

MONTHLY REPORT OF SUNSPOT OBSERVATION

JANUARY 1970 Observer - K. Fujimori Suva, Nagano

λ 138° 20"
φ +36° 2' 12"

Date	Time		N		S		Total		log ₂ f ₊ f ₋	Facula		Cent		Series	Remarks
	U.	T.	g	f	g	f	g	f		E	W	g	f		
1			—	—	—	—	—	—	—	—	—	—	—		c
2			—	—	—	—	—	—	—	—	—	—	—		c
3	3 ^h	29 ^m	4	50	2	16	6	66	126	6	2	2	47	2-3	
4			—	—	—	—	—	—	—	—	—	—	—		S
5			—	—	—	—	—	—	—	—	—	—	—		S
6	3:	23	3	34	1	2	4	36	76	1	4	4	36	3	
7	3:	15	2	20	0	0	2	20	40	1	4	1	6	4	
8	3:	21	3	12	1	1	4	13	53	2	2	1	1	3	
9	3:	18	1	1	4	15	5	16	66	2	3	2	7	3	
10	3:	42	0	0	6	38	6	38	98	4	1	1	4	2	
11	2:	30	2	3	7	63	9	66	156	2	4	1	13	2	
12	3:	25	2	5	10	90	12	95	215	3	3	3	50	2	
13	3:	25	2	8	11	100	13	108	238	3	4	3	47	1~2	
14	3:	25	2	9	11	118	13	127	257	4	2	7	81	1~2	
15			—	—	—	—	—	—	—	—	—	—	—		c
16	4:	05	3	17	12	113	15	130	280	3	1	9	81	2-3	
17	3:	20	2	21	12	88	14	109	249	5	3	6	49	1~2	
18	2:	20	4	28	11	96	15	124	274	4	5	8	65	4~5	
19	3:	30	3	38	12	70	15	108	258	3	4	7	82	2-3	
20	3:	21	2	26	9	49	11	75	185	4	6	8	62	2-3	
21	3:	23	1	22	7	55	8	77	157	2	5	4	36	3	
22	3:	19	3	21	8	41	11	62	172	2	3	4	19	2	
23			—	—	—	—	—	—	—	—	—	—	—		c
24	3:	17	2	4	4	27	6	31	91	4	2	1	6	2	
25	4:	00	1	2	7	60	8	62	142	2	2	5	49	2	
26	3:	23	0	0	6	87	6	87	147	2	3	5	73	2	
27	3:	30	2	6	9	129	11	135	245	1	3	8	124	2	肉眼黒点 = 1
28	3:	25	1	9	9	130	10	139	239	3	3	8	125	2-3	" = 1
29	3:	25	1	13	9	123	10	136	236	3	3	4	57	2	" = 1
30			—	—	—	—	—	—	—	—	—	—	—		c
31			—	—	—	—	—	—	—	—	—	—	—		R
Sum				809		3191		4000					2091		
Mean				35.2		138.7		173.9	73.9				90.9		

Days 23 100^{mm} Refractor x56 Direct Vision
80^{mm} Refractor x67 Projection 15^{cm}

78 9 10 11 12 ① 23 4 5 6 7
36882 ÷ 261 = 141.3
N17808 = 68.2
S19074 = 73.1

MONTHLY REPORT OF SUNSPOT OBSERVATION
 FEBRUARY 1970 Observer - K. Fujimori Suwa, Nagano # 436'2'12"

λ 138°20"
 φ +36'2'12"

Date	Time		N		S		Total		Facula			Cent.		Seems	Remarks	
	U.	T.	g	f	g	f	g	f	10 ³ E	W	g	f	5-1			
1	2	30 ^m	1	12	8	65	9	77	16	7	3	4	2	13	1-2	
2	3	23	2	20	8	25	10	45	14	5	4	6	1	6	2	
3	3	20	3	14	7	35	10	49	14	9	3	4	3	23	3	
4	3	16	3	11	3	21	6	32	9	2	2	2	4	24	4	
5	3	14	2	6	3	19	5	25	7	5	2	1	3	19	2	
6	3	22	1	2	8	28	9	30	12	0	3	2	4	14	2-3	
7	3	23	2	4	6	37	8	41	12	1	3	2	4	28	2-3	
8			-	-	-	-	-	-	-	-	-	-	-	-	-	S
9	3	22	1	29	5	31	6	60	12	0	4	1	3	31	1	
10	3	23	2	65	8	43	10	108	20	8	4	2	6	82	2-3	肉眼黒点 = 1
11	3	35	2	72	9	50	11	122	23	2	3	3	7	104	3	" = 1
12	3	23	2	71	8	66	10	137	23	7	3	2	7	95	2-3	" = 2
13	3	25	2	64	7	69	9	133	22	3	3	3	3	42	3	" = 2
14	3	25	1	43	6	65	7	108	17	8	4	4	4	30	2-3	
15																C
16	3	24	2	18	5	76	7	94	16	4	2	3	1	28	2	肉眼黒点 = 1
17	3	24	2	6	6	87	8	93	17	3	2	3	2	37	3	" = 1
18	3	26	3	15	8	101	11	116	22	6	3	4	2	51	2	" = 1
19	3	22	2	10	7	104	9	114	20	4	4	3	2	62	2	" = 1
20	3	25	3	11	6	114	9	125	21	5	4	3	2	59	2-3	" = 2
21	3	23	4	15	7	67	11	82	19	2	3	2	5	50	2	" = 1
22	6	23	5	37	5	65	10	102	20	2	3	1	6	43	2-3	" = 1
23			-	-	-	-	-	-	-	-	-	-	-	-	-	C
24			-	-	-	-	-	-	-	-	-	-	-	-	-	C
25			-	-	-	-	-	-	-	-	-	-	-	-	-	C
26			-	-	-	-	-	-	-	-	-	-	-	-	-	R
27	3	25	5	70	5	35	10	105	20	5	3	2	2	51	2	
28			-	-	-	-	-	-	-	-	-	-	-	-	-	S
Sum				1.095		2.553		3.648						1.622		
Mean				52.1		121.6		173.7		173.7				77.2		

