

2007.08.05 (A) S. UeNo HOP0012 Target Check

$r = 13'40'' \xrightarrow{170^\circ} 16'30''$  scan01  
 $P = 270^\circ 20'$  Plage 1  
 $i = 000^\circ 03'$

$r = 13'40'' \xrightarrow{170^\circ} 16'30''$  scan02  
 $P = 264^\circ 58'$  Plage 2  
 $i = 355^\circ 00'$

$r = 13'50'' \xrightarrow{180^\circ} 16'50''$  scan03  
 $P = 256^\circ 22'$  Prominence  
 $i = 346^\circ 24''$

$r = 12'40'' \xrightarrow{140^\circ} 15'00''$  scan04  
 $P = 114^\circ 00'$  Sunspot  
 $i = 24^\circ 00'$

• Dark 90 e 0g x 50

2007.08.06 (A) 小森, 上野 HOP0012

21:45 UT HOP0024 = Prominence 1/2h ㊦

$r = 15'29''$   
 $P = 253^\circ 43'$  a Prominence = HIS 8:15  
 $z = 7 -$

CaH scan 01 <sup>x10</sup> 90"  
 $r = 15'20'' \rightarrow 16'50''$  23:15:19.8  
 $P = 255^\circ 20'$  23:19:25.0 <sup>4:05<sub>m</sub></sup>  
 $i = 345^\circ 20'$

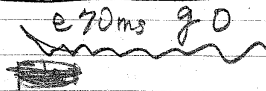
e: 80ms, g: 5

CaH scan 02 <sup>x10</sup>  
 r, p, i 同 r e 80 g 5

CaH scan 03 <sup>x10</sup>  
 " " \* 時 = cloud

CaH scan 04 <sup>x10</sup>  
 " "

Flat 01 e 50 g 5

e 70ms g 0  


$r = 14'50'' \Rightarrow 16'20''$   $P = 274^\circ 00'$   
 $i = 004^\circ 00'$   
 CaH scan 05 <sup>x10</sup>  
 CaH scan 06 <sup>x10</sup>  
 CaH scan 07 <sup>x10</sup>  
 CaH scan 08 <sup>x10</sup>

r=14'40" → 16'10" P=274°00' i=004°00"

Call Scan 9

Flat 02 e45g0 Call 用

Scan 10 20ms θ

r=14'50" → 16'20" P=i

Scan 11

r=14'55" → 16'25" P=277°38' i=007°38"

Scan 12 3496

Scan 13

1313  
x627  
+883x8  
6.5  
1  
2000  
1000

Flare NOAA10966

Ca-K Scan 14<sup>x2</sup> e30g0

K Scan 15<sup>x6</sup> e50g0

r=10'29" → 12'27"

手動スキャン

P=116°33' i=26°40'

Scan 22<sup>x4</sup>  
e30g0  
8219

r=10'25" → 11'55" 自動スキャン

K Scan 16<sup>x10</sup> e60g0

K Scan 17<sup>x10</sup> "

K Scan 18<sup>x10</sup> "

K Scan 19<sup>x10</sup> "

HIS

Exp

~~120 140 200~~  
300 350 550  
270, 320, 520  
110, 140, 200  
100, ~~140~~, ~~200~~  
90  
120

Dark  
12:15

5

12:35

JST

Flat 用

11:50 - 12:10 JST

13:17 (JST)

(West 11mb)

r: +0.8 +0.5 0 -0.5 -0.8  
exp 150 170 230 170 150

14:31 (JST)

exp 120 140 200 140 120

Dark BIN 1, 2  
150, 170, 230

Dark BIN 2  
120, 140, 200

Flat e60g0 x1230

Call 用

Dark 80e5g

Dark 30e5g

Dark 20e0g

Dark 45e0g

Dark 30e0g

Dark 50e0g

Dark 60e0g

r=14'55" 15'05" → 16'35"

P=228°34'

i=008°33'

r=15'05" → 16'35"

P=229°00'

i=9°00'

Call Scan 20<sup>x10</sup> 80e0g

H Scan 21

Dark 80e0g

r=14'40" → 16'10" P=274°00' i=004°00'

Call Scan09

Flat 02 e45g0 Call用

Scan10 20ms 0

r=14'50" → 16'20" P=i

Scan11

r=14'55" → 16'25" P=277°38' i=007°38'

Scan12 3496

Scan13

2313  
x627  
-----  
14433 x 5  
6.5      1  
          2000  
          1000

Flare NoAA10966

2000

Ca-K Scan14<sup>x2</sup> e30g0

K Scan15<sup>x6</sup> e50g0

r=10'27" → 12'27"

手動スキャン

P=116°33' i=26°40'

Scan22<sup>x4</sup>  
e30g0  
8=19

r=10'25" → 11'55" 自動スキャン

K Scan16<sup>x10</sup> e60g0

K Scan17<sup>x10</sup> "

K Scan18<sup>x10</sup> "

K Scan19<sup>x10</sup> "

Flat e60g0 x1230

Call用

Dark 80e5g

Dark 30e5g

Dark 20e0g

Dark 45e0g

Dark 30e0g

Dark 50e0g

Dark 60e0g

HIS

Exp

~~120 140 200~~  
300 350 550

270, 320, 520  
110, 140, 200  
100, ~~140~~, ~~200~~  
90  
120

Dark  
12:15

5  
12:35

JST

Flat 10g

11:50-12:10 JST

13:17 (JST)

(West 11mb)

λ +0.8 +0.5 0 -0.5 -0.8  
exp 150 170 230 170 150

14:31 (JST)

exp 120 140 200 140 120

Dark BIN 1, 2  
150, 170, 230

Dark BIN 2  
120, 140, 200

Call Scan20<sup>x10</sup> 80e0g

H Scan21

Dark 80e0g

2007. 8. 17 (X1) E 野 P 野

6:44 ~ HIS 0.83 0.53 0.03 -0.47 -0.77 Å  
~~180 210 300 210 180~~  
 240 280 400 280 240 ms

