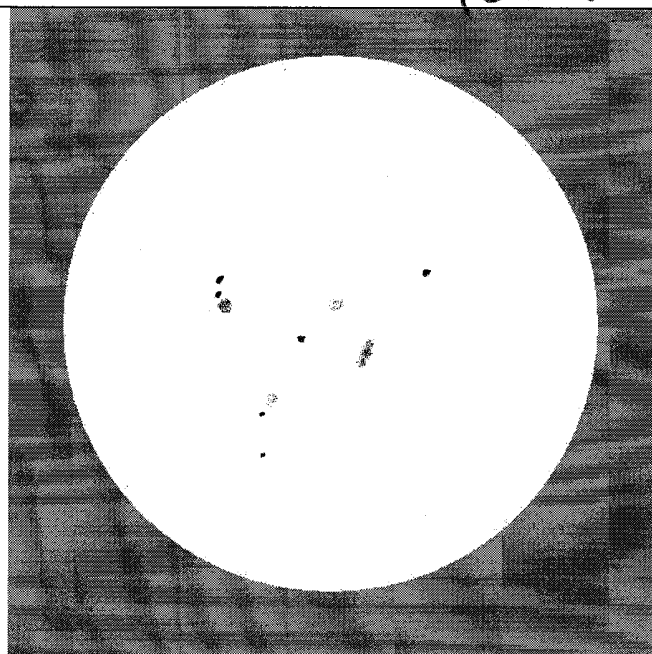


125 triller (+1?)

GG-8C



Observer's name:

B. Young

TR10 #2

Comet:

N 127/128 / 130 / 125

Date / Time:

9/20/9

1:30 am

Observing location:

Ouse-Tex

Instrument / eyepiece / magnification / field of view:

XT-12 / 10mm / 150x / 0.3

Comet sky location (constellation, nearest star, or RA/DEC):

Sky & Star steadiness

boiling

(circle one)

steady

5

4

3

②

1

Sky transparency

Un-aided zenith
magnitude limit:

6.5

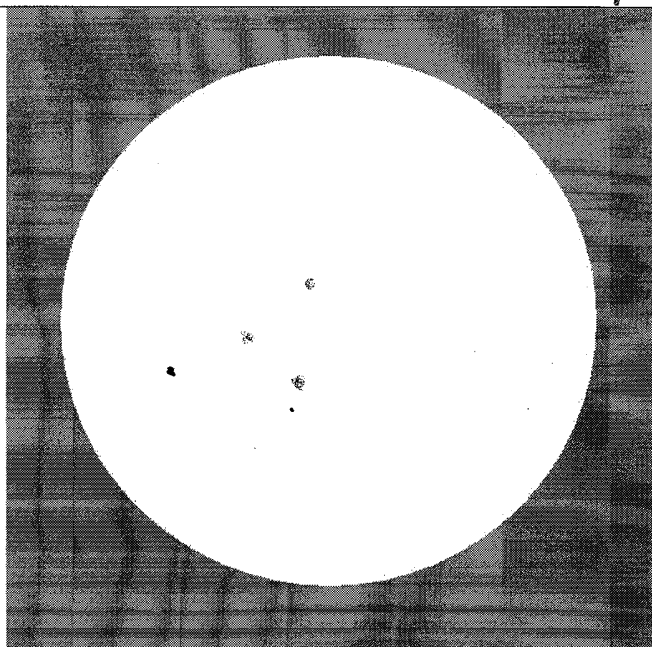
Comet description (magnitude, coma size, condensation, tail(s), color, shape, texture, motion):

3 @ DV, except NE4

Observing notes (difficulty, observing partners, interesting objects in field, general comments):

724/29/30

TR10 #7



Note: This can be the second drawing of the same comet above to show motion compared to background stars. Or, if a second position is indicated in the first drawing, this can be a different comet observation.

Comet:

N 426 / 429 / 430

Date / Time:

9/20/9

1:50

Observing location:

Ouse-Tex

Instrument / eyepiece / magnification / field of view:

XT-12 / 10mm / 150x / 0.3

Comet sky location (constellation, nearest star, or RA/DEC):

150x

Sky & Star steadiness

boiling

(circle one)

steady

5

4

3

②

1

Sky transparency

Un-aided zenith
magnitude limit:

6.5

Comet description (magnitude, coma size, condensation, tail(s), color, shape, texture, motion):

All DV, but small & no details

Observing notes (difficulty, observing partners, interesting objects in field, general comments):

■■■■

Be sure to indicate North & East on your drawings.

■■■■

GALAXY GROUP AND CLUSTER OBSERVATIONS

NGC	CONST	No. OF GALAXIES (AV)	DATE	TIME	SITE	SEIING	TRANS
N6927/8/29	Del	3	10/18/9	8:00pm	RMCC	III	I-
					INSTR	EYEPIECE	POWER
					Xt-12	10	150
					COMMENTS		
					2 small & one large easy one		
N230/232/235	Cet	3	10/18/9	10:30pm	"	IV	I
					INSTR	EYEPIECE	POWER
					"	10	150
					COMMENTS		
					F.S. from memory - no real pattern		
					All AV=3		
7383/7385/7386	Peg	3	10/18/9	11:15pm	7383	"	"
					INSTR	EYEPIECE	POWER
					"	"	"
					COMMENTS		
					← AV=1 7385		
					← AV=1 7386		
1129 group	Per	3	10/19/9	12:00 am	RMCC	IV	I
					INSTR	EYEPIECE	POWER
					Xt-12	10	150
					COMMENTS		
					← 1131 AV=3		
					← 1130 AV=3		
					← 1129 AV=1		

The AV scale for averted vision is used to classify the difficulty of observation. This 1-5 scale is further explained on pages 137-138.

Observing Log

Object Type: Galaxy Group or Galaxy Cluster

Δ6

Object ID: N392/394/397
397

R.A.: _____

Dec.: _____

Magnitude: _____

Const.: _____

Observer B. YOUNG

Date 10/18/9

Time 9:30 pm

Location RMCC

Seeing IV Transparency I

Faintest Naked Eye Star 6.0

Instrument XT-12

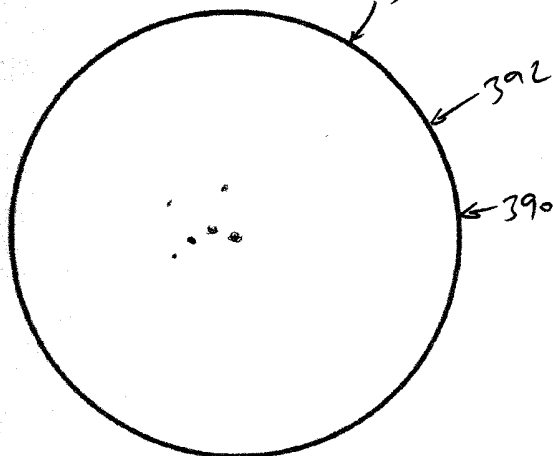
Aperture and Focal Length 1500mm

Eyepiece 10mm

Magnification 150x Field of view 0°:3

No. of averted vision galaxies 1

No. of direct vision galaxies 2



- * Can the faintest galaxy/galaxies be seen with direct vision, or is averted vision required? If averted vision is required, give an estimate on the AV scale for all objects that require it.
- * Estimate the apparent size of the galaxy group or cluster. 0°, 1
- * Do the galaxies form any particular pattern? Are they evenly or unevenly distributed? Pair + 1
- * Are details such as nuclei, dust lanes or spiral arms visible in any of the galaxies? No
- * Are any of the galaxies close enough to one another to appear superimposed? If so, are any No signs of interaction visible?

Description Verified 397 using DSS image

(McGown, Cole-Huston, Pratt 2000)

ALL OKIE-TEX ALL LGGN (Sci Group) exc. *, †, (F)

OBJECT	NOTES		
1C5271	DATE 9/20/9	TIME 1:35	Some clumpiness 9 m. 90. m. 100. Nice field
	POWER 150	SEEING II T=I-	
	INSTRUMENT XT-12	TYPE FL DoB 1500mm	
N7418	DATE "	TIME 1:40	Not too small! Even glow, compact dark nuclei
	POWER 150	SEEING II T=I-	
	INSTRUMENT "	TYPE F/	
N289	DATE "	TIME 1:50	Nice 3rd mag of small cluster near a f.s.
	POWER 150	SEEING II T=I-	
	INSTRUMENT "	TYPE F/	
* N2831	DATE "	TIME 1:58	Near 1st mag and glow - easy find
	POWER 150	SEEING II T=I-	
	INSTRUMENT "	TYPE F/	
N134	DATE "	TIME 2:00	Low by near edge on w/ great field Some detail N131 also edge of, Ar=2
	POWER 150	SEEING II T=I-	
	INSTRUMENT "	TYPE F/	
N613	DATE "	TIME 2:10	Nice! several details, 2 clumps, Ar=2, extended into 105.
	POWER 150	SEEING II T=I-	
	INSTRUMENT "	TYPE F/	
N578	DATE "	TIME 2:20	Even glow but seems to blate to east as rhom. Nice ring to see
	POWER 150	SEEING II T=I-	
	INSTRUMENT "	TYPE F/	
† N554/ 555/ 556	DATE 9/20/09	TIME 2:30 AM	Ar=4 on both (only 2 of 3)
	POWER 150	SEEING II T=I-	
	INSTRUMENT 12" 1500mm XT-12	TYPE F/	
* M77	DATE "	TIME 3:40	
	POWER 150	SEEING II T=I-	
	INSTRUMENT "	TYPE F/	
(F) N1339	DATE "	TIME 4:00	Small dense elongated and bright side.
	POWER 75	SEEING II T=I-	
	INSTRUMENT "	TYPE F/	

A Beginner's Guide

29

* - For Fun

† - GGCC Galaxy Trio #8

(F) = LGGN Fornax group

65

Observing Log

Object Type: Galaxy Group or Galaxy Cluster

Δ 9
2 Δ 10

Object ID: TR10 #9 1060 +
#10 Groups

R.A.: _____

Dec.: _____

Magnitude: _____

Const.: Mr=3

Observer B. Young

Date 3/4/10

Time 7:45 pm

Location RMCC

Seeing III Transparency I-

Faintest Naked Eye Star 6.0

Instrument XT-12

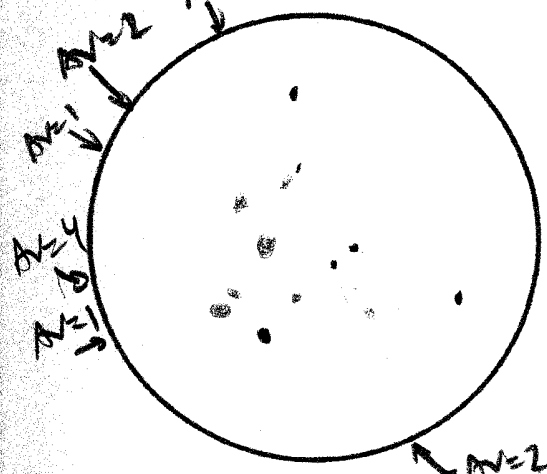
Aperture and Focal Length 12" 1500mm

Eyepiece 10mm

Magnification 150x Field of view 0° 3

No. of averted vision galaxies 4

No. of direct vision galaxies 2



- * Can the faintest galaxy/galaxies be seen with direct vision, or is averted vision required? If averted vision is required, give an estimate on the AV scale for all objects that require it.

See above

- * Estimate the apparent size of the galaxy group or cluster.

2 clusters within 0° 3 field

- * Do the galaxies form any particular pattern? Are they evenly or unevenly distributed?