Days 21 100^{mm} Reflector x56 Direct Vision
 80^{mm} Refractor x67 projection 15^{cm}
 8 9 10 11 12 1 ② 3 4 5 6 7 8
 $37792 \div 264 = 143.2$
 N18765 = 71.1
 S19027 = 72.1

MONTHLY REPORT OF SUNSPOT OBSERVATION

MARCH 1970 Observer - K. Fujimori Suwa, Nagano $\lambda 135^{\circ} 7' 20''$
 $\phi +36^{\circ} 2' 12''$

Date	Time		N		S		Total		10 ⁺ f	Facula		Cent. Beings			Remarks
	u.	T.	g	f	g	f	g	f		E	W	g	f	f-1	
1	2 ^h	38 ^m	4	73	3	17	7	90	160	3	4	2	7	5	
2	5	57	5	56	4	22	9	78	168	4	3	2	10	3	肉眼黒点 = 1
3	3	30	3	51	4	20	7	71	141	2	3	4	39	4	" = 1
4			-	-	-	-	-	-	-	-	-	-	-	-	S
5	4	05	3	27	7	39	10	66	166	2	3	3	25	3	肉眼黒点 = 1
6	4	00	3	18	6	44	9	62	152	3	3	2	23	3	" = 1
7	3	25	3	19	7	64	10	83	183	3	3	4	27	3	
8			-	-	-	-	-	-	-	-	-	-	-	-	M
9			-	-	-	-	-	-	-	-	-	-	-	-	c
10			-	-	-	-	-	-	-	-	-	-	-	-	c
11	3	20	3	6	7	55	10	61	161	3	4	4	38	2	肉眼黒点 = 1
12	3	30	2	4	3	45	5	49	99	2	3	2	34	1-2	" = 1
13			-	-	-	-	-	-	-	-	-	-	-	-	c
14	3	25	3	9	4	40	7	49	119	2	3	3	13	2	
15	3	50	2	4	4	33	6	37	97	4	2	2	18	4	
16			-	-	-	-	-	-	-	-	-	-	-	-	c
17			-	-	-	-	-	-	-	-	-	-	-	-	c
18	3	15	0	0	4	13	4	13	53	3	3	1	1	4-5	
19	3	20	2	7	3	6	5	13	63	3	4	2	6	3	
20	3	24	4	22	3	6	7	28	98	2	4	2	9	3	
21			-	-	-	-	-	-	-	-	-	-	-	-	M
22			-	-	-	-	-	-	-	-	-	-	-	-	M
23			-	-	-	-	-	-	-	-	-	-	-	-	M
24			-	-	-	-	-	-	-	-	-	-	-	-	M
25			-	-	-	-	-	-	-	-	-	-	-	-	M
26	3	23	5	56	5	22	10	78	178	3	1	6	67	2-3	肉眼黒点 = 1
27	3	25	5	63	4	8	9	71	161	3	3	4	40	3	
28	3	30	6	59	3	11	9	70	160	2	3	4	24	2-3	
29	2	20	5	34	3	21	8	55	135	2	2	3	18	3	
30			-	-	-	-	-	-	-	-	-	-	-	-	c
31	3	20	4	26	6	19	10	45	145	2	3	5	28	3	
Sum				1154		1285		2439					977		
Mean				64.1		71.4		135.5	135.5				54.3		

Days 18 100^{mm} Reflector x56 Direct Vision
 80^{mm} Retractor x67 projection 15^{cm}
 9 10 11 12 1 2 (3) 4 5 6 7 8 9
 $37745 \div 258 = 146.3$ $119258 = 74.6$
 $518487 = 71.7$

