

SOLAR DISK DRAWING

Observer: G. Young
 Location: Honolulu
 Date/Time: 3/24/05 22:00 (UT)
 Sky: H164
 Seeing: III Clouds: Clear Wind: 10 mph
 Telescope: 8" f/12.5 Type: Mak
 Aperture Used: 125 mm
 Focal Length: 1900 mm Eyepiece: 40 mm
 Filter: Bandpass (47x)

Observations:
 Director Projected (circle one)

Total Sunspot Count:

(N=north of solar equator, S=south)

Groups: N 2 + S 2 = 4

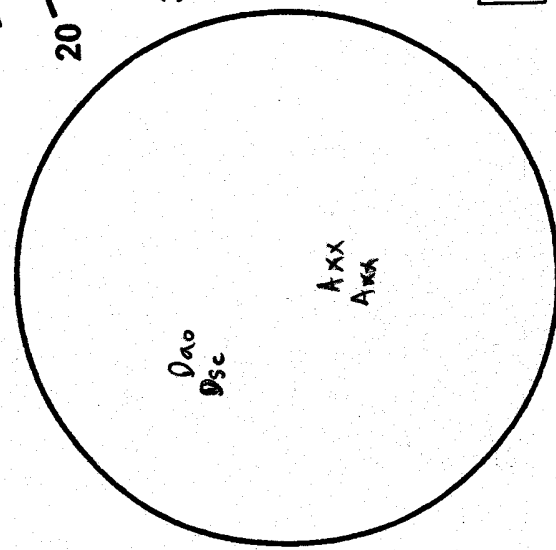
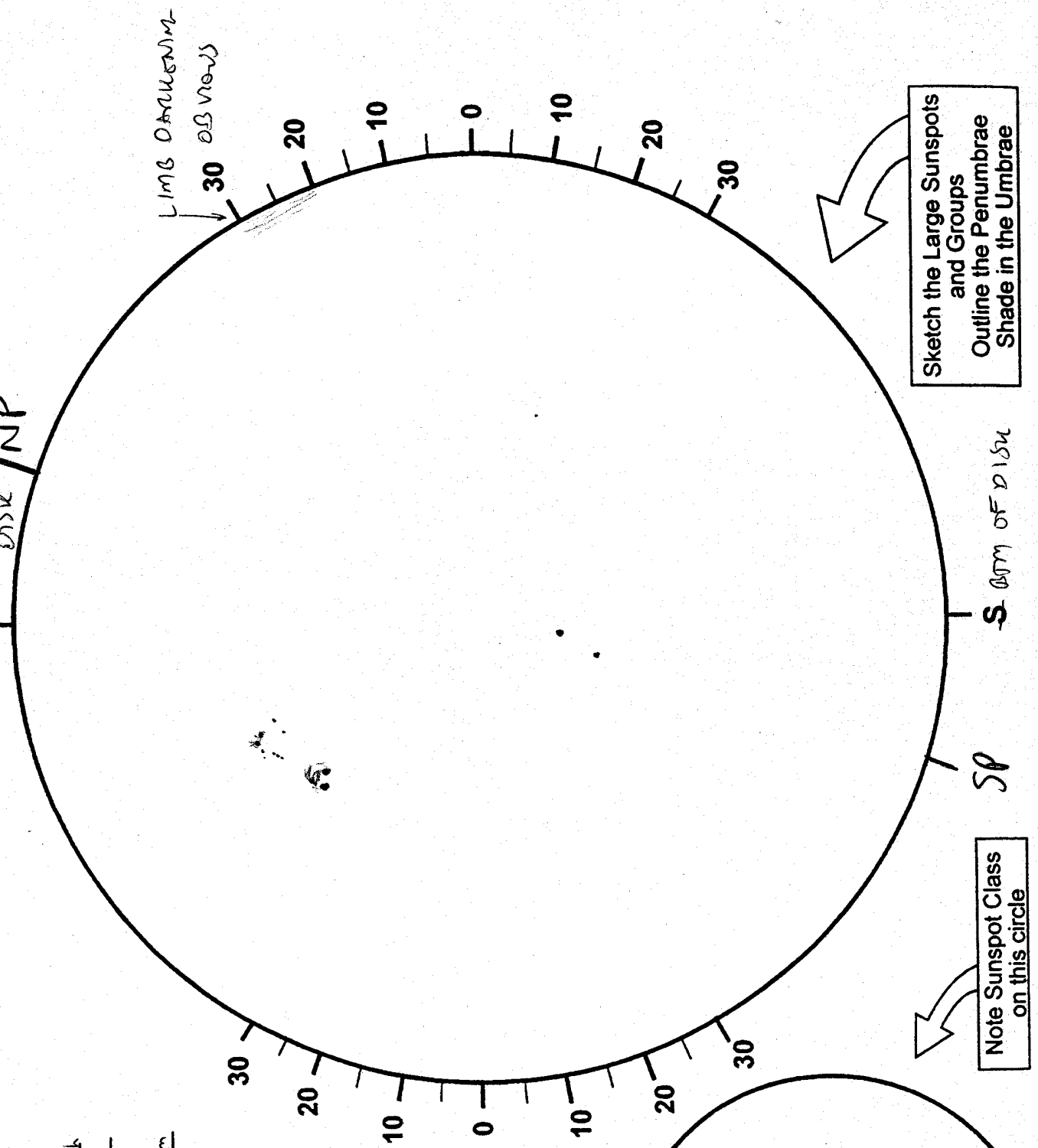
Spots: N 14 + S 2 = 16

Wolf Sunspot Number (R):

$R = 10G + S = \underline{56}$

Reported = 57

$PA^\circ \text{ at } 13 = -25^\circ.6$





The Astronomical League

The World's Largest Federation of Amateur Astronomers

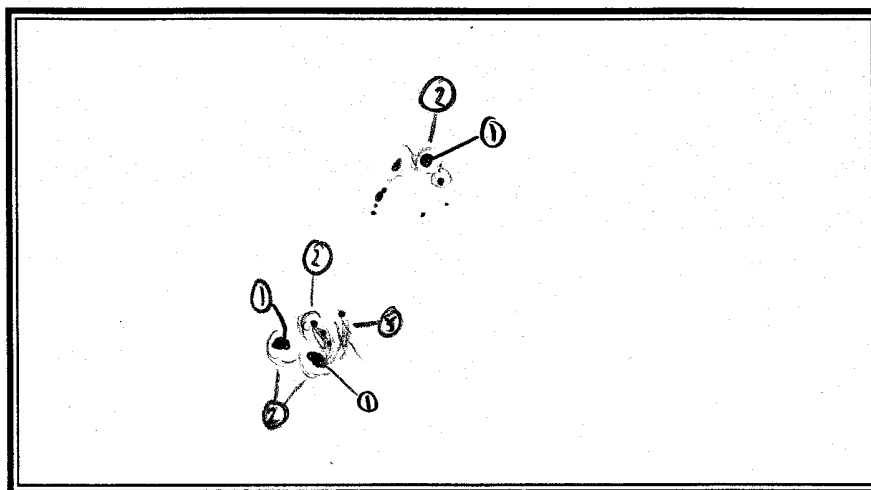
Sunspot Drawing

Observer Brad YoungUniversal date/time: 3/24/5 22:00Sky quality: FAIR

(Excellent, good, fair, poor)

Seeing in arc seconds: _____

(smallest detail seen where a photospheric granule is 1.5-2 arc seconds)

Location: HOMETelescope effective aperture: 125mmTelescope focal length: 1900mmEyepiece focal length: 12.4mmMagnification: 153xFilter type: BaaderMcIntosh Sunspot Classification: Bottom: Dsc Top: Dao

↑ SOLAR
N.P.

↑ TOP OF
DISK

↑ SKY
NORTH

Label the following on your sunspot drawing:

- 1 • Umbra
- 2 • Penumbra
- 3 • Facula
- 4 • Light bridge (if present)
- 5 • Penumbral fibril (if visible)
- Show *approximate* direction of **Solar** North with an arrow

Answer the Following:

- Is granulation visible? Yes: _____ No: X
- Is penumbral grain visible? Yes: X No: _____ very slight
- Does the drawing show the Wilson effect? Yes: _____ No: X

View the Astronomical League Sunspotters Club Solar Disk Drawing Form:

SOLAR DISK DRAWING

Observer: BY
 Location: HOME
 Date/Time: 3/27/5 22:10 (UT)
 Sky: 10- Clouds — Wind 20 mph
 Telescope: RTX 125 Type Mak
 Aperture Used: 125
 Focal Length: 1900 Eyepiece: 24 40mm
 Filter: SADDEX (47x)

Observations:
 Direct or Projected (circle one)

Total Sunspot Count:

(N=north of solar equator, S=south)

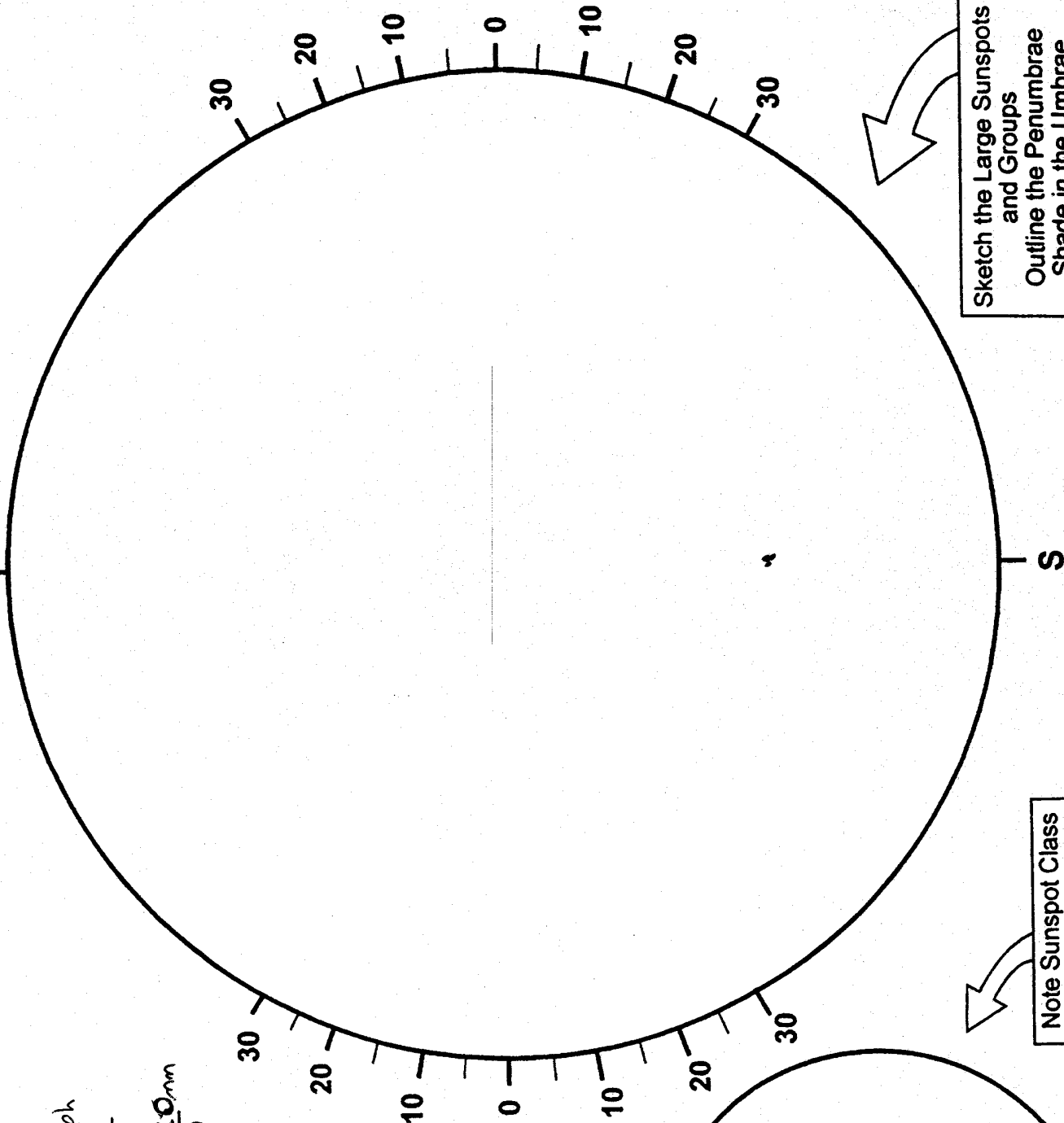
Groups: N 0 + S 01 = 1

Spots: N 0 + S 5 = 5

(from 153x view)

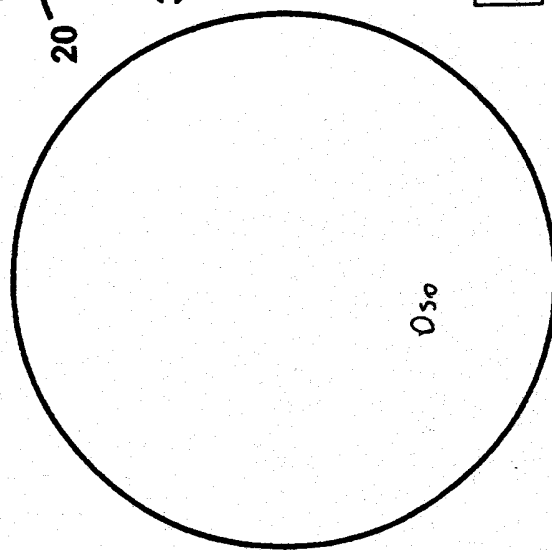
Wolf Sunspot Number (R):

R = 10G + S = 15



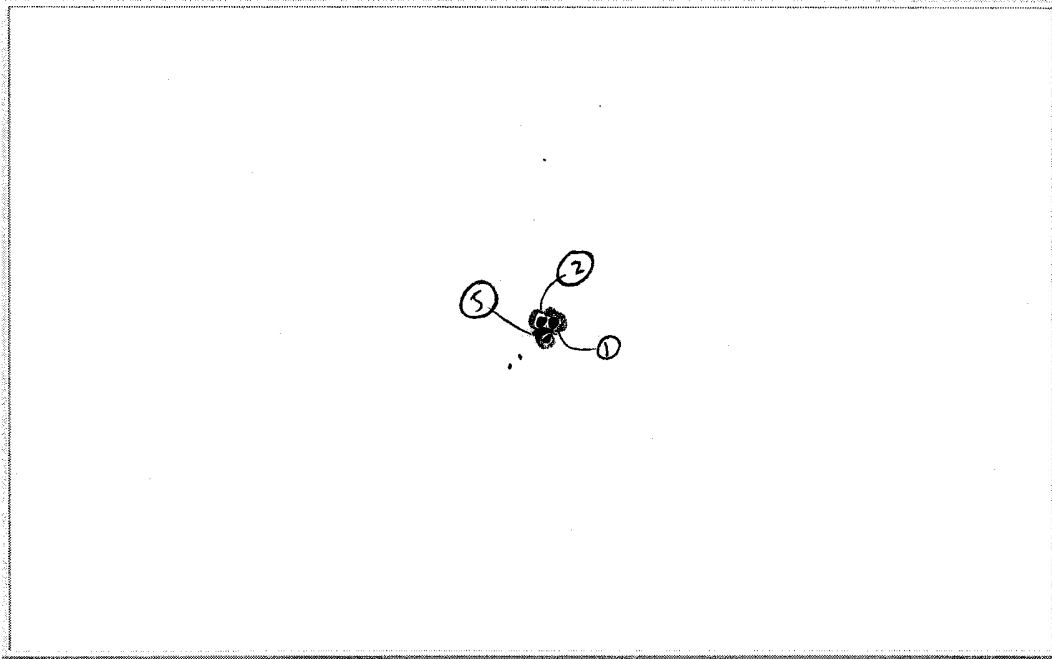
Sketch the Large Sunspots and Groups
 Outline the Penumbrae
 Shade in the Umbrae

Note Sunspot Class on this circle



Sunspot Drawing

Observer Brad Young Location: Home
 Universal date/time: 3/27/05 22:00 Telescope effective aperture: 125mm
 Sky quality: _____ Telescope focal length: 1900mm
 (Excellent, good, fair, poor) Eyepiece focal length: 12.4/10
 Seeing in arc seconds: 2-3 Magnification: 153/190
 (smallest detail seen where a photospheric granule is 1.5-2 arc seconds) Filter type: Baader Film
 McIntosh Sunspot Classification: Ds o



Label the following on your sunspot drawing:

- Umbra
- Penumbra
- Facula
- Light bridge (if present)
- Penumbrial fibril (if visible)
- Show *approximate* direction of **Solar** North with an arrow

Answer the Following:

- Is granulation visible? Yes: _____ No: _____
- Is penumbral grain visible? Yes: _____ No: _____
- Does the drawing show the Wilson effect? Yes: _____ No: _____

