

# SUN-SPOT OBSERVATIONS

JANUARY 1964

Observer - K. Fujimori

SUWA ( $\lambda = 138^{\circ}7'$   
 $\phi = 36^{\circ}2'$ )

Date	J. S. T	N		S		Total		log <sub>10</sub> f	Facula		Central zone	Seeing	Remarks
		g	+	g	+	g	+		E	W			
1													C
2													C
3													C
4	10 <sup>h</sup> 27 <sup>m</sup>	0	0	0	0	0	0	0.0	0	0	0	3	0
5													
6	13 30	0	0	1	3	1	3	13.0	0	1	3	3	13
7	13 30	1	1	1	9	2	10	30.0	1	2	10	3	30
8	13 30	1	2	1	6	2	8	28.0	0	2	8	1-2	28
9	13 20	1	3	1	8	2	11	31.0	0	2	11	3	25
10	14 30	0	0	0	0	0	0	0.0	0	0	0	3-4	15
11	14 10	0	0	1	7	1	7	17.1	1	0	0	3	14
12													
13													
14													
15	10 30	2	15	0	0	2	15	35.0	0	2	15	3	30
16	9 40	2	9	0	0	2	9	29.0	1	2	9	3	29
17													S
18													C
19	14 33	1	3	0	0	1	3	13.0	1	0	0	4	13
20	13 10	1	3	0	0	1	3	13.1	0	0	0	3	13
21	11 0	1	4	0	0	1	4	14.1	2	0	0	3	24
22	14 20	1	4	0	0	1	4	14.0	0	0	0	3	12.5
23													C
24													C
25	13 10	1	6	0	0	1	6	16.0	0	1	6	3	24
26	11 3	1	4	0	0	1	4	14.0	0	1	4	4	13
27	14 0	1	4	0	0	1	4	14.0	0	1	4	2	13
28													S
29	14 10	1	4	1	9	2	13	0.0	2	0	0	2-3	
30													
31													
Total		212		102		314					210		0
Mean		12.5		6.0		18.5	18.5				12.4		

観測日数 17日 観測器械 100<sup>mm</sup> L 直視 x 56) 赤道儀 (同架)

80<sup>mm</sup> K 投影 x 48

7 8 9 10 11 12 ① 2 3 4 5 6 7

$3.906 \div 216 = 18.1$

$N3051 = 14.1$

$S855 = 4.0$

# SUN-SPOT OBSERVATIONS

FEBRUARY 1964 Observer - K. Fujimori Locality - Suwa

Date	J.S.T	N		S		Total		log f	Facula E	Facula W	Centari Zone	1-5 Seeing	Remarks
		g	+	g	+	g	+						
1	13 <sup>h</sup> 10 <sup>m</sup>	0	0	0	0	0	0	0.0	0	0	0	3	
2	12 0	0	0	0	0	0	0	0	0	0	0	2	
3	14 10	0	0	0	0	0	0	0.0	0	0	0	4	
4	13 15	0	0	0	0	0	0	0.0	0	0	0	3	
5													c
6	10 20	0	0	0	0	0	0	0.0	0	0	0	4	
7													c
8													c
9													c
10													c
11													c
12													c
13	11 25	0	0	0	0	0	0	0.0	0	0	0	3	
14	15 10	0	0	0	0	0	0	0.0	0	0	0	3~4	
15	10 20	0	0	0	0	0	0	0.0	0	0	0	2~3	
16	10 10	1	1	1	2	2	3	23.2	0	0	0	3~4	
17	13 10	1	1	1	2	2	3	23.3	0	0	0	3	
18													c
19													s
20													c
21	10 40	1	13	1	1	2	14	34.1	0	2	14	4	
22	13 30	1	9	1	1	2	10	30.0	0	2	10	3~4	
23	12 21	2	31	1	2	3	33	63.0	0	2	31	4	
24													
25													
26	10 30	2	19	0	0	2	19	39.0	1	1	17	3	
27													c
28	12 15	2	15	1	1	3	16	46.0	0	0	0	3	
29	14 10	2	15	0	0	2	15	35.0	2	0	0	3	
Total		224		69		293					142		0
Mean		14.0		4.3		18.3	18.3				8.9		