6:57 ~ HIS 0.83 0.53 0.03 -0.47 -0.77 Å  
 180 210 300 210 180 ms

8:58 Binning 1 → 2

10:21 ~ 120, 140, 200, 140, 120 ms

10:28 ~ 90, 105, 150, 105, 90 ms

Spectrum

• Scan 01 CaH x2  
 90ms 3g 23.02 ~ 06

• Scan 02 CaH x2 23.08 ~ 11  
 90ms 0g

• Dark 90e 3g

• Dark 90e 0g

• Scan 03 CaK x10  
 70ms 0g

$\left. \begin{array}{l} r = 08'45'' \\ \downarrow 120'' \\ 10'45'' \end{array} \right\} \begin{array}{l} 10:21:24.5 \\ 5 \\ 10:26:27.3 \\ 5/10 \ 2g \end{array}$

$\left. \begin{array}{l} p = 125^{\circ}21' \\ i = 35^{\circ}20' \end{array} \right\}$

• Scan 04 x10 01.44

• Scan 05 x10 01.56

• Scan 06 x10 02.06

• Scan 07 x10 02.17

$\left. \begin{array}{l} r = 09'46'' \\ \downarrow 120'' \\ 09'46'' \\ p = 128^{\circ}28' \\ i = 038^{\circ}27' \end{array} \right\}$

03.13 - 18 60ms 0g → Scan 08 x10

# HIS

# Spectrum

dark  
 16:49 ~  
 ① 200, 280, 400, 280, 240 bin

Scan 09<sup>x10</sup> exp 80 1254-1301  
 Scan 10<sup>x10</sup> exp 60 I3?  
 13-04-09 FIT 7.1 ~ 18?

16:55 ~  
 ② 150, 210, 300, 210, 180, bin

Dark 50eDg

16:59 ~  
 ③ 120, 140, 200, 140, 120, bin

~~Dark 90eDg~~

Dark 70eDg

17:04 ~  
 ④ 90, 105, 150, 105, 90, bin

Dark 80eDg

Dark 60eDg

Flat-Cak (100ms Dg)

Dark 100eDg

2007. 8. 8 (水) PFF, PPF

7:44 黒E NO44 10966  
 HIS

VS

0.83, 53, 03, -47, -11  
 120 140 200 140 120

V = 5'30" ~ 4'30"  
 P = 135°00'  
 A = 47°01'

9:29 ~  
 90, 105, 150, 105, 90

Scan 01 Ca/K x 2  
 exp 90, 80

Scan 02 x10

Scan 03 80ms 80 x10

Scan 04 x10

Scan 05 70ms, 80 x10 → stop?

Scan 5 F ... x3

Scan 06 IF IF x10

Scan 07 T x2

Scan 08 exp 50 IF IF x10

Scan 09 IF IF x10

7 7:48  
 7 7:55  
 7 7:56  
 7 7:57  
 8:39  
 7 7:56  
 7 8:29  
 7 9:13  
 7 9:14

Scan 10 IE - x6 } 9:47

{ r = 5' 21" → 7' 21"  
p = 136° 04'  
A = 046° 04'

Scan 11 IE x10 } 9:52

Scan 12 IE - x6 } 10:09

~~1031~~  
Plat 5A 80ms ~1031 Plat 50g0

90, 105, 150, 105, 90

{ r = 05' 13"  
p = 137° 54'  
A = 047° 54'

Scan 13 x9 } 10:24

Scan 14 x10

Scan 15 x10

Scan 16 x5 } 11:45

~~11~~

{ 4' 46"  
140° 54'  
50° 53'

Scan 17 x10 } 11:52  
12:00

Scan 18 70ms 0g } 12:05  
12:15  
IE IE

Scan 19 50ms 0g } 12:17  
12:31  
IE IE

Scan 20 ~~r=4'39"~~ x10 } 12:33  
12:39

Scan 21 40ms x10 } 12:42

Scan 22 x10

Scan 23 x10

Scan 24 x10

Scan 25 x10

Scan 26 x10

Scan 27 x10 } 12:53

Scan 28

$$\begin{cases} r = 4'00'' \\ p = 146^{\circ}11' \\ i = 56^{\circ}11' \end{cases}$$

5:08  
bin 1 → bin 2

$$\left. \begin{matrix} \text{Scan 28} \times 10 \\ \text{Scan 29} \end{matrix} \right\} \begin{matrix} 15:26 \\ 15:42 \end{matrix}$$

Scan 29

Flat 90e0g

$$\begin{cases} r = 4'06'' \\ p = 152^{\circ}24' \\ i = 62^{\circ}25' \end{cases}$$

$$\left. \begin{matrix} \text{Scan 29} \times 10 \\ \text{Scan 30} \end{matrix} \right\} \begin{matrix} 16:38 \\ 16:50 \end{matrix}$$

$$\begin{cases} r = 4'51'' \\ p = 146^{\circ}04' \\ i = 056^{\circ}04' \end{cases}$$

$$\left. \begin{matrix} \text{Scan 30} \end{matrix} \right\} \begin{matrix} 17:06 \\ 17:27 \end{matrix}$$

08 = 41 UT

dark 80 90

180ms 210, 300, 210, 180.