SOLAR DISK DRAWING

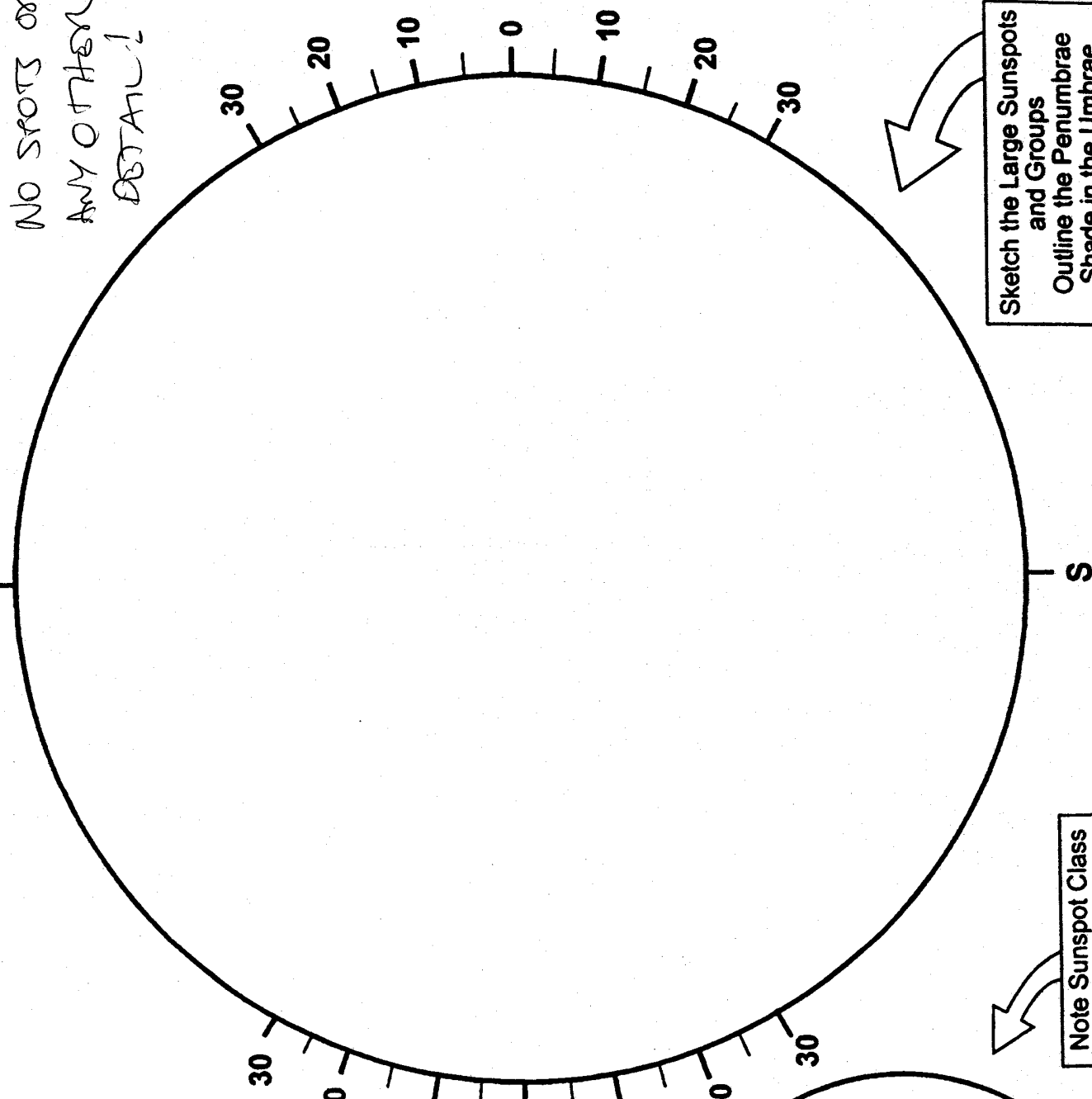
Observer: By
 Location: Home
 Date/Time: 3/28/5 18:40 (UT)
 Sky: II Clouds No Wind Light
 Seeing II Telescope 50mm Type Reflector
 Aperture Used 50mm
 Focal Length 800mm Eyepiece 25mm
 Filter No = 30X

Observations:
 Direct or Projected (circle one)

Total Sunspot Count:
 (N=north of solar equator, S=south)
 Groups: N 0 + S 0 = 0
 Spots: N 0 + S 0 = 0

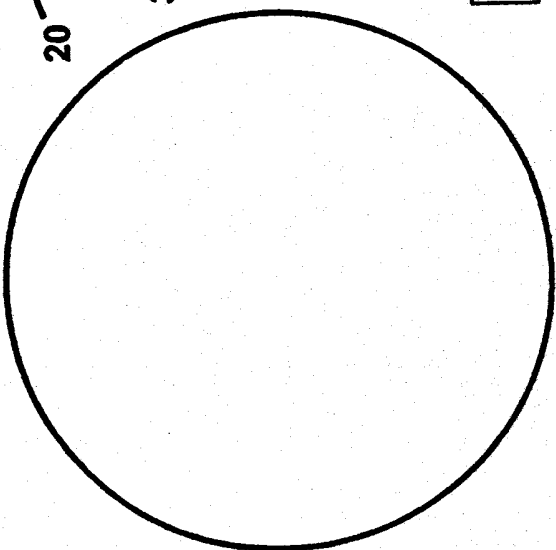
Wolf Sunspot Number (R):
 $R = 10G + S = \underline{0}$
 Noted As 15
 By SPACEWEATHER.COM

NO SPOTS OR
 ANY OTHER
 DETAIL!



Sketch the Large Sunspots
 and Groups
 Outline the Penumbrae
 Shade in the Umbrae

Note Sunspot Class
 on this circle



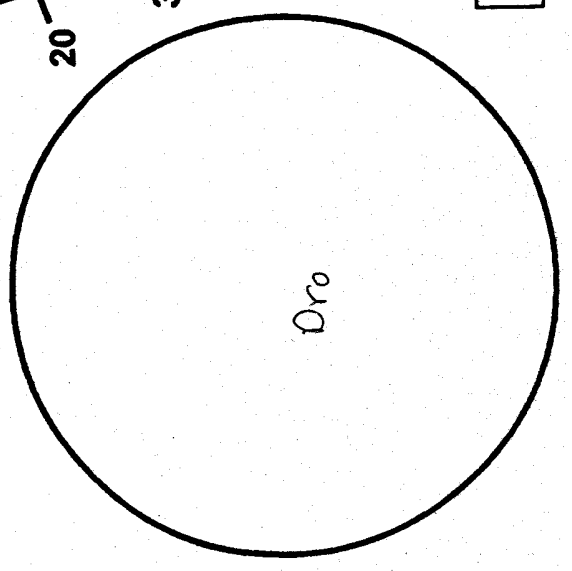
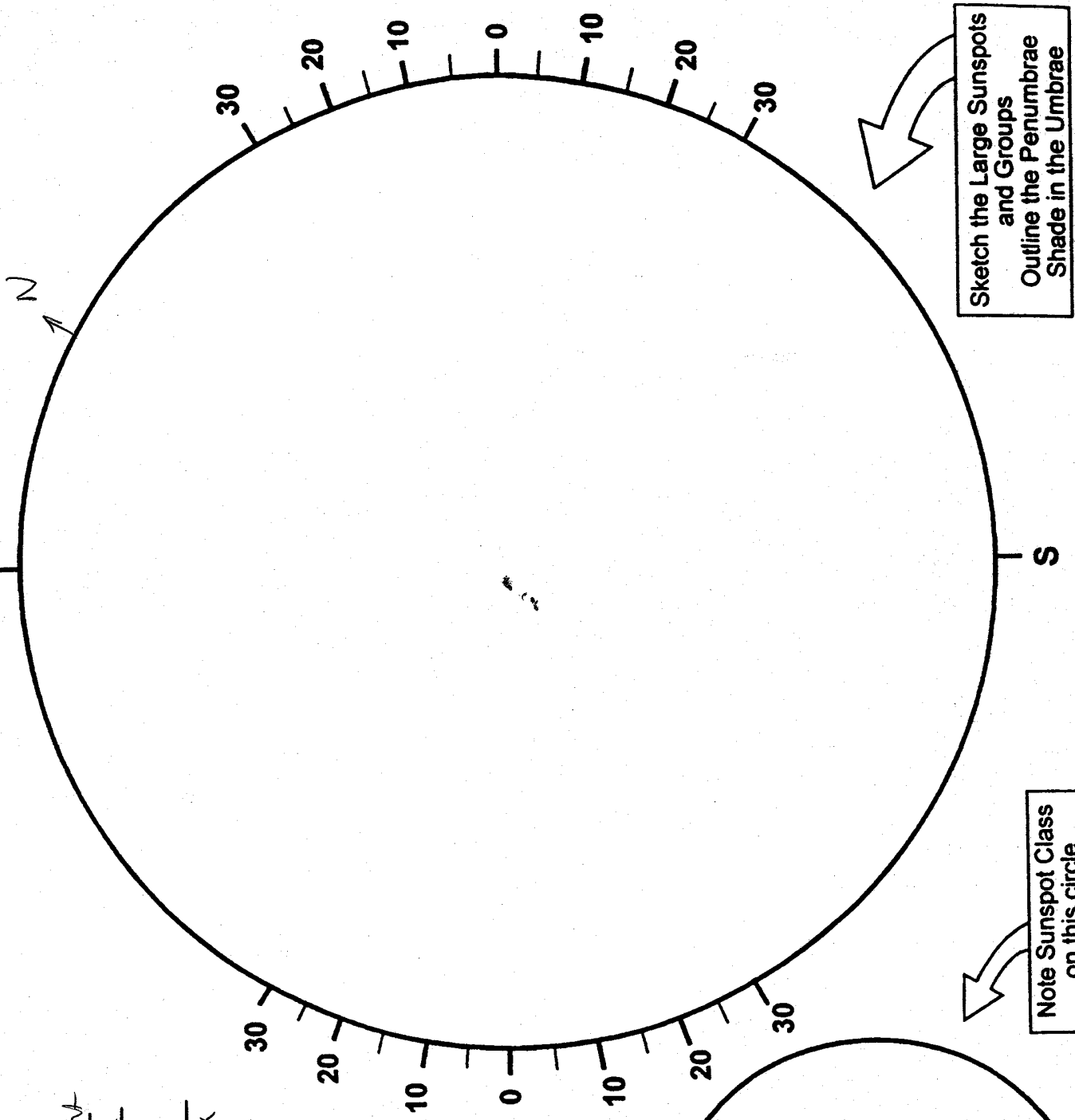
SOLAR DISK DRAWING

Observer: By
 Location: HOME
 Date/Time: 4/2/5 1315D (UT)
 Sky: Seeing II Clouds No Wind Light
 Telescope: RTX Type MARK
 Aperture Used 125
 Focal Length 1900 Eyepiece 40
 Filter BADEN 47X

Observations:
 Direct or Projected (circle one)

Total Sunspot Count:
 (N=north of solar equator, S=south)
 Groups: N 0 + S 1 = 1
 Spots: N 0 + S 4 = 4

Wolf Sunspot Number (R):
 $R = 10G + S = 14$



SOLAR DISK DRAWING

Observer: BY

Location: HOMES

Date/Time 3/30/85 23:20 (UT)

Sky:

Seeing III Clouds No Wind 10-15 mph

Telescope PTX Type MAK

Aperture Used 125 mm

Focal Length 1900 mm Eyepiece 40 mm

Filter BAADER FILM (47X)

Observations:

Direct or Projected (circle one)

Total Sunspot Count:

(N=north of solar equator, S=south)

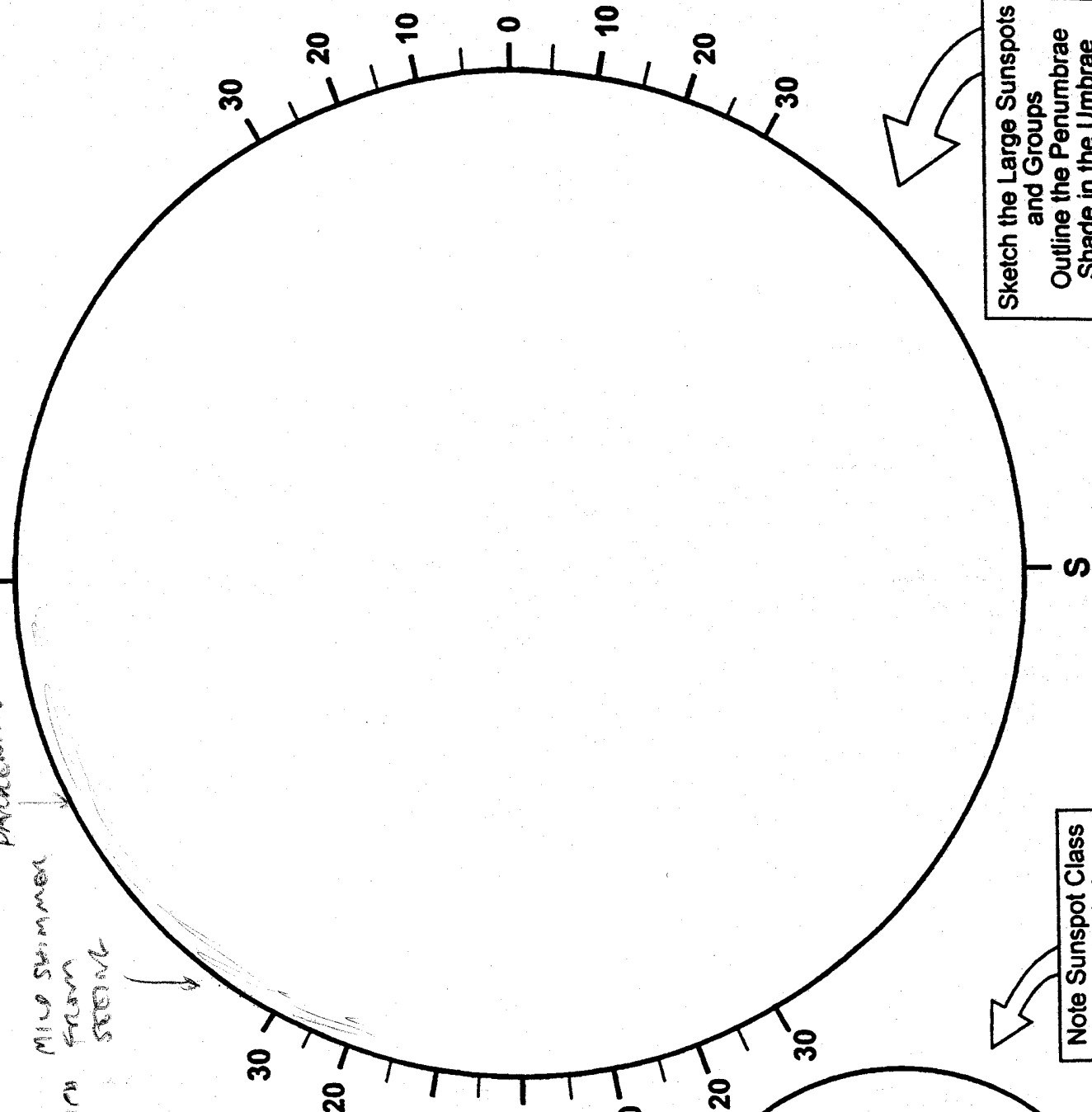
Groups: N 0 + S 0 = 0

Spots: N 0 + S 0 = 0

Wolf Sunspot Number (R):

