

MONTHLY REPORT OF SUNSPOT OBSERVATION

JANUARY 1977 Observer - K. Fujinori Suwa City, Nagano

Date	Time	N		S		Total 10g+f		Facula		Cent.		Seeing	Remarks	
		g	f	g	f	g	f	E	W	g	f			
1	4h57m	0	0	1	6	1	6	16	0	0	1	6	1 - 2	20
2	1:34	2	4	1	6	3	10	40	2	2	0	0	2 - 3	32
3	1:59	2	14	1	2	3	16	46	2	2	0	0	2	25
4	0:59	2	9	1	2	3	11	41	3	2	0	0	2	22
5	1:42	2	4	1	2	3	6	36	3	2	0	0	2	21
6	0:57	2	4	0	0	2	4	24	2	1	1	1	3	13
7	1:04	1	1	0	0	1	1	11	2	1	0	0	2 - 3	0
8	0:38	0	0	0	0	0	0	0	1	0	0	0	3	0
9	0:18	0	0	0	0	0	0	0	1	0	0	0	2	0
10		-	-	-	-	-	-	-	-	-	-	-		C - R
11	5:33	0	0	1	2	1	2	12	1	0	1	2	1 - 2	14
12	1:05	0	0	1	14	1	14	24	1	1	1	14	3	19
13		-	-	-	-	-	-	-	-	-	-	-		C
14	1:24	0	0	1	21	1	21	31	1	0	1	2	2 - 3	22
15	2:40	0	0	1	13	1	13	23	0	1	0	0	1	20
16	0:49	1	1	2	21	3	22	52	1	1	2	2	3	18
17	0:23	1	3	1	14	2	17	37	1	1	1	3	2 - 3	30
18	2:03	1	7	1	7	2	14	34	0	1	1	7	2	26
19	0:36	1	1	0	0	1	1	11	0	2	0	0	2	7
20		-	-	-	-	-	-	-	-	-	-	-		M
21	1:02	2	5	0	0	2	5	25	2	1	1	3	4	15
22	0:50	2	4	0	0	2	4	24	3	2	0	0	4 - 5	24
23	4:21	3	16	1	4	4	20	60	3	0	0	0	2	34
24	1:25	3	16	1	1	4	17	57	2	1	1	1	3	35
25	2:13	2	8	1	2	3	10	40	1	1	1	2	2	17
26		-	-	-	-	-	-	-	-	-	-	-		R
27		-	-	-	-	-	-	-	-	-	-	-		C
28	4:12	0	0	1	10	1	10	20	1	1	0	0	2	13
29	0:49	0	0	1	8	1	8	18	1	2	0	0	2	11
30	2:23	0	0	0	0	0	0	0	0	3	0	0	1 - 2	8
31	0:48	1	3	0	0	1	3	13	1	4	0	0	2	10
Sum		380		315				695			163			456
Mean		14.6		12.1				26.7			6.3			108