No

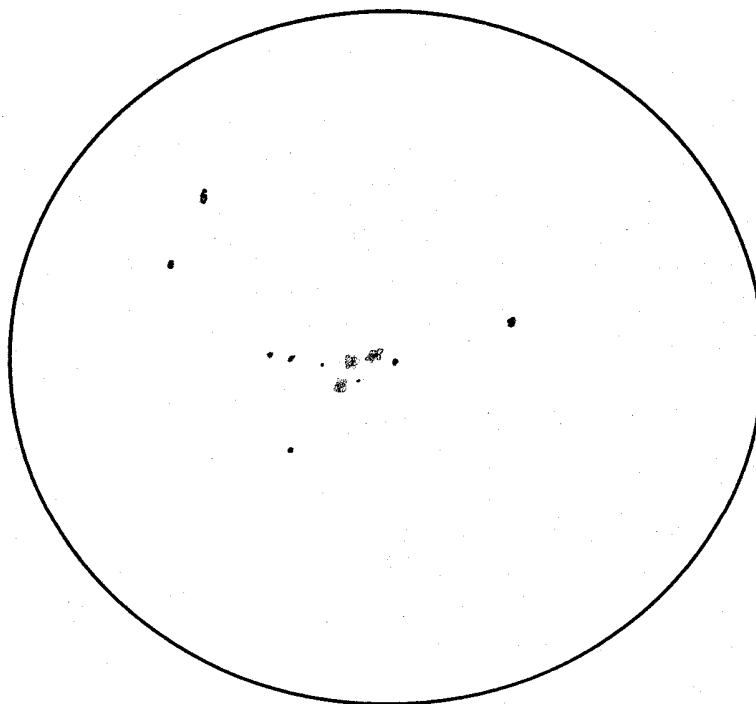
- * Are details such as nuclei, dust lanes or spiral arms visible in any of the galaxies? No

- * Are any of the galaxies close enough to one another to appear superimposed? If so, are any signs of interaction visible? No

Description Tight triangle and broader group to west

(McGown, Cole-Huston, Pratt 2000)

DATE 11/29/9 TIME 8:15 CST CDT CLARITY I II III IV V SEEING I II III IV V
INSTRUMENT ETX-125 50 x 800 mm RR 10x50 EYE XT-12
POWER 10 47 73 150 316 475 20 30 64 80 133 200
OBJECT D11 FILTER NO NB WB OIII
OBS. PROGRAM G-GC LOCATION RMCC HOME



ALV 2V!
N1721/
1725/
1728

Beautiful little triangle, all 2V, <0.1, obviously
grouped, almost overlap, no details.
Faintest star = 5.8 12", 1500 mm f.l. 10mm EP

Observing Log

Object Type: Galaxy Group or Galaxy Cluster

Object ID: _____

R.A.: _____

Dec.: _____

Magnitude: _____

Const.: _____

Observer B. Young

Date 3/13/10

Time 10:10 CST

Location RMCC

Seeing II Transparency II

Faintest Naked Eye Star 6.0

Instrument Xt-12

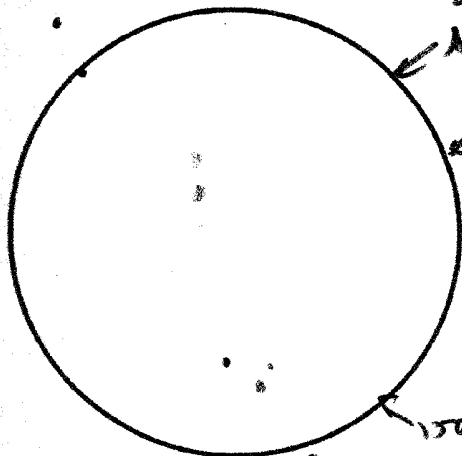
Aperture and Focal Length 12" 1500mm

Eyepiece 2X42 & 10

Magnification 75/150 Field of view 0°.6/0°.3

No. of averted vision galaxies 4

No. of direct vision galaxies 0



* Can the faintest galaxy/galaxies be seen with direct vision, or is averted vision required? If averted vision is required, give an estimate on the AV scale for all objects that require it.

* Estimate the apparent size of the galaxy group or cluster. 0°.2 / 0°.2

* Do the galaxies form any particular pattern? Are they evenly or unevenly distributed? No

* Are details such as nuclei, dust lanes or spiral arms visible in any of the galaxies? No

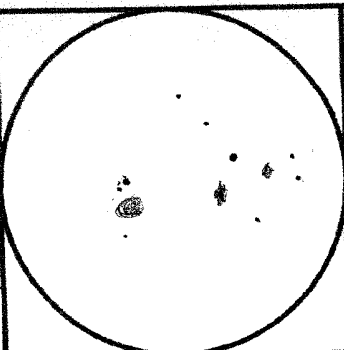
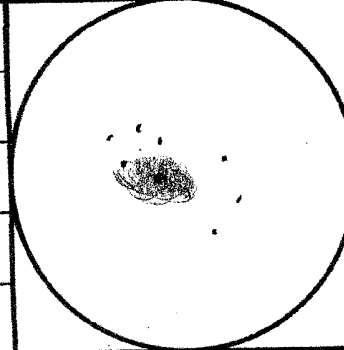
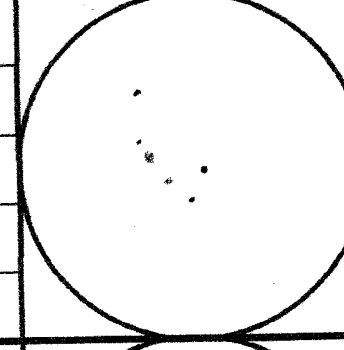
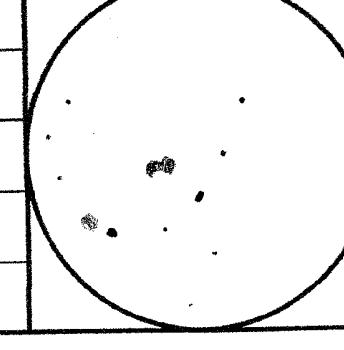
* Are any of the galaxies close enough to one another to appear superimposed? If so, are any signs of interaction visible? No

Description Only 2 of each trio seen, but both

trios seen 75x field

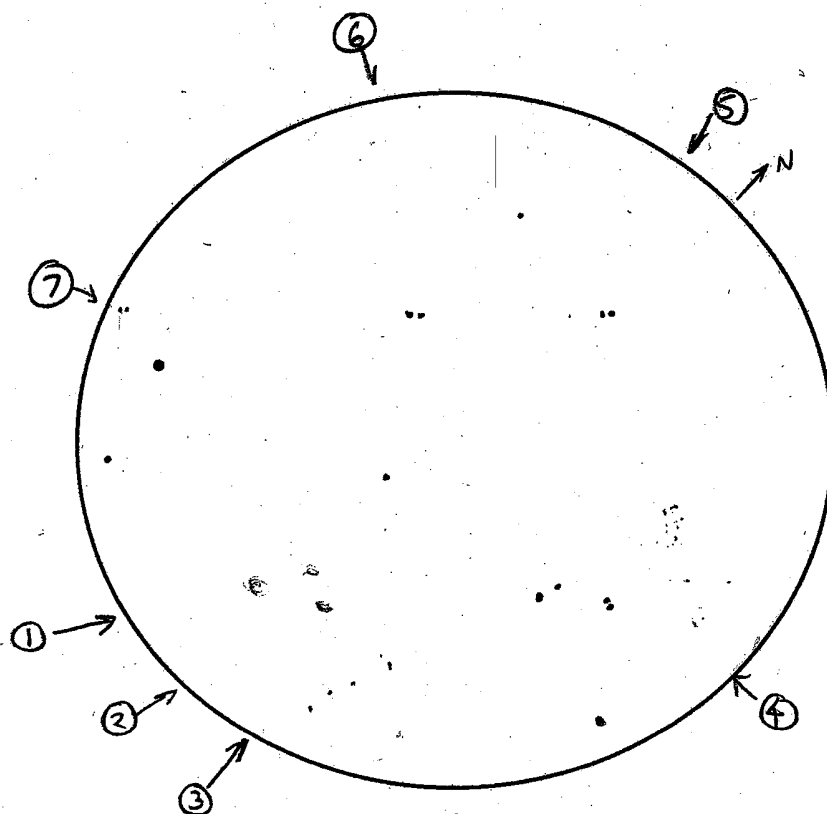
(McGown, Cole-Huston, Pratt 2000)

GALAXY GROUP AND CLUSTER OBSERVATIONS

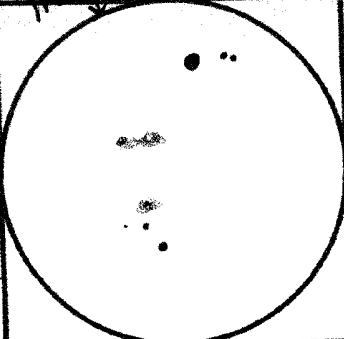
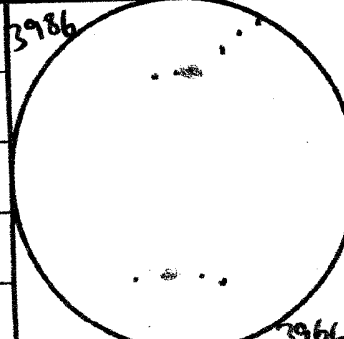
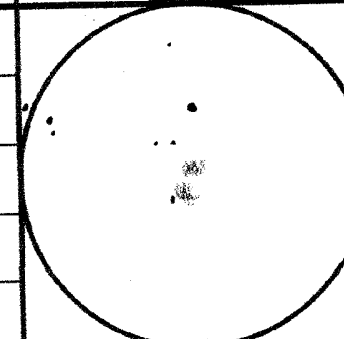
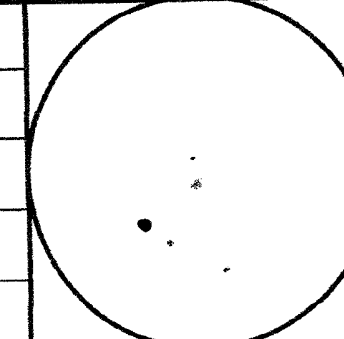
NGC 2854/6/7 CONST No. OF GALAXIES (AV) 3 DATE 4/9/10 TIME 1:00		SITE RMCC INSTR 12 COMMENTS Nice group! Same shape & details to each as shown	SEEING I TRANS I EYEPIECE 10 POWER 150	Δ 1
NGC M83 CONST No. OF GALAXIES (AV) DATE 4/9/10 TIME 1:15		SITE INSTR 11 COMMENTS 	SEEING TRANS EYEPIECE 11 POWER 	
NGC 1746 65 CONST No. OF GALAXIES (AV) 2 DATE 4/9/10 TIME 1:20		SITE INSTR 11 COMMENTS 2 dm small glows	SEEING TRANS EYEPIECE 11 POWER 	Hic 6
NGC 5150/2/3 CONST No. OF GALAXIES (AV) 3 DATE 4/9/10 TIME 1:30		SITE INSTR 11 COMMENTS 1 field w/ 1746 65 5152/3 Not separated but 2 nuclei	SEEING TRANS EYEPIECE 11 POWER 	Δ 32

The AV scale for averted vision is used to classify the difficulty of observation. This 1-5 scale is further explained on pages 137-138.

D24

DATE 3/29/3 TIME 9:15 CSDT CLARITY I III IV V SEEING I III IV VINSTRUMENT ECX-125 10x50 EYE POWER 10X 73X 153X 475XOBJECT M105 AREA LOCATION RMCC HOME~ 3 fields
actual
sizeM105 is round even
glow about same size as① M105 - rather bright - I think as easy as M95 or M96② NGC 3384 - small, not easy③ NGC 3389 = almost as bright as M105} Did I get
these reversed?④ Σ1477 - see attached⑤ AG 341 - see attached⑥ Σ1472 - see attached⑦ ? - not listed on WDS attached

GALAXY GROUP AND CLUSTER OBSERVATIONS

NGC 3991/4/5 CONST No. OF GALAXIES (AV) 3 DATE 4/8/10 TIME 10:00		SITE RMCC INSTR 12" COMMENTS A "bridge" seen w/ AV	SEEING I TRANS I EYEPiece 10 POWER 150x
NGC 3966/3986 CONST No. OF GALAXIES (AV) 2 DATE 4/8/10 TIME 10:10		SITE RMCC INSTR 12" COMMENTS White nearby	SEEING I TRANS I EYEPiece 10 POWER 150
NGC 5257/8 CONST No. OF GALAXIES (AV) 2 DATE 4/8/10 TIME 10:20		SITE " INSTR " COMMENTS Can't quite connect 2 distant glows almost make a 1/2 shell	SEEING " TRANS " EYEPiece " POWER "
NGC UGC 9532 CONST No. OF GALAXIES (AV) 1 DATE 4/8/10 TIME 10:45		SITE " INSTR " COMMENTS Barely seen - 1 small glow	SEEING " TRANS " EYEPiece " POWER "

The AV scale for averted vision is used to classify the difficulty of observation. This 1-5 scale is further explained on pages 137-138.

Observing Log

Object type: Galaxy

Δ 27

Object ID: NGC 4278/4283 (?)