観測日数 16日 観測器械 100<sup>mm</sup> L直視 x56) 赤道儀(同架)

80<sup>mm</sup> R投影 x48

8 9 10 11 12 1 (2) 3=4 5 6 7 8 N3222 = 14.0  
 4.099 ÷ 230 = 17.8 S 877 = 3.8

# SUN-SPOT OBSERVATION

MARCH 1964 Observer - K. Fujimori Locality - Suwa

Date	J. S. T		N		S		Total		10g <sup>+</sup> f	Facula		Seeing 1-5	Remarks	
			g	+	g	+	g	+		E	W			central zone
1	11	0 <sup>m</sup>	3	6	0	0	3	6	360	2	1	3	4	
2														
3														R
4														M
5	13	10	0	0	0	0	0	0	00	0	0	0	2-3	
6	10	30	0	0	0	0	0	0	00	0	0	0	3-4	
7														S
8														M
9	15	48	0	0	0	0	0	0	00	1	0	0	3-4	
10	7	48	0	0	0	0	0	0	00	1	0	0	4	
11	7	50	0	0	0	0	0	0	00	0	0	0	5	
12	7	56	1	6	1	3	2	9	290	2	0	0	5	140° 新列磁
13	11	10	1	5	1	2	2	7	270	1	0	0	2	
14	11	20	2	9	0	0	2	9	290	2	0	0	2-3	
15	10	4	2	18	0	0	2	18	381	2	0	0	4-5	
16														
17														
18	13	0	1	4	0	0	1	4	141	0	0	0	3-4	
19	7	55	1	2	0	0	1	2	120	1	0	0	4	
20														
21	7	53	1	2	0	0	1	2	120	0	1	2	2-3	
22	13	20	2	15	1	1	3	16	463	0	2	15	2-3	
23	10	14	2	14	0	0	2	14	341	0	1	2	3	黒斑版 1
24	8	40	2	12	0	0	2	12	321	2	1	2	3	
25														S
26														M
27														c
28	15	25	1	2	1	7	2	9	290	2	0	0	2-3	
29	9	0	0	0	1	9	1	9	190	0	1	9	3	
30	11	40	0	0	1	2	1	2	121	0	1	2	4	
31	14	43	0	0	1	2	1	2	121	0	1	2	3	
Total			285	96			381					127		0
Mean			14.3	4.8			19.1					6.4		

観測日数 20日 観測器械 100<sup>mm</sup> L 直視 x56) 赤道儀(同架)  
 9 10 11 12 1 2 ③ 4 5 6 7 8 9  
 80<sup>mm</sup> R 投影 x48  
 $N 2996 = 12.0$   
 $S 720 = 3.1$   
 $3716 \div 230 = 16.2$

# SUN-SPOT OBSERVATIONS

APRIL 1964 Observer - K. Fujimori Locality - Suwa

Date	J.S.T	N		S		Total		10g+	Facula		Centari Zone	Ded. 1-5	Remarks
		g	f	g	f	g	f		E	W			
1													
2	11 50 <sup>m</sup>	0	0	0	0	0	0	0	4	1	0	0	3
3	14 2	0	0	0	0	0	0	0	1	1	0	0	2
4	11 20	0	0	0	0	0	0	0	0	1	0	0	4
5	12 3	1	2	0	0	1	2	12	1	1	0	0	4
6													
7													C
8													R
9													R
10													R
11	12 14	1	1	0	0	1	1	11	0	1	1	1	3
12	12 19	1	1	0	0	1	1	11	2	1	0	0	3
13	13 23	1	1	0	0	1	1	11	1	0	0	0	4
14	12 54	1	1	0	0	1	1	11	1	0	0	0	3
15	12 22	0	0	0	0	0	0	0	0	0	0	0	3
16	12 46	0	0	1	2	1	2	12	0	0	1	2	5
17	12 45	0	0	0	0	0	0	0	1	1	0	0	3
18													C
19													C
20													C
21	12 35	0	0	1	11	1	11	21	0	0	1	11	4
22	7 37	0	0	1	14	1	14	24	0	1	1	14	3
23	11 58	0	0	1	9	1	9	19	0	1	1	9	2-3
24	12 40	0	0	2	9	2	9	29	1	1	1	8	3
25													C
26													R
27	11 55	0	0	0	0	0	0	0	1	1	0	0	3
28													C
29	12 40	0	0	0	0	0	0	0	0	0	0	0	2-3
30	12 53	0	0	0	0	0	0	0	1	0	0	0	4-5
Total			56		105		161					105	0
Mean			3.1		5.8		8.9	8.9				5.8	