MONTHLY REPORT OF SUNSPOT OBSERVATION
 APRIL 1970 Observer - K. Fujimori Suwa, Nagano, $\lambda 138^{\circ}7'20''$
 $\phi +36^{\circ}3'12''$

Date	Time	N		S		Total		10 ⁴ f	Facula		cent.		Seeing	Remarks
		g	f	g	f	g	f		E	W	g	f		
1	0 ^h 40 ^m	4	28	4	21	8	49	129	2	3	4	34	2-3	
2	3:08	3	34	3	17	6	51	111	3	2	2	30	3	
3		-	-	-	-	-	-	-	-	-	-	-	-	C
4		-	-	-	-	-	-	-	-	-	-	-	-	C
5	2:30	4	21	6	49	10	70	170	4	1	2	20	2-3	
6	2:32	4	24	5	58	9	82	172	6	2	2	25	3	肉眼黒点 = 1
7		-	-	-	-	-	-	-	-	-	-	-	-	C
8	4:35	5	51	4	66	9	117	207	2	3	4	92	2	肉眼黒点 = 2
9	3:10	5	70	5	63	10	133	233	3	2	5	82	3	" = 3
10		-	-	-	-	-	-	-	-	-	-	-	-	C
11		-	-	-	-	-	-	-	-	-	-	-	-	C
12	3:03	6	62	5	50	11	112	222	2	6	3	37	2-3	肉眼黒点 = 1
13	4:03	4	49	6	45	10	94	194	3	5	3	33	2	
14	3:08	3	41	4	33	7	74	144	3	5	2	33	4-5	
15	3:17	3	31	5	24	8	55	135	3	5	2	9	2-3	
16	2:30	2	34	6	18	8	52	132	3	3	1	3	5	
17		-	-	-	-	-	-	-	-	-	-	-	-	C
18		-	-	-	-	-	-	-	-	-	-	-	-	R
19		-	-	-	-	-	-	-	-	-	-	-	-	R
20		-	-	-	-	-	-	-	-	-	-	-	-	C-R
21	4:03	3	14	3	13	6	27	87	3	2	5	21	4	
22	3:50	2	21	3	17	5	38	88	2	2	3	16	5	
23	4:40	3	17	3	23	6	40	100	2	4	2	24	4-5	
24	3:43	3	19	3	19	6	38	98	2	3	3	18	3	
25		-	-	-	-	-	-	-	-	-	-	-	-	C
26		-	-	-	-	-	-	-	-	-	-	-	-	C
27	4:00	3	9	3	18	6	27	87	3	2	1	3	2	
28		-	-	-	-	-	-	-	-	-	-	-	-	C
29	3:53	2	16	5	39	7	55	125	3	2	4	28	2-3	
30	3:00	3	29	6	49	9	78	168	4	3	5	61	2-3	
Sum		1.190		1.412		2.602					1.099			
Mean		66.1		78.4		144.5		144.5			61.1			

Days 18 100^{mm} Reflector x56 Direct Vision
 80^{mm} Refractor x67 projection 15^{cm}
 10 11 12 / 2 3 (4) 5 6 7 8 9 10
 $39482 \div 253 = 148.2$
 $N19548 = 77.3$
 $S17934 = 70.9$

MONTHLY REPORT OF SUNSPOT OBSERVATION

MAY 1970 Observer - K. Fujimori Suwa, Nagano $\lambda 138^{\circ} 7' 20''$
 $\phi +36^{\circ} 2' 12''$