dark 90 90

~~17:51 ~~~

dark 110 80

~~dark ① 120, 140, 200, 140, 120~~

dark 50 80

~~17:53 ~~~

~~dark ② 90, 105, 150, 105, 90~~

17:53 ~

dark 90, 105, 150, 105, 90

17:57 ~

dark 120, 140, 200, 140, 120

18:02 ~

dark 180, 210, 300, 210, 180

2007.08.09 (木) 上野, 小森

HIS

Spectra

$\lambda$  +0.8, 0.5, 0.0, -0.5, -0.8

CaH

Exp

Scan 01 100 ms 4g

↓  
150, 200, 250, 200, 150

Scan 02 80 ms 3g

↓  
100, 150, 200, 150, 100

Scan 03 70 ms Dg

Dark 70e0g

23:45 UT

CaK

$r = 02'54" + 120"$   
 $p = 169^\circ 31'$   
 $i = 079^\circ 31'$

Scan 04 60 ms Dg  
x10  
many cloud

23:55 UT

Exp 100, 120, 180, 120, 100

Scan 05 " "  
x10

Scan 06 " "  
x10

Scan 07 " "  
T x2

Scan 08 " "  
IF x10

$r = 02'48" + 120"$   
 $p = "$ ,  $i = "$

Scan 09 x5 " "  
550f

Scan 10 50ms 0g  
IF x4

Scan 11 " "  
T x2

01:23 UT

Exp 80, 100, 160, 100, 80

02:56 UT

$r = 02'19" \rightarrow +120"$   
 $p = 175^\circ 50'$   
 $i = 085^\circ 50'$

Scan 12 " "  
IF x4

Scan 13 " "  
F x3

Scan 14  
T x2

Flat 50e0g

03:19 UT

$r = 02'10" \rightarrow +120"$   
 $p = 182^\circ 21'$   
 $i = 092^\circ 22'$

~~Scan 15~~

03:40 UT

Flat Frames

81 frames 60ms

03:47 UT

$\lambda$  -0.8 -0.5 ± 0 +0.5 +0.8  
(ms) 80 100 160 100 80

Scan 15 F x3

03:25 Focus → 1136 → 1548



344  
7  
2-988

05:50 UT

$$\left\{ \begin{array}{l} r = 02'08'' \rightarrow +120'' \\ p = 196.30'' \\ \bar{c} = \cancel{92} \rightarrow 106.30'' \end{array} \right.$$

Exp 80, 100, 140, 100, 80.

r 02 23

07:19 UT

$$\left\{ \begin{array}{l} r = 02'50'' \rightarrow +120'' \\ p = 183.22 \\ \bar{c} = 093.22 \end{array} \right.$$

07:30 UT

Exp 100, 120, 160, 120, 100 ms

07:49 UT

$$\left\{ \begin{array}{l} r = 02'28'' \\ p = 184.55 \\ \bar{c} = 094.55 \end{array} \right.$$

Exp 120, 140, 180, 140, 120  
160, 180, 220, 180, 160

Scan 16 " " x10

Scan 17 x5

Scan 18 x10

Scan 19 x6

Scan 20 x10

Scan 21 x5

Scan 22 x2

Scan 23 80ms 2g x7

Scan 24 x10

Scan 25 80ms 4g x9

360  
3108 3452

Call

Scan 26 80ms 4g x3

~~Scan 27~~

- Dark 80e 4g x50
- Dark 80e 2g x50
- Dark 50e 0g x50
- ~~• Dark 100e 4g x50~~
- ~~• Dark 80e 3g x50~~
- ~~• Dark 70e 0g~~
- Dark 60e 0g x50

2007. 8. 10 (金) 小森, 上野

Target - NOAA 10966

$$\begin{cases} r = 09^{\circ} 09' \\ p = 224^{\circ} 17' \\ \bar{i} = 359^{\circ} 56' \end{cases}$$

binning = 1

21:26 頃 観測終了 HIS 07

$\lambda =$	+0.8	+0.5	$\pm 0.0$	-0.5	-0.8	<u>Ca H</u>
exp (ms)	110	130	180	130	110	60ms Dg

$$\begin{cases} r = 02^{\circ} 54'' + 120'' \\ p = 219^{\circ} 44' \\ \bar{i} = 309^{\circ} 44' \end{cases}$$

Scan01 x1

Scan02 x10 " "

Scan03 x10 " "

22:36 ~ Bin 2 に変更

$$\begin{cases} r = 02^{\circ} 55'' + 120'' \\ p = 221^{\circ} 43' \\ \bar{i} = 311^{\circ} 43' \end{cases}$$

Scan04 x10 " "

Scan05 x10 50ms Dg

Scan06 IEF x8 " "

23:26

exp	100	120	160	120	100	<u>Ca K</u>
-----	-----	-----	-----	-----	-----	-------------

$$\begin{cases} r = 2^{\circ} 56'' + 120'' \\ p = 224^{\circ} 49' \\ \bar{i} = 314^{\circ} 49' \end{cases}$$

Scan07 x10 " "

Scan08 x10 " "

Scan09 x10 " "

Scan10 x10 " "

Scan11 x10 " "

Scan12 x10 " "

Scan13 x10 " "

Scan14 x10 " "

20:24 ~

exp	90	100	180	100	90
-----	----	-----	-----	-----	----

Scan15 x10 " "

Scan16 x10 " "

Scan17 x10 " "

$$\begin{cases} r = 03^{\circ} 13'' + 120'' \\ p = 227^{\circ} 48' \\ \bar{i} = 317^{\circ} 48' \end{cases}$$

Scan18 x10 " "

Scan19 x10

Scan20 x10

Scan21 x10

Scan22 x10

$$\begin{cases} r = 03^{\circ} 12'' \\ p = 229^{\circ} 04' \\ \bar{i} = 319^{\circ} 04' \end{cases}$$

Scan23 x10

Scan24 x10

Flat BIN 2 x ~ 81 枚

Flat BIN 1 x ~ 81 枚

Flat 40e Dg 2358 枚

Telescope

West → East. 03:24 UT

03:49

(exp) 90 100 160 100 90

05:15

(exp) 180 200 320 200 180

05:22

(exp) 140 150 200 150 140

05:28

(exp) 100 120 200 120 100

$$\begin{cases} r = 03'32'' \\ p = 239^{\circ}52' \\ i = 329^{\circ}52' \end{cases}$$

Scan 25 x 10 60ms 0g

05:53

$$\begin{cases} r = 03'32'' \\ p = 239^{\circ}29' \\ i = 329^{\circ}29' \end{cases}$$

Scan 26 x 10 " "

06:23

$$\begin{cases} r = 03'32'' \\ p = 241^{\circ}14'' \\ i = 331^{\circ}14'' \end{cases}$$

Scan 27 x 10 80ms 0g

$$\begin{cases} r = 03'35'' \\ p = 241'14'' \\ i = 331'14'' \end{cases}$$

Scan 28 x 10 " "

06:58

(exp) 200 240 400 240 200

07:39

(exp) 180 200 320 200 180

$$\begin{cases} r = 03'34'' \\ p = 243^{\circ}45' \\ i = 323^{\circ}45' \end{cases}$$

CaH

Scan 29 x 5 80ms 3g

08:23

(exp) 140:150, 200:150 140

Scan 30 x 10 80ms 3g

09:17

Dark

Scan 31 x 10 80ms 3g

Scan 32 x 10 " "

Dark 60e 0g

" 50e 0g

" 40e 0g

" 80e 0g

" 80e 3g

2007. 8. 11 上野, 渡邊, 大辻

Target — NOAA 10966

$$\begin{cases} r = 5'08'' + 120'' \\ p = 250^\circ 10' \\ i = 340^\circ 10' \end{cases}$$

binning = 2

21:33 HSS start

$\lambda = f_{0.8} \quad f_{0.5} \quad f_{0.0} \quad -0.5 \quad -0.8$   
 (exp) 110 130 180 130 100