Const.: Com

RA: _____ Dec.: _____

Mag: _____ Size: _____

Observer BY

Date 5/20/4

Time 11:50

Location RMCC

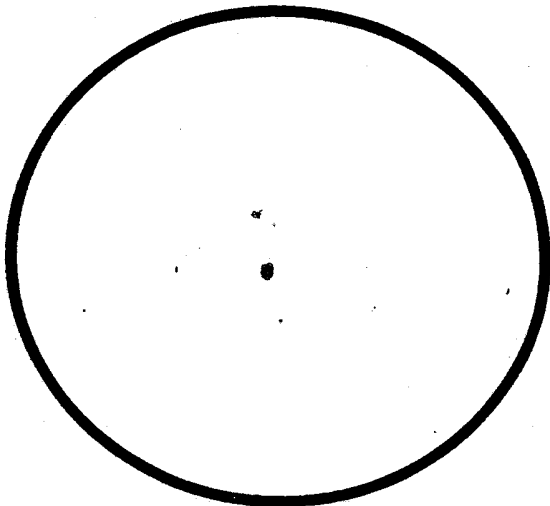
Seeing 7 Transparency 3+

Instrument ETX 125

Size 125

Eyepiece 12.4

Field of view _____ Power 153x



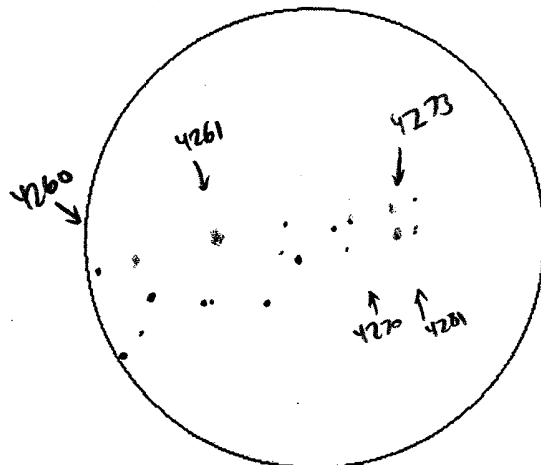
- Can this galaxy be seen with 4278 direct vision, or is averted vision required? 4283
- What is the overall shape? Round & "fuzzy star"
- Is a core noticeable? No - both even
- Is the core compact or stellar? N/A
- Can any detail be seen between the core and the outer envelope of the object? No
- Are the edges of the outer envelope sharp or fairly diffuse?
- Can any detail or mottling be seen in the outer envelope (bright or dark patches or lanes)? No
- Are there any other deep-sky objects in the same field of view? If so, what? each other

Description 4283 at edge of RCV

H II
(426084270)
84339

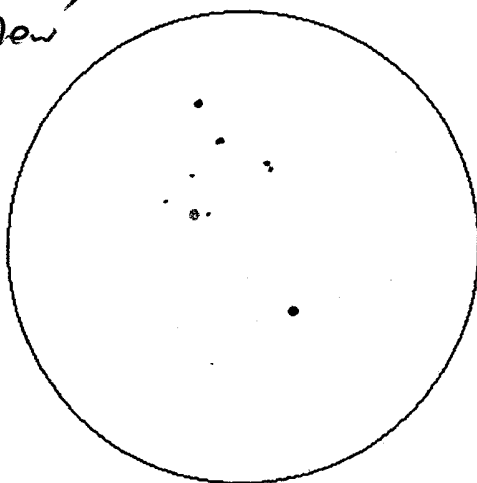
Object Ngc 4260 4273 4281 Date 4/22/6
 Constellation _____ Time 1130 EDT
 Magnitude _____ Seeing: Transparency II
 Concentration Class _____ Steadiness II
 Location _____ Telescope X5-12
 Eyepiece / Magnification 42/3M

Notes: Great field!



Object Ngc 4339 Date 4/22/6
 Constellation _____ Time 1:45 EDT
 Magnitude _____ Seeing: Transparency II
 Concentration Class _____ Steadiness II -
 Location _____ Telescope X5-12
 Eyepiece / Magnification 42/37x

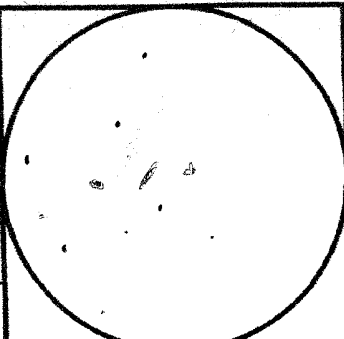
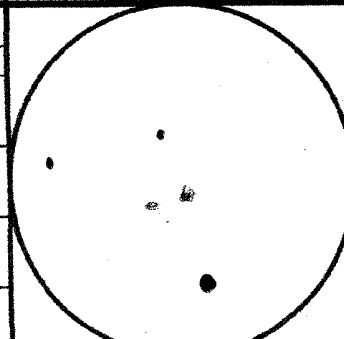
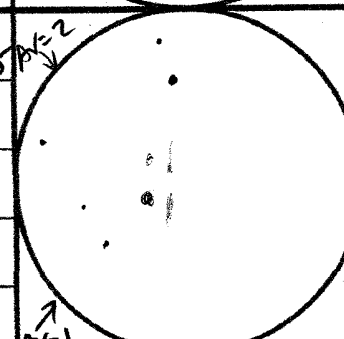
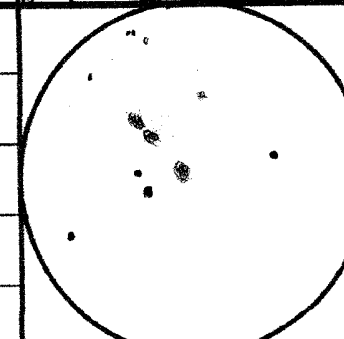
Notes: Not too dim,
round enough



A28
 ←
 (ONLY
 SEEN)

204

GALAXY GROUP AND CLUSTER OBSERVATIONS

NGC 4613/4/5		SITE RMCC	SEEING II	TRANS II	29 AM 34
CONST		INSTR 12	EYEPIECE 10	POWER 150x	
No. OF GALAXIES (AV) 3		COMMENTS AV=2,2,3			
DATE 3/18/10		Middle one need 6 of 13nt, others rounder			
TIME 11:30					
NGC W.1d's Triplet		SITE RMCC	SEEING II	TRANS II	29 AM 34
CONST		INSTR 12	EYEPIECE 10	POWER 150x	
No. OF GALAXIES (AV) 2		COMMENTS AV=1&2 (3.7 elong or 2?)			
DATE 3/18/10					
TIME 11:35					
NGC 4169/73/74/75		SITE RMCC	SEEING II	TRANS II	162 68
CONST "the Box"		INSTR 12	EYEPIECE 10	POWER 150x	
No. OF GALAXIES (AV) 4		COMMENTS ← AV=2 COOL! ← AV=2			
DATE 3/18/10					
TIME 11:45					
NGC 5353+54+50		SITE RMCC	SEEING II	TRANS II	162 68
CONST		INSTR 12	EYEPIECE 10	POWER 150x	
No. OF GALAXIES (AV)		COMMENTS All AV=1! COOL!			
DATE 3/18/10		Some hint of interaction			
TIME 11:55		with 5354+5354			

The AV scale for averted vision is used to classify the difficulty of observation. This 1-5 scale is further explained on pages 137-138.

Observing Log

Object type: Galaxy

~~12~~
Δ31

Object ID: NGC 5077 / 5079

Const.: VN

RA: _____ Dec.: _____

Mag: _____ Size: _____

Observer BY

Date 5/20/7

Time 12:40 CST

Location RMCC

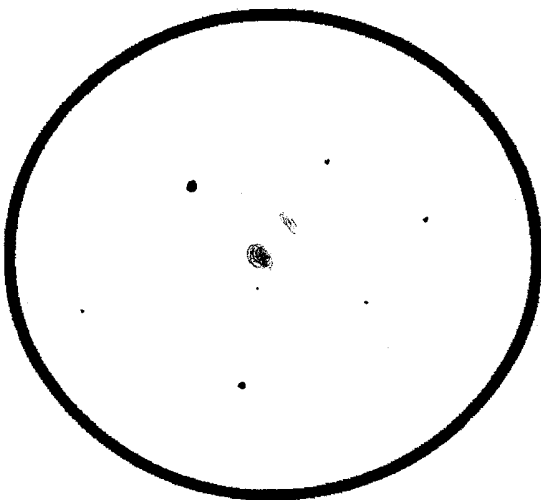
Seeing II Transparency II

Instrument XT-12

Size 12

Eyepiece 25

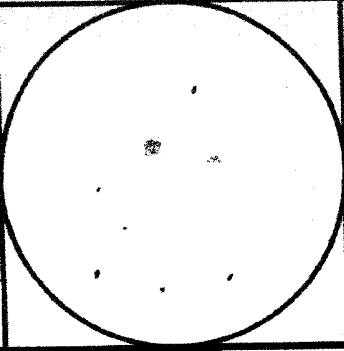
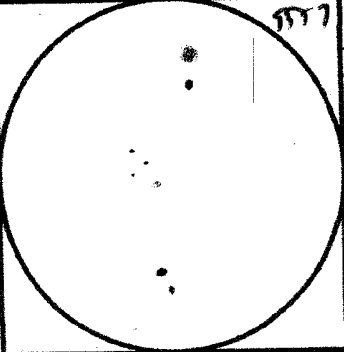
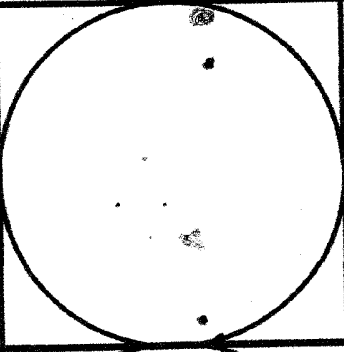
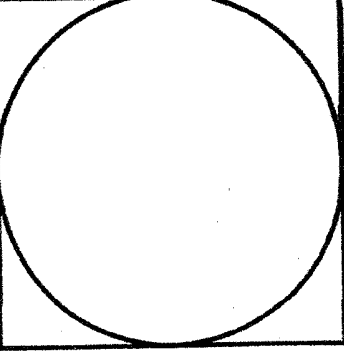
Field of view _____ Power box



- Can this galaxy be seen with direct vision, or is averted vision required? use 5079
- What is the overall shape? Round, oval
- Is a core noticeable? in 5077 only
- Is the core compact or stellar?
- Can any detail be seen between the core and the outer envelope of the object? No
- Are the edges of the outer envelope sharp or diffuse? both
- Can any detail or mottling be seen in the outer envelope (bright or dark patches or lanes)? No
- Are there any other deep-sky objects in the same field of view? If so, what? each other

Description _____

GALAXY GROUP AND CLUSTER OBSERVATIONS

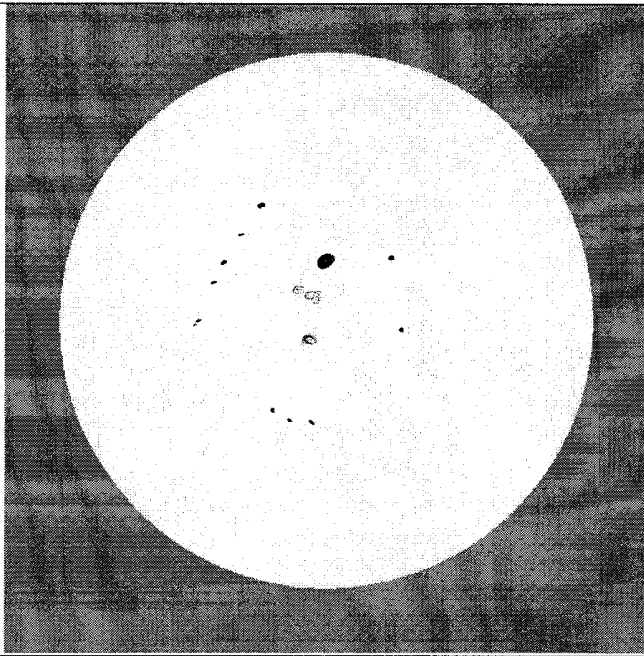
NGC N5613+ CONST 5614 No. OF GALAXIES (AV) DATE 3/14/10 TIME 12:25		SITE RMCC INSTR 12 COMMENTS AV=1 + AV=3 Other no match, no split at 5614/5
NGC ARP 199 CONST No. OF GALAXIES (AV) 3 DATE 3/14/10 TIME 12:45		SITE RMCC INSTR 12 COMMENTS 5544/45 Wide field showing N5557 to E
NGC ARP 199 CONST No. OF GALAXIES (AV) DATE TIME 		SITE INSTR COMMENTS 5544/45 more detail 2 nuclei? + extension to N/NW.
NGC CONST No. OF GALAXIES (AV) DATE TIME 		SITE INSTR COMMENTS

Δ
 34
 AP
 17
 AP
 19

The AV scale for averted vision is used to classify the difficulty of observation. This 1-5 scale is further explained on pages 137-138.