Date	Time U. T.	N		S		Total		10g+	Facula		Cent.		Seeing 5-1	Remarks
		g	f	g	f	g	f		E	W	g	f		
1	3 ^h 44 ^m	2	25	6	41	8	66	146	4	3	40	2		
2		-	-	-	-	-	-	-	-	-	-	-	M	
3	3 = 48	3	30	8	34	11	64	174	3	4	22	4-5		
4	3 = 50	3	23	6	18	9	41	131	-	-	5	15	2	肉眼黒点 = 2
5	1 = 45	4	30	7	35	11	65	175	1	3	6	28	5	" = 2
6		-	-	-	-	-	-	-	-	-	-	-	C	
7		-	-	-	-	-	-	-	-	-	-	-	C	
8	5 = 00	3	41	4	10	7	51	121	-	-	4	34	2	
9	2 = 40	4	36	3	12	7	48	118	2	5	3	30	3	
10		-	-	-	-	-	-	-	-	-	-	-	C	
11		-	-	-	-	-	-	-	-	-	-	-	R	
12	3 = 51	6	37	4	25	10	62	162	4	2	1	2	2-3	
13	4 = 19	5	52	3	33	8	85	165	3	3	2	29	2	
14	3 = 56	3	38	3	31	6	69	129	2	2	2	31	1	
15	3 = 50	4	54	6	62	10	116	216	3	1	7	70	3	肉眼黒点 = 2
16	5 = 00	4	68	5	64	9	132	222	-	-	8	85	2	" = 2
17		-	-	-	-	-	-	-	-	-	-	-	R	
18	3 = 50	4	82	6	56	10	138	238	3	2	5	85	2-3	肉眼黒点 = 1
19	4 = 10	3	63	5	42	8	105	185	-	-	2	59	2	
20		-	-	-	-	-	-	-	-	-	-	-	R	
21	4 = 10	6	73	5	29	11	102	212	2	5	4	38	3-4	
22	3 = 47	4	47	4	22	8	69	149	3	3	2	13	2	
23	3 = 13	4	46	4	22	8	68	148	2	3	3	24	3	
24	2 = 18	4	39	4	30	8	69	149	4	3	4	42	4	
25		-	-	-	-	-	-	-	-	-	-	-	M	
26	2 = 57	4	19	4	46	8	65	145	3	2	3	51	1-2	
27	3 = 00	4	11	7	62	11	73	183	3	3	5	61	4	
28		-	-	-	-	-	-	-	-	-	-	-	M	
29	4 = 14	4	11	5	47	9	58	148	3	2	3	35	2	
30	4 = 08	5	22	5	45	10	67	167	3	2	4	24	2-3	
31	3 = 43	5	32	6	54	11	86	196	3	4	5	27	3	
Sum		1.759		1.920		3.679				1.715				
Mean		79.9		87.3		167.2		167.2		78.0				

Days 22 100^{mm} Reflector x56 Direct Vision
 80^{mm} Refractor x67 projection 15^{cm}
 11 12 / 2 3 4 ⑤ 6 7 8 9 10 11
 38137 ÷ 253 = 150.7
 N 20100 = 79.4
 S 18037 = 71.3

MONTHLY REPORT OF SUNSPOT OBSERVATION

JUNE 1970, Observer - K. Fujimari Suwa, Nagano λ 138° 7' 20"
φ +36° 2' 12"

Date	U		N		S		Total		Diff	Faculae		Cent		Secies	Remarks
	+	-	+	-	+	-	+	-		E	W	+	-		
1	4 ^h	10 ^m	4	35	4	38	8	73	153	2	2	6	45	2	
2	3	18	5	20	4	30	9	50	140	2	3	5	32	2-3	
3			-	-	-	-	-	-	-	-	-	-	-	-	C
4	3	16	3	5	3	9	6	14	74	1	2	3	6	2-3	
5			-	-	-	-	-	-	-	-	-	-	-	-	C
6	3	13	1	1	4	7	5	8	52	4	4	0	0	2	
7	3	00	1	2	5	12	6	14	74	4	2	0	0	5	
8	3	17	2	12	2	5	4	17	57	4	2	0	0	3-4	
9	3	21	2	21	1	4	3	25	55	2	2	1	4	2	
10			-	-	-	-	-	-	-	-	-	-	-	-	R
11			-	-	-	-	-	-	-	-	-	-	-	-	C
12			-	-	-	-	-	-	-	-	-	-	-	-	C
13	3	20	6	108	2	5	8	113	193	2	2	3	41	2-3	
14			-	-	-	-	-	-	-	-	-	-	-	-	R
15			-	-	-	-	-	-	-	-	-	-	-	-	R
16			-	-	-	-	-	-	-	-	-	-	-	-	R
17			-	-	-	-	-	-	-	-	-	-	-	-	C
18			-	-	-	-	-	-	-	-	-	-	-	-	C
19			-	-	-	-	-	-	-	-	-	-	-	-	R
20	3	20	7	31	2	6	9	37	127	-	-	3	7	1-2	
21	4	30	6	34	3	8	9	42	132	3	2	4	12	2	
22			-	-	-	-	-	-	-	-	-	-	-	-	C
23			-	-	-	-	-	-	-	-	-	-	-	-	C
24	3	24	3	34	5	17	8	51	131	2	2	3	17	3	
25			-	-	-	-	-	-	-	-	-	-	-	-	R
26	3	27	6	28	4	9	10	37	137	-	-	5	19	1-2	
27	8	20	5	44	4	14	9	58	148	3	3	3	17	2-3	
28	3	10	6	56	3	18	9	74	164	4	2	6	21	3-4	
29	3	10	5	55	4	26	9	81	171	3	3	4	47	2-3	肉眼黒点 = 1
30			-	-	-	-	-	-	-	-	-	-	-	-	R
Sum			1106		708		1814				728				
Mean			73.7		47.2		120.9		120.9		48.5				

