

MONTHLY REPORT OF SUNSPOT OBSERVATION  
 JANUARY 1971 Observer - K. Fujimori Suwa, Nagano  $\lambda 138^{\circ} 20''$   
 $\phi 36^{\circ} 12''$

Date	Time		N		S		Total		Faculae		Cent.		Seeing	Remarks	
	U.	T.	g	+	g	+	g	f	E	W	g	+	5-1		
1	2	45 <sup>m</sup>	4	31	1	23	5	54	104	3	3	1	9	4	58
2	1	45	5	32	1	8	6	40	100	2	3	3	12	2	62
3			-	-	-	-	-	-	-	-	-	-	-	-	c
4	2	10	5	28	1	5	6	33	93	2	3	3	21	2-3	69
5	3	23	3	14	1	25	4	39	79	3	1	1	8	3	52
6	3	22	3	11	1	44	4	55	95	2	4	1	7	2-3	52
7	3	20	3	8	1	50	4	58	98	2	3	0	0	3	肉眼黒点=1 56
8			-	-	-	-	-	-	-	-	-	-	-	-	M
9	3	20	3	7	2	57	5	64	114	2	3	2	57	2	肉眼黒点=1 74
10	2	13	3	6	3	81	6	87	147	2	2	3	70	4	" = 1 70
11	3	22	2	4	4	45	6	49	109	2	2	4	44	2	" = 1 68
12	3	23	2	7	5	54	7	61	131	3	2	3	47	3	" = 1 75
13			-	-	-	-	-	-	-	-	-	-	-	-	c
14	3	20	4	10	5	33	9	43	133	2	4	4	18	3	67
15	3	50	6	21	3	13	9	34	124	3	4	5	14	2	61
16	3	33	3	35	1	5	4	40	80	3	2	1	4	3-4	65
17	3	36	4	43	0	0	4	43	83	1	3	1	2	2	68
18	3	23	5	41	1	5	6	46	106	2	2	1	2	1	86
19	3	25	5	63	1	12	6	75	135	3	2	2	11	3	肉眼黒点=1 98
20	3	42	7	89	2	19	9	108	198	3	1	3	56	4-5	" = 1 104
21			-	-	-	-	-	-	-	-	-	-	-	-	R
22			-	-	-	-	-	-	-	-	-	-	-	-	c
23	3	24	6	83	1	25	7	108	178	2	3	4	67	3	肉眼黒点=2 96
24	2	12	6	65	2	39	8	104	184	1	2	3	51	4	" = 1 99
25			-	-	-	-	-	-	-	-	-	-	-	-	M
26	3	20	4	27	2	36	6	63	123	3	3	2	10	2-3	88
27	3	30	6	30	3	49	9	79	169	4	3	2	4	3	111
28	3	30	5	37	2	31	7	68	138	3	3	3	19	3	99
29	3	46	4	39	2	33	6	72	132	1	2	4	35	3	95
30			-	-	-	-	-	-	-	-	-	-	-	-	M
31			-	-	-	-	-	-	-	-	-	-	-	-	M
Sum			1.711		1.142		2.853					1.128			1.773
Mean			74.4		49.6		124.0	124.0				49.0			

Days 23 80<sup>mm</sup> Refractor x 67 projection 15<sup>cm</sup>  
 7 8 9 10 11 12 ① 2 3 4 5 6 7 K = 0.62

80<sup>mm</sup> 投影 x 67  
 1971年1月21 15cm 投

$32468 \div 272 = 119.4$

$N 19773 = 72.7$   
 $S 12695 = 46.7$

MONTHLY REPORT OF SUNSPOT OBSERVATION  
 FEBRUARY 1971 Observer-K. Fujimori Suwa, Nagano  $\lambda 158^{\circ}20'$   
 $\phi +36^{\circ}2'12''$