7463/4/5

GGEC



Observer's name:

Trio #45

Comet:

NGC 7463/7464/7465

Date / Time:

9/20/9 2:45

Observing location:

Ohio-Tex

Instrument / eyepiece / magnification / field of view:

XT-12/10mm/150x/0.93

Comet sky location (constellation, nearest star, or RA/DEC):

Sky & Star steadiness

boiling

(circle one)

steady

5

4

3

2

1

Sky transparency

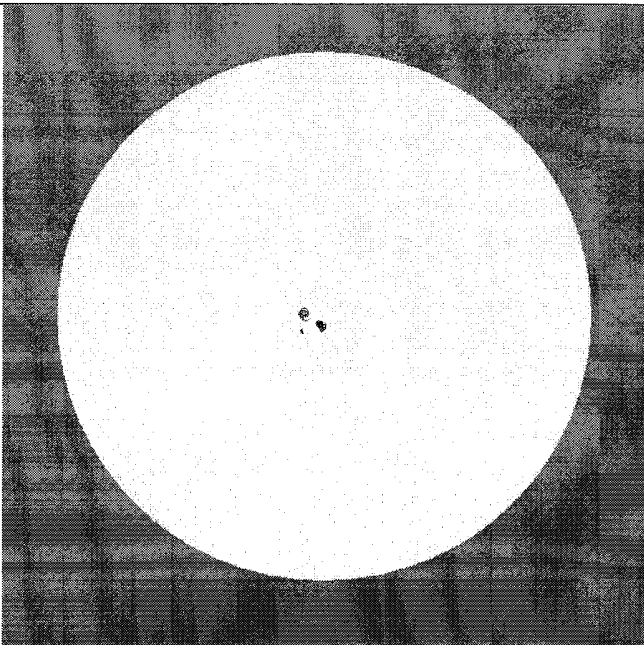
Un-aided zenith
magnitude limit:

6.5

Comet description (magnitude, coma size, condensation, tail(s), color, shape, texture, motion):

All d.v., not too dim or small, 2 minutes?

Observing notes (difficulty, observing partners, interesting objects in field, general comments):



Note: This can be the second drawing of the same comet above to show motion compared to background stars. Or, if a second position is indicated in the first drawing, this can be a different comet observation.

Comet:

Hickson 94 (Arp 170)

Date / Time:

9/20/9 2:55 am

Observing location:

Ohio-Tex

Instrument / eyepiece / magnification / field of view:

XT-12/10mm/150x/0.93

Comet sky location (constellation, nearest star, or RA/DEC):

Sky & Star steadiness

boiling

(circle one)

steady

5

4

3

2

1

Sky transparency

Un-aided zenith
magnitude limit:

6.5

Comet description (magnitude, coma size, condensation, tail(s), color, shape, texture, motion):

Both dv, but not much detail

Observing notes (difficulty, observing partners, interesting objects in field, general comments):



Be sure to indicate North & East on your drawings.



Observing Log

Object Type: Galaxy Group or Galaxy Cluster

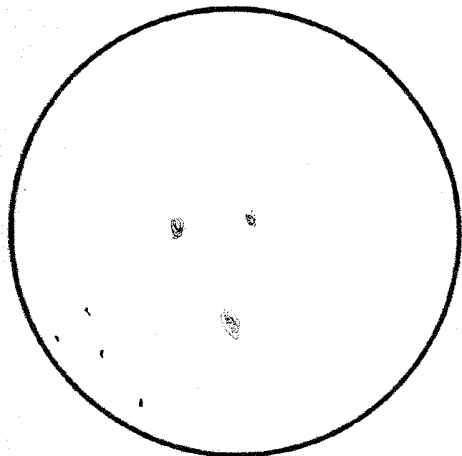
Object ID: D46

R.A.: _____

Dec.: _____

Magnitude: _____

Const.: _____



Observer B. Young

Date 12/18/19

Time 8:00 pm CST

Location RMCC

Seeing II Transparency I

Faintest Naked Eye Star 5.8

Instrument XT-12

Aperture and Focal Length 12" 1500mm

Eyepiece 10mm

Magnification 150X Field of view _____

No. of averted vision galaxies 3

No. of direct vision galaxies 0

N 7499 / 7501 / 7503

* Can the faintest galaxy/galaxies be seen with direct vision, or is averted vision required? If averted vision is required, give an estimate on the AV scale for all objects that require it.

AV=2,2,4

* Estimate the apparent size of the galaxy group or cluster.

0°.1

* Do the galaxies form any particular pattern? Are they evenly or unevenly distributed?

Δ shape

* Are details such as nuclei, dust lanes or spiral arms visible in any of the galaxies?

No

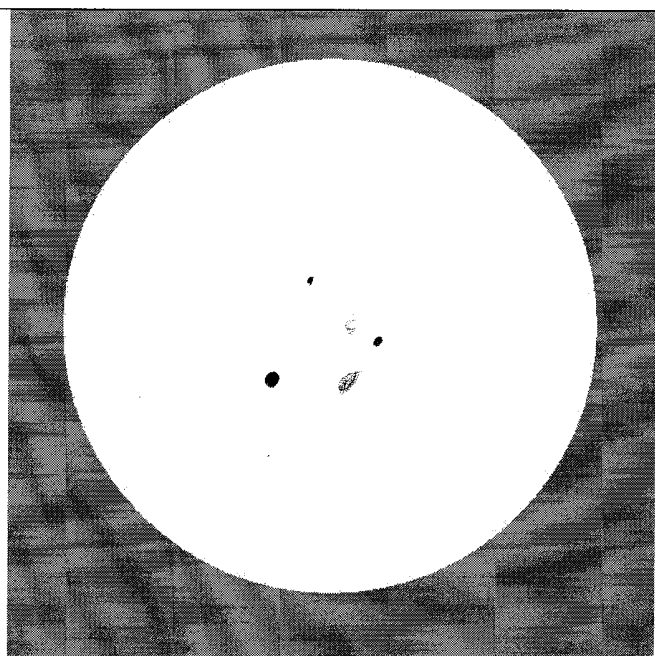
* Are any of the galaxies close enough to one another to appear superimposed? If so, are any signs of interaction visible?

No, no

Description All done, but all seen

(McGown, Cole-Huston, Pratt 2000)

7530 7:30 AM 2 AM w/ 4 observers 4:00 AM G-Gec



Observer's name:

B. Young

TR10#47

Comet:

N7530/7532/7534

Date / Time:

9/20/9 2:00

Observing location:

Onic-Tex

Instrument / eyepiece / magnification / field of view:

Xt-12/10^m/150x/0.93

Comet sky location (constellation, nearest star, or RA/DEC):

Sky & Star steadiness

boiling

(circle one)

steady

5

4

3

2

1

Sky transparency

Un-aided zenith magnitude limit:

6.5

Comet description (magnitude, coma size, condensation, tail(s), color, shape, texture, motion):

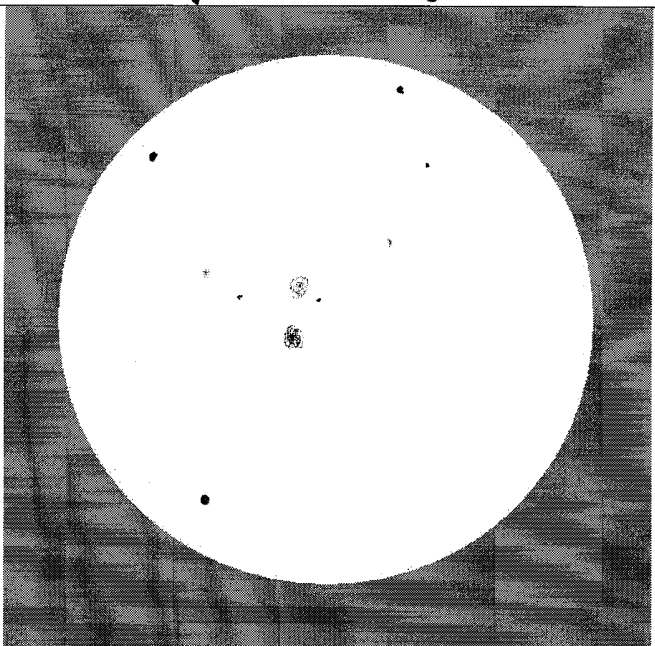
2 seen (DV) - not much detail except one elongated

Observing notes (difficulty, observing partners, interesting objects in field, general comments):

M=3

1st-2

TR10#47



Note: This can be the second drawing of the same comet above to show motion compared to background stars. Or, if a second position is indicated in the first drawing, this can be a different comet observation.

Comet:

Date / Time:

Observing location:

Instrument / eyepiece / magnification / field of view:

Comet sky location (constellation, nearest star, or RA/DEC):

Sky & Star steadiness

boiling

(circle one)

steady

5

4

3

2

1

Sky transparency

Un-aided zenith magnitude limit:

Comet description (magnitude, coma size, condensation, tail(s), color, shape, texture, motion):

Observing notes (difficulty, observing partners, interesting objects in field, general comments):

Be sure to indicate North & East on your drawings.

Observing Log

Object Type: Galaxy Group or Galaxy Cluster

TR10
#50

Object ID: 7778 Group

Observer B. Young

R.A.: _____

Date 9/20/9

Dec.: _____

Time 10:05

Magnitude: _____

Location O-Tex

Const.: _____

Seeing II Transparency I-

Faintest Naked Eye Star 6.5

Instrument X-T-12

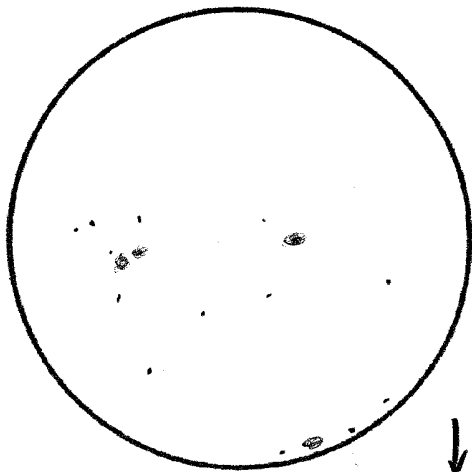
Aperture and Focal Length 12" 1500mm

Eyepiece 10mm

Magnification 150X Field of view 0.3

No. of averted vision galaxies _____

No. of direct vision galaxies 5



- * Can the faintest galaxy/galaxies be seen with direct vision or is averted vision required? If averted vision is required, give an estimate on the AV scale for all objects that require it.
- * Estimate the apparent size of the galaxy group or cluster. Fairly large
- * Do the galaxies form any particular pattern? Are they evenly or unevenly distributed?
- * Are details such as nuclei, dust lanes or spiral arms visible in any of the galaxies?
- * Are any of the galaxies close enough to one another to appear superimposed? If so, are any signs of interaction visible?

Description _____

(McGown, Cole-Huston, Pratt 2000)

Observing Log

Object Type: Galaxy Group or Galaxy Cluster

Object ID: Hickson 7

R.A.: _____

Dec.: _____

Magnitude: _____

Const.: _____

Observer B. Young

Date 9/20/9

Time 3:00

Location OUT-TX

Seeing II Transparency II

Faintest Naked Eye Star 6 +

Instrument XT-12

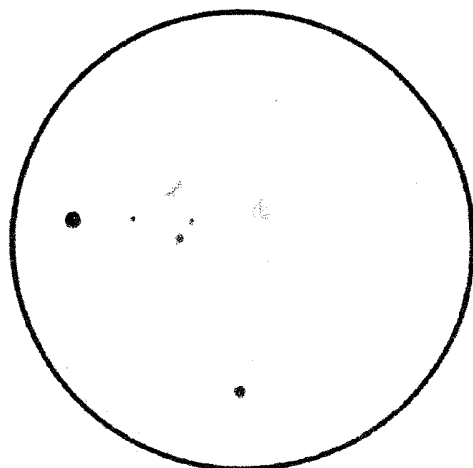
Aperture and Focal Length 12" 1500mm

Eyepiece 10

Magnification 150 Field of view 0°.3

No. of averted vision galaxies 4

No. of direct vision galaxies 4



- * Can the faintest galaxy/galaxies be seen with direct vision, or is averted vision required? If averted vision is required, give an estimate on the AV scale for all objects that require it. Better AV
- * Estimate the apparent size of the galaxy group or cluster. 5'
- * Do the galaxies form any particular pattern? Are they evenly or unevenly distributed? ▷
- * Are details such as nuclei, dust lanes or spiral arms visible in any of the galaxies? No
- * Are any of the galaxies close enough to one another to appear superimposed? If so, are any signs of interaction visible? No

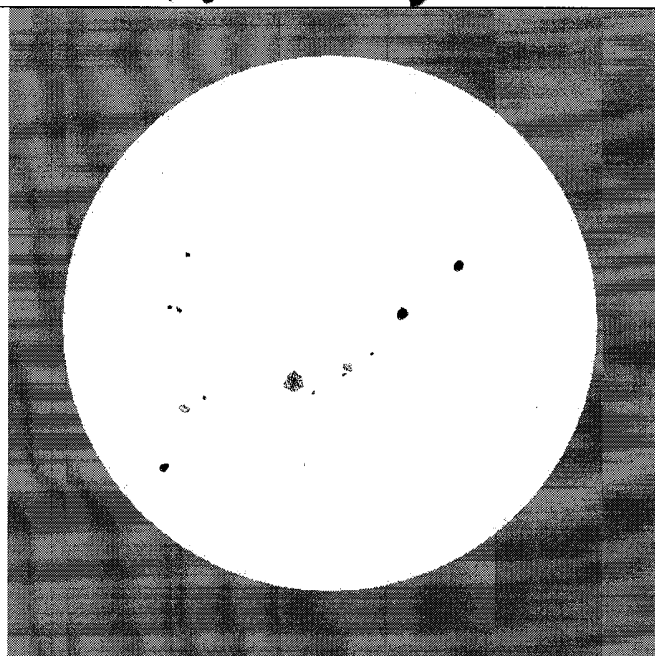
Description Fairly easy to see, easy to find among
field stars