Days 15 100^{mm} Reflector x56 Direct Vision

80^{mm} Retractor x67 projection 15^{cm}
12 1 2 3 4 5 6 7 8 9 10 11 12

$37.896 \div 252 = 150.4$

$N 19631 = 77.9$
 $S 18265 = 72.5$

MONTHLY REPORT OF SUNSPOT OBSERVATION

JULY 1970

Observer-K. Fujimori Suwa, Nagano. $\lambda 138^{\circ}7'20''$
 $\phi +36^{\circ}2'12''$

Date	Time U. T.	N		S		Total		log f	Faculd		Cent.		Seeing 5-1	Remarks
		g	f	g	f	g	f		E	W	g	f		
1		-	-	-	-	-	-	-	-	-	-	-		c
2	3 ^h 20 ^m	5	48	5	48	10	96	196	2	2	5	78	2	肉眼黒点 = 1
3	3:22	6	58	4	64	10	122	222	2	3	4	68	3	" = 1
4	3:25	5	59	4	85	9	144	234	3	3	4	75	3	" = 1
5	4:05	5	39	4	90	9	129	219	1	3	7	78	3	" = 1
6		-	-	-	-	-	-	-	-	-	-	-		M
7	4:20	4	34	5	66	9	100	190	2	3	3	49	3	
8		-	-	-	-	-	-	-	-	-	-	-		c
9		-	-	-	-	-	-	-	-	-	-	-		M
10	3:20	5	18	3	26	8	44	124	3	5	3	7	4	
11		-	-	-	-	-	-	-	-	-	-	-		R
12	3:50	4	22	2	14	6	36	96	2	2	2	11	2	
13		-	-	-	-	-	-	-	-	-	-	-		c
14	3:22	4	22	1	12	5	34	84	4	2	2	17	2	
15	3:24	3	22	3	14	6	36	96	4	2	4	33	2-3	
16		-	-	-	-	-	-	-	-	-	-	-		c
17		-	-	-	-	-	-	-	-	-	-	-		c
18	3:18	3	24	1	2	4	26	66	2	2	1	3	3-4	
19	5:00	3	47	5	8	8	55	135	2	2	3	11	4	
20	3:23	3	50	4	12	7	62	132	2	2	3	18	2-3	
21	3:20	3	50	4	9	7	59	129	3	3	4	14	2	
22	3:25	5	68	4	10	9	78	168	3	3	3	48	2-3	肉眼黒点 = 1
23	3:22	4	61	2	8	6	69	129	4	2	1	57	3-4	" = 1
24	3:25	3	61	3	13	6	74	134	4	1	1	44	2-3	" = 1
25	3:21	3	90	4	20	7	110	180	4	3	1	49	2-3	" = 1
26	3:55	5	98	4	21	9	119	209	5	3	4	84	3	
27	3:24	5	94	4	17	9	111	201	4	3	5	63	3	
28	2:30	6	104	4	27	10	131	231	6	3	6	76	3-4	肉眼黒点 = 1
29	3:20	7	87	4	29	11	116	226	3	1	9	84	2-3	" = 1
30		-	-	-	-	-	-	-	-	-	-	-		R
31		-	-	-	-	-	-	-	-	-	-	-		c
Sum		2066		1335		3401					1711			
Mean		98.4		63.6		162.0		162.0			81.5			

Days 21 100^{mm} Reflector x56 Direct Vision
 80^{mm} Refractor x67 projection 15 cm
 1 2 3 4 5 6 (7) 8 9 10 11 12 /
 $119868 = 78.5$
 $37508 \div 253 = 148.3$
 $512640 = 69.7$

MONTHLY REPORT OF SUNSPOT OBSERVATION

AUGUST 1970 Observer - K. Fujimori Suwa, Nagano λ 138° 20"
φ +36° 2' 12"