21:41 1'517D 重組終了

21:49 再開

22:03

(exp) 80 100 160 100 80

22:53

flat

CalH

Scan 1 x1 80ms 2g

Scan 2 x10 80ms 0g

Scan 3 x10 60ms 0g

Scan 4 x10 60ms 0g

Scan 5 x10 " "

Scan 6 x10 " "

Scan 7 x10 50ms 0g

Scan 8 x10 " "

Scan 9 x10 " "

Scan 10 x10 " "

flat 40e0g 40ms 0g

flat 30e2g 30ms 2g

$$\begin{cases} h = 25'17'' + 120'' \\ p = 201^\circ 51' \\ i = 340^\circ 10' \end{cases}$$

CalK

Scan 11 x10 50ms 2g

Scan 12 x10 " "

Scan 13 x10 " "

Scan 14 x10 45ms 2g

Scan 15 x10 " "

Scan 16 x10 " "

Scan 17 x10 " "

Scan 18 x10 " "

23:57 Pが許容範囲を超えたため、F7 stopで再リセット

途中から F7 stop の影響あり  
Scan 19 x10 " "

$$\begin{cases} r = 5'36'' + 120'' \\ p = 251^\circ 02'' \\ i = 341^\circ 01'' \end{cases}$$

00:06 再開

~~Scan 19~~  
Scan 20 x10 45ms 2g

Scan 21 x10 40ms 2g

Scan 22 x10 " "

flat 40e2g

flat 60e0g

CaH

Scan 23 x10 35ms Og

Scan 24 x10 " "

Scan 25 x10 " "

Scan 26 x10 " "

Scan 27 x2 " "

し途中ではまた  
アプリケーションが閉鎖されました  
ディスク full

Scan 28 x10 " "

Scan 29 x10 " "

Scan 30 x10 " "

Scan 31 x10 70ms Og  
(50% ND)

Scan 32 x10 " "  
(50% ND)

Scan 33 x10 90ms Og  
(50% ND)

CaK

Scan 34 x10 45ms Og

(ND=2L)

Scan 35 x10 " "

Scan 36 x10

Scan 37 x10

Scan 38

01:20  
r = 05' 42"  
p = 254° 05'  
i = 344.06

02:06  
r = 05' 57"  
p = 253° 24'  
i = 345° 24'

West position → East position

03:10

r = 05' 57"  
p = 255° 50'  
i = 345° 50'

05:17

r = 06' 23"  
p = 258° 33'  
i = 348° 33'

06:40

r = 06' 26"  
p = 262° 22'  
i = 352° 22'

07:17 -

Dark

Scan 39 x10 55ms Og

CaH

Scan 40 x10 80ms Og

5

cloudyのため残りの5回は  
捨てる

Scan 41

dark 30e Og

dark 30e 2g

dark 35e Og

dark 40e Og

dark 40e 2g

dark 45e Og

" 45e 2g

" 50e Og

" 50e 2g

" 55e Og

" 60e Og

" 70e Og

" 80e Og

2007.8.12

一野, 波連, 木止

Target

NoAA 10966

$$\begin{cases} r = 8'41'' \\ p = 260'58'' \\ i = 350'58'' \end{cases}$$

23:32

(CRD) 80 100 160 100 50

$$\begin{cases} r = 8'40'' \\ p = 264'35'' \\ i = 354'35'' \end{cases}$$

00:03

CaH

ND 50%

Scan 1 x 10 70ms 0g

Scan 2 x 10 " "

Scan 3 x 10 " "

Scan 4 x 10 " "

Scan 5 x 10 " "

Scan 6 x 10 " "

Scan 7 x 10 " "

Scan 8 x 10 " "

Scan 9 x 10 " "

Scan 10 x 10 " "

Flat 50e 0g 50ms 0g

~~CaH~~

~~CaH~~

~~CaH~~

g

$$\begin{cases} r = 08'40'' \\ p = 264'34'' \\ i = 354'34'' \end{cases}$$

01:22

CaK

ND 0%

~~Flat~~

Flat 40e 0g 40ms 0g

Scan 11 x 10 40ms 0g

Scan 12 x 10 50ms 0g

Scan 13 x 10 " "

Scan 14 x 10 " "

Scan 15 x 10 " "

Scan 16 x 10 " "

Scan 17 x 10 " "

Scan 18 x 10 " "

Scan 19 x 10 " "

Scan 20 x 10 " "

CaH

ND 50%

Scan 21 x 10 70ms 0g

Scan 22 x 10 " "

Scan 23 x 10 " "

Scan 24 x 10 " "

Scan 25 x 10 " "

Scan 26 x 10 " "

Scan 27 x 10 " "

Scan 28 x 10 " "

Scan 29 x 10 " "

Scan 30 x 10 " "

03:08

$$\begin{cases} r = 09'01'' + 120'' \\ p = 267'36'' \\ i = 357'37'' \end{cases}$$

01:12

flat

$r = 8'57''$   
 ~~$r = 8'25''$~~   
 $p = 262'59$   
 $i = 355'59$

04:05

05:06  
 $r = 8'58''$   
 $p = 267'27'$   
 $i = 357'27'$

$r = 9'06''$   
 $p = 267'57'$   
 $i = 357'57'$

05:52

06:10

$r = 9'16''$   $r=050T$   
 $p = 269'56$   
 $i = 359'56$

7:35 中絶

8:12 再開

08:29

Exp 120, 140, 200, 140, 120

P, i 記録

r=0856~1056

r=0856~1140

Exp 160, 180, 240, 180, 160  
 200, 220, 280, 220, 200

CaH ND 50%  
 Scan 31 x 10 70ms 0g  
 scan 32 x 10 " "

CaK ND 0%  
 scan 33 x 10 60ms 0g

K  
 Scan 34 x 10 60ms 0g  
 K 途中 T Dドライブ容量オーバー  
 scan 35 x 10 " "

K  
 Scan 36 x 1 70ms 0g

CaH  
 Scan 37 x 1 80ms 3g

Scan 38 x 1 " "

scan 39 x 1 100ms 10g

Dark

80, 100, 160,

120, 140, 200,

180, 240, 220,

280 x 16 = 160f

Dark 40e0g

Dark 50e0g

Dark 60e0g

Dark 70e0g

Dark 80e3g

Dark 100e10g.