(McGown, Cole-Huston, Pratt 2000)

7557
↓ 7523

↓ 7562 ↓ 7524
7523 NOT G68C

G68C (H7)



Observer's name:

Comet:

Date / Time:

9/20/9 12:20

Observing location:

Oure-Tex

Instrument / eyepiece / magnification / field of view:

XT-12 / 10 / 150 / 0.3

Comet sky location (constellation, nearest star, or RA/DEC):

Sky & Star steadiness

boiling	(circle one)			steady
5	4	3	2	1

Sky transparency

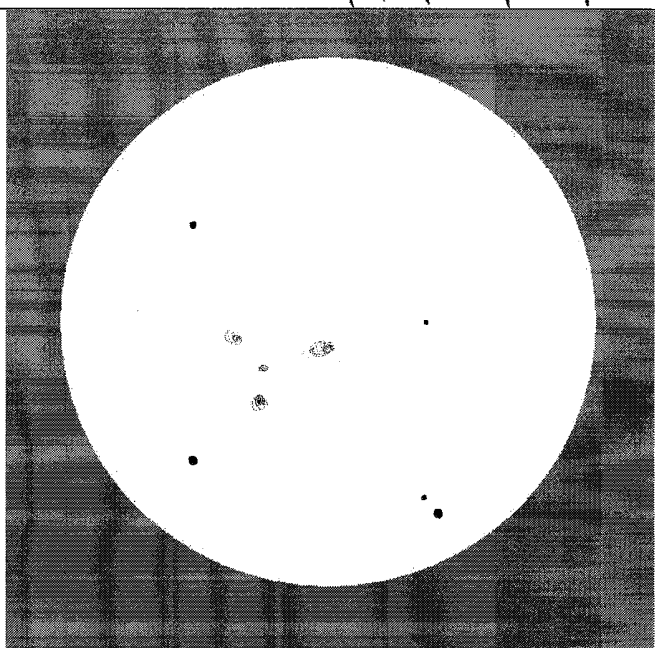
Un-aided zenith magnitude limit:

Comet description (magnitude, coma size, condensation, tail(s), color, shape, texture, motion):

Observing notes (difficulty, observing partners, interesting objects in field, general comments):

192 / 196 / 197 / 201

Hudson 7 again



Note: This can be the second drawing of the same comet above to show motion compared to background stars. Or, if a second position is indicated in the first drawing, this can be a different comet observation.

Comet:

Date / Time:

Observing location:

Instrument / eyepiece / magnification / field of view:

150x

Comet sky location (constellation, nearest star, or RA/DEC):

Sky & Star steadiness

boiling	(circle one)			steady
5	4	3	2	1

Sky transparency

Un-aided zenith magnitude limit:

Comet description (magnitude, coma size, condensation, tail(s), color, shape, texture, motion):

Observing notes (difficulty, observing partners, interesting objects in field, general comments):

FFFF

Be sure to indicate North & East on your drawings.

FFFF

Observing Log

Object Type: Galaxy Group or Galaxy Cluster

Hudson 10

Object ID: Hudson 10

R.A.: _____

Dec.: _____

Magnitude: 542

Const.: Mr

Observer B. Young

Date 10/18/9

Time 9:55 pm

Location RMCC

Seeing IV Transparency I

Faintest Naked Eye Star 6.0

Instrument X7-12

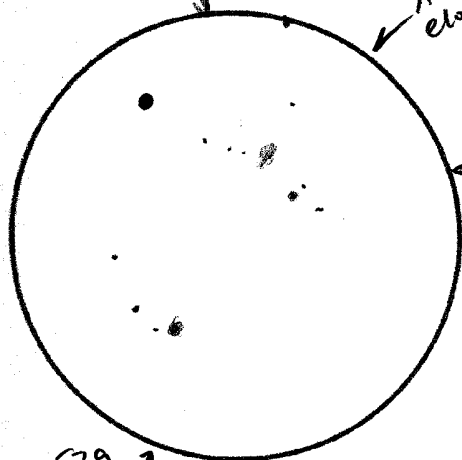
Aperture and Focal Length 1500 mm

Eyepiece 1.0

Magnification 150 Field of view 0.3

No. of averted vision galaxies 2

No. of direct vision galaxies 2



- * Can the faintest galaxy/galaxies be seen with direct vision, or is averted vision required? If averted vision is required, give an estimate on the AV scale for all objects that require it. see above
- * Estimate the apparent size of the galaxy group or cluster. 0.3
- * Do the galaxies form any particular pattern? Are they evenly or unevenly distributed? No
- * Are details such as nuclei, dust lanes or spiral arms visible in any of the galaxies? Only shapes
- * Are any of the galaxies close enough to one another to appear superimposed? If so, are any signs of interaction visible? No

Description Easy to find near a 6m star

(McGown, Cole-Huston, Pratt 2000)

PLATE
→

36-38
everyone
p
need st
cat
line

Observing Log

Object Type: Galaxy Group or Galaxy Cluster

Object ID: Hickson 16

R.A.: _____

Dec.: _____

Magnitude: _____

Const.: _____

Observer B. Young

Date 9/20/9

Time 3:10

Location Oketex

Seeing II Transparency II

Faintest Naked Eye Star 6+

Instrument XT-12

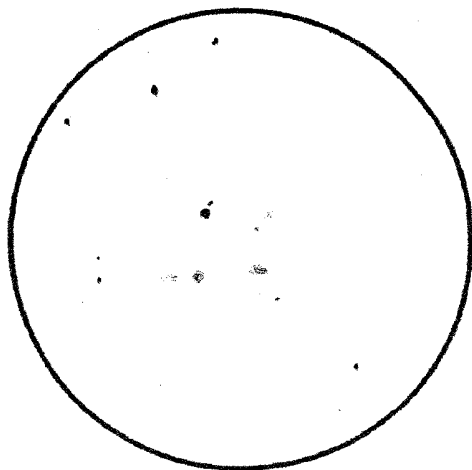
Aperture and Focal Length 12" 1500mm

Eyepiece 10

Magnification 150 Field of view 00.3

No. of averted vision galaxies 4

No. of direct vision galaxies 4



- * Can the faintest galaxy/galaxies be seen with direct vision, or is averted vision required? If averted vision is required, give an estimate on the AV scale for all objects that require it.
- * Estimate the apparent size of the galaxy group or cluster. 5'
- * Do the galaxies form any particular pattern? Are they evenly or unevenly distributed? No
- * Are details such as nuclei, dust lanes or spiral arms visible in any of the galaxies? No
- * Are any of the galaxies close enough to one another to appear superimposed? If so, are any signs of interaction visible? No

Description 2 round & 2 elongated

(McGown, Cole-Huston, Pratt 2000)

Observing Log

Object Type: Galaxy Group or Galaxy Cluster

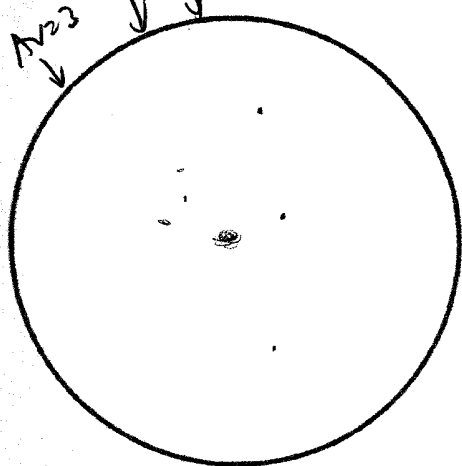
Object ID: Hick 22

R.A.: _____

Dec.: N 1

Magnitude: 11.99

Const.: Mr 23



Observer B. Yount

Date 12/18/9

Time 8:45 pm

Location RMCC

Seeing II Transparency I

Faintest Naked Eye Star 6.1

Instrument XT-12"

Aperture and Focal Length 12" 1500mm

Eyepiece 10mm

Magnification 150 Field of view _____

No. of averted vision galaxies 2

No. of direct vision galaxies 1

* Can the faintest galaxy/galaxies be seen with direct vision, or is averted vision required? If averted vision is required, give an estimate on the AV scale for all objects that require it.

* Estimate the apparent size of the galaxy group or cluster. 0°.1

* Do the galaxies form any particular pattern? Are they evenly or unevenly distributed? No, -

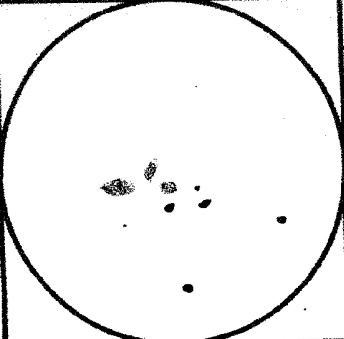
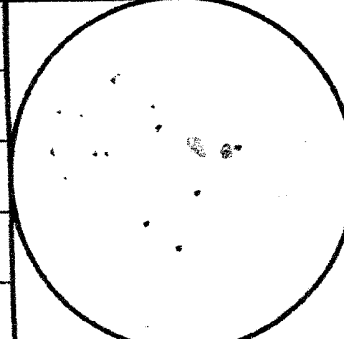
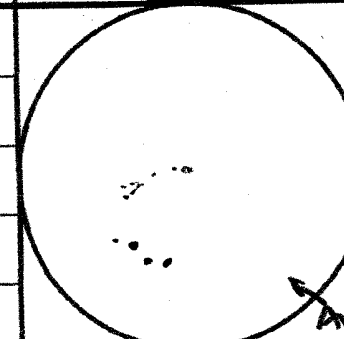
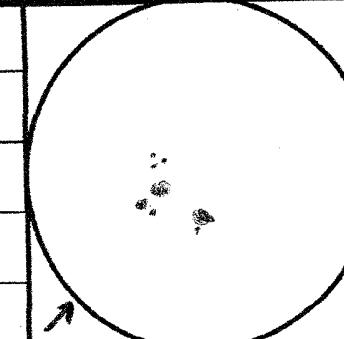
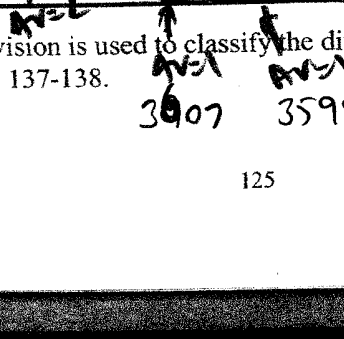
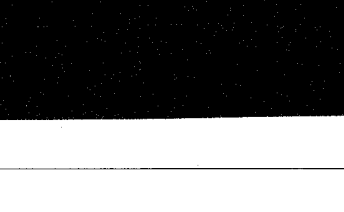
* Are details such as nuclei, dust lanes or spiral arms visible in any of the galaxies? No, but 1199

* Are any of the galaxies close enough to one another to appear superimposed? If so, are any signs of interaction visible? No

Description Stopped by N1172 & N1209 while
on the way

(McGown, Cole-Huston, Pratt 2000)

GALAXY GROUP AND CLUSTER OBSERVATIONS

NGC 2292 group		SITE RMCC	SEEING III	TRANS I-	
CONST		INSTR 12"	EYEPIECE 10mm	POWER 150x	
No. OF GALAXIES (AV) 3		COMMENTS All AV=1 Nice tight group near field of stars			
DATE 3/4/10		COMMENTS All AV=1 No sign of interaction			
TIME 8:00 CST					
NGC 1504 31		SITE RMCC	SEEING III	TRANS I-	
CONST		INSTR 12"	EYEPIECE 10mm	POWER 150x	
No. OF GALAXIES (AV) 2		COMMENTS No details, small bright one AV=2 Other larger, AV=3			
DATE 3/4/10					
TIME 8:15 CST					
NGC 1504 34		SITE RMCC	SEEING III	TRANS I-	
CONST		INSTR XT-12"	EYEPIECE 10mm	POWER 150x	
No. OF GALAXIES (AV) 1		COMMENTS Very small & dim but cool field			
DATE 3/4/10					
TIME 8:35 CST					
NGC 3607 group		SITE RMCC	SEEING III	TRANS I-	
CONST		INSTR XT-12"	EYEPIECE 10mm	POWER 150x	
No. OF GALAXIES (AV) 3		COMMENTS These easy - no 3605 seen			
DATE 3/4/10					
TIME 9:45 CST					

The AV scale for averted vision is used to classify the difficulty of observation. This 1-5 scale is further explained on pages 137-138.