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	3:00 ^m	3	26	2	16	5	42	92	-	-	2	16	1-2	
2	2:03	4	25	2	14	6	39	99	3	3	2	14	3-4	
3		-	-	-	-	-	-	-	-	-	-	-		M
4		-	-	-	-	-	-	-	-	-	-	-		M
5	3:18	3	33	2	3	5	36	86	1	2	1	17	3	
6	3:15	4	35	1	2	5	37	87	2	3	2	12	3	
7		-	-	-	-	-	-	-	-	-	-	-		R-C
8	3:13	4	41	1	17	5	58	108	2	2	3	45	3	
9	4:10	3	55	1	28	4	83	123	4	2	3	68	4	
10	3:13	3	52	1	20	4	72	112	3	2	4	63	3	
11	3:16	3	49	1	10	4	59	99	2	1	3	45	3	
12	3:30	3	72	1	7	4	79	119	1	3	3	37	3	
13	3:20	3	56	3	3	6	59	119	2	2	3	31	3	
14		-	-	-	-	-	-	-	-	-	-	-		C
15		-	-	-	-	-	-	-	-	-	-	-		R
16	4:45	3	32	4	35	7	67	137	3	3	2	15	4	
17	3:18	3	26	3	37	6	63	123	3	3	2	19	3-4	
18		-	-	-	-	-	-	-	-	-	-	-		R
19	3:20	6	32	6	28	12	60	180	5	3	4	24	4-5	
20	3:22	5	32	5	18	10	50	150	6	3	4	26	2-3	肉眼點集=1
21	3:24	5	39	2	11	7	50	120	4	1	4	31	1	
22		-	-	-	-	-	-	-	-	-	-	-		M
23		-	-	-	-	-	-	-	-	-	-	-		M
24	3:20	8	49	2	16	10	65	165	4	3	4	33	3	
25	3:24	8	41	3	20	11	61	171	3	3	4	20	3	
26	3:18	7	34	3	16	10	50	150	2	3	4	21	1-2	
27	3:16	6	43	2	10	8	53	133	2	5	4	26	4	
28	3:18	8	41	2	8	10	49	149	2	4	6	28	4-5	
29	3:20	7	43	4	17	11	60	170	2	4	6	38	4	
30	3:22	9	45	4	12	13	57	187	3	4	4	16	4	
31		-	-	-	-	-	-	-	-	-	-	-		C
Sum		1,981		898		2879				1,385				
Mean		90.1		40.8		130.9/130.9				63.0				

Days 22 100^m Reflector x5 Direct Vision
 80^m Refractor x67 Projection 15cm
 2 3 4 5 6 7 8 9 10 11 12 12

$36128 \div 255 = 141.7$

$N20474 = 80.3$
 $S15654 = 61.4$

MONTHLY REPORT OF SUNSPOT OBSERVATION
 SEPTEMBER 1970 Observer - K. Fujimori Suwa, Nagano $\lambda 138^{\circ} 7' 20''$
 $\phi +36^{\circ} 2' 12''$

Date	Time	N		S		Total		10g+		Facula		Cent.		Grains	Remarks
		g	f	g	f	g	f	g	f	g	f	g	f		
1	3 h 22 ^m	6	61	4	8	10	69	169	2	6	3	15	4		
2		-	-	-	-	-	-	-	-	-	-	-	-	M	
3	3 = 20	8	69	2	7	10	76	176	3	3	5	51	2-3	肉眼黒点 = 1	
4	3 = 24	8	97	2	8	10	105	205	3	2	6	95	3	" = 1	
5	3 = 24	8	87	4	11	12	98	218	3	2	6	81	2	" = 1	
6		-	-	-	-	-	-	-	-	-	-	-	-	M	
7	3 = 23	6	76	6	23	12	99	219	3	3	5	59	2	肉眼黒点 = 1	
8	3 = 25	7	64	4	23	11	87	197	3	4	6	24	2	" = 1	
9	3 = 24	7	51	5	21	12	72	192	5	4	5	22	3		
10		-	-	-	-	-	-	-	-	-	-	-	-	C	
11	3 = 16	4	22	5	23	9	45	135	2	1	3	17	3-4		
12	3 = 20	3	9	5	16	8	25	105	3	3	2	9	3-4		
13		-	-	-	-	-	-	-	-	-	-	-	-	M	
14		-	-	-	-	-	-	-	-	-	-	-	-	C	
15	3 = 18	2	13	6	23	8	36	116	4	4	3	19	3		
16		-	-	-	-	-	-	-	-	-	-	-	-	C	
17		-	-	-	-	-	-	-	-	-	-	-	-	C	
18		-	-	-	-	-	-	-	-	-	-	-	-	R	
19		-	-	-	-	-	-	-	-	-	-	-	-	R	
20	2 = 50	7	59	3	7	10	66	166	6	3	4	35	3-4		
21	3 = 17	6	79	1	6	7	85	155	4	3	1	45	3-4		
22	3 = 30	6	74	0	0	6	74	134	-	-	3	52	1		
23		-	-	-	-	-	-	-	-	-	-	-	-	R	
24	3 = 30	5	93	1	2	6	95	155	2	4	2	35	2-3		
25		-	-	-	-	-	-	-	-	-	-	-	-	C	
26		-	-	-	-	-	-	-	-	-	-	-	-	C	
27	4 = 24	5	50	2	9	7	59	129	1	3	2	36	4-5		
28		-	-	-	-	-	-	-	-	-	-	-	-	C	
29		-	-	-	-	-	-	-	-	-	-	-	-	C	
30		-	-	-	-	-	-	-	-	-	-	-	-	C	
Sum		1784		687		2471					1155				
Mean		118.9		45.8		164.7		164.7			72.0				

Days 15 100^m Reflector x56 Direct Vision
 80^m Refractor x67 projection 15^{cm}
 3 4 5 6 7 8 (9) 10 11 12 1 2 3
 $34227 \div 256 = 133.7$
 $n 19963 = 78.0$
 $c 14264 = 55.7$