~~7 8 9 10 11 12 ① 2 3 4 5 6 7~~

k=0.656

Days 26                      8cm Refractor X67 Projection 15cm

7 8 9 10 11 12 ① 2 3 4 5 6 7

$13854 = 12.0$

$7315 \div 320 = 22.9$

$53461 = 10.8$

MONTHLY REPORT OF SUNSPOT OBSERVATION

FEBRUARY 1977 Observer - K.Fujimori Suwa City, Nagano-Ken

Date	Time	N		S		Total 10g+f		Facula		Cent.		Seeing	Rem.	
		g	f	g	f	g	f	E	W	g	f			
1	4h09m	1	10	0	0	1	10	20	1	2	0	0	3	15
2	1:22	1	20	0	0	1	20	30	1	2	0	0	2-3	19
3	2:35	1	21	0	0	1	21	31	2	2	0	0	2	19
4	1:09	1	16	0	0	1	16	26	1	0	0	0	2	16
5	2:00	1	11	0	0	1	11	21	2	0	1	2	2-3	18
6	0:14	0	0	1	1	1	1	11	2	0	0	0	2-3	7
7	1:13	1	4	0	0	1	4	14	3	0	0	0	2	7
8	1:11	0	0	1	4	1	4	14	2	1	0	0	2	26
9	-	-	-	-	-	-	-	-	-	-	-	-	-	C
10	5:07	0	0	1	30	1	30	40	3	1	0	0	2-3	23
11	0:28	0	0	1	33	1	33	43	1	2	0	0	2-3	25
12	0:59	2	7	1	36	3	43	73	0	1	1	6	2	48
13	0:52	3	18	1	32	4	50	90	0	2	2	13	1-2	68
14	4:14	2	13	2	20	4	33	73	1	2	2	13	1-2	61
15	-	-	-	-	-	-	-	-	-	-	-	-	-	C
16	4:03	3	13	2	11	5	24	74	1	2	1	3	2	49
17	1:00	3	9	2	14	5	23	73	2	5	0	0	2-3	44
18	5:43	2	4	2	12	4	16	56	1	3	1	3	1-2	37
19	1:33	1	2	2	12	3	14	44	2	3	1	7	3-4	25
20	3:16	0	0	1	3	1	3	13	2	0	1	3	1	10
21	6:42	0	0	1	4	1	4	14	2	0	1	4	1	9
22	0:19	0	0	1	4	1	4	14	1	0	1	4	2-3	9
23	3:26	0	0	1	2	1	2	12	0	1	0	0	1-2	9
24	3:26	0	0	1	2	1	2	12	0	1	0	0	1-2	8
25	0:44	0	0	1	2	1	2	12	0	1	0	0	3	8
26	0:31	0	0	1	2	1	2	12	1	1	0	0	3	8
27	1:44	0	0	0	0	0	0	0	1	1	0	0	1-2	0
28	0:34	0	0	0	0	0	0	0	1	2	0	0	3	0
Sum			368		454			822				178		568
Mean			14.2		17.5			31.6				6.8		K=0.69/

Days 26

8cm Refractor X67 Projection 15cm

8 9 10 11 12 1 (2) 3 4 5 6 7 8

$8264 \div 319 = 25.9$   
 $N 4547 = 14.3$   
 $S 3717 = 11.7$

MONTHLY REPORT OF SUNSPOT OBSERVATION

MARCH 1977 Observer - K. Fujimori Suwa City, Nagano.

Date	Time	N		S		Total 10g+f		Facula		Cent.		Seeing		Rem
		g	f	g	f	g	f	E	W	g	f	5	1	
1	6h04m	0	0	0	0	0	0	0	1	2	0	0	2	0
2		-	-	-	-	-	-	-	-	-	-	-	-	C
3	0:19	2	3	0	0	2	3	23	2	1	0	0	1 - 3	8
4	2:00	1	2	0	0	1	2	12	2	0	0	0	2	8
5	4:06	1	2	0	0	1	2	12	2	0	0	0	2	8
6	0:24	1	3	0	0	1	3	13	1	0	0	0	3	9
7	0:53	1	3	0	0	1	3	13	3	0	1	2	2	8
8	0:06	2	5	0	0	2	5	25	3	1	2	5	2	20
9		-	-	-	-	-	-	-	-	-	-	-	-	R
10	0:16	2	7	0	0	2	7	27	3	0	1	2	1 - 2	19
11	0:20	2	6	0	0	2	6	26	3	1	0	0	2	19
12	0:16	2	3	0	0	2	3	23	2	1	0	0	2 - 3	9
13	0:18	1	2	0	0	1	2	12	1	1	0	0	1 - 2	8
14	4:05	0	0	0	0	0	0	0	1	2	0	0	1 - 2	7
15	1:13	0	0	0	0	0	0	0	1	0	0	0	3	0
16	3:24	0	0	0	0	0	0	0	1	0	0	0	2	0
17	4:03	0	0	1	1	1	1	11	1	2	0	0	2 - 3	0
18	2:58	0	0	0	0	0	0	0	0	2	0	0	2	0
19		-	-	-	-	-	-	-	-	-	-	-	-	C
20	6:52	0	0	0	0	0	0	0	-	-	0	0	1	0
21	0:02	0	0	0	0	0	0	0	0	1	0	0	4	0
22	1:00	0	0	1	4	1	4	14	1	0	0	0	2	10
23	4:58	0	0	1	4	1	4	14	1	1	0	0	2	8
24		-	-	-	-	-	-	-	-	-	-	-	-	R
25	4:04	0	0	0	0	0	0	0	0	2	0	0	3	14
26	2:08	1	1	0	0	1	1	11	1	2	0	0	2	8
27	1:51	1	2	0	0	1	2	12	1	0	0	0	2	9
28	1:36	2	4	0	0	2	4	24	2	0	1	2	2	16
29	0:07	2	6	0	0	2	6	26	1	0	0	0	4	8
30		-	-	-	-	-	-	-	-	-	-	-	-	R
31		-	-	-	-	-	-	-	-	-	-	-	-	R
Sum		259		39		298					61		196	
Mean		10.4		1.6		11.9					2.4		$k=0.658$	

