

Records of All-Sky Camera Operations
at Syowa Station, Antarctica

in 1966

Compiled by

M. AYUKAWA

(Department of Polar Research, National Science Museum)

Since 1959, an all-sky camera for aurora observation has been operated at Syowa Station, with an intermission from 1962 to 1965. This report briefly presents the data availability of the all-sky camera records obtained in 1966.

This report was compiled by the Department of Polar Research, National Science Museum where the original records are deposited.

1. Location

Table 1. Location.

CSAGI No	Station	Geographic		Geomagnetic		Remarks
		Lat. S	Long. E	Lat.	Long.	
A984	Syowa Station	69°00'	39°36'	-69.6°	77.1°	Height about 15m(a.s.l)

2. Observers

Dr. Eisuke KANEDA (Geophysical Research Laboratory, University of Tokyo).

Mr. Eiichi INBE (Ministry of Construction).

3. Instrumentation

Type of the camera used was 16 mm Bolex movie camera (model H-16RK with f/1.4, 25 mm in focal length). The camera was operated every night between March 11 and October 20, 1966, with some intermissions due to blizzard or some instrumental troubles. Fifteen-second exposure were made at intervals of 30 seconds.

The film used was black and white "Fuji 16 mm HS", with a sensitivity of ASA 320. The film in a reel was 100 feet long.

4. Obtained Records

Data availability is shown in Fig. 1 (days of observation) and Table 3 (hours of observation). Explanation of marks in Fig. 1 is as follows:

Dark area : All-sky camera was operated.

Cross : Not operated due to instrumental trouble.

Blank : Not operated due to blizzard.

The second column of Table 3 is the period of operation of the camera by the local time (45° E.M.T.) at Syowa Station.

Fig. 1. Days of observation by all-sky camera

SYOWA STATION (69°00'S, 39°36'E)

MONTH \ DATE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
MARCH																																
APRIL																																
MAY																																
JUNE																																
JULY																																
AUGUST																																
SEPTEMBER																																
OCTOBER																																

3

In the third column are given K-indices at Syowa Station, which show the intensity of geomagnetic activity during the operation of the all-sky camera. The classification of K-indices at Syowa Station is given in Table 2.

Table 2. Classification of K-indices at Syowa Station.

K	Range in Gamma
0	0 ~ < 25 r
1	25 ~ < 50 r
2	50 ~ < 100 r
3	100 ~ < 200 r
4	200 ~ < 350 r
5	350 ~ < 600 r
6	600 ~ < 1,000 r
7	1,000 ~ < 1,660 r
8	1,660 ~ < 2,500 r
9	more than > 2,500 r

5. Distribution

Copies of all recorded films will be distributed to the following World Data Center after the compilation:

- 1) I.G.Y. World Data Center C (Instrumental)

Department of Electronics, Royal Institute of Technology, Stockholm 70, Sweden

Table 3. Hours of operation
of all-sky camera at Syowa Station
in 1966

March 1966

Day	Hours (45° East Meridian Time)	K-Index
11/12	00 ^h 43 ^m 00 ^s -- 04 ^h 25 ^m 45 ^s	
12/13	17-30-00 -- 04-12-45	
13/14	21-00-00 -- 04-12-45	
14/15	21-07-00 -- 04-23-45	
15/16	20-55-00 --	
16/17	21-04-00 -- 04-43-45	2,3,2,
17/18	20-30-00 -- 04-32-50	1,2,5,3,
18/19	20-23-45 -- 04-47-45	0,0,0,4,
19/20	20-46-00 -- 05-08-45	2,4,5,5,
20/21	20-47-00 -- 05-09-45	2,2,3,4,
22/23	19-50-00 -- 05-30-45	1,2,2,4,
23/24	00-13-00 -- 05-30-45	5,3,
25/26	20-29-00 -- 05-53-45	3,2,2,1,
26/27	19-35-00 -- 00-27-20	4,3,2,
27/28	23-28-45 -- 05-39-45	2,5,4,
28/29	21-00-00 -- 05-28-45	7,5,5,
29/30	19-18-00 -- 05-40-45	1,1,2,4,
30/31	19-20-00 -- 05-50-45	1,2,3,4