$R = 10G + S = \underline{0}$

NO SPOTS SEEN
RECORDED AS = 15

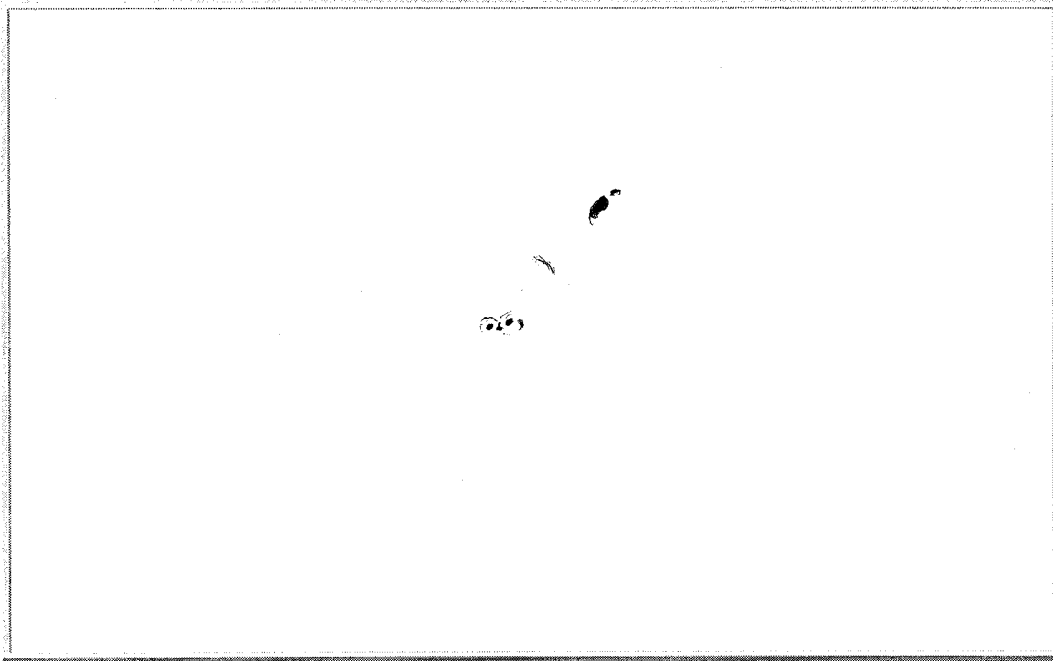


Sketch the Large Sunspots
and Groups
Outline the Penumbrae
Shade in the Umbrae

Note Sunspot Class
on this circle

Sunspot Drawing

Observer Brad Young Location: Home
Universal date/time: 4/2/5 14:05 Telescope effective aperture: 125mm
Sky quality: (Excellent, good, fair, poor) Telescope focal length: 1900mm
Seeing in arc seconds: 2 Eyepiece focal length: 25
(smallest detail seen where a photospheric granule is 1.5-2 arc seconds) Magnification: 73
Filter type: Baader Film
McIntosh Sunspot Classification: _____



Label the following on your sunspot drawing:

- Umbra
- Penumbra
- Facula
- Light bridge (if present)
- Penumbrial fibril (if visible)
- Show *approximate* direction of **Solar** North with an arrow

Answer the Following:

- Is granulation visible? Yes: ____ No: ____
- Is penumbral grain visible? Yes: ____ No: ____
- Does the drawing show the Wilson effect? Yes: ____ No: ____

SOLAR DISK DRAWING

Observer: BY
 Location: HOME
 Date/Time: 4/3/5 20:00 (UT)
 Sky: Seeing II Clouds HIGH Wind LIGHTS
 Telescope: BAR Type MARK
 Aperture Used 125
 Focal Length 1900 Eyepiece 40
 Filter BAADER 47x

Observations:
 Direct or Projected (circle one)

Total Sunspot Count:
 (N=north of solar equator, S=south)
 Groups: N 2 + S 1 = 3
 Spots: N 2 + S 5 = 7

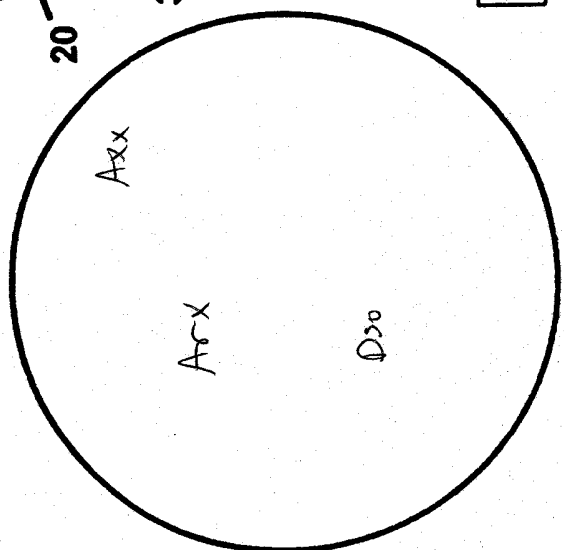
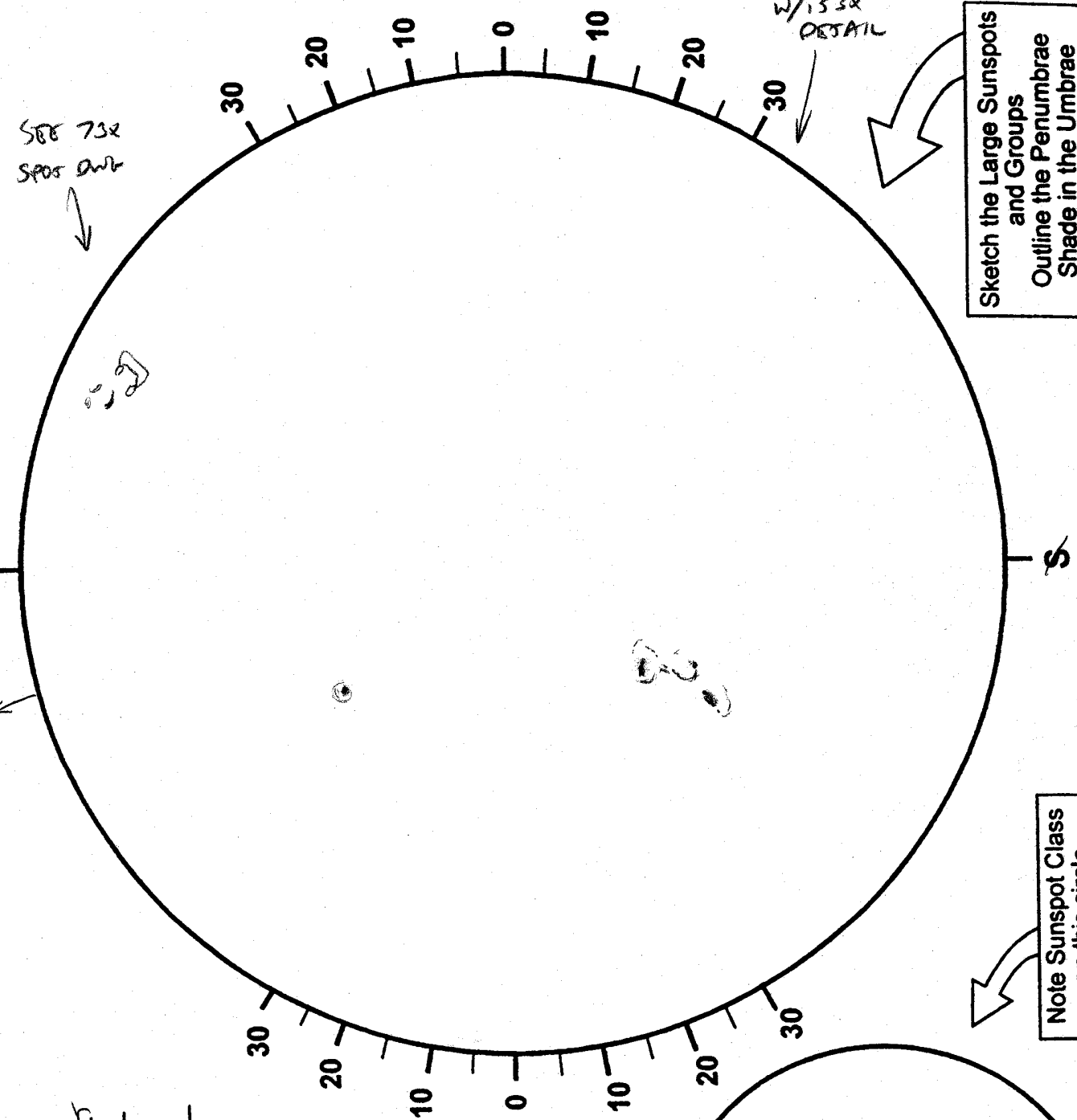
Wolf Sunspot Number (R):
 $R = 10G + S = \underline{37}$

SEE 73x
 SPOT 20x
 →

"FILLED IN"
 W/153x
 DETAIL
 →

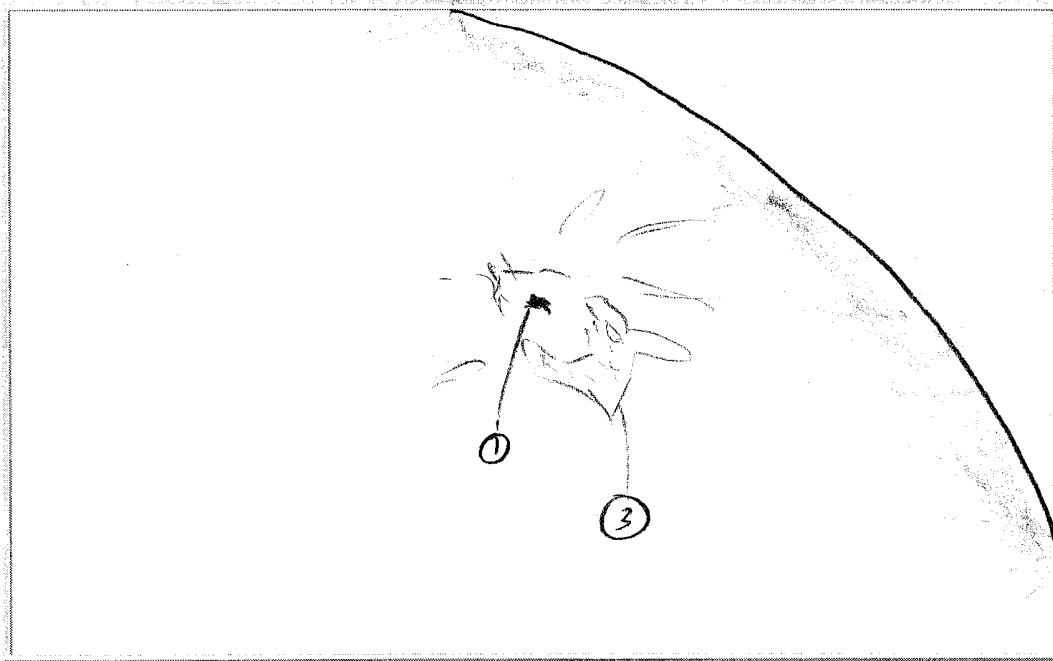
Sketch the Large Sunspots
 and Groups
 Outline the Penumbrae
 Shade in the Umbrae

Note Sunspot Class
 on this circle



Sunspot Drawing

Observer Brad Young Location: Home
 Universal date/time: 4/3/5 20:00 Telescope effective aperture: 125mm
 Sky quality: _____ Telescope focal length: 1900mm
 (Excellent, good, fair, poor) Eyepiece focal length: 25mm
 Seeing in arc seconds: 1.5 Magnification: 73x
 (smallest detail seen where a photospheric granule is 1.5-2 arc seconds) Filter type: Baader Film
 McIntosh Sunspot Classification: Axx



Label the following on your sunspot drawing:

- Umbra ✓
- Penumbra
- Facula ✓ — appeared like "fat" or "stretch marks" — helped Wilson effect show up easily
- Light bridge (if present)
- Penumbrial fibril (if visible)
- Show *approximate* direction of **Solar** North with an arrow

Answer the Following:

- Is granulation visible? Yes: ✓ No: _____ ESP IN FACULA
- Is penumbral grain visible? Yes: _____ No: ✓
- Does the drawing show the Wilson effect? Yes: ✓ No: _____

SOLAR DISK DRAWING

Observer: BS

Location: Home

Date/Time 4/4/8 23:00 (UT)

Sky:

Seeing II Clouds No Wind 25 S mph

Telescope 878 Type MAN

Aperture Used 125

Focal Length 1900 Eyepiece 40

Filter BALD 47X

Observations:

Direct or Projected (circle one)

Total Sunspot Count:

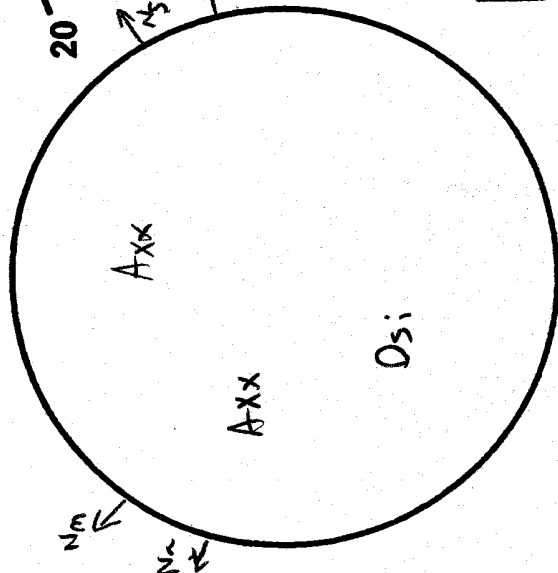
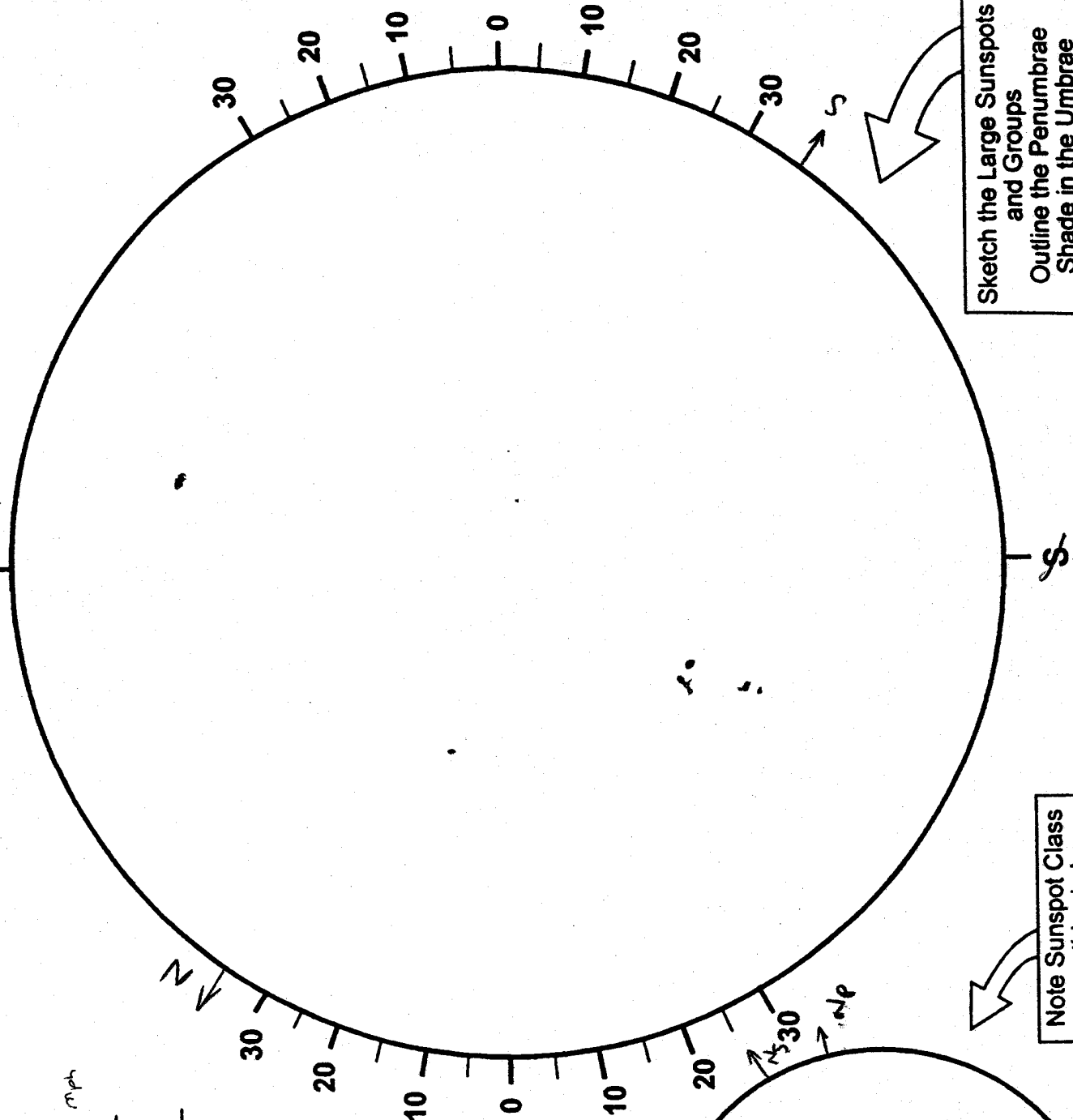
(N=north of solar equator, S=south)