9 10 11 12 1 2 (3) 4 5 6 7 8 9  
 $9293 \div 317 = 29.3$        $N5562 = 17.5$   
 $53731 = 11.8$

Days 25

Gen Refractor X67 Projection 15cm

MONTHLY REPORT OF SUNSPOT OBSERVATION

APRIL 1977 Observer - K.Fujimori Suwa City, Nagano

Date	Time U. T.	N		S		Total 10g+f		Facula		Cent.		Seeing 5 - 1	Re	
		g	f	g	f	g	f	E	W	g	f			
1	1h20m	1	3	0	0	1	3	13	2	1	1	3	2	7
2	0:09	1	5	0	0	1	5	15	1	1	0	0	2	11
3	1:55	1	3	0	0	1	3	13	0	1	0	0	3	10
4	2:58	1	1	0	0	1	1	11	2	1	0	0	2	7
5	3:55	0	0	1	1	1	1	11	3	1	0	0	3	7
6	0:02	1	2	0	0	1	2	12	3	2	0	0	4	8
7	4:30	1	1	0	0	1	1	11	2	1	0	0	2	7
8	3:10	0	0	0	0	0	0	0	1	1	0	0	2	0
9		-	-	-	-	-	-	-	-	-	-	-		
10	5:32	0	0	0	0	0	0	0	2	0	0	0	4	0
11	0:24	0	0	0	0	0	0	0	2	0	0	0	4	8
12	0:02	0	0	1	3	1	3	13	1	0	0	0	1	12
13	3:45	0	0	1	12	1	12	22	1	1	0	0	3	16
14	0:37	0	0	1	20	1	20	30	1	1	0	0	2	22
15	2:43	0	0	1	22	1	22	32	1	1	0	0	3	34
16		-	-	-	-	-	-	-	-	-	-	-		
17	3:04	0	0	2	16	2	16	36	0	0	2	16	3	32
18	3:36	0	0	2	16	2	16	36	0	0	1	12	4	29
19	5:53	0	0	2	7	2	7	27	0	1	1	6	1	2 22
20	0:07	0	0	1	5	1	5	15	0	2	1	5	2	3 12
21	0:02	0	0	1	11	1	11	21	0	2	1	2	5	20
22	4:26	0	0	1	6	1	6	16	1	2	0	0	3	19
23	0:27	0	0	1	9	1	9	19	2	1	0	0	2	18
24	0:02	0	0	1	3	1	3	13	1	1	0	0	1	2 8
25		-	-	-	-	-	-	-	-	-	-	-		
26	4:14	0	0	1	2	1	2	12	2	0	0	0	4	14
27	0:13	0	0	1	2	1	2	12	2	0	0	0	4	8
28		-	-	-	-	-	-	-	-	-	-	-		
29	1:13	0	0	1	4	1	4	14	2	0	0	0	2	9
30	1:31	0	0	1	4	1	4	14	2	2	0	0	2	8
Sum		75		343		418		114		114		348		
Mean		2.9		13.2		16.1		4.4		4.4		k=0.833		

10 11 12 / 2 3 (4) 5 6 7 8 9 10  
 $10780 \div 322 = 33.5$        $46815 = 21.2$   
 $53965 = 12.3$