April 1966

Day	Hours (45° East Meridian Time)	K-Index
MAR.31/APR.1	19 ^h 21 ^m 00 ^s -- 05 ^h 42 ^m 45 ^s	0,0,0,0,
1/2	18-55-00 -- 04-56-00	3,6,7,5,4,
2/3	19-32-45 -- 05-57-00	1,2,4,3,
4/5	18-55-00 -- 20-28-50	1,
7/8	18-45-00 -- 06-11-45	0,3,4,5,5,
8/9	18-35-45 -- 05-07-45	1,2,4,2,
9/10	18-47-30 --	
11/12	18-27-45 -- 06-20-50	1,1,0,1,1,
12/13	19-33-30 -- 06-43-50	0,1,2,2,2,
13/14	18-30-00 -- 06-39-50	4,5,5,4,3,
14/15	18-39-00 -- 06-41-50	2,1,5,5,1,
15/16	19-56-50 -- 06-54-50	0,0,1,1,1,
16/17	17-47-20 -- 04-19-25	1,1,1,2,2,
18/19	18-01-00 -- 06-53-50	0,0,0,0,1,
19/20	17-45-50 -- 06-58-50	4,2,1,1,1,0,
20/21	17-48-50 -- 07-36-20	3,2,2,3,4,3,
21/22	17-51-00 -- 22-45-00	1,0,1,
24/25	17-33-50 -- 04-39-50	2,0,2,3,3,

April - May, 1966

Day	Hours (45° East Meridian Time)	K-Index
26/27	22 ^h 22 ^m 50 ^s - 07 ^h 29 ^m 50 ^s	0,1,1,0,
27/28	17-01-15 - 05-14-50	0,1,1,0,0,
29/30	17-26-50 - 07-26-50	1,2,3,4,4,5,
APR. 30/MAY 1	17-04-50 - 01-36-00	3,3,3,3,
2/3	17-01-50 - 07-42-50	3,4,4,4,2,2,
3/4	16-58-50 - 08-27-50	1,0,3,6,6,5,
4/5	16-59-50 - 06-10-50	2,2,3,5,4,1,
6/7	16-53-53 - 04-58-50	0,0,2,3,3,
9/10	16-48-50 - 08-21-50	0,0,0,1,0,0,
10/11	16-35-50 - 08-34-00	0,0,0,0,0,1,
11/12	16-40-50 - 08-10-50	1,1,4,5,3,2,
12/13	16-34-50 - 08-53-50	0,1,2,4,5,3,
13/14	17-24-50 - 08-42-50	1,2,1,1,1,1,
14/15	16-29-50 - 08-27-20	0,1,0,1,0,0,
15/16	20-08-50 - 08-39-50	0,0,0,0,1,
16/17	16-16-50 - 08-40-50	1,3,3,4,4,
17/18	16-14-50 - 08-27-50	0,1,4,5,4,3,
18/19	16-11-50 - 08-47-50	1,1,0,2,3,2,

May - June, 1966

Day	Hours (45° East Meridian Time)	K-Index
19/20	16 ^h 12 ^m 50 ^s - 08 ^h 30 ^m 50 ^s	1,1,4,3,3,1,
20/21	16-37-50 - 09-11-50	0,1,3,4,2,1,1,
21/22	16-08-50 - 07-36-50	1,0,0,0,0,0,
23/24	15-59-50 - 07-23-50	0,0,0,0,1,0,
25/26	15-55-50 - 07-39-00	0,0,1,1,1,1,
26/27	15-17-50 - 07-22-50	5,5,6,6,5,1,
27/28	05-54-50 - 08-59-20	1,2,
28/29	15-49-50 - 09-49-00	1,1,0,4,2,1,1,
29/30	15-47-50 - 09-01-50	0,0,2,2,2,0,0,
30/31	16-44-50 - 09-05-50	1,1,4,5,5,7,5,
MAY 31/JUN. 1	15-44-50 - 09-32-50	3,4,6,7,7,4,4,
1/2	16-12-50 - 08-57-50	1,0,1,0,1,0,
2/3	15-40-00 - 09-15-50	4,1,2,3,2,1,1,
3/4	16-01-50 - 00-40-50	1,2,2,3,
5/6	15-20-50 - 09-34-50	0,1,0,1,4,3,1,
6/7	16-19-50 - 09-26-50	0,0,0,2,3,5,1,
7/8	15-25-50 - 09-29-50	1,1,0,1,2,1,1,
8/9	16-56-50 - 09-26-50	2,1,0,0,0,0,0,