Date	Time U. T.	N		S		Total		10g+f	Facula		Cent.		Seeing 5-1	Remarks	
		g	f	g	f	g	f		F	W	g	f			
1	3 <sup>h</sup> 30 <sup>m</sup>	2	54	3	17	5	71	121	3	2	3	65	2	肉眼黒点=1	77
2	3:18	2	58	3	15	5	73	123	2	2	2	55	2-3	" =1	78
3	3:21	2	60	4	13	6	73	133	3	3	2	54	3	" =1	68
4	3:16	1	45	2	7	3	52	82	-	-	2	41	1	不确实	80
5	3:17	2	52	2	9	4	61	101	1	2	1	7	2		65
6	3:17	3	46	1	5	4	51	91	1	4	1	5	3		73
7	1:11	4	37	2	7	6	44	104	1	2	2	9	4		75
8	3:14	4	23	1	2	5	25	75	2	3	2	7	1-2		60
9	3:10	3	12	1	2	4	14	54	-	-	1	7	1	不确实	37
10	3:20	2	12	2	3	4	15	55	0	4	1	10	2		37
11	3:13	2	6	4	6	6	12	72	2	3	3	6	2		62
12	3:09	4	11	2	4	6	15	75	1	2	1	2	2		50
13	3:06	5	15	2	4	7	19	89	2	3	2	4	4		63
14	0:20	5	34	1	2	6	36	96	4	4	1	11	4-5		60
15		-	-	-	-	-	-	-	-	-	-	-	-	S	
16	3:10	3	26	3	8	6	34	94	2	3	2	4	4		66
17		-	-	-	-	-	-	-	-	-	-	-	-	R	
18	3:14	3	14	3	28	6	42	102	1	2	4	15	1-2		68
19	3:12	3	7	4	38	7	45	115	2	1	4	14	2		87
20	3:17	4	9	5	38	9	47	137	3	2	2	10	2-3		91
21	0:30	3	13	5	47	8	60	140	4	2	3	16	4		91
22	3:13	3	7	5	62	8	69	149	2	2	3	49	2		100
23		-	-	-	-	-	-	-	-	-	-	-	-	R	
24	3:18	3	18	5	57	8	75	155	1	5	4	57	2	肉眼黒点=1	98
25	3:16	3	13	5	33	8	46	126	2	3	4	31	1-2		93
26	3:10	4	20	3	18	7	38	108	-	-	3	12	2	不确实	69
27	3:12	3	22	3	22	6	44	104	3	2	3	25	3		66
28	0:50	4	31	3	18	7	49	119	5	3	3	23	4-5		71
Sum			1.415		1.205		2.620					1.129			1.985
Mean			56.6		48.2		104.8	104.8				45.2			

Days 25 80<sup>mm</sup> Refractor x67 projection 15<sup>cm</sup>

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

K=0.68

$30886 \div 271 = 114.0$

$Nd. 8422 = 68.0$

$S. 12464 = 46.0$

# MONTHLY REPORT OF SUNSPOT OBSERVATION

MARCH 1971 Observer - K. Fujimori Suwa, Nagano λ 138° 7' 20"  
φ +36° 2' 12"

Date	Time		N		S		Total		log r <sub>f</sub>	Facula		Cent.		Jejins <sub>f</sub>	Remarks
	U.	T.	g	f	g	f	g	f		E	W	g	f		
1	3 <sup>h</sup>	20 <sup>m</sup>	4	25	3	12	7	37	107	3	3	1	15	2	76
2			—	—	—	—	—	—	—	—	—	—	—	—	M
3			—	—	—	—	—	—	—	—	—	—	—	—	R
4	3=	20	4	16	3	12	7	28	98	2	2	3	15	1-2	70
5	3=	16	3	9	3	11	6	20	80	1	2	2	7	2	63
6	3=	14	3	11	3	7	6	18	78	1	3	2	5	3-4	47
7	1=	10	2	5	2	3	4	8	48	2	4	1	1	1	不確定 47
8	3=	12	2	5	3	10	5	15	65	4	3	1	1	3	46
9	3=	10	2	3	3	14	5	17	67	3	4	2	5	4	35
10			—	—	—	—	—	—	—	—	—	—	—	—	S-C
11	3=	10	1	2	3	22	4	24	64	2	3	1	14	3	43
12	3=	10	2	—	3	—	5	—	—	—	—	2	—	—	M
13	3=	14	3	12	3	30	6	42	102	3	2	2	27	2	76
14	1=	38	3	16	4	23	7	39	109	5	2	2	16	3	65
15	3=	12	2	11	3	12	5	23	73	2	2	3	12	1	68
16	3=	13	2	13	4	14	6	27	87	2	2	5	22	2	76
17	3=	10	2	6	4	24	6	30	90	2	3	4	24	2-3	76
18	3=	14	2	5	6	27	8	32	112	3	4	4	20	3	79
19	3=	19	2	4	5	23	7	27	97	2	3	1	5	3-4	63
20	3=	12	1	2	5	21	6	23	83	2	3	1	4	3	50
21	0=	50	1	2	4	21	5	23	73	1	2	1	11	4	51
22	1=	30	0	0	3	22	3	22	52	1	3	2	19	4	55
23			—	—	—	—	—	—	—	—	—	—	—	—	S
24	1=	40	0	0	3	22	3	22	52	1	0	2	15	3	51
25			—	—	—	—	—	—	—	—	—	—	—	—	M
26	1=	50	1	2	3	23	4	25	65	2	2	1	2	3	49
27	3=	14	2	3	3	21	5	24	74	3	3	2	7	3	55
28	2=	50	1	2	3	29	4	31	71	2	2	1	6	4	49
29			—	—	—	—	—	—	—	—	—	—	—	—	M
30			—	—	—	—	—	—	—	—	—	—	—	—	R
31			—	—	—	—	—	—	—	—	—	—	—	—	R 1280
Sum				584		1163		1747					693		
Mean				26.5		52.9		79.4	79.4				31.5		K=0.73