Days 26      8cm Refractor X67 Projection 15cm



MONTHLY REPORT OF SUNSPOT OBSERVATION

MAY 1977 Observer - K. Fujimori Suwa City, Nagano

Date	Time U. T.	N		S		Total 10g+f		Facula		Cent.		Seeing 5 - 1	Rem	
		g	f	g	f	g	f	E	W	g	f			
1	0h02m	0	0	1	3	1	3	13	1	1	1	3	4	15
2		-	-	-	-	-	-	-	-	-	-	-		R
3	2:00	1	9	1	1	2	10	30	1	1	1	1	2	22
4		-	-	-	-	-	-	-	-	-	-	-		C
5		-	-	-	-	-	-	-	-	-	-	-		R
6	0:38	1	7	0	0	1	7	17	1	0	0	0	2 - 3	16
7	3:45	1	6	0	0	1	6	16	2	1	0	0	4	12
8	3:07	1	6	1	1	2	7	27	2	2	0	0	3 - 4	19
9	3:54	2	6	1	1	3	7	37	2	0	0	0	2	25
10	4:01	2	9	1	4	3	13	43	1	1	0	0	4	29
11	2:53	2	7	1	4	3	11	41	1	2	0	0	4	34
12	0:29	2	4	2	10	4	14	54	1	2	1	6	3	35
13	0:16	2	3	2	9	4	12	52	1	2	1	5	4	26
14	0:45	1	2	2	8	3	10	40	1	2	2	4	4	33
15		-	-	-	-	-	-	-	-	-	-	-		R
16	4:10	0	0	1	15	1	15	25	1	1	1	15	2	21
17	0:03	0	0	1	14	1	14	24	3	1	1	14	3	20
18	3:16	0	0	1	6	1	6	16	1	1	1	1	2	12
19	0:04	0	0	0	0	0	0	0	1	1	0	0	2	0
20	0:03	0	0	1	2	1	2	12	2	2	1	2	2	11
21	1:16	0	0	1	6	1	6	16	2	2	1	1	2	14
22		-	-	-	-	-	-	-	-	-	-	-		C
23	3:39	0	0	1	1	1	1	11	1	2	0	0	2	7
24	2:44	0	0	0	0	0	0	0	2	1	0	0	1 - 2	7
25		-	-	-	-	-	-	-	-	-	-	-		R
26		-	-	-	-	-	-	-	-	-	-	-		C
27	0:13	1	1	1	1	2	2	22	1	1	0	0	4	13
28	3:55	0	0	1	3	1	3	13	1	2	1	3	3	16
29	3:07	1	8	1	1	2	9	29	1	2	2	9	2 - 3	20
30		-	-	-	-	-	-	-	-	-	-	-		C
31	1:40	2	38	0	0	2	38	58	2	1	0	0	3	40
Sum		296		300				596			204			447
Mean		12.9		13.0				25.9			8.9			

11 12 1 2 3 4 ⑤ 6 7 8 9 10 11  
 $10974 \div 320 = 34.3$        $N7149 = 22.3$   
~~N7149~~  
 $53825 = 12.0$

$k = 0.750$

Days 23

8cm Refractor X67 Projection 15cm

MONTHLY REPORT OF SUNSPOT OBSERVATION

JUNE 1977 Observer - K. Fujimori Suwa City, Nagano

Date	Time U. T.	N		S		Total 10g+f		Facula		Cent.		Seeing 5 - 1	Remarks	
		g	f	g	f	g	f	E	W	g	f			
1	5h03m	2	26	1	5	3	31	61	2	2	0	0	2 - 3	44
2		-	-	-	-	-	-	-	-	-	-	-		C
3	3:26	2	11	2	7	4	18	58	2	2	1	4	2 - 3	43
4	0:02	2	15	3	15	5	30	80	2	2	2	14	3 - 4	49
5		-	-	-	-	-	-	-	-	-	-	-		M
6	2:06	2	10	1	19	3	29	59	2	1	1	2	2	33
7		-	-	-	-	-	-	-	-	-	-	-		C
8	2:26	1	5	2	19	3	24	54	1	2	1	16	2	38
9	2:43	0	0	2	21	2	21	41	3	2	1	16	2	33
10		-	-	-	-	-	-	-	-	-	-	-		R
11	4:23	0	0	2	17	2	17	37	0	2	0	0	2	27
12	2:54	0	0	2	10	2	10	30	1	2	1	3	2	22
13	0:19	0	0	2	7	2	7	27	0	1	1	2	2	20
14	0:10	1	2	2	5	3	7	37	0	1	1	3	2	25
15		-	-	-	-	-	-	-	-	-	-	-		C
16	1:54	0	0	1	3	1	3	13	3	2	0	0	2 - 3	8
17		-	-	-	-	-	-	-	-	-	-	-		R
18		-	-	-	-	-	-	-	-	-	-	-		R
19	0:58	1	1	3	4	4	5	45	4	2	0	0	2 - 3	36
20	4:20	1	2	1	4	2	6	26	3	1	0	0	3	21
21	2:49	1	2	1	15	2	17	37	2	0	0	0	2 - 3	26
22	3:34	1	2	1	12	2	14	34	2	0	0	0	1	40
23	4:08	2	4	1	23	3	27	57	2	0	1	2	2	57
24		-	-	-	-	-	-	-	-	-	-	-		R
25		-	-	-	-	-	-	-	-	-	-	-		R *
26	2:23	2	30	1	31	3	61	91	2	1	2	32	2 - 3	naked 7/6
27	5:18	2	47	1	24	3	71	101	2	2	0	0	4	naked 7/6
28	1:22	2	44	1	16	3	60	90	1	4	1	43	4	naked 5/6
29	1:08	1	44	1	12	2	56	76	3	2	1	44	3	naked 5/6
30		-	-	-	-	-	-	-	-	-	-	-		C
Sum		475		579		1054		321						782
Mean		23.8		29.0		52.7		16.1						K=0.742