観測日数 18日 観測器 100<sup>mm</sup> L 直視 x56  
80<sup>mm</sup> R 接影 x43 > 赤道儀 (同架)

10 11 12 / 1 2 3 (4) 5 6 7 8 9 10  
3298 ÷ 235 = 14.0  
N2653 = 11.3  
S 645 = 2.7

# SUN SPOT OBSERVATIONS

MAY 1964 Observer-K. Fujimori Locality- Suwa

Date	J.S.T	N		S		Total		10g	Facula		Central ZONE	Occur. MS	Remarks
		+	-	+	-	+	-		E	W			
1	-												R
2	13 <sup>h</sup> 15 <sup>m</sup>	0	0	0	0	0	0	0	1	0	0	0	3
3	12 20	0	0	0	0	0	0	0	0	0	0	0	4
4	12 53	0	0	0	0	0	0	0	1	0	0	0	4
5	-												C
6	13 26	0	0	1	3	1	3	13	2	0	1	3	2
7	12 52	0	0	1	5	1	5	15	1	0	1	5	3
8	13 20	0	0	1	4	1	4	14	1	1	0	0	4
9	13 0	0	0	1	1	1	1	11	2	2	0	0	4-5
10	12 38	0	0	1	1	1	1	11	1	1	0	0	2-3
11	13 26	0	0	0	0	0	0	0	1	1	0	0	1-2
12	12 55	0	0	0	0	0	0	0	0	0	0	0	3-4
13	13 50	0	0	0	0	0	0	0	0	0	0	0	3
14													M
15													M
16	12 56	1	3	0	0	1	3	13	0	1	1	3	3-4
17	12 35	1	10	0	0	1	10	20	0	0	0	0	3
18													C
19	11 50	1	5	0	0	1	5	15	0	0	1	5	3-4
20	12 50	1	2	0	0	1	2	12	0	1	1	2	3
21	13 0	0	0	0	0	0	0	0	0	1	0	0	2 異常!
22													M
23	15 45	1	-			1	-	-	-	-	1	-	M
24													M
25	12 55	1	5	0	0	1	5	15	0	1	0	0	2
26													M
27													M
28													M
29													M
30													M
31	12 40	1	3	0	0	1	3	13	0	0	1	3	2-3
Total			88		64		152				81		0
Mean			4.9		3.5		8.4		8.4		4.5		