Groups: N 2 + S 1 = 3

Spots: N 2 + S 7 = 9

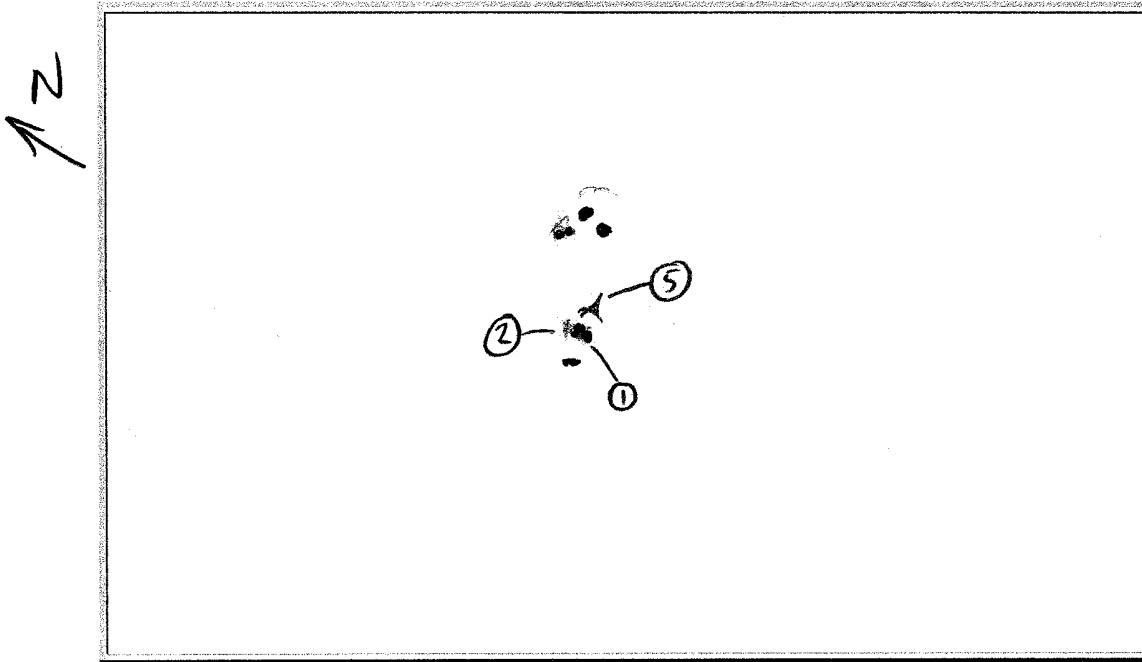
Wolf Sunspot Number (R):

$R = 10G + S = \underline{39}$



Sunspot Drawing

Observer Brad Young Location: Home
 Universal date/time: 4/4/5 23:10 Telescope effective aperture: 125mm
 Sky quality: _____ Telescope focal length: 1900mm
 (Excellent, good, fair, poor) Eyepiece focal length: 25
 Seeing in arc seconds: 2 Magnification: 73
 (smallest detail seen where a photospheric granule is 1.5-2 arc seconds) Filter type: Baader Film
 McIntosh Sunspot Classification: DSi



Label the following on your sunspot drawing:

- Umbra
- Penumbra
- Facula
- Light bridge (if present)
- Penumbral fibril (if visible)
- Show *approximate* direction of **Solar** North with an arrow

Answer the Following:

- Is granulation visible? Yes: _____ No: ✓
- Is penumbral grain visible? Yes: _____ No: ✓
- Does the drawing show the Wilson effect? Yes: _____ No: ✓

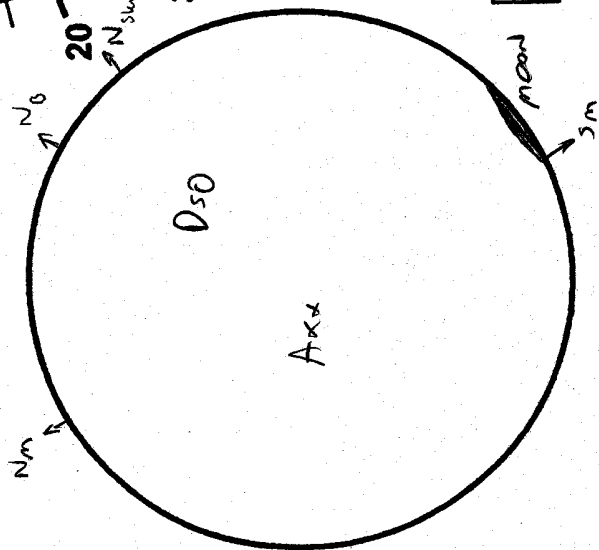
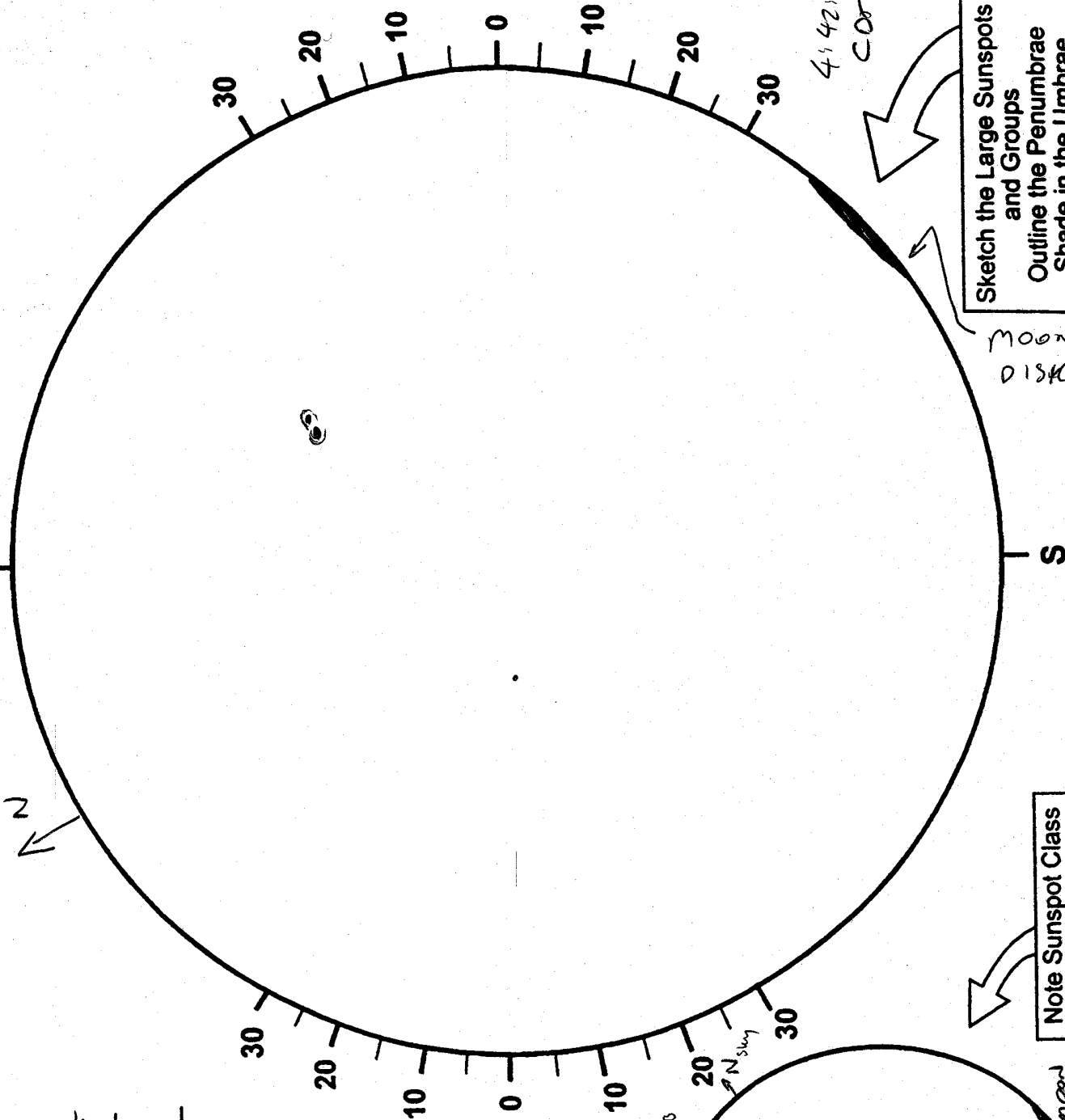
SOLAR DISK DRAWING

Observer: BY
 Location: HOME
 Date/Time: 4/8/85 15:45 (UT)
 Sky: POOR
 Seeing: II Clouds: YES Wind: STILL
 Telescope: EDX Type: MAX
 Aperture Used: 125
 Focal Length: 1900 Eyepiece: 40
 Filter: BALDWIN 47x

Observations:
 Direct or Projected (circle one)

Total Sunspot Count:
 (N=north of solar equator, S=south)
 Groups: N 1 + S 0 = 1
 Spots: N 3 + S 0 = 3

Wolf Sunspot Number (R):
 $R = 10G + S = 13$



Note Sunspot Class on this circle

SOLAR DISK DRAWING

Observer: BY
 Location: Home
 Date/Time: 4/14/08 23:13(UT)
 Sky: EX!
 Seeing I - Clouds No Wind Light
 Telescope: EDS Type MAX
 Aperture Used 125
 Focal Length 1900 Eyepiece 40
 Filter DAVIES

Observations:
 (Direct or Projected (circle one))

Total Sunspot Count:
 (N=north of solar equator, S=south)
 Groups: N 3 + S 2 = 5
 Spots: N 7 + S 4 = 11

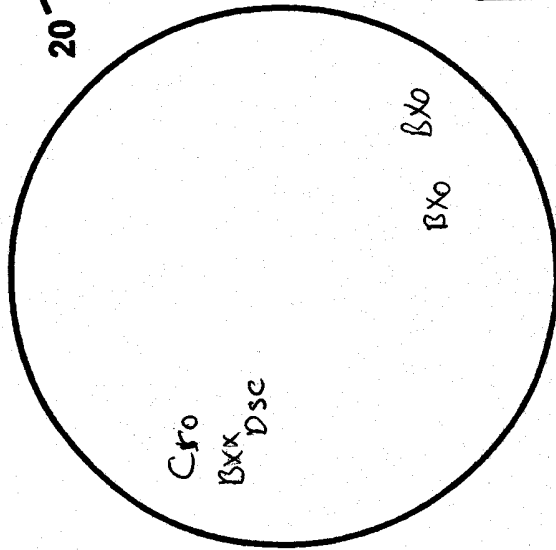
Wolf Sunspot Number (R):
 $R = 10G + S = \underline{61}$

N

S

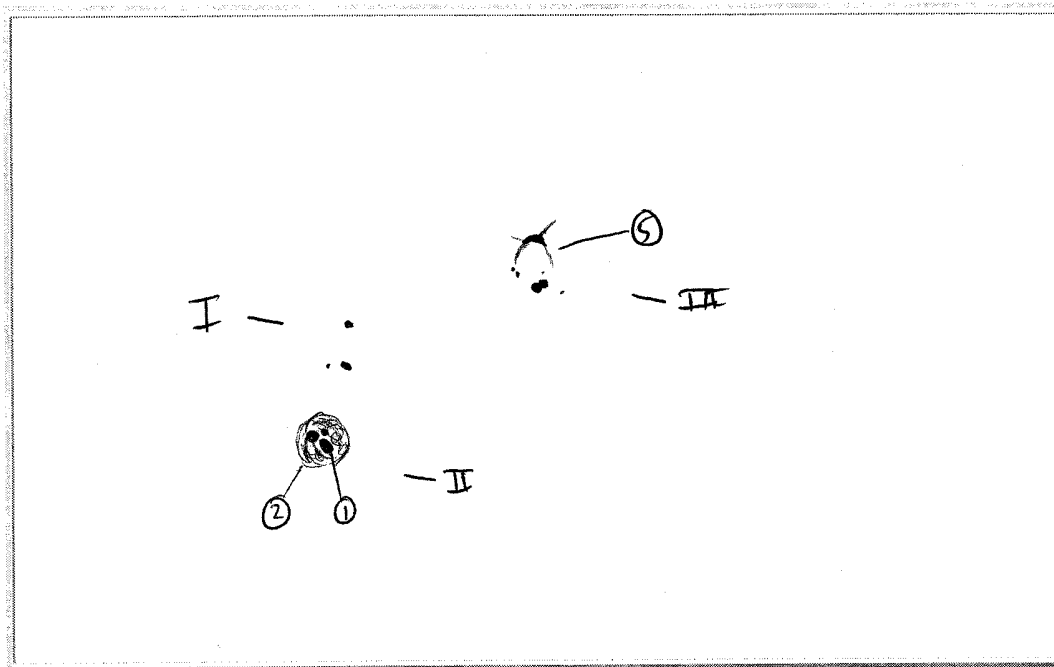
Sketch the Large Sunspots
and Groups
Outline the Penumbrae
Shade in the Umbrae

Note Sunspot Class
on this circle



Sunspot Drawing

Observer Brad Young Location: Home
 Universal date/time: 4/14/08 23:20 Telescope effective aperture: 125mm
 Sky quality: EX Telescope focal length: 1900mm
 (Excellent, good, fair, poor) Eyepiece focal length: 25
 Seeing in arc seconds: 1.5 Magnification: 73
 (smallest detail seen where a photospheric granule is 1.5-2 arc seconds) Filter type: Baader Film
 McIntosh Sunspot Classification: I = Bxx II = Dsc III = Cro



Label the following on your sunspot drawing:

1. Umbra
2. Penumbra
3. Facula
4. Light bridge (if present)
5. Penumbral fibril (if visible)
- Show *approximate* direction of **Solar** North with an arrow

Answer the Following:

- Is granulation visible? Yes: ✓ No: _____
- Is penumbral grain visible? Yes: ✓ No: _____
- Does the drawing show the Wilson effect? Yes: _____ No: ✓

SOLAR DISK DRAWING

Observer: BY
 Location: HOME
 Date/Time: 4/16/15 23:30 (UT)
 Sky: FAIR
 Seeing II Clouds High Wind NO
 Telescope ETX Type MAX
 Aperture Used 125
 Focal Length 1900 Eyepiece 40
 Filter BAADER

Observations:
 Direct or Projected (circle one)

Total Sunspot Count:

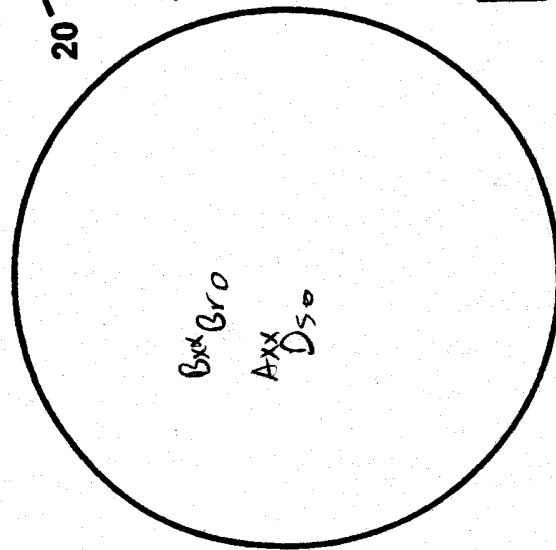
(N=north of solar equator, S=south)