MONTHLY REPORT OF SUNSPOT OBSERVATION
 OCTOBER 1970 Observer - K. Fujimori Suwa, Nagano $\lambda 138^{\circ}20'$
 $\phi +36^{\circ}2'12''$

Date	Time		N		S		Total		Facula			cent.		Seeing 5-1	Remarks
	U.	T.	#	f	#	f	#	f	10+	E	W	#	f		
1	3 ^h	25 ^m	4	16	1	5	5	21	71	3	3	2	6	3	肉眼黒点 = 1
2			-	-	-	-	-	-	-	-	-	-	-		c
3			-	-	-	-	-	-	-	-	-	-	-		c
4			-	-	-	-	-	-	-	-	-	-	-		c-R
5			-	-	-	-	-	-	-	-	-	-	-		c
6	3=51		2	16	1	29	3	45	75	2	3	1	29	4	
7	5=00		2	11	2	33	4	44	84	2	2	1	32	2-3	
8	5=58		3	20	2	64	5	84	134	3	1	2	61	4	
9	4=50		2	14	2	62	4	76	116	2	4	3	25	2	
10			-	-	-	-	-	-	-	-	-	-	-		c
11			-	-	-	-	-	-	-	-	-	-	-		c
12			-	-	-	-	-	-	-	-	-	-	-		c
13			-	-	-	-	-	-	-	-	-	-	-		R
14			-	-	-	-	-	-	-	-	-	-	-		c
15	5=10		4	48	2	7	6	55	115	3	2	2	40	2-3	
16			-	-	-	-	-	-	-	-	-	-	-		R
17			-	-	-	-	-	-	-	-	-	-	-		c
18	3=30		7	56	1	4	8	60	140	4	3	6	53	2	
19			-	-	-	-	-	-	-	-	-	-	-		M
20			-	-	-	-	-	-	-	-	-	-	-		M
21	3=00		6	41	1	2	7	43	113	2	5	2	15	3-4	
22	3=30		7	45	1	2	8	47	127	3	4	2	17	3	
23	3=20		7	55	2	3	9	58	148	4	3	3	18	2-3	
24	3=30		7	70	2	4	9	74	164	3	2	2	22	2	
25	1=23		6	87	2	4	8	91	171	4	2	3	19	2-3	
26			-	-	-	-	-	-	-	-	-	-	-		R-c
27			-	-	-	-	-	-	-	-	-	-	-		c
28	3=27		6	128	1	2	7	130	200	1	3	4	106	1-2	肉眼黒点 = 2
29	3=20		6	-	2	-	8	-	-	-	-	4	-		M
30			-	-	-	-	-	-	-	-	-	-	-		c
31	3=22		8	86	2	11	10	97	197	-	-	4	44	2	
Sum			1.403		4.52		1.855					8.57			
Mean			100.2		32.3		132.5		132.5			61.2			

Days 14 100^{mm} Reflector x51 Direct Vision
 80^{mm} Refractor x67 Projection 15^{cm}
 4 5 6 7 8 9 10 11 12 1 2 3 4
 $34539 \div 263 = 131.3$ $N 20198 = 76.8$
 $S 14341 = 54.5$

MONTHLY REPORT OF SUNSPOT OBSERVATION

NOVEMBER 1970

Observer - K. Fujimori Suwa, Nagano $\lambda 138^{\circ} 7' 20''$
 $\phi +36^{\circ} 2' 12''$