観測回数 18 回 観測器械 100<sup>mm</sup> L 直視 x56 同架赤道儀  
80<sup>mm</sup> R 投影 x48

11 12 1 2 3 4 ⑤ 6 7 8 9 10 11

$$2931 \div 243 = 12.1$$

$$N 2275 = 9.4$$

$$S 656 = 2.7$$

# SUN SPOT OBSERVATIONS

JUNE 1964 - Observer - K. Fujimori Locality - SUWA

Date	J. S. T	N		S		Total		Wgt	E	W	Central Zone	Seeing	
		+	-	+	-	+	-						
1	13 <sup>h</sup> 20 <sup>m</sup>	1	3	0	0	1	3	130	0	1	3	3	
2													C
3													R-C
4	11 55	1	3	0	0	1	3	130	1	0	0	3-4	
5	14 30	0	0	0	0	0	0	00	0	0	0	3	
6	16 30	0	0	0	0	0	0	00	0	0	0	2	
7	12 51	1	1	0	0	1	1	111	1	0	0	3-4	
8	12 30	0	0	0	0	0	0	01	0	0	0	3	
9													C-R
10	7 18	0	0	0	0	0	0	01	0	0	0	4	
11	11 52	0	0	0	0	0	0	01	0	0	0	2	
12	13 35	0	0	0	0	0	0	00	0	0	0	3	
13	12 50	1	5	0	0	1	5	150	0	1	5	2-3	
14													
15	12 45	2	18	0	0	2	18	381	0	1	10	4	
16	13 0	2	14	0	0	2	14	340	1	1	2	4	
17	8 37	1	7	0	0	1	7	170	0	0	0	3-4	
18	12 45	2	11	0	0	2	11	310	0	1	7	3	
19	12 45	2	16	0	0	2	16	360	1	2	16	3	
20													R
21	17 0	2	6	0	0	2	6	260	0	1	5	3	
22													C
23	14 0	0	0	0	0	0	0	01	1	0	0	3	
24													C
25													R
26	11 15	0	0	0	0	0	0	00	0	0	0	3	
27													R
28	12 0	0	0	0	0	0	0	00	0	0	0	2-3	黒斑!
29	13 40	0	0	0	0	0	0	00	0	0	0	2	
30	12 32	0	0	1	1	1	1	111	0	0	0	4	
Total		234		11		245					128		0
Mean		11.1		0.5		11.6		11.6			6.1		

観測日数 21日 観測器械 100<sup>mm</sup>L 直視 ×56 > 同架赤道儀  
80<sup>mm</sup>R 投影 ×48

12 / 2 3 4 5 ⑥ 7 8 9 10 11 12

$$3068 \div 255 = 12.0$$

$$N \ 2283 = 9.0$$

$$S \ 785 = 3.1$$

# MONTHLY REPORT OF SUNSPOT OBSERVATION

JULY 1964 Observer-K. Fujimori Locality-SUWA

Date	Time J. S. T	N		S		Total		10 <sup>2</sup> ±	Facula		Central Zone	Seems 1-5
		g	f	g	f	g	f		E	W		
1	12 48 <sup>m</sup>	0	0	1	1	1	1	110	0	0	0	2
2	12 41	0	0	0	0	0	0	01	0	0	0	4
3												M
4	13 25	0	0	0	0	0	0	01	0	0	0	2-3
5	14 32	1	4	0	0	1	4	141	0	0	0	3-2
6	7 16	1	4	0	0	1	4	141	0	0	0	3-2
7												C
8												R
9												R
10	12 50	1	1	0	0	1	1	110	0	1	1	3
11												M
12	12 32 <sup>m</sup>	0	0	0	0	0	0	00	0	0	0	3
13												M
14	12 50	1	5	0	0	1	5	150	1	0	0	3
15												C
16	12 40	1	8	0	0	1	8	180	0	1	5	4
17	14 0	1	4	0	0	1	4	140	0	1	4	1-2
18												R
19												R
20	14 0	0	0	0	0	0	0	01	0	0	0	3
21												C
22	11 55	0	0	0	0	0	0	00	1	0	0	3
23	11 52	0	0	0	0	0	0	00	1	0	0	3
24	16 30	0	0	0	0	0	0	00	0	0	0	2
25	13 52	0	0	0	0	0	0	00	0	0	0	3
26	12 15	0	0	0	0	0	0	01	0	0	0	4
27	12 15	0	0	0	0	0	0	00	0	0	0	4
28	11 56	0	0	0	0	0	0	00	0	0	0	4
29	12 30	0	0	0	0	0	0	00	0	0	0	4
30	12 50	0	0	0	0	0	0	00	0	0	0	4
31	12 15	0	0	0	0	0	0	00	1	0	0	4-5
Sum			86		11		97	97			40	0
Mean			4.1		0.5		4.6	4.6			1.9	

Days: 21  
 100<sup>mm</sup> Reflector x56 Direct Vision  
 80<sup>mm</sup> Refractor x48 Projection  
 Parallel an equatorial  
 1 ~ (7) ~ 1  
 $N.2632 = 10.3$   
 $S. 670 = 2.6$   
 $3.302 \div 255 = 12.9$