June - July, 1966

Day	Hours (45° East Meridian Time)	K-Index
9/10	15 ^h 25 ^m 50 ^s - 09 ^h 15 ^m 50 ^s	1,1,1,2,1,0,0,
11/12	18-23-50 - 09-42-50	0,2,0,1,3,1,
17/18	15-44-50 - 09-27-50	0,1,1,2,1,2,0,
18/19	15-13-50 - 09-28-50	0,1,1,1,1,0,0,
19/20	16-19-50 - 09-17-50	1,1,2,2,1,2,1,
20/21	15-05-50 - 09-34-50	1,1,2,1,3,3,1,
21/22	16-07-50 - 09-33-50	1,1,0,2,0,0,0,
22/23	14-59-50 - 09-23-50	1,0,1,0,3,3,1,1,
23/24	15-13-50 - 22-47-50	2,5,5,
26/27	14-52-50 - 09-31-50	0,1,0,2,4,1,0,0,
27/28	15-09-50 - 02-26-50	0,1,0,1,
28/29	15-12-50 - 09-12-50	0,0,3,3,4,1,1,
29/30	15-24-50 - 09-19-50	1,1,2,4,4,3,3,
JUN 30/JUL 1	15-19-50 - 09-23-50	1,0,2,6,4,2,3,
1/2	15-19-50 - 09-23-50	2,2,1,4,2,1,1,
2/3	15-31-50 - 09-47-50	0,0,0,3,2,3,1,
3/4	15-22-50 - 09-36-50	1,0,2,2,1,0,0,
4/5	15-27-50 - 09-30-50	1,2,3,5,3,3,2,

July 1966

Day	Hours (45° East Meridian Time)	K-Index
5/6	15 ^h 41 ^m 50 ^s - 09 ^h 20 ^m 50 ^s	0,0,1,2,2,1,1,
6/7	15-29-50 - 09-55-50	1,1,1,0,3,1,1,
9/10	15-19-50 - 09-02-50	2,2,2,4,6,6,6,
10/11	15-28-50 - 09-26-50	3,2,2,5,5,4,3,
11/12	15-40-50 - 09-20-50	0,1,0,5,5,6,4,
12/13	15-30-50 - 09-30-50	3,1,1,1,3,3,1,
13/14	15-42-50 - 09-12-50	1,1,1,0,1,1,0,
14/15	15-52-50 - 09-10-50	0,1,0,0,0,1,1,
17/18	15-40-50 - 09-12-50	1,1,3,4,0,2,2,
18/19	16-11-50 - 09-45-50	1,1,0,0,0,2,1,
19/20	15-51-50 - 09-31-50	0,0,0,2,3,1,2,
20/21	16-33-50 - 09-05-50	1,1,1,5,5,5,3,
21/22	16-16-50 - 09-36-00	1,2,4,4,6,3,3,
22/23	16-17-50 - 09-05-50	1,1,3,3,3,4,2,
23/24	16-29-50 - 09-10-50	1,1,1,3,5,4,2,
24/25	16-21-50 - 09-00-50	1,0,0,2,1,1,1,
25/26	16-17-50 - 09-04-50	0,0,1,2,3,3,1,
26/27	16-04-50 - 09-31-50	1,1,2,5,5,2,3,

July - August, 1966

Day	Hours (45° East Meridian Time)	K-Index
27/28	16h04m50s - 09h27m50s	3,2,0,3,5,6,4,
28/29	16-05-50 - 09-24-50	2,1,1,3,4,2,1,
30/31	16-24-50 - 09-25-50	1,0,0,2,2,1,1,
JUL.31/AUG.1	17-08-50 - 08-30-50	1,1,1,4,4,4,
1/2	16-35-50 - 08-12-50	0,1,0,4,3,0,
2/3	16-36-50 - 08-27-50	0,0,1,0,1,2,
3/4	16-38-50 - 08-19-50	1,2,0,1,0,0,
4/5	16-44-00 - 09-12-50	2,1,0,5,4,3,3,
5/6	16-47-50 - 08-19-50	2,2,0,3,5,4,
8/9	16-44-50 - 08-14-50	0,0,1,5,4,2,
9/10	17-02-50 - 08-00-50	1,1,5,3,4,3,
10/11	17-04-50 - 08-15-50	3,2,1,4,2,4,
11/12	17-37-50 - 07-48-50	3,2,3,5,5,5,
12/13	17-01-50 - 07-27-50	2,2,2,4,4,3,
13/14	22-13-50 - 07-43-50	0,3,4,4,
14/15	16-56-50 - 07-45-50	1,1,1,1,3,1,
16/17	17-06-50 - 07-10-50	0,0,0,1,1,1,
18/19	17-44-50 - 07-22-50	3,2,4,1,5,6,

