Start	Stop	max-min-max		
Date: 7/16/79							
1	26	70RF79-085	15:17	15:34	43 - 41	105-107	?
2	27	70RF79-086	15:41	15:57	39 - 37	110-113	?
3	28	70RF79-087	16:04	16:19	35 - 33	116-119	?
Date: 7/17/79							
4	29	70RF79-088	14:19	14:31	54 - 53	93-95	?
5	30	70RF79-089	14:37	14:46	51 - 50	96-97	?
Date: 8/11/79							
1	45	70RF79-002	15:10	15:25	52 - 50	117-118	?
2	46	70RF79-003	16:36	16:51	40 - 38	139-144	?
3	47	70RF79-004	16:56	17:10	37 - 36	146-151	?
4	48	70RF79-005	17:17	17:29	36 - 35	154-158	?
5	49	70RF79-006	17:35	17:43	34 - 34	162-164	?

Iowa Dates Spectral Data Collected

↑
19 rows in column

↓
could this column be used to show blank

Field Number	Crop	5/15	5/23	6/11	6/29	7/16	7/17	8/14	8/30
1	Corn	9	9	8	6	-	6	10	
2	Soybeans	10	11	10	20	-	10	12	
3	Corn	6	6	7	-	-	7	7	
4	Oats	7	7	4	-	-	7	2	
5	Soybeans	24	25	21	-	-	22	25	
6	Corn	21	22	21	-	-	25	21	
7	Corn	10	13	11	-	-	16	11	
8	Soybeans	3	3	5	-	-	4	4	
9	Oats	19	-	18	-	-	18	18	
10	Soybeans	6	-	5	-	-	7	7	
11	Soybeans	13	-	10	-	-	11	14	
12	Soybeans	12	-	9	-	-	8	11	
13	Corn	21	27	24	26	-	24	28	
14	Soybeans	19	20	25	21	-	24	24	
15	Soybeans	14	12	9	11	-	18	17	
16	Corn	15	26	21	23	-	23	24	
17	Corn	14	16	13	21	-	17	20	
18	Soybeans	11	14	13	14	-	13	15	
19	Corn	21	17	16	21	-	23	19	
20	Corn	12	19	22	19	-	15	20	
21	Soybeans	20	22	24	24	-	23	26	
22	Corn	14	20	20	17	-	24	7	
23	soybeans	17	10	8	17	-	30	24	
24	Corn	8	10	11	8	-	10	11	
25	soybeans	8	9	8	10	-	10	7	
26	Soybeans	7	12	10	10	10	-	15	
27	Soybeans	8	12	11	11	10	-	14	
28	Soybeans	20	23	22	24	23	-	27	
29	Soybeans	-	19	-	-	-	-	-	
30		-	24	-	-	-	-	-	
31	Corn	8	10	11	12	11	-	12	
32	Corn	34	33	34	35	36	-	41	
33	Oats	15	25	21	19	20	-	20	
34	Soybeans	15	18	16	16	17	-	18	
35	Soybeans	13	28	26	23	27	-	26	
36	Corn	19	19	23	25	22	-	26	

79102237

FORM # APPROVED FOR FUNDING

Field Number	Crop	5/15/79	5/23	6/11	6/29	7/16	7/17	8/30
37		-	-	-	-	-	-	-
38	Corn	6	12	12	10	-	-	12
39	Corn	13	13	16	8	-	-	16
40	Soybeans	21	18	15	13	9	-	17
41	Corn	24	17	20	23	23	-	22
42	Soybeans	23	29	24	24	24	-	26
43	Soybeans	11	10	11	13	12	-	14
44	Corn	9	10	13	11	12	-	12
45	Corn	8	10	9	11	11	-	10
46	Oats	4	2	2	2	2	-	2
47	Corn	18	23	20	20	20	-	19
48	Corn	14	10	9	17	15	-	10
49	Corn	9	11	9	9	9	-	9
50	Corn	23	23	23	24	21	-	20
51	Corn	26	21	23	23	25	-	22
52	Soybeans	18	22	26	23	24	-	25
53	Soybeans	8	9	10	10	13	-	15
54	Corn	7	5	8	13	10	-	8
55	Soybeans	9	15	9	11	17	-	10
56	Soybeans	8	8	8	8	8	-	8
57	Corn	23	19	22	26	26	-	23
58	Soybeans	13	17	26	8	14	-	6
59	Corn	16	8	10	19	12	-	18
60	Corn	8	10	9	10	-	-	16
61	Soybeans	11	10	9	11	10	-	10
62	Soybeans	21	20	19	27	23	-	20
63	Corn	26	19	21	24	25	-	22
64	Soybeans	10	10	13	14	13	-	12
65	Corn	25	25	23	20	29	-	26
66	Soybeans	22	21	25	20	23	-	23
67	Corn	14	11	11	12	11	-	11
68	Corn	2	11	9	10	9	-	10
69	Corn	15	16	14	17	17	-	19
70	Corn	21	27	17	28	25	-	25
71	Corn	19	19	19	23	21	-	25
72	Soybeans	8	9	11	12	11	-	10