50f.

end

2007, 8 13 上野, 渡邊, 大井

Target - New EPR

$$\begin{cases} r = 02'16'' \\ p = 254^{\circ}41' \\ i = 359^{\circ}59' \end{cases}$$

21:06 Bin=2

(exp) 100 120 150 120 100

$$\begin{cases} r = 00'37'' + 120'' \\ p = 254^{\circ}43' \\ i = 349^{\circ}43' \end{cases}$$

21:13 Bin=2

$$\begin{cases} r = 00'13'' \\ p = 254^{\circ}43' \\ i = 349^{\circ}43' \end{cases}$$

21:26

$$\begin{cases} r = 00'35'' \\ p = 254^{\circ}43' \\ i = 344^{\circ}43' \end{cases}$$

21:42

Call

$r = 0'35'' \rightarrow 3'00''$		
Scan 01 x 1	70ms	0g
<del>Scan 01</del> flat	"	"
$r = 0'35'' \rightarrow 3'00''$		
Scan 02 x 1	"	"

Target - NOAA 10966

$$\begin{cases} r = 10'55'' \\ p = 269^{\circ}55' \\ i = 359^{\circ}55' \end{cases}$$

22:04

(exp) 80 100 160 100 80

$$\begin{cases} r = 11'02'' \\ p = 269^{\circ}55' \\ i = 359^{\circ}55' \end{cases}$$

22:32

Scan 03 x 10	60ms	0g
Scan 04 x 10	"	"
Scan 05 x 10	"	"
Scan 06 x 10	"	"
Scan 07 x 10	"	"
Scan 08 x 10	80ms	0g (NO 50%)
Scan 09 x 10	"	"
Scan 10 x 10	"	"
Scan 11 x 10	"	"
Scan 12 x 10	"	"
Scan 13 x 10	"	"
Scan 14 x 10	"	"
15 x 10	"	"
16 x 10	"	"



$$\begin{cases} r = 11'00'' \\ p = 270^\circ 56' \\ i = 000^\circ 56' \\ 00:05 \end{cases}$$

- (Scan 17) x 10 80ms 0g
- (Scan 18) x 10 " "
- (Scan 19) x 10 " "
- (Scan 20) x 10 " "

00:30

Flat Frames 82  
5 Å 50ms

- (flath-nd 60e 0g) ~ 1000 FX
- (flath 25e 0g) ~ 1000 FX

00:45 (New Young AR)

$$\begin{cases} r = 01'16'' - 120'' \text{ scan} \\ p = 264^\circ 48' \\ i = 354^\circ 48' \end{cases}$$

- CaK 50% ND
- (Scan 21) x 10 80ms 0g
- (Scan 22) x 10

01:03 NOAA 10966

$$\begin{cases} r = 11'19'' \\ p = 271^\circ 09' \\ i = 001^\circ 12' \end{cases}$$

- 0% ND
- (Scan 23) x 10 65ms 0g
- (Scan 24) x 10 " "
- (Scan 25) x 10 " "
- (Scan 26) x 10 " "

$$\begin{cases} r = 11'19'' \\ p = 272^\circ 23' \\ i = 002^\circ 36' \\ 01:42 \end{cases}$$

- (Scan 27) x 10 65ms 0g
- (Scan 28) x 10 " "

ND 50%  
(Scan 29) x 10 80ms 0g

- (Scan 30) x 10
- (Scan 31) x 10
- (Scan 32) x 10
- (Scan 33) x 10

$$\begin{cases} r = 11'32'' \\ p = 273^\circ 05' \\ i = 003^\circ 04' \\ 02:47 \end{cases}$$

(Scan 34) x 10 " "

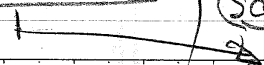
(Scan 35) x 10 60ms 0g  
(No ND)

- (Scan 36) x 10 " "
- (Scan 37) x 10 " "
- (Scan 38) x 10 " "

B:K

- (Scan 39) x 10 " "
- (Scan 40) x 10 " "

West → East Position



NEW AR

07:00

$$\begin{cases} r = 2'34'' \\ p = 292^{\circ}35' \\ i = 053'38'' \end{cases}$$

Plat 40e Dg 40ms Dg

NOAA 10966

$$\begin{cases} r = 11'33'' \\ p = 292^{\circ}49' \\ i = 2'43'' \end{cases}$$

05:04

Scan 41 x10 70ms Dg

Scan 42 x10 / /

43 / /

44 / /

45 / /

$$\begin{cases} r = 11'48'' \\ p = 293^{\circ}30' \\ i = 003'30'' \end{cases}$$

06:11

46 " "

47 " "

48 " "

$$\begin{cases} r = 11'56'' \\ p = 297^{\circ}30' \\ i = 003'30'' \end{cases}$$

07:10

→ 49 80ms Dg

$$\begin{cases} r = 11'56'' \\ p = 293^{\circ}30' \\ i = 3'30'' \end{cases}$$

07:31

(exp) 100, 120, 180, 120, 100

08:11

dark  
08:21

08:29

Ca-H

Scan 50 x10 80ms Dg

Scan 51 x10 " "

Scan 52

~~Scan 53~~

dark

2007.8.14

上野, 教野, 大止

Target - New AR (remnant)

$$\begin{cases} r = 04'05'' \\ p = 279'69'' \\ i = 326'25'' \end{cases}$$

21:27

(CSP) 100 120 180 120 100

$$\begin{cases} r = 03'41'' \\ p = 276'22'' \\ i = 6'21'' \end{cases}$$

21:43

Ca H

Scan 01 x1 80ms Dg  
3'41" → 6'38"

21:50

$$\begin{cases} r = 03'34'' \\ p = 276'37'' \\ i = 6'21'' \end{cases}$$

Target - NOAA 10966

$$\begin{cases} r = 13'10'' \\ p = 273'25'' \\ i = 3'25'' \end{cases}$$

22:03

Ca H

Scan 02 x10 70ms Dg

Scan 03 x10 " "

Scan 04 x10 " "