Days 22 80<sup>m</sup> Refractor × 67 projection 15<sup>cm</sup>

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

$28863 \div 263 = 109.7$

K = 0.73  
N 16747 = 63.7  
S 12116 = 46.1

MONTHLY REPORT OF SUNSPOT OBSERVATION  
 APRIL 1971 Observer-K. Fujimori Suwa, Nagano  $\lambda 138^{\circ} 7' 20''$   
 $\phi +36^{\circ} 2' 12''$

Date	Time		N		S		Total		log <sub>10</sub> f	Facula		Cent.		Group	Remarks
	U.	T.	g	f	g	f	g	f		=	w	g	f		
1	3 <sup>h</sup>	10 <sup>m</sup>	2	11	2	14	4	25	65	1	2	2	22	3	59
2	3	30	2	14	3	19	5	33	83	2	3	3	30	3-4	56
3	3	30	2	8	3	19	5	27	77	2	2	2	12	2	58
4	3	40	3	7	3	16	6	23	83	2	3	2	4	3	56
5	3	11	3	8	3	10	6	18	78	2	2	1	2	4	65
6	3	20	3	5	4	15	7	20	90	4	2	1	1	4	58
7	3	16	3	21	3	9	6	30	90	3	2	0	0	3-4	59
8	3	44	2	24	3	9	5	33	83	3	2	2	10	2	61
9			-	-	-	-	-	-	-	-	-	-	-	-	R
10	2	50	3	16	1	4	4	20	60	2	2	2	10	3	52
11	2	00	2	14	3	6	5	20	70	2	1	3	10	2-3	46
12	2	17	4	21	4	18	8	39	119	5	1	2	5	3-4	86
13	2	56	4	20	4	28	8	48	128	6	2	1	15	4-5	100
14	0	17	5	21	6	49	11	70	180	4	1	4	35	4-5	113
15	3	20	5	32	5	61	10	93	193	4	2	5	61	3	126
16	2	53	4	38	5	44	9	82	172	4	3	6	51	5	104
17			-	-	-	-	-	-	-	-	-	-	-	-	R
18	3	42	4	42	5	21	9	63	153	3	1	6	56	3	104
19	3	30	6	57	5	24	11	81	191	2	2	6	64	5	110
20	2	50	6	62	4	20	10	82	182	2	4	4	39	4-5	103
21	3	30	6	73	3	13	9	86	176	2	4	2	8	4-5	98
22			-	-	-	-	-	-	-	-	-	-	-	-	R
23	3	00	4	23	3	6	7	29	99	2	4	0	0	3	55
24	2	40	4	8	3	11	7	19	89	3	4	1	1	4	50
25	4	04	1	2	2	20	3	22	52	2	4	2	14	2-3	44
26	3	40	1	19	3	33	4	52	92	2	1	3	47	4-5	53
27	3	33	1	20	3	25	4	45	85	3	2	3	40	4	50
28			-	-	-	-	-	-	-	-	-	-	-	-	M
29			-	-	-	-	-	-	-	-	-	-	-	-	R
30	4	00	1	13	3	8	4	21	61	2	2	2	11	4	36
Sum				1,389		1,362		2,751					1,198		1,802
Mean				55.6		54.5		110.0	110.0				47.9		K=0.66

Days 25 80<sup>m</sup> Refractor x67 projection 15<sup>cm</sup>

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

$29357 \div 263 = 104.0$

$N 15711 = 59.7$

$S 11646 = 44.3$

# MONTHLY REPORT OF SUNSPOT OBSERVATION

MAY 1971 Observer - K. Fujimori Suwa, Nagano  $\lambda 138^{\circ} 7' 20''$   
 $\phi +36^{\circ} 2' 12''$