Date	Time		N		S		Total		log f	Facula		cent	Secing	Remarks	
	U	T	g	f	g	f	g	f		E	W				
1	3	40	7	52	2	14	9	66	156	3	4	2	14	3	
2	2	14	6	37	2	19	8	56	136	3	5	2	19	4	
3	1	20	6	21	4	25	10	46	146	2	4	3	17	4	
4	2	10	3	14	4	41	7	55	125	2	2	3	27	2	
5			-	-	-	-	-	-	-	-	-	-	-	-	M
6	2	30	3	14	5	47	8	61	141	2	4	6	40	2-3	
7	4	50	3	12	6	78	9	90	180	3	3	6	80	2-3	
8	3	36	4	7	6	43	10	50	150	2	4	4	36	2-3	
9	4	10	3	16	3	27	6	37	97	3	5	2	20	3-4	
10	2	50	4	28	4	17	8	45	125	3	3	1	7	1-2	
11	3	40	4	23	4	9	8	32	112	3	3	1	2	1-2	
12	3	40	4	41	2	19	6	60	120	3	3	3	16	2-3	
13	3	48	4	87	3	13	7	100	170	3	2	3	74	3	肉斑黒点=1
14			-	-	-	-	-	-	-	-	-	-	-	-	C
15			-	-	-	-	-	-	-	-	-	-	-	-	R
16	3	30	4	145	2	27	6	172	232	2	2	5	138	1-2	肉斑黒点=1
17	4	58	4	139	2	31	6	170	230	4	5	6	170	3	" = 1
18	4	00	6	181	1	31	7	212	282	-	-	5	139	2-3	不確定
19			-	-	-	-	-	-	-	-	-	-	-	-	R
20			-	-	-	-	-	-	-	-	-	-	-	-	R
21	3	40	8	86	1	2	9	88	178	2	3	1	20	1-2	
22	3	30	11	77	1	2	12	79	199	2	3	4	7	3-4	
23	3	23	9	60	2	4	11	64	174	2	2	5	15	3	
24	4	04	6	34	2	9	8	43	123	1	2	4	18	3-4	
25	3	30	6	18	2	9	8	27	107	4	3	4	14	3-4	
26			-	-	-	-	-	-	-	-	-	-	-	-	R
27			-	-	-	-	-	-	-	-	-	-	-	-	R
28	3	50	5	33	3	10	8	43	123	5	5	2	10	4	
29			-	-	-	-	-	-	-	-	-	-	-	-	C
30	3	22	6	29	6	22	12	51	171	4	3	3	8	1-2	
Sum			2,308		1,169		3,477						1,570		
Mean			104.9		53.1		158.0		158.0				71.4		

Days 22 100^{mm} Reflector x5E Direct Vision
 80^{mm} Reflector x6E Projection 15^{cm}

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

$33832 \div 268 = 126.2$

$N 20633 = 77.1$
 $S 13199 = 49.3$

MONTHLY REPORT OF SUNSPOT OBSERVATION

DECEMBER 1970 Observer - K. Fujimori Suwa, Nagano λ 138° 20"
φ 36° 2' 12"

Date	Time		N		S		Total		10 ⁵ ±f	Facula		Ccnt.		Seeing	Remarks
	U.	T.	g	f	g	f	g	f		E	W	g	f		
1			-	-	-	-	-	-	-	-	-	-	-	-	M
2			-	-	-	-	-	-	-	-	-	-	-	-	S-S
3	3 ^h	30 ^m	5	23	4	19	9	42	132	-	-	7	30	1-2	75
4	3:	30	3	15	4	26	7	41	111	-	-	5	36	1	65
5	3:	25	3	18	5	41	8	59	139	2	3	7	53	3	85
6	3:	10	3	20	4	37	7	57	127	2	4	3	30	2-3	79
7	3:	22	3	20	4	38	7	58	128	3	4	2	14	2	88
8			-	-	-	-	-	-	-	-	-	-	-	-	C
9	3:	25	3	64	2	25	5	89	139	4	3	1	17	2	87
10	3:	23	3	84	3	35	6	119	179	5	2	3	63	2-3	95
11	3:	30	3	90	4	34	7	124	194	3	2	3	71	2	101
12	3:	22	3	66	3	33	6	99	159	3	1	4	83	2	85
13			-	-	-	-	-	-	-	-	-	-	-	-	M
14	3:	18	4	49	1	12	5	61	111	2	3	2	33	3	82
15	3:	17	5	48	1	10	6	58	118	2	2	2	26	3-4	81
16	3:	20	4	43	3	10	7	53	123	3	2	1	10	3	65
17			-	-	-	-	-	-	-	-	-	-	-	-	C
18	3:	20	3	35	2	6	5	41	91	3	3	2	8	2	肉眼黒点 = 170
19			-	-	-	-	-	-	-	-	-	-	-	-	M
20			-	-	-	-	-	-	-	-	-	-	-	-	C
21	3:	00	4	65	3	23	7	88	158	2	2	4	48	3-4	93
22			-	-	-	-	-	-	-	-	-	-	-	-	C
23			-	-	-	-	-	-	-	-	-	-	-	-	C
24			-	-	-	-	-	-	-	-	-	-	-	-	M
25	3:	24	5	22	1	10	6	32	92	-	-	2	16	1	68
26			-	-	-	-	-	-	-	-	-	-	-	-	M
27	3:	02	5	18	1	1	6	19	79	4	3	3	5	4	50
28	3:	15	5	17	1	2	6	19	79	3	3	2	11	3	47
29	3:	20	5	28	2	14	7	42	112	2	3	4	37	4-5	50
30	3:	20	6	27	1	22	7	49	119	3	2	4	40	3-4	71
31			-	-	-	-	-	-	-	-	-	-	-	-	S
Sum				1502		888		2390					1241		1447
Mean				79.1		46.7		125.8	125.8				65.3		

Days 19 100^{mm} Reflector x56 Direct Vision

80^{mm} Refractor x67 Projection 15^{cm}

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

$31482 \div 263 = 119.7$

$N19478 = 74.1$

$S12004 = 45.6$

$K = 0.61$