12 / 2 3 4 5 6 7 8 9 10 11 12  
 $12476 \div 322 = 38.7$        $17729 = 24.0$   
 $54747 = 14.7$

Days 20

8cm Refractor E67 Projection 15cm

MONTHLY REPORT OF SUNSPOT OBSERVATION

JULY 1977 Observer - K. Fujimori Suwa City, Nagano

Date	Time U. T.	N		S		Total 10g+f		Facula		Cent.		Seeing		Rem	
		g	f	g	f	g	f	E	W	g	f	5	1		
1	5h33m	1	33	1	1	2	34	54	1	2	1	33	42	2	naked
2	2:10	2	33	1	1	3	34	64	2	2	1	8	45	3	naked
3	0:33	3	26	0	0	3	26	56	4	2	0	0	42	- 3	
4	3:40	3	27	0	0	3	27	57	2	3	0	0	39	2	
5	1:24	3	20	1	2	4	22	62	2	2	0	0	40	- 3	
6	0:58	4	13	1	2	5	15	65	3	2	0	0	40	3	
7	0:10	2	14	1	2	3	16	46	2	1	0	0	25	3	
8	0:12	1	10	1	2	2	12	32	2	1	0	0	20	2	
9	0:02	1	5	1	2	2	7	27	2	3	0	0	17	2	
10	1:09	1	2	1	2	2	4	24	0	3	1	2	23	2	
11		-	-	-	-	-	-	-	-	-	-	-	-	-	
12	0:06	0	0	1	6	1	6	16	1	2	1	6	8	4	
13	1:07	0	0	1	8	1	8	18	1	1	0	0	10	3	
14	4:32	0	0	1	1	1	1	11	1	3	0	0	7	4 - 5	
15	0:03	0	0	0	0	0	0	0	1	3	0	0	0	3 - 4	
16	0:00	0	0	0	0	0	0	0	2	1	0	0	0	4	
17	3:17	0	0	0	0	0	0	0	2	1	0	0	0	3	
18	4:32	0	0	0	0	0	0	0	2	0	0	0	0	2	
19	0:06	0	0	0	0	0	0	0	2	0	0	0	7	5	
20	2:11	0	0	1	1	1	1	11	3	0	0	0	8	2	
21	0:04	1	2	0	0	1	2	12	2	0	0	0	8	4	
22	0:07	2	5	0	0	2	5	25	2	1	1	3	23	4	
23	0:01	4	8	1	4	5	12	62	3	2	2	5	30	5	
24	0:14	3	4	1	6	4	10	50	4	1	1	1	45	4	
25	0:04	2	3	1	7	3	10	40	3	2	1	2	38	3	
26	2:32	3	12	2	7	5	19	69	3	1	3	7	41	2	
27	2:24	2	9	1	3	3	12	42	1	3	1	3	34	3	
28	2:42	2	7	0	0	2	7	27	1	2	1	3	26	2	
29	1:04	3	6	0	0	3	6	36	2	2	2	3	16	2	
30	2:44	1	2	0	0	1	2	12	1	1	0	0	8	2	
31	1:07	0	0	0	0	0	0	0	1	2	0	0	7	2 - 3	
Sum		681		237		918		236		649					
Mean		22.7		7.9		30.6		7.9							