Groups: N 3 + S 1 = 4

Spots: N 5 + S 3 = 8

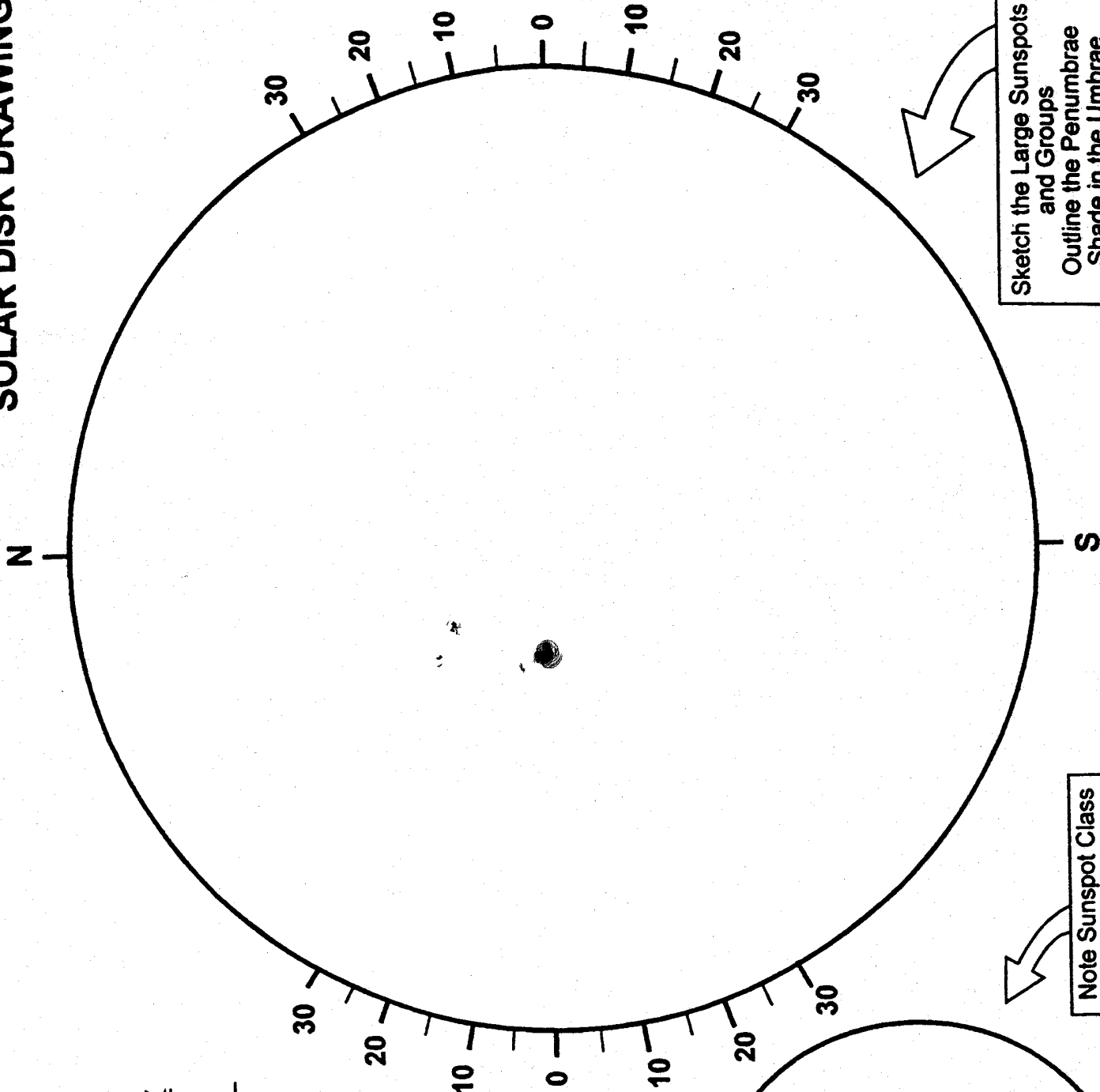
Wolf Sunspot Number (R):

$R = 10G + S = 48$



Note Sunspot Class
on this circle

Sketch the Large Sunspots
and Groups
Outline the Penumbrae
Shade in the Umbrae



SOLAR DISK DRAWING

Observer: By

Location: HONG

Date/Time 4/17/5 18:30 (UT)

Sky:

Seeing III Clouds P.C. Wind 10 mph

Telescope ETX 125 Type MAX

Aperture Used 125

Focal Length 1900 Eyepiece 40

Filter B&B 47K

Observations:

Direct or Projected (circle one)

Total Sunspot Count:

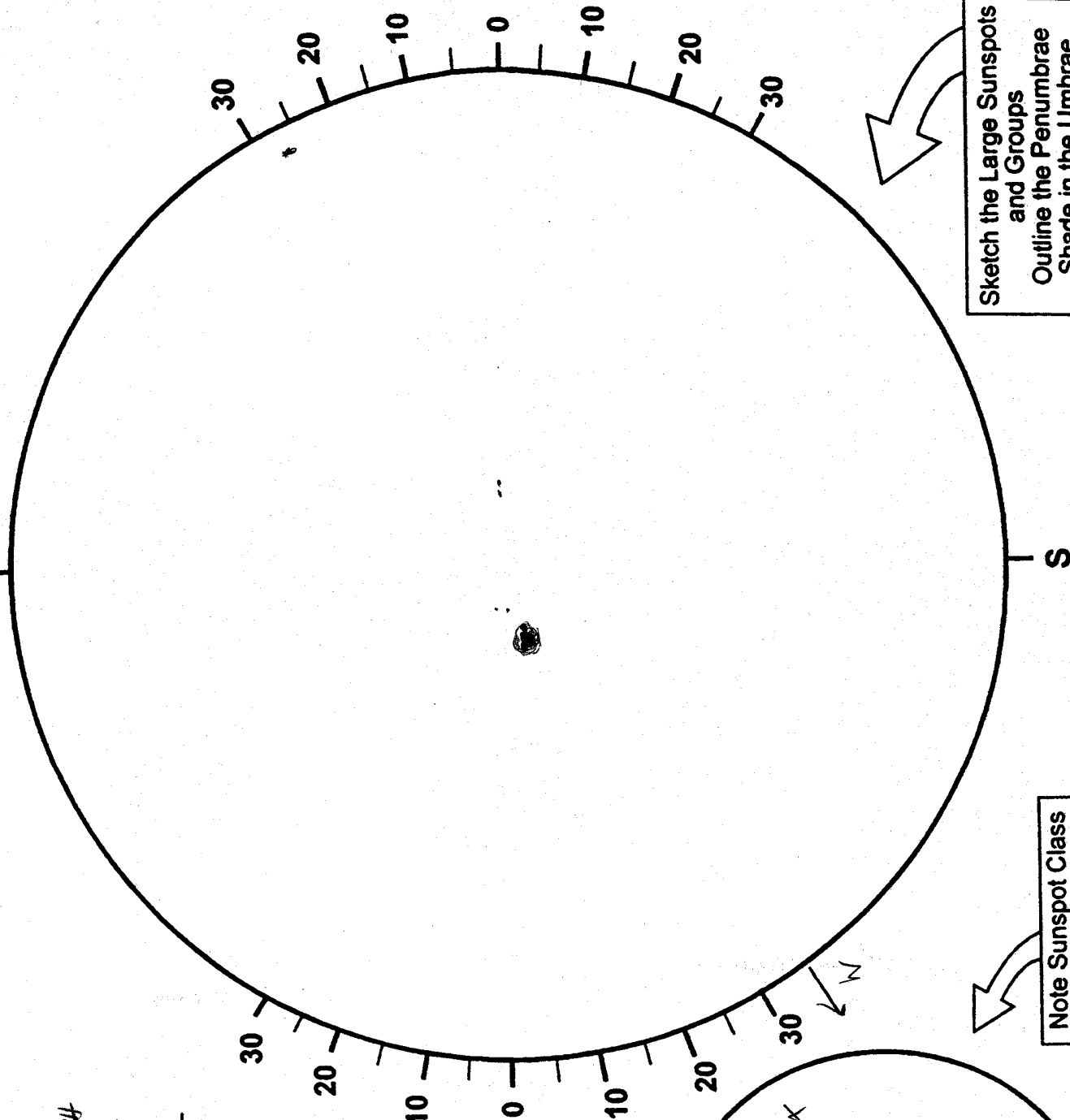
(N=north of solar equator, S=south)

Groups: N 3 + S 1 = 4

Spots: N 5 + S 3 = 8

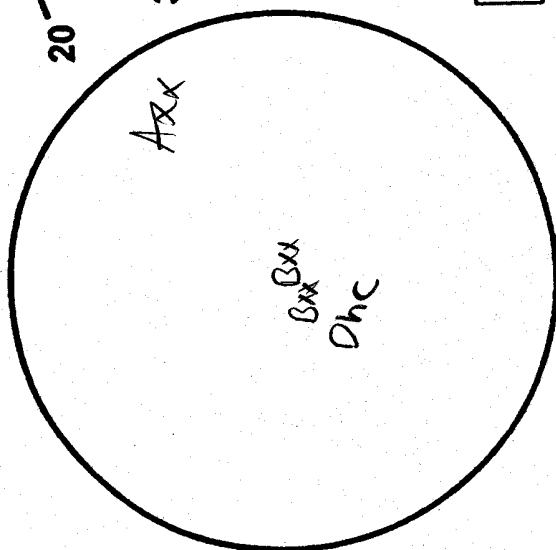
Wolf Sunspot Number (R):

$R = 10G + S = \underline{48}$



Sketch the Large Sunspots and Groups
Outline the Penumbrae
Shade in the Umbrae

Note Sunspot Class on this circle



SOLAR DISK DRAWING

Observer: BT

Location: HOME

Date/Time 4/24/05 0135 (UT)

Sky: SUN LOW BUT SOME GOOD

Seeing II Clouds NO Wind 10 N

Telescope ETX Type MAX

Aperture Used 125

Focal Length 1900 Eyepiece 40

Filter BALDER 47X

Observations:

Director Projected (circle one)

Total Sunspot Count:

(N=north of solar equator, S=south)

Groups: N 0 + S 0 = 0

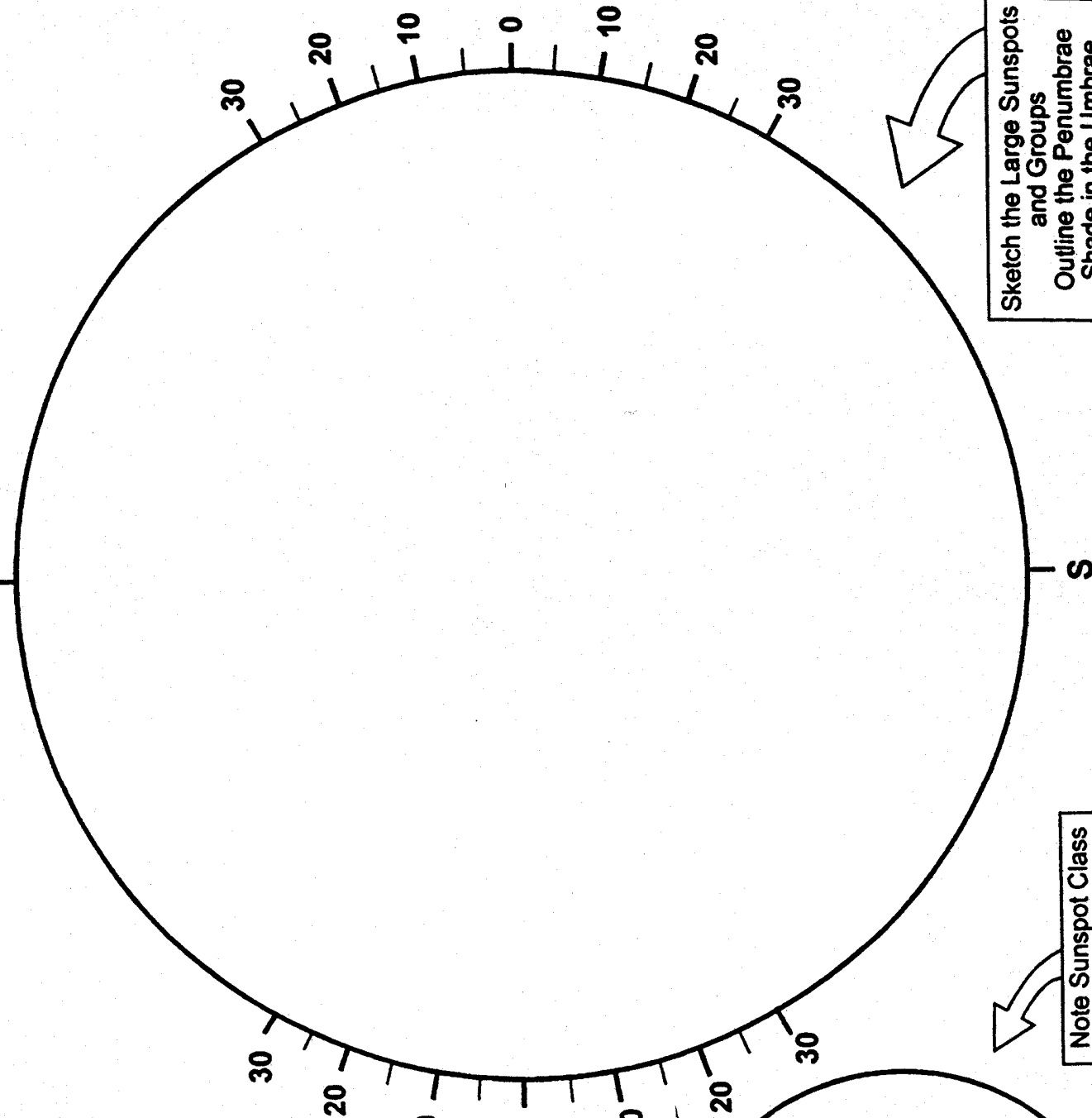
Spots: N 0 + S 0 = 0

Wolf Sunspot Number (R):

R = $10G + S$ = 0

NO SPOTS SEEN!

NICE GRANULATION IN
CENTER OF DISK AT
TIME
(LOW)



Note Sunspot Class
on this circle

Sketch the Large Sunspots
and Groups
Outline the Penumbrae
Shade in the Umbrae

SOLAR DISK DRAWING

Observer: B7
 Location: Home
 Date/Time: 4/24/5 21:25 (UT)
 Sky: FAIR
 Seeing: III Clouds HIGH Wind to E
 Telescope: ETX Type MAK
 Aperture Used 125
 Focal Length 900 Eyepiece 40
 Filter B&W 47X

Observations:

Direct or Projected (circle one)

Total Sunspot Count:

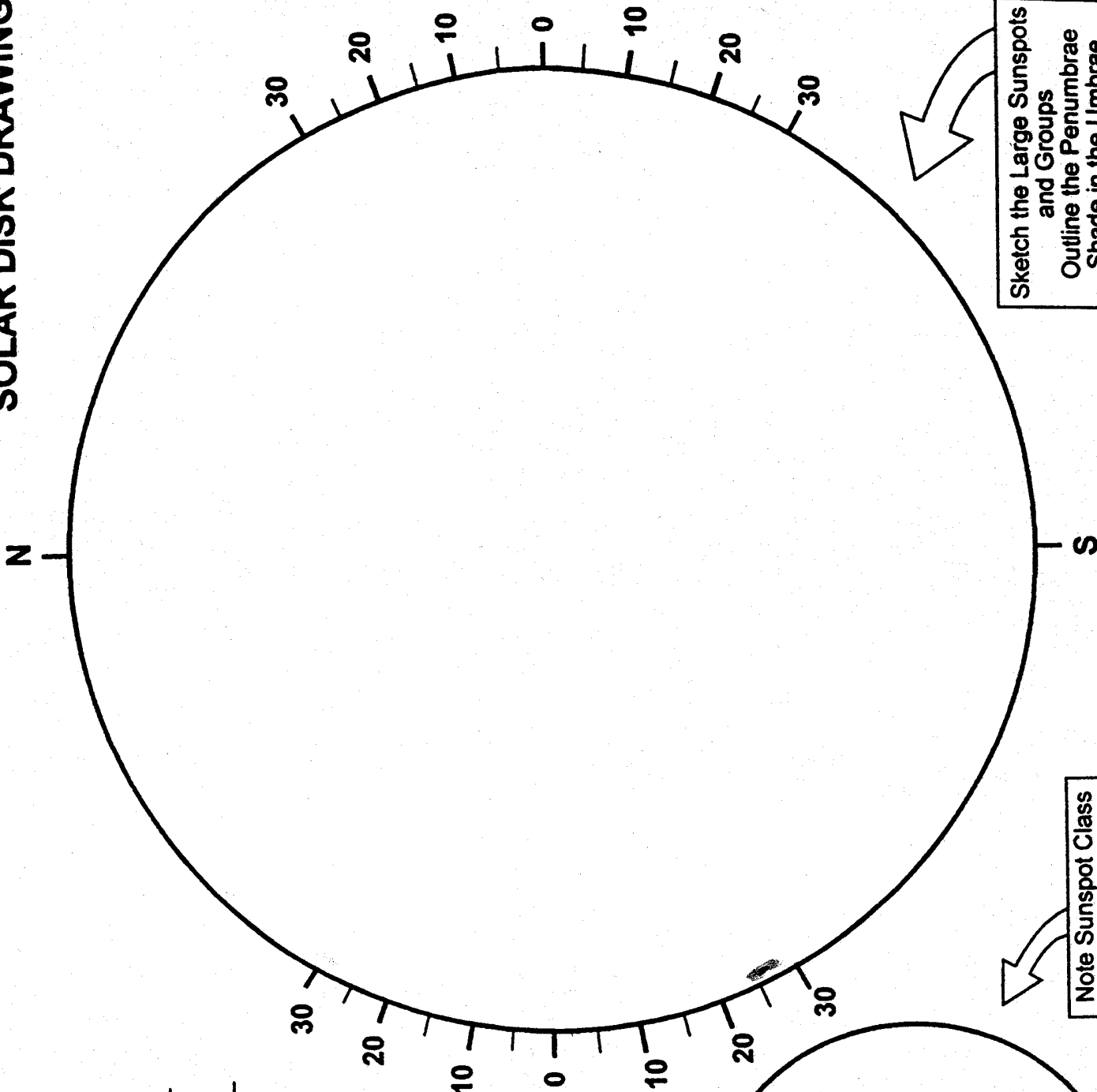
(N=north of solar equator, S=south)