# MONTHLY REPORT OF SUNSPOT OBSERVATION

AUGUST 1964 Observer-K. Fujimori Locality- SUWA

Date	Time			N		S		Total		log <sub>10</sub> f	Facula E	Facula W	Central Zone	Seeing 1-5	Remarks
	J	S.	T	g	f	g	f	g	f						
1	13	18 <sup>m</sup>		1	7	0	0	1	7	17.0	0	0	0	4-5	
2	14	10		2	8	0	0	2	8	28.0	1	1	3	4	
3	12	45		2	6	0	0	2	6	26.0	1	0	0	4	
4	12	55		1	3	0	0	1	3	13.0	2	0	0	2-3	
5	14	0		1	2	0	0	1	2	12.0	0	0	0	2-3	Observed A. Fujimori
6															
7															
8	13	2		1	2	1	1	2	3	23.1	0	2	3	3	
9															Rain~cloudiness
10	14	10		0	0	1	1	1	1	11.0	0	0	0	3	
11	13	58		1	1	0	0	1	1	11.1	0	0	0	3	
12	13	3		2	9	0	0	2	9	29.1	0	1	7	2-3	
13															Absent Obs-
14	12	15		2	18	0	0	2	18	38.0	1	0	0	3-4	
15	13	48		2	28	0	0	2	28	48.0	1	1	15	4	
16	10	44		2	20	0	0	2	20	40.1	1	1	11	2	
17	15	30		1	8	0	0	1	8	18.1	1	1	8	2	
18															Absent Obs
19	13	14		1	2	0	0	1	2	12.0	0	0	0	4	
20															
21	13	5		1	2	0	0	1	2	12.1	1	0	0	3	
22	11	21		1	1	0	0	1	1	11.1	1	0	0	2	
23	12	20		0	0	0	0	0	0	0.1	0	0	0	4	
24	11	58		0	0	0	0	0	0	0.1	0	0	0	4	
25															Cloudiness
26	12	28		0	0	0	0	0	0	0.1	0	0	0	2	
27	12	40		0	0	0	0	0	0	0.0	0	0	0	2	
28	13	30		0	0	0	0	0	0	0.0	0	0	0	2	
29															Cloudiness
30	15	30		0	0	0	0	0	0	0.0	0	0	0	4	
31	12	18		0	0	0	0	0	0	0.0	1	0	0	3	
Sum				32	7	22		34	9	34.9		11	7		
Mean				1.4	2	1.0		15.2	15.2			5.1			

Days 23 Instrument (100<sup>mm</sup> Reflector x56 Direct Vision  
80<sup>mm</sup> Retractor x48 Projection

2 3 4 5 6 7 (8) 9 10 11 12 1 2  
Σ 27.1 = 12.9      Σ 27.05 = 10.6



# MONTHLY REPORT OF SUNSPOT OBSERVATION

SEPTEMBER 1964 Observer - K. Fujimori Address - Suwa Nagano

Date	Time J. S. T	N		S		Total		10 <sup>h</sup> ±	Facula E W	Central zone	Seeing 1-5	Remarks		
		#	+	#	+	#	+							
1	15 <sup>h</sup> 40 <sup>m</sup>	1	2	0	0	1	2	12	1	0	0	0	2-3	
2														C
3	12 37	1	2	0	0	1	2	12	0	0	0	0	3-4	
4														C
5	12 28	0	0	0	0	0	0	0	1	0	0	0	4	
6	13 10	0	0	0	0	0	0	0	0	0	0	0	5	Obs - AKIKO.F
7	13 15	1	2	0	0	1	2	12	1	0	0	0	3	
8	13 28	2	10	0	0	2	10	30	0	0	1	2	3	
9														C
10														
11	12 13	1	5	0	0	1	5	15	0	1	0	0	4	
12	12 45	1	9	0	0	1	9	19	0	2	0	0	4	
13														C
14	13 10	1	6	0	0	1	6	16	0	1	0	0	3	
15	14 20	1	5	0	0	1	5	15	0	1	0	0	2-3	
16														C
17														C
18	12 40	0	0	0	0	0	0	0	0	0	0	0	3	
19	14 0	0	0	0	0	0	0	0	0	0	0	0	3	
20														C
21														C
22														C
23														C
24														R
25														R
26	12 47	0	0	0	0	0	0	0	0	0	0	0	3	
27														R
28														R
29	11 56	0	0	0	0	0	0	0	1	0	0	0	3	
30	12 15	0	0	0	0	0	0	0	1	0	0	0	3	
Sum			131		0		131					12		
Mean			8.7		0		8.7	8.7				0.8		