1 2 3 4 5 6 (7) 8 9 10 11 12 1 K=0.707  
 $13.678 \div 318 = 43.0$  N 8439 = 26.5  
 S 5239 = 16.5

Days 30      8cm Refractor X67 Projection 15cm



MONTHLY REPORT OF SUNSPOT OBSERVATION

SEPTEMBER 1977 Observer - K. Fujimori Suwa City, Nagano

Date	Time	N		S		Total 10g+f		Facula		Cent.		Seeing		Re	
		g	f	g	f	g	f	E	W	g	f	5	- 1		
1	1h15m	3	9	2	3	5	12	62	1	2	1	1	22	3	
2	1:54	2	8	0	0	2	8	28	1	3	1	2	29	3	
3	3:32	2	26	0	0	2	26	46	2	4	1	15	292	- 3	
4		-	-	-	-	-	-	-	-	-	-	-	-	-	M
5	0:47	2	19	0	0	2	19	39	1	2	2	18	20	4	
6		-	-	-	-	-	-	-	-	-	-	-	-	-	M
7	0:08	3	9	0	0	3	9	39	1	0	1	6	25	2	
8	0:02	2	11	0	0	2	11	31	3	1	1	9	18	2	
9		-	-	-	-	-	-	-	-	-	-	-	-	-	R
10		-	-	-	-	-	-	-	-	-	-	-	-	-	C
11	0:04	4	39	0	0	4	39	79	3	1	1	1	45	3	
12	3:40	3	50	0	0	3	50	80	4	1	0	0	57	2 (naked e)	
13	0:01	3	59	0	0	3	59	89	2	1	2	23	48	2	" =1
14	0:02	2	64	0	0	2	64	84	2	0	2	64	47	3	" =1
15	2:49	2	62	0	0	2	62	82	1	0	2	62	53	2-3	" =1
16	0:03	3	70	0	0	3	70	100	2	2	2	68	56	3	" =1
17	0:03	3	61	0	0	3	61	91	1	1	2	57	53	2	" =1
18	3:17	3	42	1	2	4	44	84	2	2	1	4	59	2	" =1
19		-	-	-	-	-	-	-	-	-	-	-	-	-	R
20	1:28	3	26	1	29	4	55	95	2	4	1	2	58	3	
21	0:17	2	14	1	28	3	42	72	2	1	1	2	59	2	
22		-	-	-	-	-	-	-	-	-	-	-	-	-	C
23	0:19	1	3	1	25	2	28	48	1	2	1	15	41	3	
24	4:14	2	9	2	14	4	23	63	2	2	1	8	48	2	
25		-	-	-	-	-	-	-	-	-	-	-	-	-	C
26	(-)51	2	32	2	7	4	39	79	2	2	1	21	49	2	
27	1:39	3	24	2	5	5	29	79	2	3	1	14	54	2 - 3	
28	2:05	4	20	1	3	5	23	73	3	2	1	3	61	3	
29		-	-	-	-	-	-	-	-	-	-	-	-	-	R
30	3:04	3	31	1	6	4	37	77	4	2	1	21	67	3	
Sum		1258		262		1520		686		992					
Mean		57.2		11.9		69.1		31.2							

$K = 0.653$

Days 22 Sun. Refractor X67 Projection 15cm  
 3 4 5 6 7 8 9 10 11 12 1 2 3  
 $18427 \div 315 = 58.5$        $N 11896 = 37.7$   
 $S 6541 = 20.8$