Groups: N +S =

Spots: N +S =

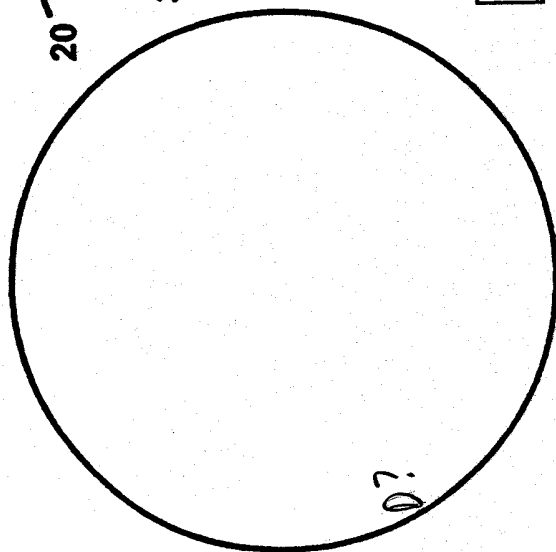
Wolf Sunspot Number (R):

$R = 10G + S = \underline{\hspace{1cm}}$



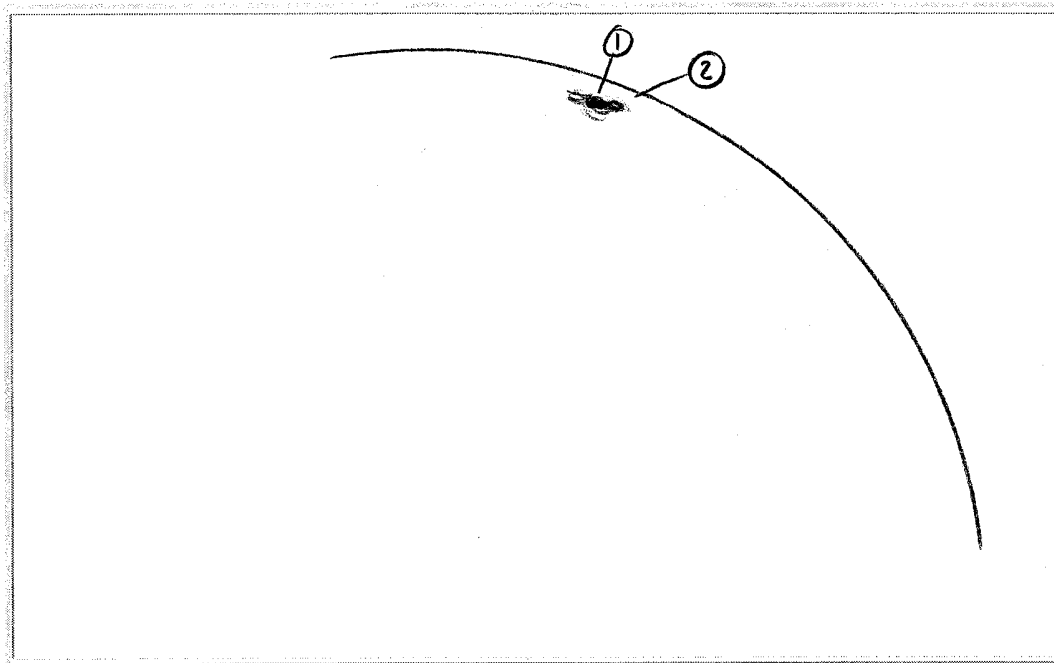
Sketch the Large Sunspots and Groups
 Outline the Penumbrae
 Shade in the Umbrae

Note Sunspot Class on this circle



Sunspot Drawing

Observer Brad Young Location: Home
 Universal date/time: 4/24/15 21:15 Telescope effective aperture: 125mm
 Sky quality: _____ Telescope focal length: 1900mm
 (Excellent, good, fair, poor) Eyepiece focal length: 25
 Seeing in arc seconds: 3" Magnification: 73x
 (smallest detail seen where a photospheric granule is 1.5-2 arc seconds) Filter type: Baader Film
 McIntosh Sunspot Classification: P-?



Label the following on your sunspot drawing:

- Umbra
- Penumbra
- Facula
- Light bridge (if present)
- Penumbrial fibril (if visible)
- Show *approximate* direction of **Solar** North with an arrow

Answer the Following:

- Is granulation visible? Yes: _____ No: ✓
- Is penumbral grain visible? Yes: _____ No: ✓
- Does the drawing show the Wilson effect? Yes: X No: _____

Very obvious

SOLAR DISK DRAWING

Observer: BZ
 Location: Home
 Date/Time: 4/30/8 19:00 (UT)
 Sky: EXCELLENT
 Seeing: II - Clouds ND Wind N 10
 Telescope: 8"X Type MAINT
 Aperture Used 125
 Focal Length 1900 Eyepiece 40
 Filter BAADER 47X

Observations:

Direct or Projected (circle one)

Total Sunspot Count:

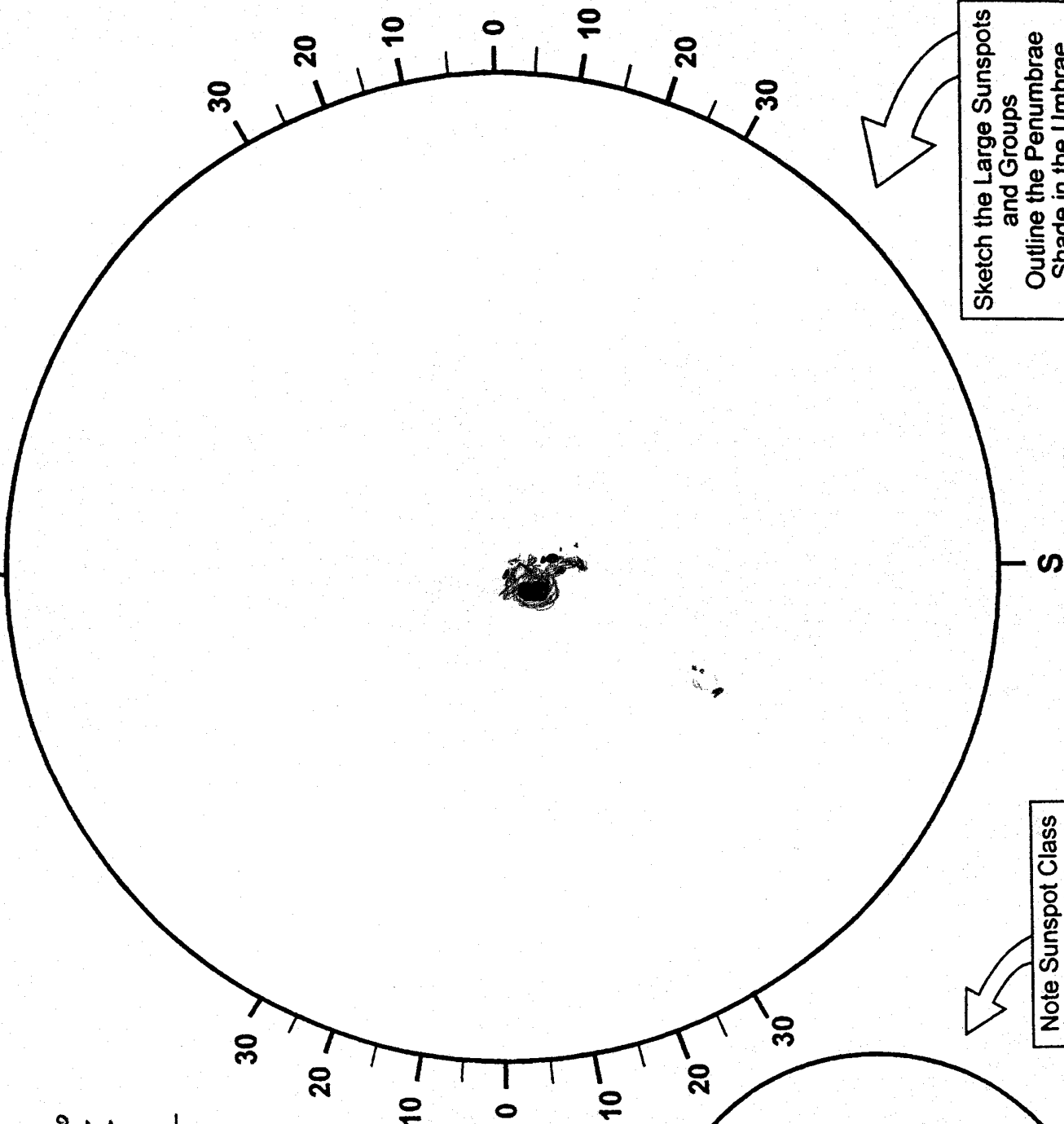
(N=north of solar equator, S=south)

Groups: N 7 + S 7 = 7

Spots: N 38 + S 38 = 38

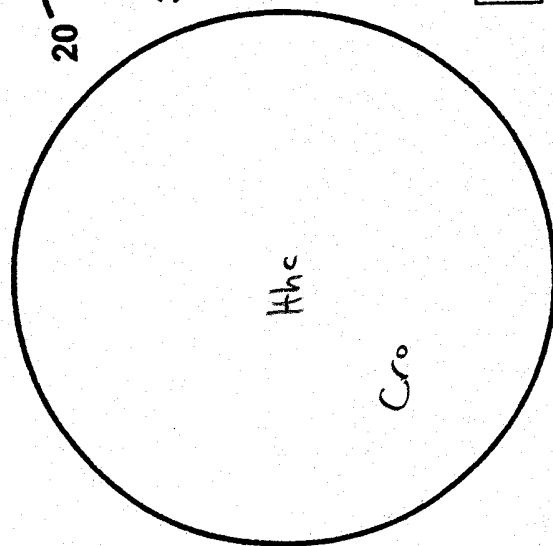
Wolf Sunspot Number (R):

$R = 10G + S = 108$



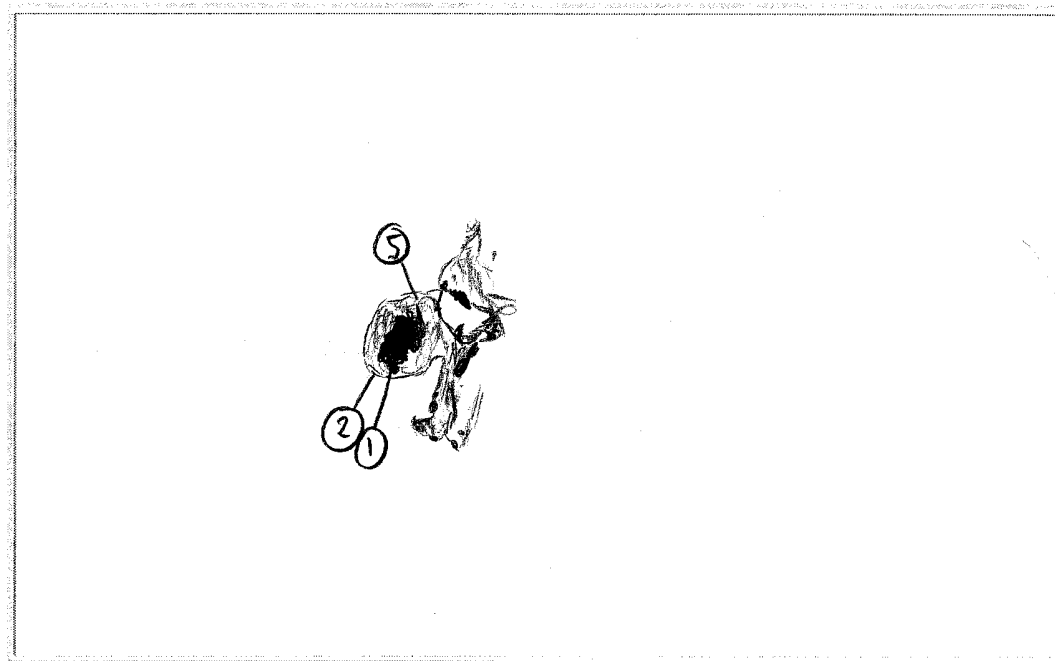
Sketch the Large Sunspots
and Groups
Outline the Penumbrae
Shade in the Umbrae

Note Sunspot Class
on this circle



Sunspot Drawing

Observer Brad Young Location: HOME
 Universal date/time: 4/30/5 19:00 Telescope effective aperture: 125mm
 Sky quality: (Excellent) good, fair, poor Telescope focal length: 1900mm
 Seeing in arc seconds: 2-3 Eyepiece focal length: 25
 (smallest detail seen where a photospheric granule is 1.5-2 arc seconds) Magnification: 73
 Filter type: Baader Film
 McIntosh Sunspot Classification: Hh c



Label the following on your sunspot drawing:

1. Umbra
2. Penumbra
3. Facula
4. Light bridge (if present)
5. Penumbrial fibril (if visible)
- Show *approximate* direction of **Solar** North with an arrow

39 spots + 4 in other group

Answer the Following:

- Is granulation visible? Yes: No: X
- Is penumbral grain visible? Yes: No:
- Does the drawing show the Wilson effect? Yes: No: X

slightly

Amazing
gray!

SOLAR DISK DRAWING

Observer: B7
 Location: Home
 Date/Time: 17:50 5/3/5 (UT)
 Sky: Partly Cloudy
 Seeing: III Clouds: Clear Wind: SS
 Telescope: ETX Type: MAK
 Aperture Used: 125
 Focal Length: 1900 Eyepiece: 40
 Filter: BADEN
 Observations:
 Director Projected (circle one)

Total Sunspot Count:

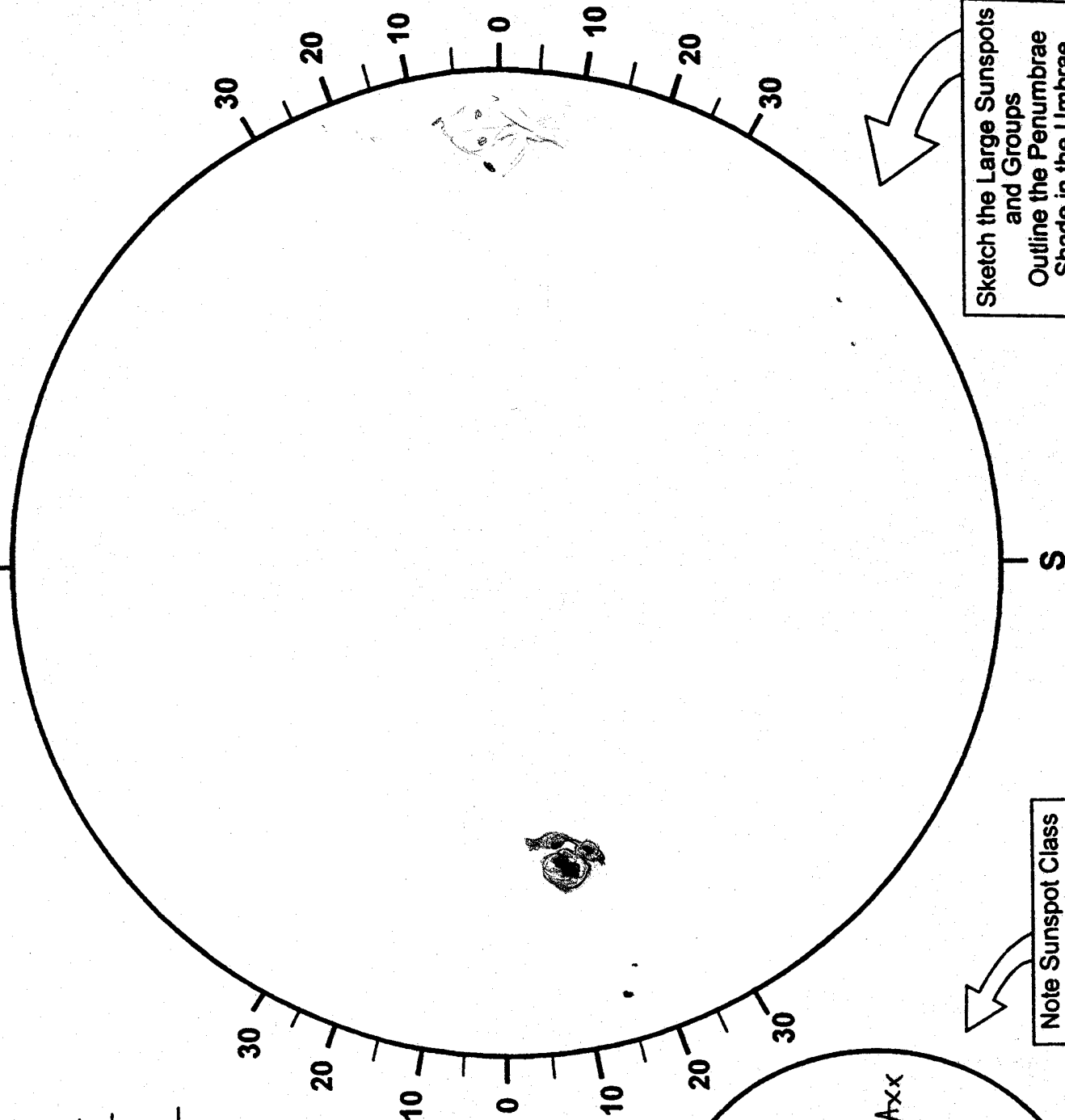
(N=north of solar equator, S=south)