Days 15 Instrument (100<sup>mm</sup> Reflector x56 Direct Vision  
80<sup>mm</sup> Refractor x48 projection

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

$2550 \div 257 = 12.6$

$N 2700 = 10.5$

# MONTHLY REPORT OF SUNSPOT OBSERVATION

OCTOBER 1964    Observer - K. Fujimori    Address - Suwa Nagano

Date	Time J. S. T	N		S		Total		10 <sup>+</sup> off	Facula		Central Zone	Seeing 1-5	Remarks	
		g	+	g	+	g	+		E	W				
1	14 <sup>h</sup> 10 <sup>m</sup>	0	0	0	0	0	0	0	0	0	0	0	3-4	
2	13 50	0	0	1	4	1	4	14	0	1	0	0	3	
3	12 15	0	0	0	0	0	0	0	1	0	0	0	2-3	
4	12 47	1	2	0	0	1	2	12	0	1	0	0	5	
5	15 15	1	1	0	0	1	1	11	0	1	0	0	1-2	
6														R
7														C
8														R
9	15 40	1	3	0	0	1	3	13	0	2	0	0	1-2	
10														
11														
12														
13														C
14	15 25	0	0	0	0	0	0	0	2	1	0	0	3	
15														
16														
17														C
18														R
19	12 0	1	5	0	0	1	5	15	0	0	1	5	2	
20	10 45	1	3	0	0	1	3	13	1	0	0	0	3	
21														C
22														R
23														C
24	12 50	0	0	0	0	0	0	0	0	2	0	0	2	
25	12 54	1	1	0	0	1	1	11	1	0	0	0	2	
26	11 36	1	1	0	0	1	1	11	1	0	0	0	2	
27	14 5	0	0	1	2	1	2	12	1	0	1	2	3	
28	11 40	0	0	0	0	0	0	0	0	0	0	0	2	
29	15 20	0	0	0	0	0	0	0	0	0	0	0	3	
30	13 5	0	0	0	0	0	0	0	0	1	0	0	3	
31	10 20	1	2	0	0	1	2	12	1	1	0	0	4-5	
Sum			98		26		124					39		
Mean			5.8		1.5		7.3		7.3			2.3		

Days ~~15~~ Instrument (100<sup>mm</sup> REFLECTOR x56 Direct Vision  
17 80<sup>mm</sup> REFRACTOR x48 projection

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

$$3.005 \div 252 = 11.9$$

$$N 2523 = 10.0$$

$$S 482 = 1.9$$

# MONTHLY REPORT OF SUNSPOT OBSERVATION

NOVEMBER 1964 Observer - K. Fujimori Address - Suwa Nagano

Date	Time J. S. T	N		S		Total	log <sub>10</sub> f	Facula E W	Central Zone	Seeing 1-5	Remarks
		g	+	g	+						
1											
2	12 <sup>h</sup> 10 <sup>m</sup>	0	0	1	2	1	2	120	0	1	2 3~4
3	12 45	0	0	1	2	1	2	120	0	1	2 2
4	11 45	0	0	0	0	0	0	00	1	0	0 3
5	12 0	0	0	0	0	0	0	01	1	0	0 2
6	12 0	0	0	0	0	0	0	01	1	0	0 5
7	9 55	0	0	0	0	0	0	01	1	0	0 3
8											
9											c
10	14 44	0	0	0	0	0	0	01	0	0	0 2
11	9 48	0	0	0	0	0	0	00	0	0	0 4
12											
13	13 15	0	0	0	0	0	0	00	0	0	0 3
14	12 28	1	3	0	0	1	3	130	0	0	0 3-4
15	10 50	1	3	0	0	1	3	130	0	0	0 3
16											
17											
18	14 3	1	7	1	1	2	8	280	1	0	0 2
19	12 8	1	6	0	0	1	6	160	1	0	0 2
20	12 35	1	3	0	0	1	3	130	1	0	0 3
21	12 0	1	3	0	0	1	3	130	1	0	0 2
22	12 5	1	1	0	0	1	1	111	1	0	0 2
23	13 10	0	0	0	0	0	0	00	0	0	0 2
24											c
25	14 15	0	0	0	0	0	0	01	0	0	0 2
26	13 10	0	0	0	0	0	0	00	1	0	0 3
27	13 20	0	0	0	0	0	0	00	1	0	0 3
28	12 13	0	0	0	0	0	0	00	0	0	0 2
29	12 25	0	0	0	0	0	0	00	0	0	0 2
30											c
Sum			96		35		131			24	
Mean			4.4		1.6		6.0	6.0		1.1	