MONTHLY REPORT OF SUNSPOT OBSERVATION

OCTOBER 1977 Observer - K. Fujimori Suwa City, Nagano

Date	Time U. T.	N		S		Total 10g+f		Facula		Cent.		Seeing 5 - 1	Remarks	
		g	f	g	f	g	f	E	W	g	f			
1	2h11m	3	26	2	5	5	31	81	3	4	1	17	2 - 3	45
2	1:39	2	20	1	3	3	23	53	4	3	1	17	2	31
3		-	-	-	-	-	-	-	-	-	-	-		
4	5:52	3	32	1	3	4	35	75	2	0	2	6	1 - 2	45
5	2:36	3	16	1	6	4	22	62	2	2	2	8	3	38
6	2:11	4	27	1	7	5	34	84	2	2	1	2	2 - 3	47
7		-	-	-	-	-	-	-	-	-	-	-		
8		-	-	-	-	-	-	-	-	-	-	-		
9	0:26	5	30	1	2	6	32	92	2	3	0	0	3	C - R 45
10	3:11	4	25	1	2	5	27	77	1	3	2	20	2 - 3	36
11		-	-	-	-	-	-	-	-	-	-	-		
12	2:08	3	23	0	0	3	23	53	1	1	2	20	2 - 3	M 27
13	1:06	5	36	0	0	5	36	86	2	1	2	26	2	53
14	0:51	5	30	0	0	5	30	80	2	1	4	25	2 - 3	45
15	1:04	4	31	0	0	4	31	71	4	1	2	25	3	48
16	0:04	6	31	0	0	6	31	91	3	2	4	22	3	53
17	4:03	5	36	0	0	5	36	86	3	3	3	17	3	50
18	0:45	4	35	0	0	4	35	75	3	3	2	21	3	50
19	0:04	4	23	1	12	5	35	85	1	3	1	5	2	46
20	1:17	4	19	1	17	5	36	86	0	4	1	3	2 - 3	53
21	2:12	3	14	1	18	4	32	72	1	2	2	15	2	38
22	1:07	1	10	2	21	3	31	61	0	1	1	11	4	35
23	1:24	2	4	2	18	4	22	62	2	4	0	0	3 - 4	25
24	0:22	0	0	2	8	2	8	28	3	2	0	0	3	31
25	2:26	2	8	2	6	4	14	54	2	3	1	1	3	25
26	2:49	1	5	2	4	3	9	39	3	4	0	0	3	29
27	0:30	2	14	2	5	4	19	59	5	4	0	0	2 - 3	40
28	5:23	3	21	0	0	3	21	51	3	3	1	10	2 - 3	39
29	1:11	3	28	1	4	4	32	72	4	3	2	22	3	39
30	3:03	3	22	1	4	4	26	66	2	2	2	20	2	43
31	3:28	3	22	2	8	5	30	80	3	1	2	15	2	51
Sum		1458		423		1881		738						1107
Mean		54.0		15.7		69.7		27.3						K=0.589

Days 27

8cm Refractor X67 Projection 15cm

4 5 6 7 8 9 10 11 12 1 2 3 4

$$21435 \div 311 = 68.9$$

$$N13789 = 44.3$$

$$S 7646 = 24.6$$



MONTHLY REPORT OF SUNSPOT OBSERVATION

NOVEMBER 1977 Observer - K. Fujimori Suwa City, Nagano

Date	Time U. T.	N		S		Total 10g+f		Facula		Cent.		Seeing 5 - 1	Remarks	
		g	f	g	f	g	f	R	W	g	f			
1	1h09m	2	17	2	6	4	23	63	4	3	0	0	2	44
2		-	-	-	-	-	-	-	-	-	-	-		G
3	3:24	1	10	1	6	2	16	36	2	3	2	12	3	22
4		-	-	-	-	-	-	-	-	-	-	-		C -
5	2:46	1	12	1	4	2	16	36	5	4	1	12	2	20
6	2:30	1	14	1	2	2	16	36	2	3	1	14	1	223
7	3:08	2	8	1	3	3	11	41	2	2	0	0	1	2234
8	3:09	2	6	1	2	3	8	38	3	3	0	0	1	2225
9	2:55	2	3	1	2	3	5	35	3	2	0	0	1	231
10	3:13	2	3	2	5	4	8	48	3	1	0	0	2	25
11	1:05	2	3	2	6	4	9	49	1	1	1	1	2	25
12	1:57	2	4	1	9	3	13	43	2	3	2	11	1	224
13		-	-	-	-	-	-	-	-	-	-	-		M
14	3:39	3	11	1	2	4	13	53	5	4	1	4	2	24
15	3:18	1	6	3	10	4	16	56	3	2	0	0	2	33
16		-	-	-	-	-	-	-	-	-	-	-		C -
17		-	-	-	-	-	-	-	-	-	-	-		R
18	1:13	4	42	3	8	7	50	120	3	3	1	30	2	50 naked eye
19	2:07	3	40	2	3	5	43	93	1	2	2	37	2	35/11 = 1
20	3:45	3	33	0	0	3	33	63	0	1	1	30	1	23/11 = 1
21	3:14	2	23	0	0	2	23	43	2	3	1	16	3	28
22		-	-	-	-	-	-	-	-	-	-	-		R
23	3:11	2	11	0	0	2	11	31	1	3	1	3	1	20
24	0:52	2	11	0	0	2	11	31	4	5	0	0	1	15
25	0:15	2	6	0	0	2	6	26	2	4	0	0	2	38
26		-	-	-	-	-	-	-	-	-	-	-		R
27	2:48	2	2	0	0	2	2	22	3	2	0	0	2	14
28	3:50	1	2	0	0	1	2	12	3	1	0	0	2	7
29	1:59	1	2	0	0	1	2	12	4	0	0	0	3	10
30	2:11	1	3	1	6	2	9	29	3	0	0	0	2	24
Sum		712		304		1016				310				
Mean		31.0		13.2		44.2				13.5				