3607 3599

M 66 group
next page

Observing Log

Object type: Nebula

Object ID: Hick 37

Const.: _____

RA: _____ Dec.: _____

Mag: _____ Size: _____

Observer B. Yomr

Date 4/11/10

Time 12:15

Location RMCC

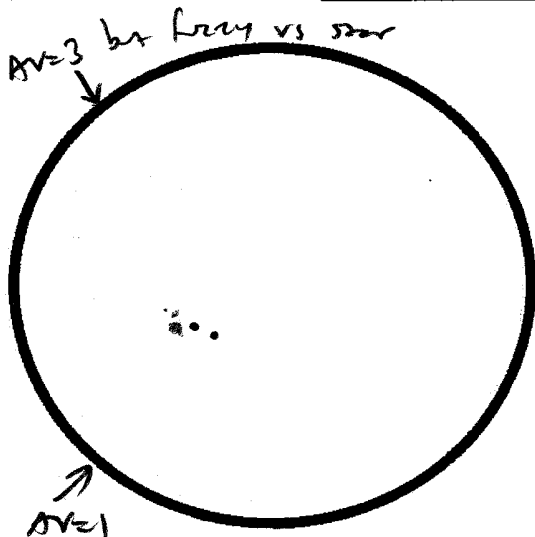
Seeing II- Transparency I

Instrument Xt-12

Size 12"

Eyepiece 10mm

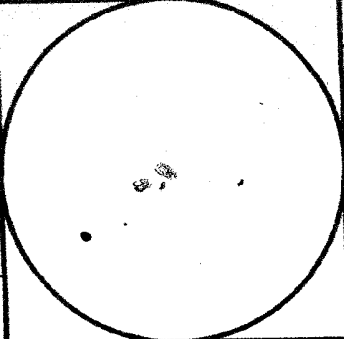
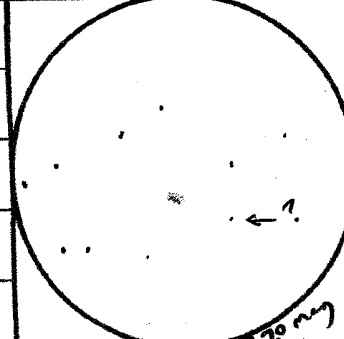
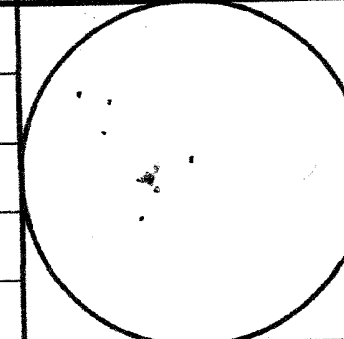
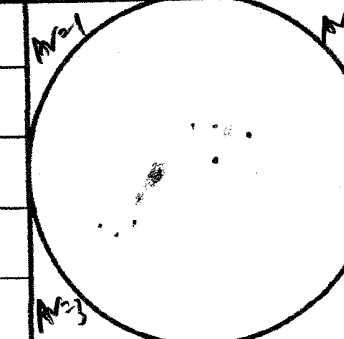
Field of view 0°3 Power 150



- Can this nebula be seen with direct vision, or is we averted vision required? See AV notes
- Is there an overall shape of the object or is it simply irregular?
- Is any part of the outer edge of the nebula sharply defined?
- Is any part of the nebula brighter or more concentrated?
- Is there any particular area where you notice an absence of stars in this cluster?
- Are there any voids or dark patches, or lanes in the nebula? Any bright filaments or streamers?
- Is there an open cluster nearby or involved or any obvious stars involved with this nebula?
- Any suggestions for observing this nebula (I.e. filter, power, field of view, etc.)?
- Are there any other deep-sky objects in the same field of view? If so, what?

Description Small brighter galaxy with some
lenticular shape & companion just
noticed as fuzzy spot.

GALAXY GROUP AND CLUSTER OBSERVATIONS

NGC NGC 2872b/4 CONST No. OF GALAXIES (AV) 3 DATE 3/16/10 TIME 9:30		SITE RMCC INSTR 12 COMMENTS 2 easy - 1 AV=5	SEEING II EYEPIECE 10 TRANS 15 POWER 150
NGC Hick 38 / Arp 237 CONST No. OF GALAXIES (AV) 1 DATE 3/16/10 TIME 9:45		SITE RMCC INSTR 12 COMMENTS EDV but definitely Saw odd shaped glow Arp 4 No detail. Why is star not plotted?	SEEING II EYEPIECE 10 TRANS 15 POWER 150x
NGC Hickson 40 CONST No. OF GALAXIES (AV) 2 or 3 DATE 3/16/10 TIME 10:50		SITE RMCC INSTR 12 COMMENTS Very strange set of glows cannot draw, some hint of elongation, one more stellar or has star.	SEEING II EYEPIECE 10 TRANS 15 POWER 150x
NGC Hickson 42 CONST No. OF GALAXIES (AV) 3 DATE 3/16/10 TIME 11:15		SITE RMCC INSTR 12 COMMENTS One easy with 2 smaller, dimmer glows N3091 some detail - grammes in arm arc	SEEING II EYEPIECE 10 TRANS 15 POWER 150x

The AV scale for averted vision is used to classify the difficulty of observation. This 1-5 scale is further explained on pages 137-138.

Observing Log

Object type: Galaxy

High
44

Object ID: NPC 3190 & 3193

Const.: Leo

RA: _____ Dec.: _____

Mag: _____ Size: _____

Observer BY

Date 4/16/4

Time 11:15 CD

Location RMCC

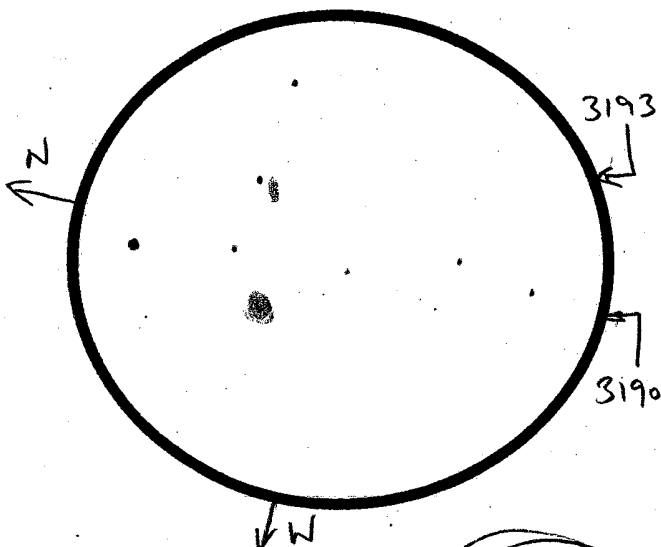
Seeing 4 Transparency 4

Instrument ETX 125

Size 125

Eyepiece 12.4

Field of view _____ Power 153X



- Can this galaxy be seen with direct vision, or is averted vision required?
- What is the overall shape? 3190 is round, 3193 round until a bit
- Is a core noticeable? No & No
- Is the core compact or stellar? N/A X2
- Can any detail be seen between the core and the outer envelope of the object? No
- Are the edges of the outer envelope sharp or diffuse?
- Can any detail or mottling be seen in the outer envelope (bright or dark patches or lanes)? Hints but fairly even
- Are there any other deep-sky objects in the same field of view? If so, what?

Description Each other & 3185 1 fl w (not a H400 object)

GALAXY GROUP AND CLUSTER OBSERVATIONS

NGC	SITE	SEEING	TRANS
Hyd 1	RMCC	II	II-
CONST (Abell 1060)	INSTR 12	EYEPiece 10	POWER 150x
No. OF GALAXIES (AV) 11	COMMENTS: Great field to find it - excellent patch of glows followed north & west to below		
DATE 3/16/10			
TIME 11:55 cor			
NGC	SITE	SEEING	TRANS
CONST	INSTR	EYEPiece	POWER
No. OF GALAXIES (AV)	COMMENTS: AV=5! Hide 48 = IC2597 AV=1		
DATE			
TIME			
NGC 3285	SITE	SEEING	TRANS
CONST	INSTR	EYEPiece	POWER
No. OF GALAXIES (AV)	COMMENTS: Easy, elong AV=1 Looks spiral w/ nucleus and disk		
DATE			
TIME			
NGC 3285 B	SITE	SEEING	TRANS
CONST	INSTR	EYEPiece	POWER
No. OF GALAXIES (AV)	COMMENTS: AV=3 small, no detail		
DATE			
TIME			

The AV scale for averted vision is used to classify the difficulty of observation. This 1-5 scale is further explained on pages 137-138.

GALAXY GROUP AND CLUSTER OBSERVATIONS

NGC		SEEING	TRANS
2943 cluster		II	II
CONST		EYEPIECE	POWER
No. OF GALAXIES (AV)		10	150
DATE		COMMENTS	
3/18/10		RMCC	
TIME		INSTR 12	
10:30		AV=3 <u>small</u> , dm 2946	
		2943 looks elliptical	
		2933 AV=3 elongated	
NGC		SEEING	TRANS
Copeland's		II	II
CONST		EYEPIECE	POWER
No. OF GALAXIES (AV)		10	150x
DATE		COMMENTS	
3/18/10		only 2 for me	
TIME		AV=2	
10:50		AV=4	
NGC		SEEING	TRANS
N3697		II	II
CONST		EYEPIECE	POWER
No. OF GALAXIES (AV)		10	150
DATE		COMMENTS	
3/18/10		AV=4 & one tiny spot	
TIME		AV=1 only but small	
11:00			
NGC		SEEING	TRANS
IC 700		II	II
CONST		EYEPIECE	POWER
No. OF GALAXIES (AV)		10	150
DATE		COMMENTS	
3/18/10		Only one, at AV=2	
TIME		elongated	
11:10			

The AV scale for averted vision is used to classify the difficulty of observation. This 1-5 scale is further explained on pages 137-138.

Observing Log

Object type: Galaxy

Object ID: Hick 57

Const.: _____

RA: _____ Dec.: _____

Mag: _____ Size: _____

Observer B. YOUNG

Date 4/10/10

Time 10:00

Location RMCC

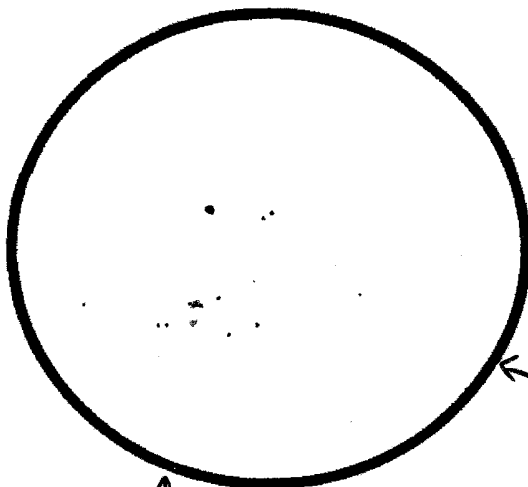
Seeing III Transparency I

Instrument XLT-12

Size 12

Eyepiece 10

Field of view 0.3 Power 150x



← "IMAGINE" 3 w/ ELONG W MPALG

- Can this galaxy be seen with direct vision, or is ~~averted~~ vision required? AV=2
- What is the overall shape? "h" + glow
- Is a core noticeable? No
- Is the core compact or stellar? —
- Can any detail be seen between the core and the outer envelope of the object? —
- Are the edges of the outer envelope sharp or diffuse? —
- Can any detail or mottling be seen in the outer envelope (bright or dark patches or lanes)? —
- Are there any other deep-sky objects in the same field of view? If so, what? 2-4 other

Description _____

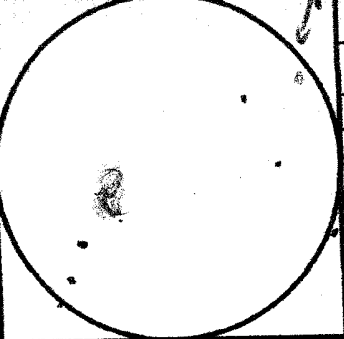
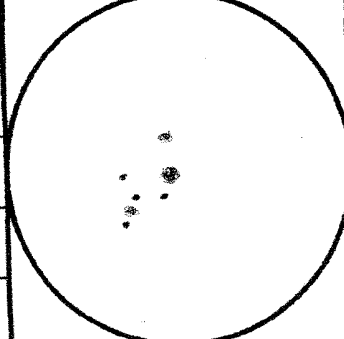
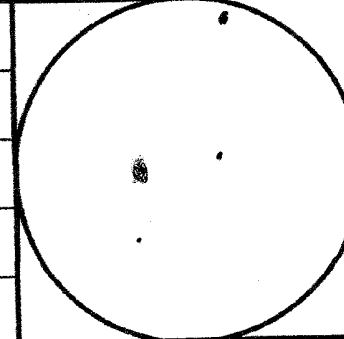
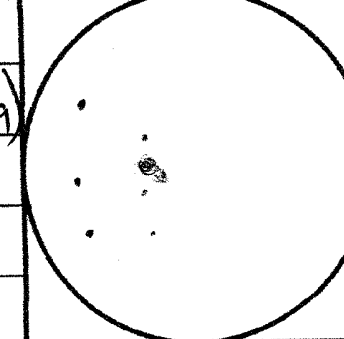
GALAXY GROUP AND CLUSTER OBSERVATIONS

NGC	CONST	No. OF GALAXIES (AV)	DATE	TIME	SITE	SEEBING	TRANS	INSTR	EYEPIECE	POWER	COMMENTS
4776	18/61/64	4 (?)	3/19/10	12:40	RMCC	II	II	12	10	150	4761 ← AV=1.5 2 nuclei! 4776/4778
5490		3	3/19/10	1100	RMCC	II	II	12	10	150	← AV=1 5490 ← AV=3 (big) IC 983 ← AV=2 (small) IC 982 No "C"
5846	50 +	5	3/19/10	2:00	RMCC	II	II	12	10	150x	← AV=1x2 5846 + A Nice line of relatively easy galaxies
5306	+	3	3/19/10	2:25	RMCC	II	II	12	10	150	5306 + small rand glow and very elongated glow just "shimmering"

The AV scale for averted vision is used to classify the difficulty of observation. This 1-5 scale is further explained on pages 137-138.