Date	Time		N		S		Total		10gts	Facula		Cent.		Sein	Remarks	
	U.	T.	g	f	g	f	g	f		E	W	g	f			
1	3 <sup>h</sup>	20 <sup>m</sup>	2	11	3	7	5	18	68	2	3	1	5	3		41
2	5	18	3	7	1	8	4	15	55	3	2	2	10	3		46
3	3	17	3	18	2	4	5	22	72	3	3	2	4	3		52
4			-	-	-	-	-	-	-	-	-	-	-	-	R	
5	5	16	3	51	2	4	5	55	105	3	2	1	41	2		65
6			-	-	-	-	-	-	-	-	-	-	-	-	R	
7	2	40	3	48	1	2	4	50	90	3	2	2	46	2	肉眼黒点=1	72
8	3	24	3	62	1	1	4	63	103	2	1	3	58	2	" = 1	70
9	3	50	4	55	0	0	4	55	95	4	1	2	17	2	" = 1	67
10	4	10	4	45	0	0	4	45	85	-	-	1	2	1		73
11	3	53	5	47	0	0	5	47	97	5	1	1	5	3		61
12	3	44	5	53	0	0	5	53	103	3	1	1	7	3		62
13	3	30	6	46	1	1	7	47	117	3	2	4	16	2		76
14	3	20	6	58	0	0	6	58	118	3	3	3	20	2		73
15	3	24	6	50	1	2	7	52	122	3	2	4	34	3-4		75
16	3	22	5	43	2	6	7	49	119	2	3	3	39	4		81
17	6	10	5	29	1	2	6	31	91	1	2	3	26	3		62
18	2	44	3	18	1	2	4	20	60	2	3	2	16	4		40
19			-	-	-	-	-	-	-	-	-	-	-	-	R	
20	3	40	3	15	0	0	3	15	45	2	3	0	0	2		40
21	3	30	4	14	0	0	4	14	54	2	3	1	3	3		38
22	3	00	3	11	0	0	3	11	41	2	2	1	2	2-3		30
23			-	-	-	-	-	-	-	-	-	-	-	-	M	
24			-	-	-	-	-	-	-	-	-	-	-	-	C	
25	4	00	2	18	0	0	2	18	38	2	4	1	2	3-4		25
26	3	10	1	24	0	0	1	24	34	2	2	0	0	3		35
27			-	-	-	-	-	-	-	-	-	-	-	-	R	
28	3	50	2	16	1	3	3	48	78	1	2	1	13	2		65
29			-	-	-	-	-	-	-	-	-	-	-	-	C	
30	4	50	4	36	1	14	5	50	100	2	2	2	31	4-5		58
31			-	-	-	-	-	-	-	-	-	-	-	-	C	
Sum				1.625		2.65		1.890					807			1010.
Mean				70.7		11.5		82.2	82.2				35.1			

Days 23 80<sup>mm</sup> Refractor x57 projection 15<sup>cm</sup> k=0.69

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

$27730 \div 272 = 101.9$        $N 14953 = 55.0$   
 $S 12777 = 47.0$

MONTHLY REPORT OF SUNSPOT OBSERVATION

JUNE 1971 (Observer - K. Fujimori Suwa, Nagano  $\lambda 138^{\circ} 7' 20''$   
 $\phi +35^{\circ} 2' 12''$ )

Date	Time	N		S		Total		10 <sup>3</sup> +f	Facula		Cent.		Seeing 5-7	Remarks	
		i	f	i	f	i	f		E	W	%	%			
1	3h 17 <sup>m</sup>	4	23	1	3	5	26	76	-	-	2	7	2		49
2	3:17	5	22	2	8	7	30	100	2	1	2	5	2-3		61
3		-	-	-	-	-	-	-	-	-	-	-		c	
4		-	-	-	-	-	-	-	-	-	-	-		R	
5		-	-	-	-	-	-	-	-	-	-	-		M	
6	7:10	1	1	3	12	4	13	53	3	2	3	12	4		25
7	0:00	0	0	3	12	3	12	42	4	1	3	12	4-5		24
8	3:16	1	4	4	10	5	14	64	4	1	5	14	4-5		40
9	3:12	1	6	2	4	3	10	40	3	2	1	2	3		27
10	3:16	1	3	2	5	3	8	38	1	2	1	3	2		24
11		-	-	-	-	-	-	-	-	-	-	-		c	
12		-	-	-	-	-	-	-	-	-	-	-		R	
13		-	-	-	-	-	-	-	-	-	-	-		M	
14		-	-	-	-	-	-	-	-	-	-	-		c	
15	3:20	0	0	2	11	2	11	31	3	2	1	10	3		17
16		-	-	-	-	-	-	-	-	-	-	-		R	
17	3:16	1	4	5	11	6	15	75	2	2	2	4	4		44
18	3:20	1	4	2	10	3	14	44	1	2	1	7	1-2		42
19	3:17	1	5	2	7	3	12	42	2	3	2	7	3		23
20		-	-	-	-	-	-	-	-	-	-	-		c	
21		-	-	-	-	-	-	-	-	-	-	-		R	
22	3:20	1	7	2	13	3	20	50	1	1	0	0	2		31
23	3:12	2	11	2	11	4	22	62	1	1	2	16	3		49
24		-	-	-	-	-	-	-	-	-	-	-		c	
25	2:13	2	21	2	30	4	51	91	2	2	3	33	3		64
26	3:18	3	40	2	28	5	68	118	1	2	4	26	4		88
27		-	-	-	-	-	-	-	-	-	-	-		c	
28		-	-	-	-	-	-	-	-	-	-	-		c	
29	5:30	4	55	4	48	8	103	183	4	3	2	48	4-5		95
30	1:50	5	68	4	67	9	135	225	3	2	3	64	4		91
Sum		604		730		1334					640				794
Mean		35.5		42.9		78.5		78.5			37.6				K=0.60

Days 17 80<sup>m</sup> Retractor x67 projection 15<sup>cm</sup>

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

$27/25 \div 273 = 99.4$

$N 13776 = 50.5$

$S 13349 = 48.9$

# MONTHLY REPORT OF SUNSPOT OBSERVATION

JULY 1971      Observer - K. Fujimori      Suva, Nagano λ 138° 7' 20"  
φ +35° 2' 12"