$k = 0.579$

Days 23      8cm Refractor X67 Projection 15cm

5 6 7 8 9 10 (11) 12 1 2 3 4 5

$\frac{27745}{23833} \div 307 = 77.6$

$11557 = 50.7$   
 $58276 = 27.0$

MONTHLY REPORT OF SUNSPOT OBSERVATION

DECEMBER 1977 Observer - K. Fujimori Suwa City, Nagano

Date	Time	N		S		Total 10g+f		Facula		Cent.		Seeing	Remarks	
		g	f	g	f	g	f	W	W	g	f			
1	2h21m	0	0	1	14	1	14	24	4	1	0	0	2	20
2	3:26	2	4	1	12	3	16	46	3	1	2	4	2	15
3	(-)13	1	1	1	13	2	14	34	5	1	1	1	1 - 2	31
4	1:47	2	11	1	16	3	27	57	3	1	2	11	2	47
5	3:23	2	17	1	15	3	32	62	3	2	2	24	2 - 3	62
6	1:23	2	18	3	23	5	41	91	2	1	3	29	2	58
7	3:53	2	14	3	29	5	43	93	3	1	1	14	2	55
8		-	-	-	-	-	-	-	-	-	-	-		M
9	2:13	1	3	3	46	4	49	89	2	5	0	0	3 - 4	55
10	1:12	2	14	5	67	7	81	151	2	7	3	28	3	75
11	1:24	2	15	4	64	6	79	139	4	5	2	59	2	71
12	3:40	2	10	5	51	7	61	131	5	3	1	41	1 - 2	53
13	3:10	2	11	2	32	4	43	83	5	3	1	4	1 - 2	34
14	3:06	2	6	1	11	3	17	47	4	2	1	3	1 - 2	32
15		-	-	-	-	-	-	-	-	-	-	-		C
16		-	-	-	-	-	-	-	-	-	-	-		C
17		-	-	-	-	-	-	-	-	-	-	-		R
18	1:30	3	6	1	4	4	10	50	1	3	3	8	2	28
19	3:20	4	16	1	3	5	19	69	1	2	2	9	1 - 2	39
20	3:50	1	7	1	1	2	8	28	1	4	0	0	1 - 2	23
21	1:25	2	8	1	1	3	9	39	3	5	1	1	2	23
22	1:17	2	11	1	1	3	12	42	4	1	1	1	2 - 3	17
23	2:26	1	5	1	2	2	7	27	1	3	1	5	1 - 2	23
24	3:57	2	10	1	7	3	17	47	1	3	1	8	3	25
25		-	-	-	-	-	-	-	-	-	-	-		C
26	3:28	3	9	1	15	4	24	64	4	1	0	0	1 - 2	36
27	1:45	3	13	3	13	6	26	86	7	2	1	1	1 - 2	50
28	1:28	3	14	1	8	4	22	62	3	2	1	3	1	38
29	1:35	3	14	3	14	6	28	88	3	1	3	0	1 - 2	58
30	5:25	3	-	2	-	5	-	-	-	-	2	-	1	M
31		-	-	-	-	-	-	-	-	-	-	-		R
Sum		727		922		1649				590				968
Mean		30.3		38.4		68.7				24.6				k=0.587

Days 24      Sun Refractor X67 Projection 15cm

6 7 8 9 10 11 (12) 1 2 3 4 5 6

$25702 \div 304 = 84.5$

$16932 = 55.7$   
~~N 16452~~  
 $S 8780 = 28.8$