Days 22<sup>d</sup> Instrument (100<sup>mm</sup> REFLECTOR x56 Direct Vision  
80<sup>mm</sup> REFRACTOR x48 Projection

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

$$N 3086 = 12.4$$

$$S 390 = 1.6$$

$$3476 \div 249 = 14.0$$

# MONTHLY REPORT OF SUNSPOT OBSERVATION

DECEMBER 1964 Observer - K. Fujimori Address - Suwa Nagano

Date	Time J. S. T	N		S		Total		10 <sup>+</sup>	Facula		Central Zone	Seeing 5-1 <sup>0</sup>	Remarks	
		g	+	g	+	g	+		E	W				
1	12 <sup>h</sup> 50 <sup>m</sup>	0	0	0	0	0	0	0	0	1	0	0	0	1-2
2	12 35	0	0	0	0	0	0	0	0	0	1	0	0	1
3	12 58	0	0	0	0	0	0	0	0	1	0	0	0	2-3
4	14 0	0	0	0	0	0	0	0	0	1	0	0	0	2
5	13 0	0	0	0	0	0	0	0	0	1	0	0	0	1
6														
7	13 35	1	1	0	0	1	1	1	1	1	0	0	0	3
8	13 25	0	0	0	0	0	0	0	0	1	0	0	0	2
9	12 0	0	0	0	0	0	0	0	0	0	1	0	0	2
10	13 10	0	0	1	2	1	2	1	2	1	0	0	0	1-2
11														
12	12 55	0	0	1	4	1	4	1	4	1	0	0	0	1-2
13	12 13	0	0	1	4	1	4	1	4	1	0	0	0	2-3
14	12 40	0	0	1	5	1	5	1	5	1	2	1	5	3
15	13 30	0	0	1	4	1	4	1	4	0	2	1	4	4
16	1 30	1	4	0	0	1	4	1	4	0	1	0	0	1-2
17														
18														
19	13 40	2	6	1	7	3	13	4	3	1	0	0	0	1-2
20	13 10	2	10	1	3	3	13	4	3	2	1	1	3	2-3
21	13 0	2	5	1	5	3	10	4	0	1	2	1	5	4
22	13 25	1	5	1	5	2	10	3	0	1	3	1	5	4
23	12 55	1	6	0	0	1	6	1	6	0	0	0	0	3
24														
25														
26	13 20	1	3	0	0	1	3	1	3	0	1	0	0	3
27														
28	12 10	3	9	0	0	3	9	3	9	0	1	0	0	2-3
29	12 10	4	15	0	0	4	15	5	5	0	1	2	4	2-3
30	11 35	3	10	0	0	3	10	4	0	0	1	2	8	1-2
31	11 50	1	11	0	0	1	11	2	1	0	0	1	11	2
Sum			305		129		434					145		
Mean			12.7		5.4		18.1					6.0		

Days 24<sup>d</sup> Instrument (100<sup>mm</sup>) REFLECTOR x56 Direct Vision

平均 28/2 ÷ 232 = 12.1  
 N2142 9.2 (80<sup>mm</sup>) REFRACTOR x48 projection  
 5670 2.9

6 7 8 9 10 11 (12) 1 2 13 44 ~~56~~ 3542 ÷ 246 = 144  
 N3103 = 12.6  
 5670 = 1.0