Date	Time		N		S		Total		10 <sup>+</sup> +	Facula		Cent.	Series 5-1	Remarks	
	U	T	g	f	g	f	g	f		E	W				
1			-	-	-	-	-	-	-	-	-	-		C	
2			-	-	-	-	-	-	-	-	-	-		C	
3	3 <sup>h</sup>	00 <sup>m</sup>	3	16	4	71	7	87	157	2	1	6	84	3	肉眼黒点=1 102
4	3:	20	3	11	4	78	7	89	159	1	1	4	80	3	" = 1 95
5	3:	18	1	2	4	70	5	72	122	2	1	4	55	3	" = 1 84
6	3:	16	2	3	6	63	8	66	146	2	3	2	5	3	" = 1 79
7			-	-	-	-	-	-	-	-	-	-	-		R
8	3:	12	1	2	4	43	5	45	95	2	3	0	0	3-4	70
9	8:	10	1	2	3	35	4	37	77	1	2	1	15	2	58
10	3:	14	1	3	2	40	3	43	73	2	2	1	36	3	42
11	6:	13	1	6	2	34	3	40	70	2	1	1	27	3-4	48
12	3:	14	2	9	2	42	4	51	91	3	1	2	42	2-3	58
13	8:	14	2	18	2	24	4	42	82	2	0	2	15	2-3	54
14	3:	14	3	23	2	21	5	44	94	3	2	2	8	3	61
15	6:	40	3	43	2	6	5	49	99	5	1	1	15	4	82
16	3:	20	3	71	4	17	7	88	158	5	2	2	30	3-4	93
17	4:	06	3	51	5	17	8	68	148	3	2	3	49	2-3	肉眼黒点=1 87
18	2:	20	4	59	3	12	7	71	141	3	1	5	64	4-5	75
19	3:	20	4	70	1	2	5	72	122	2	1	4	51	2	104
20	3:	10	5	73	0	0	5	73	123	1	2	4	75	2	91
21	3:	13	7	74	0	0	7	74	144	1	1	5	61	4	97
22			-	-	-	-	-	-	-	-	-	-	-		R
23			-	-	-	-	-	-	-	-	-	-	-		C
24	3:	30	5	48	4	18	9	66	156	-	-	2	16	2	119
25			-	-	-	-	-	-	-	-	-	-	-		C
26			-	-	-	-	-	-	-	-	-	-	-		R
27	3:	12	4	40	3	10	7	50	120	2	2	4	12	3	80
28	3:	20	3	17	3	19	6	36	96	2	2	2	9	1-2	74
29	3:	08	2	15	4	16	6	31	91	2	1	4	16	3	64
30	3:	14	5	21	4	21	9	42	132	1	2	4	14	4	72
31	2:	10	3	14	4	20	7	34	104	1	3	3	20	4-5	69
Sum			140	1	139	9	280					147	9		1858
Mean			58.4		58.3		116.7	116.7				61.6			K=0.66

Days 24      80<sup>mm</sup> Refractor x67 Projection 15cm

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

26481 ÷ 274 = 96.6      N12767 = 46.6  
 513714 = 50.1

# MONTHLY REPORT OF SUNSPOT OBSERVATION

AUGUST 1971 Observer - K. Fujimori Suway, Nagano R 138° 7' 20"  
b 36° 2' 12"

Date	Time U. T.	N		S		Total		10g <sup>11</sup>	Faculae		Cent.		Seeing 5"-1"	Remarks
		g	f	g	f	g	f		E	W	g	f		
1	1 <sup>h</sup> 00 <sup>m</sup>	3	21	5	21	8	42	122	2	1	4	30	4	70
2	3=41	3	10	4	19	7	29	99	2	3	3	10	4-5	57
3		-	-	-	-	-	-	-	-	-	-	-		M
4	2=33	1	3	4	12	5	15	65	1	1	1	3	4	43
5	3=07	1	3	4	11	5	14	64	2	1	2	3	2	48
6		-	-	-	-	-	-	-	-	-	-	-		C
7		-	-	-	-	-	-	-	-	-	-	-		M
8	3=00	2	10	2	34	4	44	84	2	2	2	21	2-3	55
9	3=12	2	25	1	4	3	66	96	2	1	2	58	2	59
10	3=13	2	20	2	35	4	55	95	1	2	3	43	2-3	64
11	3=10	3	18	1	22	4	40	80	3	3	1	22	3	60
12		-	-	-	-	-	-	-	-	-	-	-		M
13	3=10	4	13	1	15	5	28	78	2	2	2	6	2	58
14	3=40	4	12	1	8	5	20	70	3	2	2	5	2-3	58
15	3=34	4	12	2	8	6	20	80	1	1	3	8	5	53
16	0=50	5	13	1	1	6	14	74	3	2	3	7	3	49
17	3=18	4	12	1	7	5	19	69	2	1	3	12	3	52
18	5=40	4	9	2	20	6	29	89	-	-	3	6	1-2	60
19	3=20	4	7	2	39	6	46	106	2	2	3	5	2	62
20		-	-	-	-	-	-	-	-	-	-	-		C
21		-	-	-	-	-	-	-	-	-	-	-		C
22		-	-	-	-	-	-	-	-	-	-	-		C
23		-	-	-	-	-	-	-	-	-	-	-		C
24		-	-	-	-	-	-	-	-	-	-	-		C
25	3=20	2	16	2	116	4	132	172	2	1	2	113	3	肉眼黒点=2 91
26	3=20	2	11	3	102	5	113	163	2	2	3	15	3	=2 92
27	3=18	0	0	2	67	2	67	87	1	2	1	6	2	49
28	3=12	0	0	2	58	2	58	78	2	2	1	7	3-4	37
29	0=00	0	0	2	28	2	28	48	2	2	0	0	4-5	29
30		-	-	-	-	-	-	-	-	-	-	-		R
31		-	-	-	-	-	-	-	-	-	-	-		R
S. m		715		1104		1819				320				1136
Mean		35.8		55.2		91.0		91.0		41.0				K=0.62