Scan 05 x10

Scan 06 x10

Scan 07 x10

Scan 08 x10

Scan 09 x10

Scan 10 x10 60ms Dg

Scan 11 x10 "

$$\begin{cases} r = 13'05'' \\ p = 274'55'' \\ i = 004'05'' \end{cases}$$

23:12

Scan 12 x10 50ms Dg

Scan 13 x10 " "

Scan 14 x10 " "

Scan 15 x6 80ms Dg

ND 50%

Scan 16 x10 " "

Scan 17 x10 " "

Scan 18 x10 " "

Scan 19 x10 " "

Scan 20 x10 " "

Scan 21 x10 " "

Scan 22 x10 " "

flat Dg ~~80ms~~ 0.05

Ca K

$$\begin{cases} r = 13'24'' \\ p = 275'25'' \\ i = 005'25'' \end{cases}$$

23:17

Scan 23 x10 60ms ~~80ms~~ Dg

ND 50% Scan 24 x10 60ms Dg

Scan 25 x10 " "

Scan 26 x10 " "

$$\begin{cases} r = 13' 28'' \\ p = 276^\circ 14' \\ i = 006^\circ 14' \end{cases}$$

Telescope West  $\Rightarrow$  East

Flat Frames x 86 at 5A

03242 MAA 10966

$$\begin{cases} r = 04' 50'' + 120'' \\ p = 281^\circ 18' \\ i = 11^\circ 21' \end{cases}$$

$$\begin{cases} r = 13' 35'' \\ p = 277^\circ 20'' \\ i = 7^\circ 19' \end{cases}$$

08:17 UT  
Exp 100, 120, 180, 120, 100 ms

Scan 27 x 10 60ms Og

Scan 28 x 10 : :

Scan 29 x 5 = :

Scan 30 x 5 = :

Flat 40R Og

Scan 31 x 5

Scan 32 x 2 = :

Scan 33 x 6 = :

Scan 34 x 3 = :

Scan 35 x 7 70ms Og

Scan 36 x 2 : :

Scan 37 x 6 = :

Scan 38 x 4 = :

Hot filter image only 7:15

2007. 8. 15 上野 萩野

Target NOAA 10966

$$\begin{cases} r = 14' 29'' \\ p = 276^\circ 16' \\ i = 006^\circ 16' \end{cases}$$

$\lambda = +0.08 \ +0.05 \ 0 \ -0.05 \ -0.08$   
Exp = 80 100 160 100 80 ms

23:27 UT

$$\begin{cases} r = 14' 37'' \\ p = 278^\circ 28'' \\ i = 008^\circ 28'' \end{cases}$$

$$\begin{cases} r = 14' 37'' \\ p = 277^\circ 12'' \\ i = 7^\circ 12' \end{cases}$$

1:38 UT

D2F

Scan 01 x 80ms Og

t = 17010 ~ 1410

Ca H - Dark 80e Og ✓

Scan 02 x 9 : :

Scan 03 x 4 65ms Og

Scan 04 x 11 = :

Scan 05 x 10 = :

Scan 06 x 10 60ms Og

Scan 07 x 10 = :

Scan 08 x 10 = :

Scan 09 x 10 = :

Scan 10 x 10 = :

Scan 11 x 10 = :

Scan 12 x 10 = :

Scan 13 x 10 = :

Scan 14 x 10 = :

Scan 15 x 10 = :

Scan 16 x 10 = :

Scan 17 x 10 = :

• El. + 300.0g

1:56 UT	flat 30e Og
Target NOAA 10968	$r = 07'45'' + 130'' \text{ \& } \text{star V}$
<del><math>r = 09'06''</math> <math>p = 284^{\circ} 35'</math> <math>i = 14^{\circ} 36'</math></del>	Scan 18 x 10 30ms Og
$r = 07'45''$ 2:13 UT	Scan 19 x 10 60ms Og K ND 50%
$p = 282^{\circ} 23'$	Scan 20 x 10 : :
$i = 12^{\circ} 25'$	Scan 21 x 10 : :
	Scan 22 x 10 : :
	Scan 23 x 10 : :
	Scan 24 x 10 : :
	Scan 25 x 10 70ms Og
$r = 08'03''$	Scan 26 x 10 : :
	Scan 27 x 10 " "
	Scan 28 x 10 " "
	Scan 29 x 10 " "
	Scan 30 x 10 " "
	Scan 31 x 10 " "
	Scan 32 x 10 " "
NLS flat 4:06 UT	flat 50e Og 4:09 UT

Target NOAA 10968	Scan 33 x 10 70ms Og
$r = 8'05''$	Scan 34 x 10 70ms Og
$p = 282^{\circ} 56'$	Scan 35 x 10 : :
$i = 12^{\circ} 58'$	Scan 36 x 10 : :
	Scan 37 x 10 : :
	Scan 38 x 10 = :
	Scan 39 x 10 = =
	Scan 40 x 10 = =
	Scan 41 x 10 : :
$r = 8'15'' + 130''$	Scan 42 x 10 : :
	Scan 43 x 10 = :
5:56 STOP	Scan 44 x 10 80ms Og
New AR near the East Limb	
6:05	Scan 45 x 2 60ms Og
$r = 13'43''$	$r = 13'12'' \rightarrow 15'00''$ (N6 ND)
$p = 118^{\circ} 23'$	• Dark 65e Og ✓
$i = 28^{\circ} 21'$	• Dark 60e Og ✓
	• Dark 30e Og ✓
06:44	• Dark 70e Og ✓
Exp 100, 120, 180, 120, 100ms	

Date

Date

2007.8.16

上野 観望

CaH

Target NOAA 10968

$\left\{ \begin{array}{l} r = 10' 10'' \\ p = 284^\circ 35' \\ i = 14^\circ 36' \end{array} \right.$

2240UT

HIS

$\lambda = +0.8 \quad +0.5 \quad 0 \quad -0.5 \quad -0.8$

exp = X 80ms 100ms 160ms 100ms 80ms

0 120ms 140ms 200ms 140ms 120ms

exp = 100ms 140ms 200ms 140ms 100ms

exp = 80ms 100ms 160ms 100ms 80ms

Scan 1  $r = 10' 15'' \rightarrow 12' 35''$   
Scan 2  $r = 10' 18'' \rightarrow 130''$