2:15 am
T Cen
LA 2.3 CC ~7.3
C 7.0

GALAXY GROUP AND CLUSTER OBSERVATIONS

NGC		SITE	SEEING	TRANS
M66+		RMCC	III	II
CONST Leo		INSTR 12"	EYEPIECE 10	POWER 150x
No. OF GALAXIES (AV) 3 (not counting 2N)		COMMENTS Several fields		
DATE 3/4/10		← M=2 SEARCHING		
TIME 10:10pm CST		IC 2702 Around per CHARLES		
NGC 2510/11/13		RMCC	II	II
CONST CMi		INSTR 12	EYEPIECE 10	POWER 150
No. OF GALAXIES (AV) 3		COMMENTS All fairly easy		
DATE 3/13/10		in a nice star field		
TIME 10:00		No details.		
NGC Arp 42		RMCC	II	II
CONST (NGC 5829)		INSTR 12	EYEPIECE 10	POWER 150
No. OF GALAXIES (AV) 1		COMMENTS Only main galaxy		
DATE 3/14/10		No others seen, or much		
TIME 12:15		detail		
NGC Arp 90		RMCC	II	II
CONST (N 5930+5929)		INSTR 12	EYEPIECE 10	POWER 150
No. OF GALAXIES (AV)		COMMENTS Does seem to have		
DATE		2 "lobes", but can't		
TIME 12:30		see much detail		

Ag #1

D 15

+ Hic 7

Ar 90

The AV scale for averted vision is used to classify the difficulty of observation. This 1-5 scale is further explained on pages 137-138.

Observing Log

G68C

Object type: Cluster/Nebula

Object ID: Hickson 90

Const.: P5A

Observer B. Young

RA: _____ Dec.: _____

Date 11/26/9

Mag: _____ Size: _____

Time 9:10 am CST

N7173
N23
N7172
N7176/7174

Location RMCC

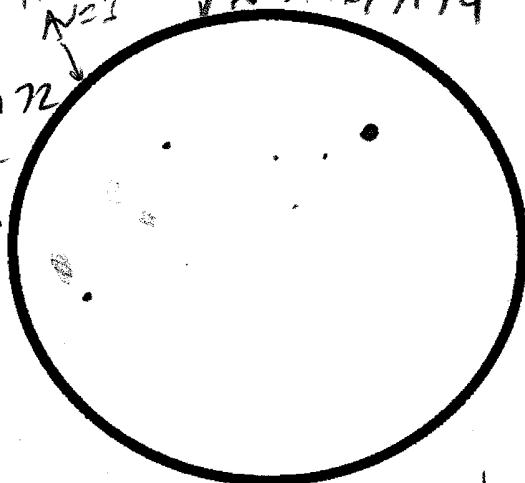
Seeing II Transparency II

Instrument XT-12 1500mm F/4

Size 12

Eyepiece 10mm

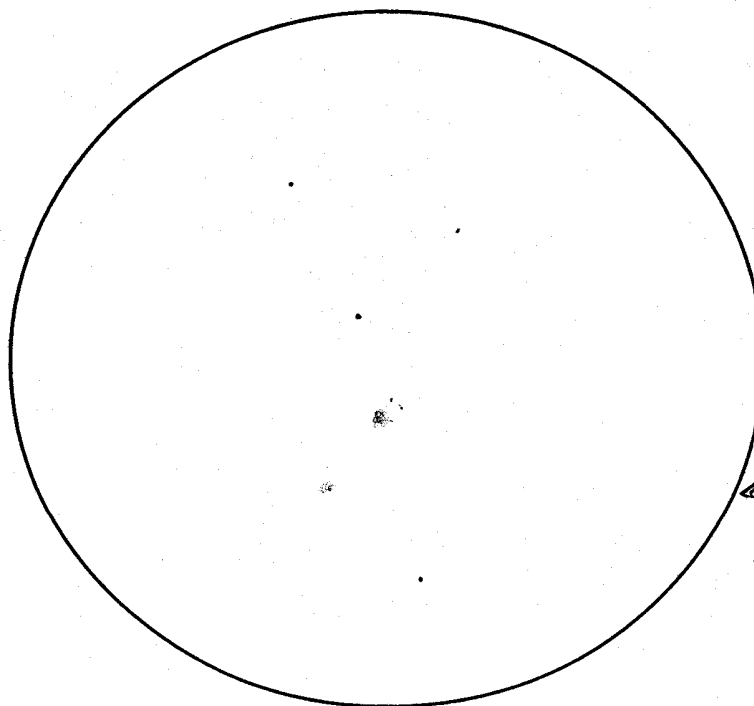
Field of view 0.2 Power 150x



- Can ~~both the cluster and nebula~~ ^{galaxies} be seen with direct vision, or is averted vision required? see log
- Is there an overall shape of the ~~object~~ ^{group} or is it simply irregular? clump + 1
- Is any part of the ~~outer edge of the nebula~~ ^{galaxies} sharply defined? No, didn't see it
- Are the ~~stars~~ ^{galaxies} more concentrated in any one particular area? How many ~~stars~~ ^{galaxies} are in the cluster? N7176/7174
- Is the ~~cluster~~ ^{galaxies} embedded in the nebulosity or is there a distinct separation? clump
- Is ~~any part of the nebula~~ ^{there interaction?} brighter or more concentrated? Yes, but I didn't see it
- Is there any particular area where you notice an absence of ~~stars~~ ^{galaxies} in this cluster? Brightest N.E. star = 5.8
- Are there any voids or dark patches, or lanes in the nebula? Any bright filaments or streamers? NO
- Any suggestions for observing this ~~nebula~~ ^{cluster} (I.e. filter, power, field of view, etc.)?
- Are there any other deep-sky objects in the same field of view? If so, what? each other

Description _____

DATE 11/20/9 TIME 8:30 CST CDT CLARITY I II III IV V SEEING II III IV V
INSTRUMENT ETX-125 50 x 800 mm RR 10x50 EYE X1-12
POWER 10 47 73 150 316 475 20 30 64 80 133 200
OBJECT Hickson 91 FILTER NO NB WB OIII
OBS. PROGRAM GG&C LOCATION RMCC HOME



N7214

← AV22

← AV3

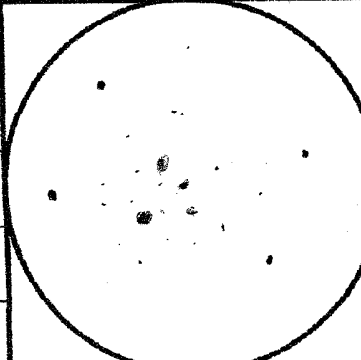
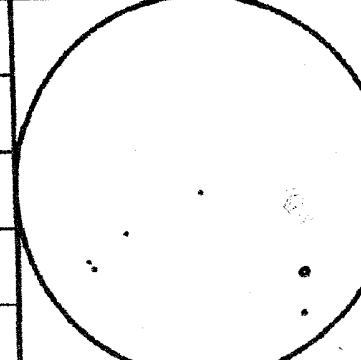
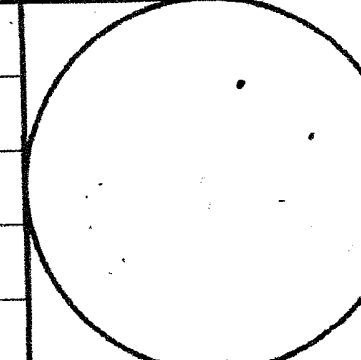
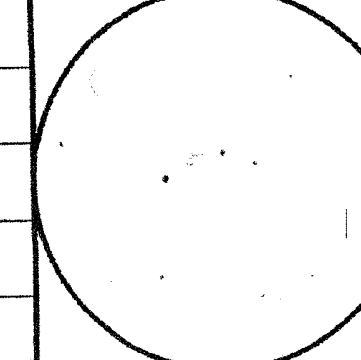
M-5-B2-56

Very difficult to see either as it
was getting low, but can tell these are
them from field.

Exposure scan = 5.8 12", 1500mm f1 10mm EP
2 AV galaxies, Group ~ 0.1 No pattern,
no details, no overlapping

GALAXY GROUP AND CLUSTER OBSERVATIONS

Ohre
Tex

NGC Stephans Quintet CONST Peg No. OF GALAXIES (AV) 4 DATE 9/16/9 TIME 9:30		SITE O-T SEEING II TRANS I- INSTR XT-12 EYEPIECE 10 POWER 150 COMMENTS 3 1/4 smudges HICKSON # 92
NGC IC 1613 CONST Psc No. OF GALAXIES (AV) 1 (AV=2) DATE 9/18/9 TIME 12:55		SITE O-T SEEING II TRANS II INSTR XT-12 EYEPIECE 2x42 POWER 75 COMMENTS Confirmed L66C
NGC WM CONST No. OF GALAXIES (AV) DATE 9/18/9 TIME 1:10		SITE OhreTex SEEING II TRANS II INSTR XT-12 EYEPIECE 2x42 POWER 75 COMMENTS Very faint but KC saw it too
NGC N 7713 CONST No. OF GALAXIES (AV) DATE 9/18/9 TIME 1:30		SITE O-T SEEING II TRANS II INSTR XT-12 EYEPIECE 2x42 POWER 75 COMMENTS Small glow, no detail

The AV scale for averted vision is used to classify the difficulty of observation. This 1-5 scale is further explained on pages 137-138.

58

7.4 Local Group & Galactic Neighborhood Observations (choose one)

Object NGC 7550 group

R.A. _____

Dec _____

Magnitude _____

Constellation _____

Transparency _____

Seeing _____

Date 9/20/9

Time 10:15

Location Onre Tex

Instrument XT-12

Eyepiece 10

Power (X) 150

Field of View 0°3

McGown
#93
(Arp 99)

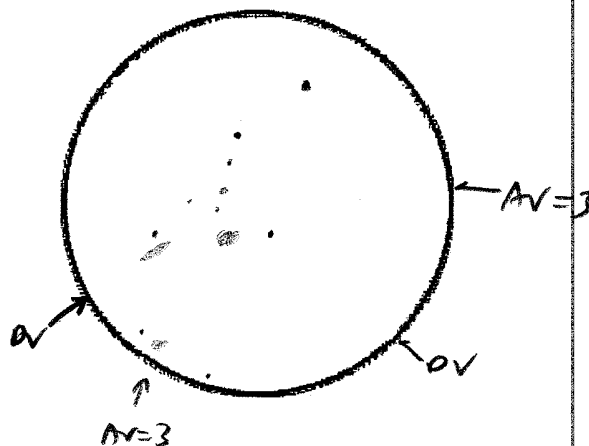
Aperture & Focal Length _____

Faintest Naked Eye Star _____

of averted vision galaxies _____

of direct vision galaxies _____

Group or Cluster _____



- * Can the faintest galaxy/galaxies be seen with direct vision, or is averted vision required? If averted vision is required, give an estimate on the AV scale for all objects that require it.
- * Is there any grouping or clustering apparent? Any interaction between galaxies?
- * Do the galaxies form any particular pattern? Are they evenly or unevenly distributed?
- * Are details such as nuclei, dust lanes or spiral arms visible in any of the galaxies?
- * Are any of the galaxies close enough to one another to appear superimposed? If so, are any signs of interaction visible?