Days 20 SO<sup>11m</sup> Refractor x67 Projection 15<sup>cm</sup>

2 3 4 5 6 7 ⑧ 9 10 11 12 1 2

$$25891 \div 267 = 97.0$$

$$N 12008 = 45.0$$

$$S 13883 = 52.0$$



MONTHLY REPORT OF SUNSPOT OBSERVATION  
 SEPTEMBER 1971 Observer, K. Fujimori Suwa, Nagano  $\lambda 138^{\circ} 20''$   
 $\phi +36^{\circ} 2' 12''$

Date	Time U. T.	N		S		Total		Faculae		Cent.		Seeing 5-1	Remarks	
		g	f	g	f	g	f	Dg+g	E w	g	f			
1	3 <sup>h</sup> 24 <sup>m</sup>	0	0	2	3	2	3	23	2	2	0	0	2-3	22
2	3:08	0	0	2	4	2	4	24	2	2	0	0	4-5	18
3		-	-	-	-	-	-	-	-	-	-	-		c
4	3:15	1	2	1	23	2	25	45	1	2	2	25	2	25
5		-	-	-	-	-	-	-	-	-	-	-		R
6		-	-	-	-	-	-	-	-	-	-	-		R
7		-	-	-	-	-	-	-	-	-	-	-		R
8	3:18	4	31	1	25	5	56	106	2	3	3	7	2-3	55
9		-	-	-	-	-	-	-	-	-	-	-		R
10		-	-	-	-	-	-	-	-	-	-	-		R
11		-	-	-	-	-	-	-	-	-	-	-		R
12	1:40	2	4	1	3	3	7	37	1	3	1	3	2	27
13	3:13	3	5	1	12	4	17	57	3	1	1	12	2	43
14		-	-	-	-	-	-	-	-	-	-	-		M
15		-	-	-	-	-	-	-	-	-	-	-		M
16	3:14	2	6	2	39	4	45	85	2	1	1	3	2-3	59
17		-	-	-	-	-	-	-	-	-	-	-		R
18		-	-	-	-	-	-	-	-	-	-	-		R
19	4:00	3	7	3	41	6	48	108	2	2	3	45	4	65
20		-	-	-	-	-	-	-	-	-	-	-		R
21		-	-	-	-	-	-	-	-	-	-	-		R
22		-	-	-	-	-	-	-	-	-	-	-		R
23	3:13	3	11	2	7	5	18	68	2	4	1	3	2-3	62
24	3:10	1	2	2	13	3	15	45	1	3	1	3	2	30
25	3:03	0	0	2	20	2	20	40	2	2	1	17	3	30
26		-	-	-	-	-	-	-	-	-	-	-		R
27	3:12	0	0	3	19	3	19	49	2	2	1	12	3	38
28		-	-	-	-	-	-	-	-	-	-	-		M
29	4:35	1	10	3	20	4	30	70	-	-	2	8	2	肉眼黒点=16/
30	3:18	1	18	4	31	5	49	99	1	2	3	26	2	" = 16/9
Sum		306		550		856		856		364				604
Mean		21.9		39.3		61.1		61.1		26.0				K=0.766

Days 14 80<sup>mm</sup> Refractor x67 projection 15<sup>cm</sup>

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

$25769 \div 263 = 98.0$

$N 11680 = 44.4$

$S 14089 = 53.6$

MONTHLY REPORT OF SUNSPOT OBSERVATION  
 OCTOBER 1971 Observer - K. Fujimori Suwa, Nagano  $\lambda 138^{\circ}7'20''$   
 $\phi +36^{\circ}2'12''$