Field Number	Crop	5/15/79	5/23	6/11	6/29	7/16	7/17	8/30
73	Corn	10	9	10	15	11	-	8
74	Soybeans	20	16	19	22	18	-	19
75	Corn	22	19	20	24	23	-	23
76	Corn	7	9	9	10	6	-	7
77	Soybeans	27	25	24	21	25	-	28
78	Soybeans	17	18	21	16	20	-	23
79	Corn	14	13	16	13	18	-	-
80	Corn	19	17	21	15	15	-	23
186	Soybeans	-	-	-	-	-	-	5
273	Pasture	-	-	-	-	-	-	10
274	Soybeans	-	-	-	-	-	-	6
276	Corn	-	-	-	-	-	-	12
277	Corn	-	-	-	-	-	-	12

Dates Spectral Data Collected

Field Number	Number of Observations							
	5/15	5/23	6/11	6/29	7/16	7/17	8/4	8/30
1	9	9	8	6	-	6		10
2	10	11	10	20	-	10		12
3	6	6	7	-	-	7		7
4	7	7	4	-	-	7		2
5	24	25	21	-	-	22		25
6	21	22	21	-	-	25		21
7	10	13	11	-	-	16		11
8	3	3	5	-	-	4		4
9	19	-	18	-	-	18		18
10	6	-	5	-	-	7		7
11	13	-	10	-	-	11		14
12	12	-	9	-	-	8		11
13	21	27	24	26	-	24		28
14	19	20	25	21	-	24		24
15	14	12	9	11	-	18		17
16	15	26	21	23	-	23		24
17	14	16	13	21	-	17		20
18	11	14	13	14	-	13		15
19	21	17	16	21	-	23		19
20	12	19	22	19	-	15		20
21	20	22	24	24	-	23		26
22	14	20	20	17	-	24		7
23	17	10	8	17	-	30		24
24	8	10	11	8	-	10		11
25	8	9	8	10	-	10		7
26	7	12	10	10	10	-		15
27	8	12	11	11	10	-		14
28	20	23	22	24	23	-		27
29	-	19	-	-	-	-		-
30	-	24	-	-	-	-		-
31	8	10	11	12	11	-		12
32	34	33	34	35	36	-		41
33	15	25	21	19	20	-		20
34	15	18	16	16	17	-		18
35	13	28	26	23	27	-		26
36	19	19	23	25	22	-		26
37	-	-	-	-	-	-		-
38	6	12	12	10	-	-		12
39	13	13	16	8	-	-		16
40	21	18	15	18	9	-		17
41	24	17	20	23	23	-		22
42	23	29	24	24	24	-		26
43	11	10	11	13	12	-		14
44	9	10	13	11	12	-		12
45	8	10	9	11	11	-		10
46	4	2	2	2	2	-		2

Dates Spectral Data Collected (cont.)

Field Number	Number of Observations							
	5/15	5/23	6/11	6/29	7/16	7/17	8/4	8/30
47	18	23	20	20	20	-		19
48	14	10	9	17	15	-		10
49	9	11	9	9	9	-		9
50	23	23	23	24	21	-		20
51	26	21	23	23	25	-		22
52	18	22	26	23	24	-		25
53	8	9	10	10	13	-		15
54	7	5	8	13	10	-		8
55	9	15	9	11	17	-		10
56	8	8	8	8	8	-		8
57	23	19	22	26	26	-		23
58	13	17	26	8	14	-		6
59	16	8	10	19	12	-		18
60	8	10	9	10	-	-		16
61	11	10	9	11	10	-		10
62	21	20	19	27	23	-		20
63	26	19	21	24	25	-		22
64	10	10	13	14	13	-		12
65	25	25	23	20	29	-		26
66	22	21	25	20	23	-		23
67	14	11	11	12	11	-		11
68	2	11	9	10	9	-		10
69	15	16	14	17	17	-		19
70	21	27	17	28	25	-		25
71	19	19	19	23	21	-		25
72	8	9	11	12	11	-		10
73	10	9	10	15	11	-		8
74	20	16	19	22	18	-		19
75	22	19	20	24	23	-		23
76	7	9	9	10	6	-		7
77	27	25	24	21	25	-		28
78	17	18	21	16	20	-		23
79	14	13	16	13	18	-		-
80	19	17	21	15	15	-		23
186	-	-	-	-	-	-		5
273	-	-	-	-	-	-		10
274	-	-	-	-	-	-		6
276	-	-	-	-	-	-		12
277	-	-	-	-	-	-		12