August - September, 1966

Day	Hours (45° East Meridian Time)	K-Index
19/20	18 ^h 18 ^m 50 ^s - 07 ^h 13 ^m 50 ^s	4,4,4,5,2,
20/21	17-42-50 - 06-57-50	0,0,0,4,5,2,
21/22	17-40-50 - 08-01-00	1,0,0,2,1,0,
22/23	17-36-50 - 06-46-50	0,0,0,4,5,3,
23/24	17-50-50 - 07-26-50	3,3,4,6,6,2,
24/25	17-58-50 - 07-20-50	3,3,4,5,5,3,
25/26	17-55-50 - 07-36-50	2,1,3,5,5,5,3,
26/27	17-49-50 - 07-59-50	1,0,1,5,3,2,
29/30	17-49-50 - 08-14-50	2,1,1,6,6,5,
30/31	17-54-50 - 06-59-50	3,5,6,7,5,4,
SEPT. 1/2	18-05-50 - 06-35-50	5,6,6,6,2,
2/3	17-58-50 - 06-26-50	2,3,4,3,3,3,
3/4	17-57-50 - 06-29-50	5,5,7,8,8,7,
4/5	18-20-50 - 06-10-50	4,3,5,4, 4,
5/6	18-35-50 - 06-10-50	3,1,2,5,6,
6/7	18-36-50 - 06-02-50	2,1,4,4,4,
7/8	18-37-50 - 07-06-50	3,5,5,5,5,
8/9	18-42-50 - 06-16-50	4,5,6,4,4,

September 1966

Day	Hours (45° East Meridian Time)	K-Index
9/10	18 ^h 44 ^m 50 ^s - 06 ^h 01 ^m 50 ^s	4,5,6,5,6,
11/12	00-06-50 - 05-58-50	2,0,
12/13	18-58-50 - 05-37-50	0,0,2,2,
13/14	18-53-50 - 05-23-50	0,1,1,1,
14/15	19-01-50 - 05-21-50	2,1,6,7,
15/16	19-12-50 - 05-26-50	1,5,4,4,
16/17	19-34-50 - 05-12-50	1,2,4,6,
17/18	18-57-50 - 05-04-50	0,0,0,1,
18/19	19-14-50 - 05-15-50	0,0,1,5,
19/20	19-13-50 - 04-57-50	2,2,6,4,
20/21	19-35-50 - 05-00-50	3,3,5,4,
21/22	19-36-10 - 05-01-50	0,0,3,3,
22/23	19-35-50 - 05-06-50	1,3,3,3,
23/24	19-41-50 - 04-56-50	4,5,3,2,
26/27	19-51-00 - 04-40-50	4,6,4,5,
27/28	20-01-50 - 04-35-50	1,2,5,5,
28/29	20-19-50 - 04-57-50	3,0,4,4,
29/30	20-08-50 - 04-07-50	3,4,2,3,

September - October, 1966

Day	Hours (45° East Meridian Time)	K-Index
SEPT. 30/OCT. 1	20 ^h 08 ^m 50 ^s - 04 ^h 03 ^m 50 ^s	3,2,6,5,
1/2	20-11-50 - 03-56-55	0,2,1,0,
2/3	20-20-50 - 04-12-55	0,1,1,0,
3/4	20-20-50 - 03-57-50	0,0,4,4,
4/5	20-12-50 - 03-42-56	1,4,6,6,
5/6	20-20-50 - 03-42-56	3,5,4,5,
8/9	20-57-50 - 04-13-50	1,0,1,4,
9/10	20-57-50 - 03-14-50	2,1,3,0,
12/13	21-20-50 - 02-53-50	2,4,
13/14	21-00-50 - 03-06-50	2,5,3,
15/16	21-34-50 - 03-15-50	4,5,3,
16/17	21-55-50 - 02-10-50	3,3,
17/18	23-02-50 - 02-24-50	0,3,
19/20	22-57-50 - 01-53-50	1,3,
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-