Date	Time U. T.	N		S		Total		10 <sup>5</sup> +f	Facula		Cent.		Seeing 5-1"	Remarks
		g	f	g	f	g	f		=	w	g	f		
1		-	-	-	-	-	-	-	-	-	-	-		C
2		-	-	-	-	-	-	-	-	-	-	-		C
3	2 <sup>h</sup> 30 <sup>m</sup>	1	21	2	7	3	28	58	1	1	2	26	3	肉眼黒点=2 48
4		-	-	-	-	-	-	-	-	-	-	-		C
5		-	-	-	-	-	-	-	-	-	-	-		R
6		-	-	-	-	-	-	-	-	-	-	-		C
7		-	-	-	-	-	-	-	-	-	-	-		M
8	3:10	3	10	1	5	4	15	55	1	4	1	3	2-3	45
9	3:03	3	14	1	1	4	15	55	1	3	1	9	2-3	38
10	5:54	3	10	0	0	3	10	40	3	2	1	5	4-5	40
11		-	-	-	-	-	-	-	-	-	-	-		R
12		-	-	-	-	-	-	-	-	-	-	-		C
13		-	-	-	-	-	-	-	-	-	-	-		C
14		-	-	-	-	-	-	-	-	-	-	-		R
15	2:50	0	0	1	4	1	4	14	1	2	0	0	4-5	17
16	3:33	2	3	2	4	4	7	47	1	1	2	2	3	24
17	5:00	2	10	0	0	2	10	30	2	1	1	4	3	24
18	3:13	3	26	0	0	3	26	56	2	2	2	3	4	39
19	5:50	1	36	0	0	1	36	46	2	2	1	4	2	肉眼黒点=1 40
20	3:18	4	53	1	2	5	55	105	2	3	2	4	7	3 " = 1 64
21	3:17	2	59	1	6	3	65	95	1	3	2	6	2	" = 1 73
22	3:20	2	63	1	2	3	65	95	1	1	2	6	3	" = 1 72
23		-	-	-	-	-	-	-	-	-	-	-	-	R
24		-	-	-	-	-	-	-	-	-	-	-	-	M " = 1
25	1:50	4	66	1	2	5	68	118	2	1	1	11	2	" = 1 87
26		-	-	-	-	-	-	-	-	-	-	-	-	M
27		-	-	-	-	-	-	-	-	-	-	-	-	M
28	3:17	4	24	2	12	6	36	96	2	2	2	16	4	63
29		-	-	-	-	-	-	-	-	-	-	-	-	C
30		-	-	-	-	-	-	-	-	-	-	-	-	R
31	2:50	1	3	2	22	3	25	55	2	4	2	19	2	59
Sum			748		217		965					494		733.
Mean			49.9		14.5		64.3	64.3				32.9		

Days 15 80<sup>mm</sup> Refractor x67 projection 15<sup>cm</sup>

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

$25872 \div 261 = 99.1$   $N11652 = 446$   
 $S14220 = 545$

~~K=0.7596~~  
 K=0.760

# MONTHLY REPORT OF SUNSPOT OBSERVATION

NOVEMBER 1971 Observer - K. Fujimori Suwa, Nagano  $\lambda 138^{\circ} 7' 20''$   
 $\phi +36^{\circ} 2' 12''$

Date	Time		N		S		Total		10 <sup>9</sup> ± f	Facula		Cent.		Seeings 5-1	Remarks
	U.	T.	g	f	g	f	g	f		E	W	g	f		
1	3 <sup>h</sup>	16 <sup>m</sup>	2	4	6	26	8	30	110	3	2	4	20	3	76
2	3=	20	2	3	4	31	6	34	94	3	2	1	2	3	69
3	2=	30	2	8	3	26	5	34	84	3	2	1	1	2	62
4	2=	20	3	16	3	26	6	42	102	2	2	1	1	4-5	66
5	2=	00	3	17	3	26	6	43	103	2	3	4	30	4	肉眼黒点 = 1 64
6			-	-	-	-	-	-	-	-	-	-	-	-	R
7			-	-	-	-	-	-	-	-	-	-	-	-	R
8	3=	32	2	12	4	19	6	31	91	2	2	6	31	4	43
9	3=	20	2	11	4	16	6	27	87	1	1	2	11	2	56
10	3=	23	1	2	3	10	4	12	52	1	4	2	5	3	32
11	0=	53	2	6	3	7	5	13	63	2	6	1	2	4-5	40
12	1=	10	1	3	4	8	5	11	61	2	3	2	2	4-5	51
13	1=	06	2	9	4	10	6	19	79	3	4	3	8	3-4	48
14			-	-	-	-	-	-	-	-	-	-	-	-	C
15			-	-	-	-	-	-	-	-	-	-	-	-	C
16	6=	00	0	0	1	8	1	8	18	3	3	0	0	2	26
17			-	-	-	-	-	-	-	-	-	-	-	-	C-R
18			-	-	-	-	-	-	-	-	-	-	-	-	C
19	3=	20	2	3	3	14	5	17	67	2	1	2	9	4-5	肉眼黒点 = 1 48
20	3=	18	0	0	3	20	3	20	50	2	2	1	15	3	" = 1 42
21	3=	20	2	3	4	22	6	25	85	2	1	2	17	4	" = 1 60
22	3=	40	2	11	4	26	6	37	97	4	1	1	2	2	76
23	0=	10	2	17	4	38	6	55	115	3	2	2	4	4-5	97
24	3=	43	2	22	4	32	6	54	114	2	3	4	2	2	86
25	1=	30	1	25	6	35	7	60	130	1	2	3	10	2	87
26	3=	50	2	27	4	62	6	89	149	1	2	6	89	3	97
27			-	-	-	-	-	-	-	-	-	-	-	-	C
28	2=	40	2	29	5	89	7	118	188	2	1	4	112	2	93
29	3=	20	1	16	6	68	7	84	154	2	2	4	56	1	84
30	3=	38	1	11	6	54	7	65	135	1	4	2	11	1-2	73
Sum				645		1583		2.228					1.001		1.456
Mean				28.0		68.8		96.9	96.9				43.5		