Scan 1 X 1 80ms 0g

Scan 2 X 10

Scan 3 X 10

Scan 4 X 10 70ms

Scan 5 X 10

Scan 6 X 10

Scan 7 X 10 60ms

Scan 8 X 10

Scan 9 X 10

Scan 10 X 10

Scan 11 X 10 50ms

Scan 12 X 10 80ms

↑ ND50% ↓

Scan 13 X 10

Scan 14 X 10

Scan 15 X 10

Scan 16 X 10

Scan 17 X 10 80ms 0g ND50%

Scan 18 X 10

Scan 19 X 10

Scan 20 X 10

Scan 21 X 10

Scan 22 X 10

Scan 23 X 10

Scan 24 X 10

Scan 25 X 10

Scan 26 X 10

Scan 26 X 2 D洋 → E洋

Scan 27 X 10

Scan 28 X 10

Scan 29 X 10

Scan 30 X 10

Scan 31 X 10

Scan 32 X 10

Scan 33 X 10

$\left\{ \begin{array}{l} r = 10' 54'' \rightarrow +130'' \\ p = 285 \quad 19 \\ i = 015 \quad 19 \end{array} \right.$

↑ E洋 ↓ D洋

Ha flat

flat to eog

CaH Flat

00:07 UT

$\left\{ \begin{array}{l} r = 10 \quad 21 \\ p = 284 \quad 36 \\ i = 14 \quad 37 \end{array} \right.$

**CaK**

West → East 03:08 UT

$r = 10' 59''$   
 $p = 285^\circ 17'$   
 $i = 15^\circ 18'$

Scan 34 x 10 60ms 0g

Scan 35 x 10 " "

Scan 36 x 10 " "

Scan 37 x 10 " "

Scan 38 x 10 " "

Scan 39 x 10 " "

good seeing

Scan 40 x 10 " "

Scan 41 x 10 " "

Scan 42 x 10 " "

Scan 43 x 10 " "

Scan 44 x 10 " "

Scan 45 x 10 " "

Scan 46 x 10 " "

Scan 47 x 10 " "

Scan 48 x 10 " "

Scan 49 x 10 " "

Scan 50 x 10 70ms

Scan 51 x 10 " "

位置调整

$r = 11' 15'' + 130''$   
 $p = 286^\circ 20'$   
 $i = 16^\circ 20'$



$r = 11' 19''$   
 $p = 286^\circ 20'$   
 $i = 16^\circ 20'$

Scan 52 x 10 70ms 0g

Scan 53 x 10 " "

6:02 UT

flat 45e0g CaK flat

New AR near the East Limb

$r = 13' 34''$   
 $p = 121^\circ 43'$   
 $i = 016^\circ 10'$

- ~~Dark 80e0g~~
- Dark 70e0g ✓
- Dark 60e0g ✓
- Dark 50e0g ✓
- Dark 45e0g ✓

07:12 UT

Exp 100, 120, 180, 120, 100

9:00 UT END

Dark frames

2007.08.17 (金) 11時, 上野

Telescope, HIS

$\lambda$	Exp
+0.80	180ms
+0.50	140ms
+0.00	200ms
-0.50	140ms
-0.80	120ms

$F = 10'13'' \Rightarrow 12'23''$

$\left\{ \begin{array}{l} r = 13'25'' + 120'' \\ p = 286^\circ 36' \\ i = 16^\circ 36' \end{array} \right.$

$\lambda$	Exp
+0.80	100ms
+0.50	120ms
+0.00	180ms
-0.50	120ms
-0.80	100ms

VS SpectroScope

Call

Scan 01 x1 70ms 0g

$r = 10'10'' \rightarrow 13'30''$

$p = 127'17''$

$i = 037'17''$

-Dark 70e0g (50%)

Scan 02 x10 70ms 0g

Scan 03 x10 70ms 0g

Scan 04 =

Scan 05 =

Scan 06 =

Scan 07 =

Scan 08 =

Scan 09 =

Scan 10 x10 60ms 0g

Scan 11 =

Scan 12 =

9:24  $r = 12'51''$   
 (0274)  $p = 286^\circ 36'$   
 $i = 16^\circ 37'$

← 02  
7:27

11:17 南東のActive region  
 (0274)  $r = 10'59''$   
 $p = 127^\circ 13'$   
 $i = 37^\circ 13'$

03:06 Exp change  
80, 100, 160, 100, 80

NOAA 10968  
 $r = 13'24''$   
 $p = 286^\circ 51'$   
 $i = 16^\circ 51'$

Scan 13 =  
x10 →

Scan 14 =

Scan 15 =

Scan 16 =

Scan 17 =

Scan 18 =

Scan 19 =

Scan 20 x10 "

Scan 21 x10 "

Scan 22 x10 "

Scan 23 x10 "

Scan 24 x10 70ms 0g ND50%

Scan 25 "

Scan 26 "

Scan 27 "

Scan 28 "

Scan 29 "

Flat 70e0g x 1000x

Scan 30 x10 60ms 0g

Scan 31 x2 = 0g

Scan 32 x2 =

Scan 33 x2 =

Scan 34 x2 =



(Scan 35) x 2 60ms Dg

(Scan 36) x 2 =

(Scan 37) x 2 =

(Scan 38) x 2 =

(Scan 39) x 2 =

(Scan 40) x 2 =

(Scan 41) x 2 =

(Scan 42) x 2 =

(Scan 43) x 2 =

(Scan 44) x 2 =

(Scan 45) x 2 =

(Scan 46) x 2 =

(Scan 47) x 2 =

(Scan 48) x 2 =

(Scan 49) x 2 =

(Scan 50) x 2 =

(Scan 51) x 2 =

(Scan 52) x 2 =

06:37 UT  $8^{\circ} 52''$   
 $r = 11^{\circ} 02' + 130''$   
 $p = 127^{\circ} 47'$   
 $i = 37^{\circ} 03'$



8:50 END

Dark Frames

80, 100, 120, 160, 180, 200

140 ms x 16

(Scan 53) x 10 70ms Dg

(Scan 54) x 10 =

(Scan 55) x 10 =

(Scan 56) x 2 =

• Dark 70e Dg x 1000

• Dark 60e Dg x 1000

2007. 08. 18

EPR

$$\left\{ \begin{aligned} r &= 07'54'' + 130'' \\ P &= 135^\circ 33' \\ i &= 045^\circ 33' \end{aligned} \right.$$