Groups: N 1 + S 3 = 4

Spots: N 3 + S 10 = 13

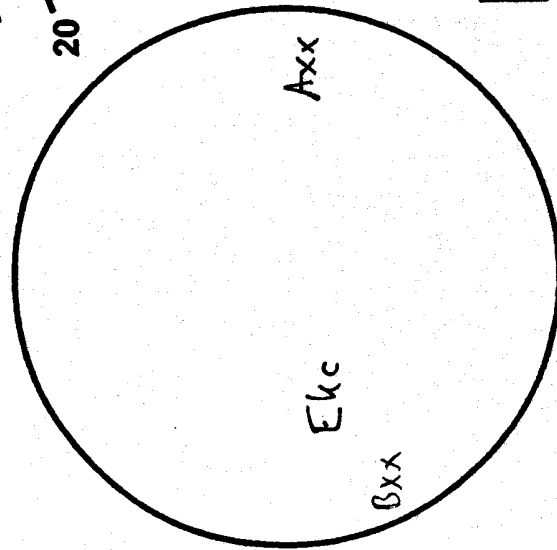
Wolf Sunspot Number (R):

$R = 10G + S = \underline{63}$



Sketch the Large Sunspots and Groups
 Outline the Penumbrae
 Shade in the Umbrae

Note Sunspot Class on this circle



SOLAR DISK DRAWING

Observer: BY
 Location: HOMES
 Date/Time: 5/8/5 22:05 (UT)
 Sky: UNSTEADY
 Seeing: II Clouds VALL Wind SSE
 Telescope: MAX Type ETX
 Aperture Used 125
 Focal Length 1900 Eyepiece 40
 Filter SADDER 47x

Observations:

Direct or Projected (circle one)

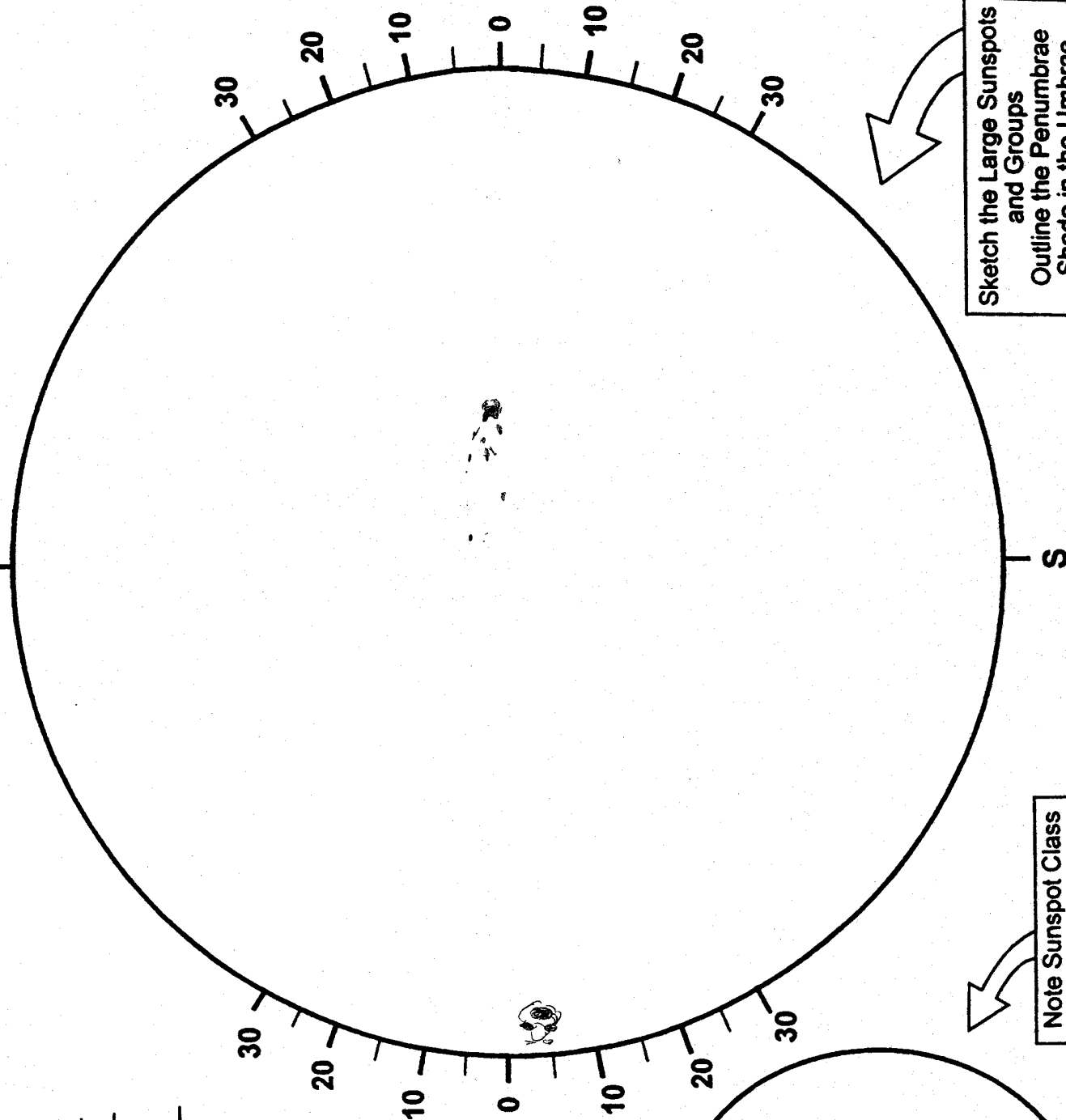
Total Sunspot Count:

(N=north of solar equator, S=south)

Groups: N 3 + S 2 = 5
 Spots: N 11 + S 4 = 15

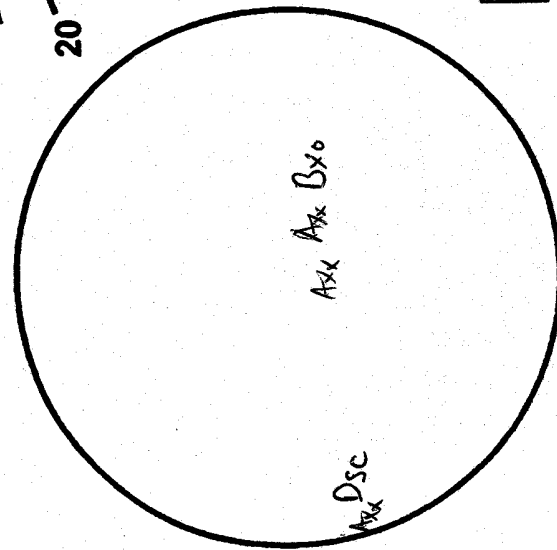
Wolf Sunspot Number (R):

$R = 10G + S = \underline{65}$



Sketch the Large Sunspots and Groups
 Outline the Penumbrae
 Shade in the Umbrae

Note Sunspot Class on this circle



SOLAR DISK DRAWING

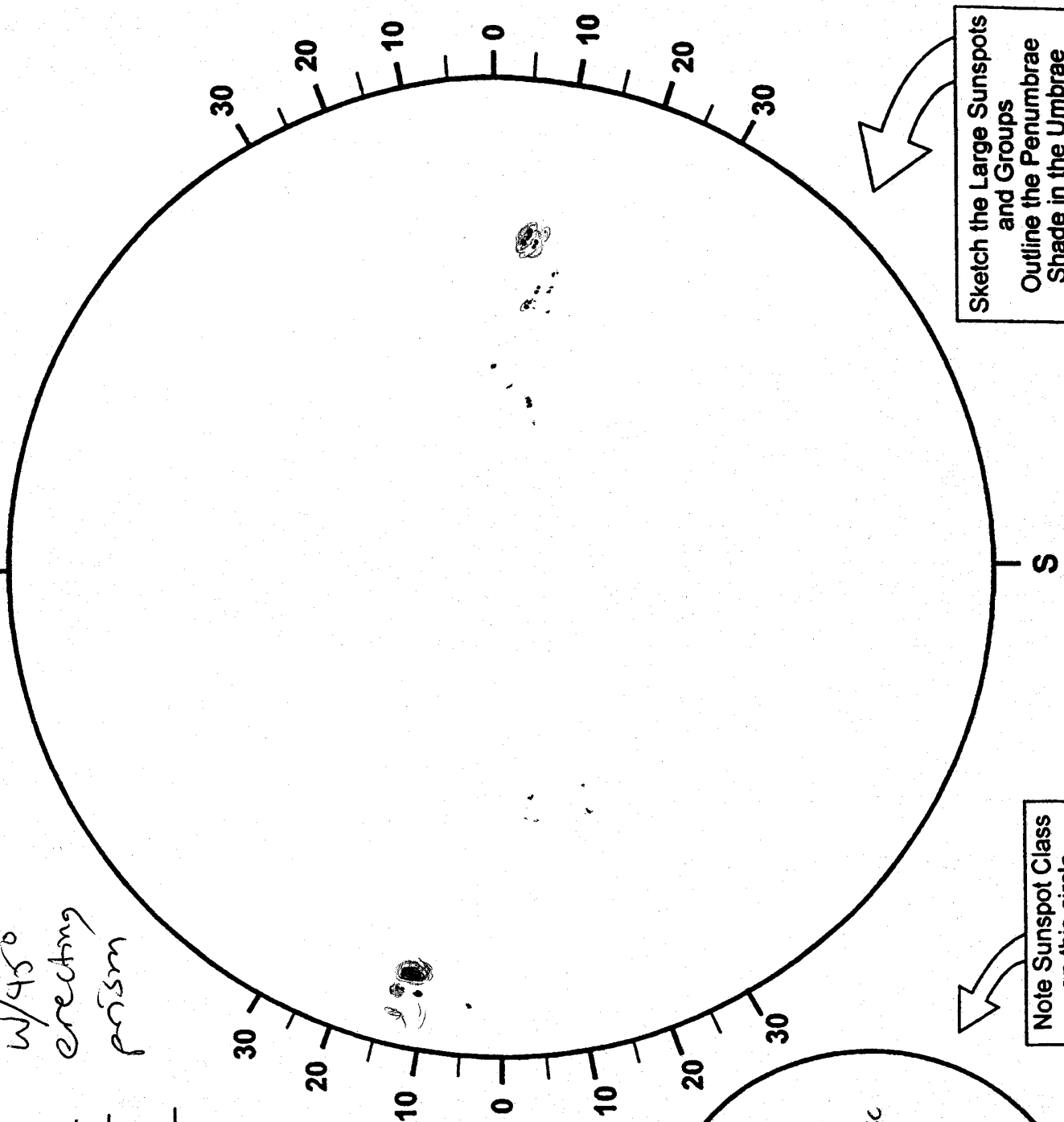
Observer: BY
 Location: HOME
 Date/Time: 5/9/15 23:10(UT)
 Sky: Good ^{light} Clouds Wind 10S
 Seeing 1.5 Clouds Wind 10S
 Telescope: 872 Type MAX
 Aperture Used 125
 Focal Length 1900 Eyepiece 40
 Filter BAADER 47x

Observations:
 Direct or Projected (circle one)

Total Sunspot Count:
 (N=north of solar equator, S=south)
 Groups: N 1 + S 4 = 40
 Spots: N 6 + S 28 = 34

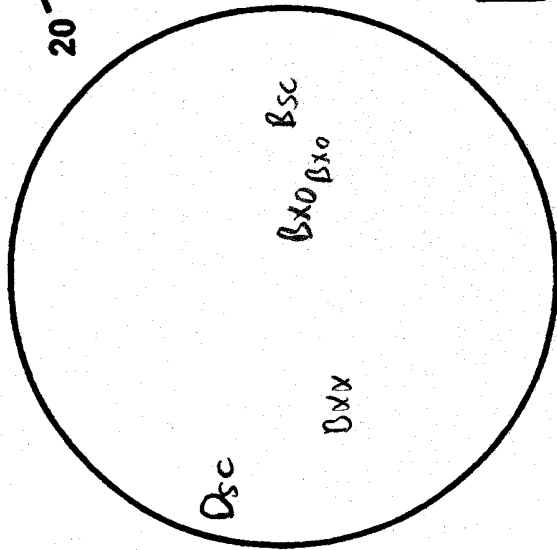
Wolf Sunspot Number (R):
 $R = 10G + S = 74$

w/450 erecting prism



Sketch the Large Sunspots and Groups
 Outline the Penumbrae
 Shade in the Umbrae

Note Sunspot Class on this circle



SOLAR DISK DRAWING

Observer: 139

Location: HOME

Date/Time 5/10/15 22:20 (UT)

Sky: Good

Seeing II Clouds No Wind Szo

Telescope MAK Type B7XAperture Used 125

Focal Length 1900 Eyepiece 40

Filter 3A0051 47X

Observations:

Observations: Direct or Projected (circle one)

Total Sunspot Count:

(N=north of solar equator, S=south)

Groups: N $2 + S$ $5 = 7$

Spots: $N \quad 7 + 5 \quad 31 = 38$

Wolf Sunspot Number (R):

$$R = 10G + S = 108$$

ms
N
100h/m
2580

β_{DHO}

Sketch the Large Sunspots and Groups

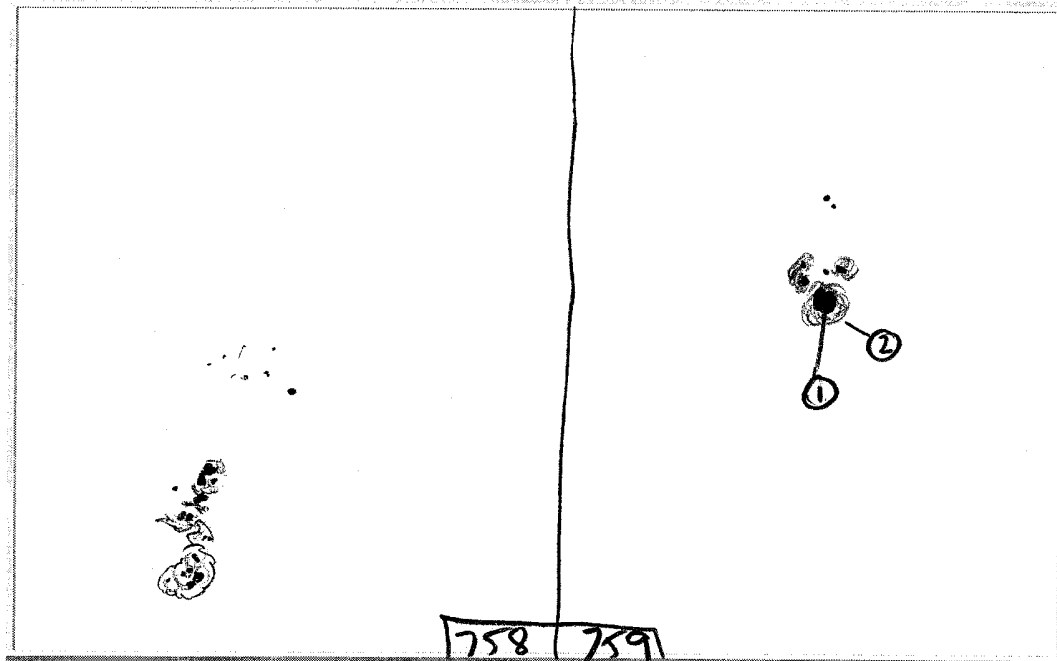
Outline the Penumbrae

Shade in the Umbrae

Note Sunspot Class
on this circle

Sunspot Drawing

Observer Brad Young Location: HOME
 Universal date/time: 5/10/5 22:35 Telescope effective aperture: 125mm
 Sky quality: _____ Telescope focal length: 1900mm
 (Excellent, good, fair, poor) Eyepiece focal length: 25
 Seeing in arc seconds: 1.5 Magnification: 73
 (smallest detail seen where a photospheric granule is 1.5-2 arc seconds) Filter type: Baader Film
 McIntosh Sunspot Classification: _____



Label the following on your sunspot drawing:

- Umbra
- Penumbra
- Facula
- Light bridge (if present)
- Penumbrial fibril (if visible)
- Show *approximate* direction of **Solar** North with an arrow

Answer the Following:

- Is granulation visible? Yes: _____ No: _____
- Is penumbral grain visible? Yes: _____ No: _____
- Does the drawing show the Wilson effect? Yes: _____ No: _____