Days 23  $80^{\text{mm}}$  Refractor x57 Projection  $15^{\text{cm}}$

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

$25308 \div 257 = 98.5$   $N/1175 = 43.5$   $935$

$514133 = 55.0$

$24.735$

$k=0.654$

# MONTHLY REPORT OF SUNSPOT OBSERVATION

DECEMBER 1971 Observer - K. Fujimori Suwa, Nagano λ 138° 7' 20"  
φ +36° 2' 12"

Date	Time		N		S		Total		10grf		Facula		cent. Seeing			Remarks
	U.	T.	g	f	g	f	g	f	g	f	E	W	g	f	5-1	
1			-	-	-	-	-	-	-	-	-	-	-	-	-	M
2	3 <sup>h</sup> 20 <sup>m</sup>		1	5	5	33	6	38	98	2	2	1	4	1-2	69	
3	3:10		1	9	4	22	5	31	81	3	2	1	8	4	80	
4	3:10		0	0	3	19	3	19	49	3	2	0	0	1-2	63	
5	3:13		1	6	3	32	4	38	78	3	3	2	32	2	肉眼黒点 = 1 70	
6			-	-	-	-	-	-	-	-	-	-	-	-	C	
7	3:18		3	21	4	30	7	51	121	4	1	4	4	2-3	肉眼黒点 = 1 107	
8	3:16		4	21	3	30	7	51	121	3	0	4	39	2	肉眼黒点 = 1 83	
9	3:20		6	30	5	32	11	62	172	4	2	7	46	2-3	" = 1 108	
10	3:20		6	40	4	25	10	65	165	2	3	3	16	2-3	117	
11	3:19		4	45	5	18	9	63	153	2	3	4	43	2	125	
12	6:10		4	40	4	12	8	52	132	3	2	2	36	2	115	
13	3:18		5	32	4	12	9	44	134	3	4	3	24	2-3	95	
14	3:17		3	35	3	8	6	43	103	2	4	3	24	1-2	85	
15	3:20		4	56	4	9	8	65	145	2	3	4	44	4-5	98	
16	3:16		4	36	4	10	8	46	126	2	3	4	29	2	89	
17	3:20		4	49	5	18	9	67	157	5	3	4	43	2-3	131	
18	3:20		4	45	6	25	10	70	170	3	2	3	37	2	126	
19			-	-	-	-	-	-	-	-	-	-	-	-	C	
20	3:20		3	14	6	49	9	63	153	3	3	3	7	4	105	
21			-	-	-	-	-	-	-	-	-	-	-	-	M	
22	3:18		1	4	4	63	5	67	117	1	4	3	54	2	94	
23	3:20		1	4	4	80	5	84	134	1	2	4	80	2	84	
24	3:21		0	0	8	104	8	104	184	2	1	6	100	2-3	97	
25			-	-	-	-	-	-	-	-	-	-	-	-	C	
26			-	-	-	-	-	-	-	-	-	-	-	-	R	
27			-	-	-	-	-	-	-	-	-	-	-	-	R	
28	3:17		2	3	6	28	8	31	114	4	2	2	14	2-3	70	
29	3:16		1	3	5	20	6	23	83	3	3	2	7	2	60	
30			-	-	-	-	-	-	-	-	-	-	-	-	R	
31	3:00		1	3	4	32	5	35	85	3	2	1	23	3	52	
Sum			1.31		1.74		2.87					1.45			2.123	
Mean			49.2		75.7		124.9		124.9			63.1			K=0.739	

Days 23      80<sup>mm</sup> Refractor x57 projection 15<sup>cm</sup>

6 7 8 9 10 11 (13) 1 2 3 4 5 6

$$25763 \div 252 = 102.2 \quad N 10425 = 41.4$$

$$S 15338 = 60.9$$