$\lambda$ (Å)	Exp (ms)
+0.80	100
+0.50	120
+0.00	180
-0.50	120
-0.80	100

$\lambda$ (Å)	Exp (ms)
+0.80	80
+0.50	100
+0.00	160
-0.50	100
-1.20	80

Scan 01 x 1 70ms Dg  
 $v = 7'54'' \sim 10'09''$   
 Ca H, 手動

- Scan 02 x 10 =
- Scan 03 x 10 =
- Scan 04 x 10 =
- Scan 05 x 10 =
- Scan 06 x 10 =
- Scan 07 x 10 =
- Scan 08 x 10 =
- Scan 09 x 10 =
- Scan 10 x 10 =
- Scan 11 x 10 =
- Scan 12 x 10 =
- Scan 13 x 10 =
- Scan 14 x 10 =
- Scan 15 x 10 60ms Dg
- Scan 16 x 10 50ms Dg

$\lambda$	Exp
+0.80	80ms
+0.50	100
+0.00	140
-0.50	100
-0.80	80

$$\left\{ \begin{aligned} r &= 7' ~~54''~~ <sup>38''</sup> + 130'' \\ P &= 135^\circ 34' \\ i &= 45^\circ 33' \end{aligned} \right.$$

02:10 UT

$$\left\{ \begin{aligned} r &= 7'17'' + 130'' \\ P &= 137^\circ 06' \\ i &= 47^\circ 06' \end{aligned} \right.$$

- Scan 17 x 10 50ms Dg
- Scan 18 x 10 70ms Dg ND 50x
- Scan 19 x 10 =
- Scan 20 x 10 =
- Scan 21 x 10 =
- Scan 22 x 10 =
- Scan 23 x 10 =
- Scan 24 x 10 =
- Scan 25 x 10 =
- Scan 26 x 10 =
- Scan 27 x 10 80ms Dg ND 50x
- Scan 28 x 10 =
- Scan 29 x 5 =
- Scan 30 x 5 =
- Scan 31 x 5 =
- Scan 32 x 5 =
- Scan 33 x 5 =

02:56 UT

flat field +5A, 60ms  
82枚

$r = 7'22'' + 130''$   
 $p = 137^\circ 06'$   
 $i = 47^\circ 07'$

$\lambda$ [A]	Exp [ms]
+0.80	80
+0.50	100
+0.00	160
-0.50	100
-0.80	80

Scan 34 x 5 80ms Dg ND50

flat 60e Dg

午後 5) CaK 線

Scan 35 x 10 60ms Dg ND+ =

Scan 36 x 10 " "

Scan 37 x 10 " "

Scan 38 x 10 " "

Scan 39 x 10 " "

Scan 40 x 10 " "

Scan 41 x 10 " "

Scan 42 x 10 " "

Scan 43 x 10 " "

Scan 44 x 10 " "

Scan 45 x 10 "

Scan 46 x 10 "

Scan 47 x 10 "

K線用 flat

flat 60e Dg

4:59 UT

$r = 06'45''$   
 $p = 137^\circ 06'$   
 $i = 47^\circ 06'$

$\lambda$	Exp [ms]
+0.80	80
+0.50	100
+0.00	120
-0.50	100
-0.80	80

$r = 6'31'' + 130''$   
 $p = 138^\circ 13'$   
 $i = 48^\circ 11'$

Hd + 0. Exp = 160ms

8:09 UT

$\lambda$	Exp
+0.80	100
+0.50	120
+0.00	180
-0.50	120
-0.80	100

9:12 UT

dark field

80, 100, 120, 140, 160, 180ms  
各 16枚

Scan 48 ~~x 10~~ 70ms Dg

1090枚  
Scan 49 x 10 70ms Dg

Scan 50 x 10 =

Scan 51 x 10

Scan 52 x 10 80ms Dg

Scan 53 x 10 =

Scan 54 x 10 70ms Dg

Scan 55 x 10 =

Scan 56 x 10 80ms Dg

Scan 57 x 10 CaH 80ms Dg

8:28 UT

dark 70e Dg  
60ms 取端済  
dark 50e Dg  
dark 80e Dg

各 50枚

2007. 8. 19

EFR

0:24 UT  $\left\{ \begin{array}{l} r = 5'46'' \\ p = 155^\circ 50' \\ i = 65^\circ 50' \end{array} \right.$

$\lambda [Å]$	Exp [ms]
+ 0.80	80
+ 0.50	100
+ 0.00	160
- 0.50	100
- 0.80	80

$r = 4'59'' + 130''$

1:57 UT

$r = 4'48'' + 130''$

2:57 UT

$\left\{ \begin{array}{l} r = 4'24'' \\ p = 160^\circ 35' \\ i = 70^\circ 33' \end{array} \right.$

3:40 UT

flat field

Ca K

Scan 0 x 1 70ms 0g

4'30" < r < 7'40"

Scan 02 x 2 70ms 0g

Scan 03 x 2 =

Scan 04 x 2 =

Scan 05 x 10 =

Scan 06 x 10 =

Scan 07 x 9 60ms 0g

Scan 08 x 2 60ms 0g

Scan 09 x 2 =

Scan 10 x 2 =

Scan 11 x 2 =

Scan 12 x 2 =

Scan 13 x 2 =

Scan 14 x 2 =

Scan 15 x 2 =

Scan 16 x 2 =

Scan 17 x 2 =

Scan 18 x 2 =

Scan 19 x 2 =

Scan 20 x 2 60ms 0g

Scan 21 x 2 =

flat 50e 0g

flat 100e 0g

dark 60e 0g

dark 100e 0g

2007. 8. 20 (A) 1) 1.1

$\gamma = 2$  (東 1/4)

$r = 16'52''$

$p = 134^\circ 48'$

$i = 359^\circ 47'$  bin = 1

exp

$z = 0.8 \ 0.5 \ 0.3 \ 0 \ -0.3 \ -0.5 \ -0.8$   
 250 300 300 400 300 200 250

exp

02 = 03 (UT) ~~04~~ 開始

09 = 48 29-1

$z = 0.8 \ 0.5 \ 0.3 \ 0 \ -0.3 \ -0.5 \ -0.8$   
 exp 150 250 300 400 300 250 150