SOLAR DISK DRAWING

Observer: B7
 Location: HOME
 Date/Time: 5/1/5 23:35(UT)
 Sky: OK
 Seeing: III Clouds: NO Wind: S30
 Telescope: ETX Type: MAX
 Aperture Used: 125
 Focal Length: 1900 Eyepiece: 40
 Filter: BARON YR

Observations:
 Direct or Projected (circle one)

Total Sunspot Count:

(N=north of solar equator, S=south)

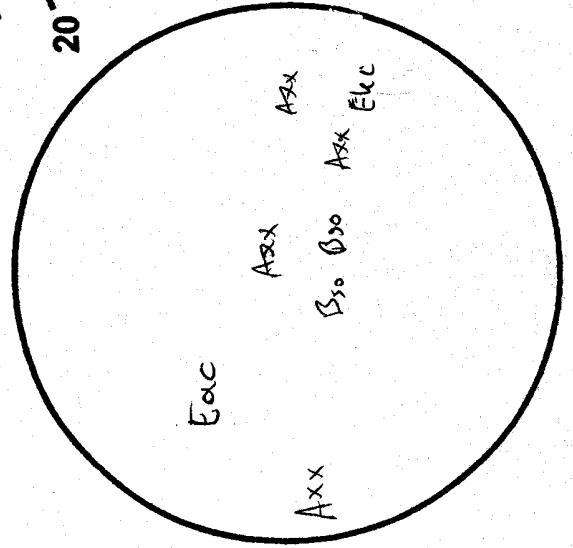
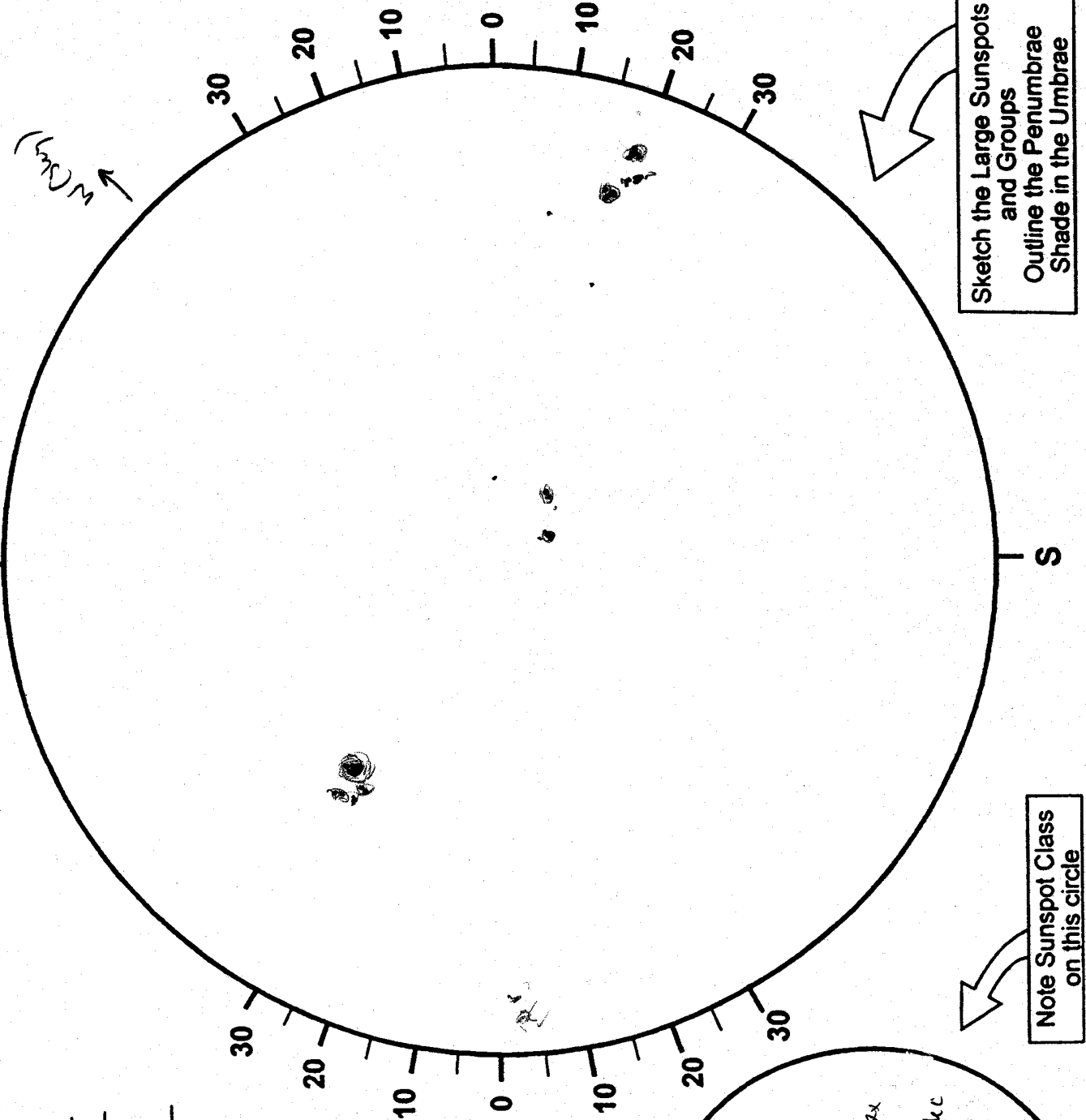
Groups: N 2 + S 6 = 8

Spots: N 6 + S 20 = 26

Wolf Sunspot Number (R):

$R = 10G + S = 106$

now 1 MATCHED



SOLAR DISK DRAWING

Observer: B7
 Location: HOME
 Date/Time: 5/14/15 19:20(UT)
 Sky: EXCELLENT
 Seeing: II Clouds: No Wind: NIS
 Telescope: 80X Type: MAX
 Aperture Used: 125
 Focal Length: 1900 Eyepiece: 40
 Filter: BAK4 47X

Observations:
Direct or Projected (circle one)

Total Sunspot Count:

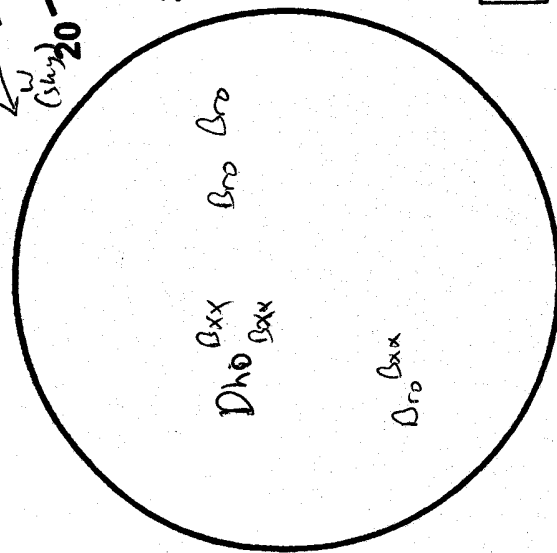
(N=north of solar equator, S=south)

Groups: N 5 + S 2 = 7

Spots: N 14 + S 3 = 17

Wolf Sunspot Number (R):

$R = 10G + S = 84$



Sketch the Large Sunspots and Groups
 Outline the Penumbrae
 Shade in the Umbrae

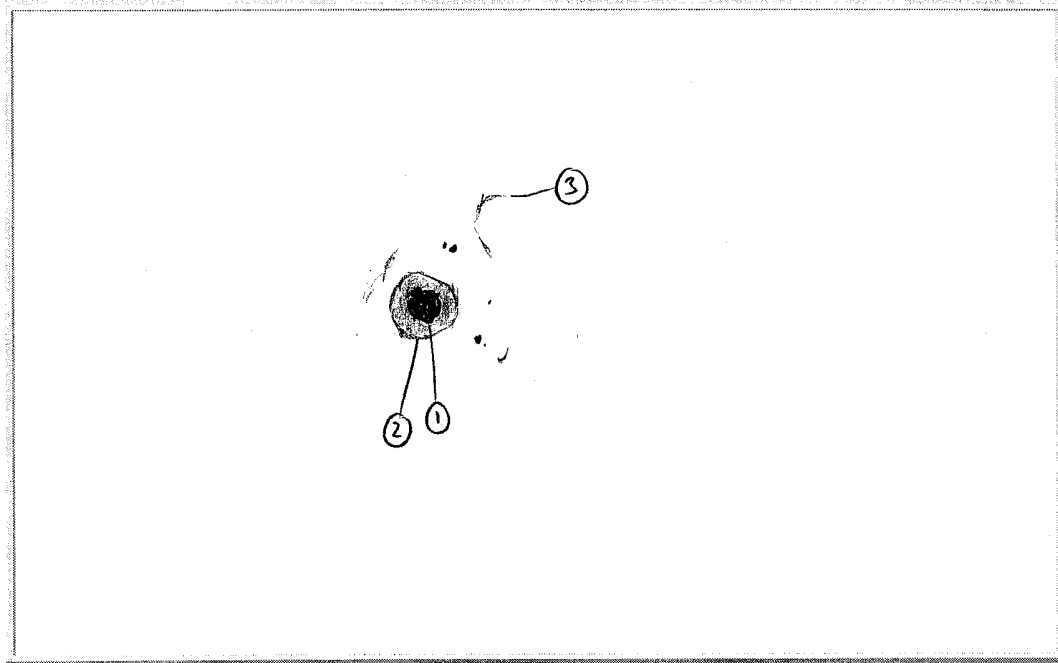
Note Sunspot Class on this circle

D_{ax} D_{ro}
 D_{ax} D_{ro}

D_{ro}

Sunspot Drawing

Observer Brad Young Location: HOME
 Universal date/time: 5/14/15 19130 Telescope effective aperture: 125mm
 Sky quality: (Excellent, good, fair, poor) Telescope focal length: 1900mm
 Seeing in arc seconds: 2 Eyepiece focal length: 25
 (smallest detail seen where a photospheric granule is 1.5-2 arc seconds) Magnification: 73
 Filter type: Baader Film
 McIntosh Sunspot Classification: Dho



Label the following on your sunspot drawing:

- Umbra
- Penumbra
- Facula
- Light bridge (if present)
- Penumbral fibril (if visible)
- Show *approximate* direction of **Solar** North with an arrow

Answer the Following:

- Is granulation visible? Yes: slight No:
- Is penumbral grain visible? Yes: No: ✓ - very smooth & even
- Does the drawing show the Wilson effect? Yes: No: X

SOLAR DISK DRAWING

Observer: BY
 Location: HOME
 Date/Time: 5/15/5 18:32(UT)
 Sky: BVL
 Seeing: 1 Clouds: Thin Wind: N20
 Telescope: ETX Type: MAX
 Aperture Used: 125
 Focal Length: 1900 Eyepiece: 40
 Filter: BAADE

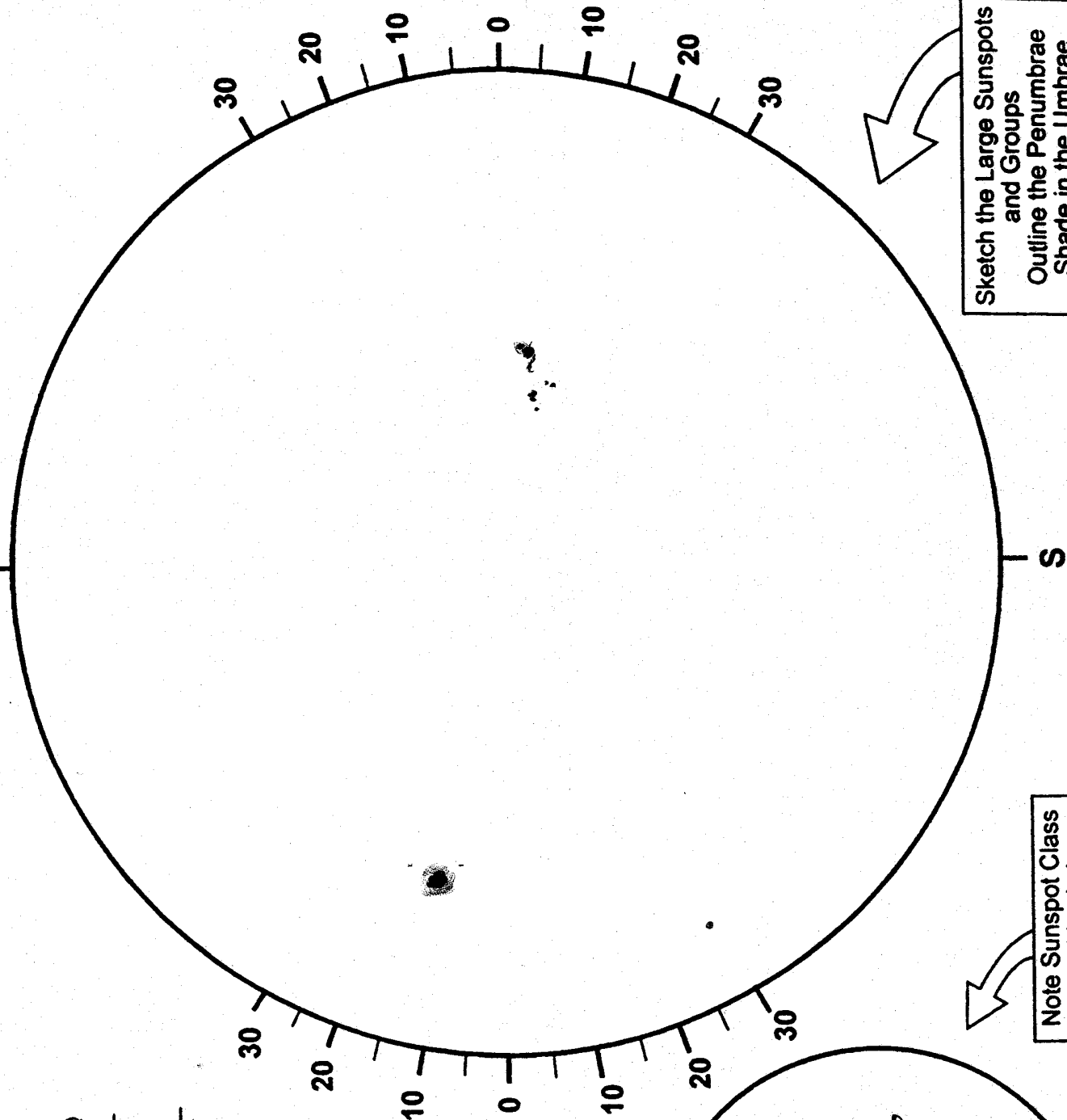
Observations:
 Direct or Projected (circle one)

Total Sunspot Count:

(N=north of solar equator, S=south)

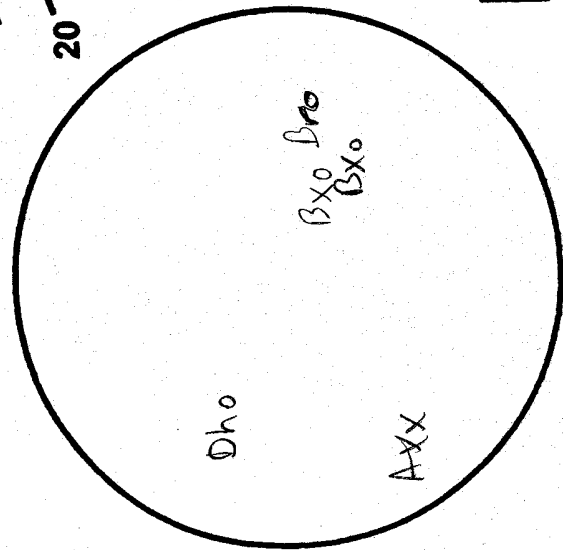
Groups: N 1 + S 4 = 5
 Spots: N 3 + S 8 = 11

Wolf Sunspot Number (R):
 $R = 10G + S = 61$



Sketch the Large Sunspots and Groups
 Outline the Penumbrae
 Shade in the Umbrae

Note Sunspot Class on this circle



SOLAR DISK DRAWING

Observer By
 Location: HOME
 Date/Time 5/16/15 23:00(UT)
 Sky: GOOD
 Seeing II Clouds No Wind 520
 Telescope 51X Type MARK
 Aperture Used 125
 Focal Length 900 Eyepiece 40
 Filter BAADER 47X

Observations:
 (Direct or Projected (circle one))

Total Sunspot Count:

(N=north of solar equator, S=south)

Groups: N 1 + S 5 = 6

Spots: N 3 + S 24 = 27

Wolf Sunspot Number (R):

$R = 10G + S = \underline{87}$

N

S

Sketch the Large Sunspots
 and Groups
 Outline the Penumbrae
 Shade in the Umbrae

Note Sunspot Class
 on this circle

Dno

Bxi Bxi
 Bxi Bxi