Description

Local Group & Galactic Neighborhood, McGown & Murray

GALAXY GROUP AND CLUSTER OBSERVATIONS

NGC	CONST	No. OF GALAXIES (AV)	DATE	TIME	SITE	SEEING	TRANS
Hick 95		2	12/20/9	8:15 pm	NMCC	II	I
					INSTR	EYEPIECE	POWER
					COMMENTS		
					N7609 not DV, not split into 2.		
Hick 96		2	"	9:25 pm			
					INSTR	EYEPIECE	POWER
					COMMENTS		
					N7674 AV=1 nice, oval, w/stellar nucleus		
					N7675 AV=3 no detail		
Hick 98		3	"	9:35 pm			
					INSTR	EYEPIECE	POWER
					COMMENTS		
					SFA only		
					RE (right eye)		
					AV 4 M+0-60-59		
					NOT SURE IF THEY		
					TOO BLUR - VERY DIFFICULT		
					MEANBY		
7699-7701		3	"	9:45 pm			
					INSTR	EYEPIECE	POWER
					COMMENTS		
					2 for sure, last one very difficult. No details		

The AV scale for averted vision is used to classify the difficulty of observation. This 1-5 scale is further explained on pages 137-138.

AV=1 AV=2 AV=4

GGC A66
#2

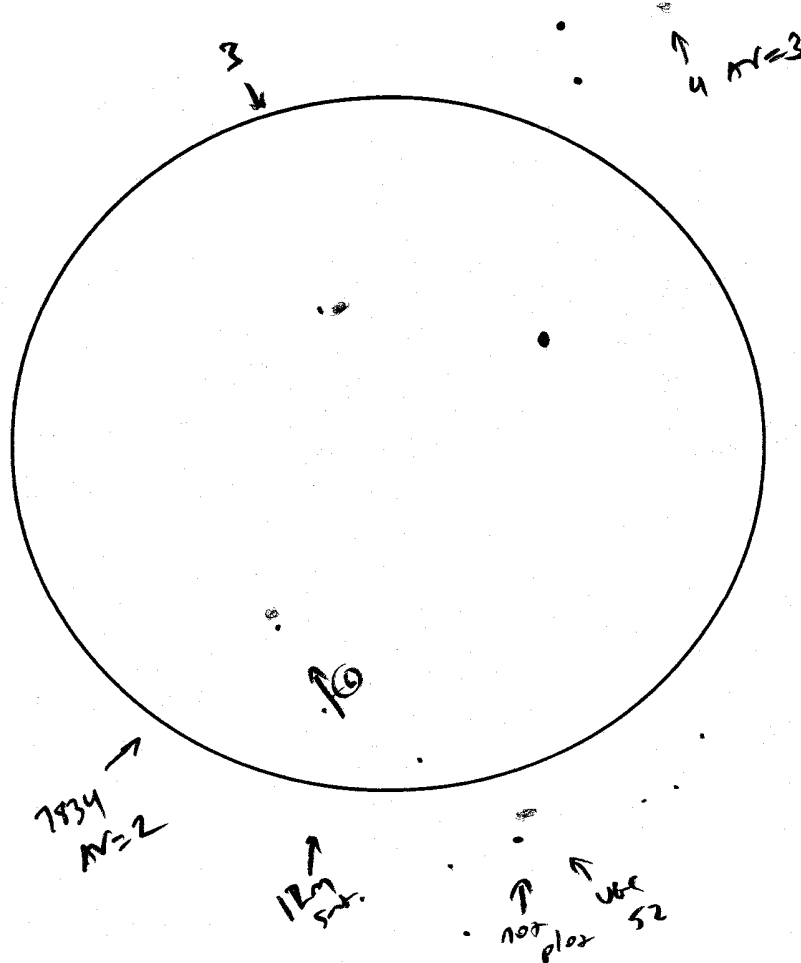
DATE 9/19/9 TIME 11:30 CST CDT CLARITY I II III IV V SEEING II III IV V

INSTRUMENT ETX-125 50 x 800 mm RR 10x50 EYE 12" XT

POWER 10 47 73 153 316 475 150X 20 30 64 80 133 200

OBJECT N6C 7834 FILTER NO NB WB OIII

OBS. PROGRAM GGC LOCATION RMCC HOME OKIE-TEX



Faintest star = 6 + DV/AV shown 20V, 2AV

Size of cluster ~ 25'-30'

No particular pattern. No details to galaxies. No superimposed / interaction.

Observing Log

Object Type: Galaxy Group or Galaxy Cluster

Object ID: Agg #4

R.A.: _____

Dec.: _____

Magnitude: _____

Const.: _____

Observer B. YOUNG

Date 12/18/9

Time 10:00 pm

Location RMCC

Seeing II Transparency I

Faintest Naked Eye Star 6.2

Instrument XT-12

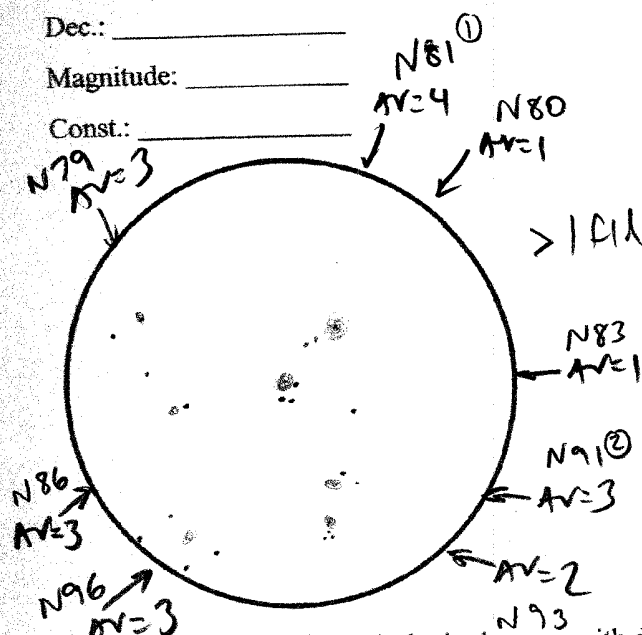
Aperture and Focal Length 12" 1500mm

Eyepiece 10mm

Magnification 150x Field of view 0.2

No. of averted vision galaxies 6

No. of direct vision galaxies 2



* Can the faintest galaxy/galaxies be seen with direct vision, or is averted vision required? If averted vision is required, give an estimate on the AV scale for all objects that require it.

* Estimate the apparent size of the galaxy group or cluster. 0.4 (about 2 fields)

* Do the galaxies form any particular pattern? Are they evenly or unevenly distributed? No

* Are details such as nuclei, dust lanes or spiral arms visible in any of the galaxies? NGC 80 has small nucleus

* Are any of the galaxies close enough to one another to appear superimposed? If so, are any signs of interaction visible? No

Description Next group in middle of nowhere, but the little A makes a marker.

① Fuzzy "points" @ EDV

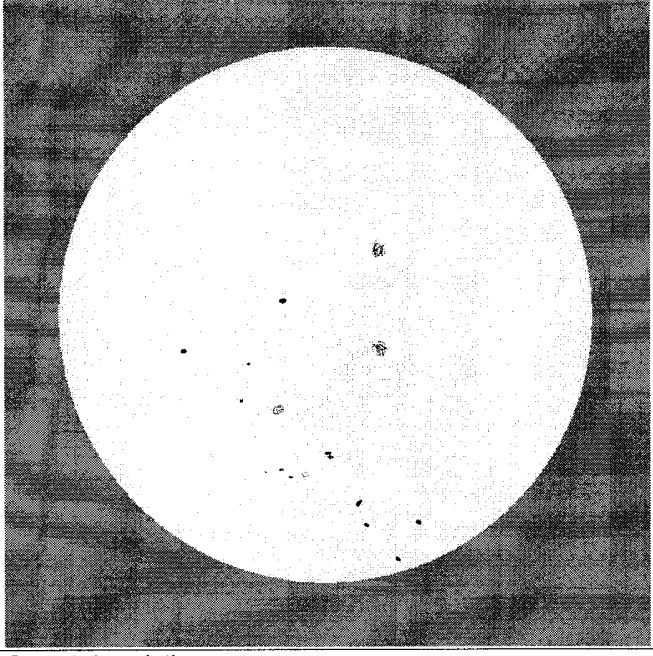
② NOT VERY CLOSE TO ME

(McGown, Cole-Huston, Pratt 2000)

321

GGC

AGG #5



Observer's name:

Comet:

Date / Time:

9/20/9 2:20

Observing location:

Olwe-Tex

Instrument / eyepiece / magnification / field of view:

10/150x

Comet sky location (constellation, nearest star, or RA/DEC):

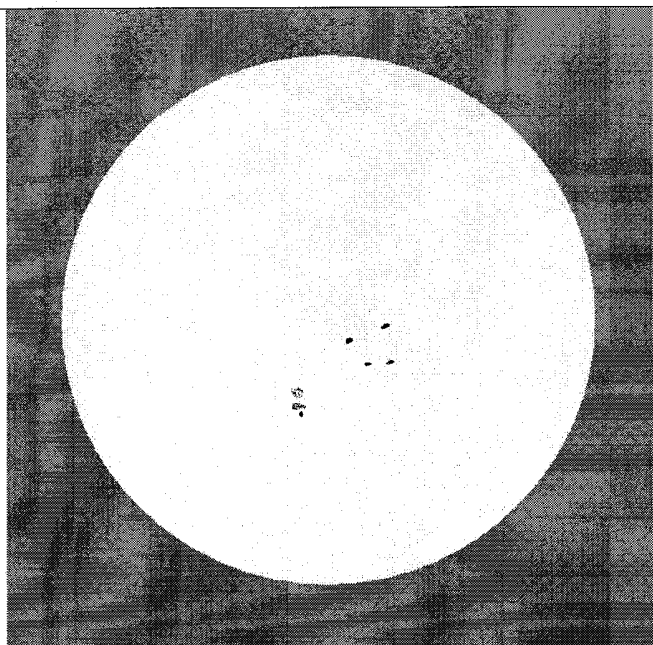
Sky & Star steadiness
boiling (circle one) steady
5 4 3 2 1

Sky transparency
Un-aided zenith
magnitude limit:

Comet description (magnitude, coma size, condensation, tail(s), color, shape, texture, motion):

321 M101 core 329
Ar=2 966 db1
Ar=3

Observing notes (difficulty, observing partners, interesting objects in field, general comments):



Note: This can be the second drawing of the same comet above to show motion compared to background stars. Or, if a second position is indicated in the first drawing, this can be a different comet observation.

Comet:

PART OF AGG #5

Date / Time:

Observing location:

Instrument / eyepiece / magnification / field of view:

Comet sky location (constellation, nearest star, or RA/DEC):

Sky & Star steadiness
boiling (circle one) steady
5 4 3 2 1

Sky transparency
Un-aided zenith
magnitude limit:

Comet description (magnitude, coma size, condensation, tail(s), color, shape, texture, motion):

Ar=2 (up) Ar=1 Ar=200 M16 1-3-51&52

Observing notes (difficulty, observing partners, interesting objects in field, general comments):

Observing Log

Object Type: Galaxy Group or Galaxy Cluster

AGG #6

Object ID: AGG #6 P3ce) Observer B. Young

R.A.: Cham Date 10/18/09

Dec.: Time 8:25 pm

Magnitude: Location RMCC

Const.: Seeing IV Transparency I

Faintest Naked Eye Star C₁₀

Instrument XT-12

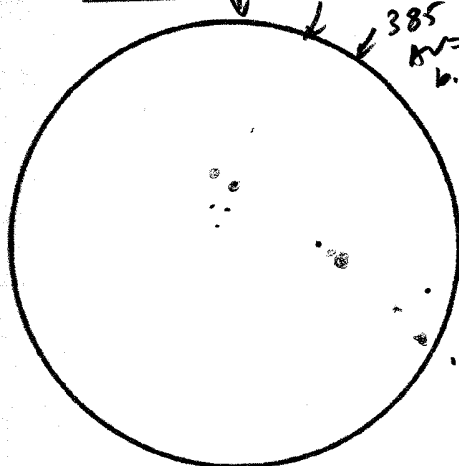
Aperture and Focal Length 1500 mm

Eyepiece 10

Magnification 150X Field of view 0.3

No. of averted vision galaxies 3

No. of direct vision galaxies 4



* Can the faintest galaxy/galaxies be seen with direct vision, or is averted vision required? If averted vision is required, give an estimate on the AV scale for all objects that require it. see above

* Estimate the apparent size of the galaxy group or cluster. ~1/2°

* Do the galaxies form any particular pattern? Are they evenly or unevenly distributed? Definitely "chain"

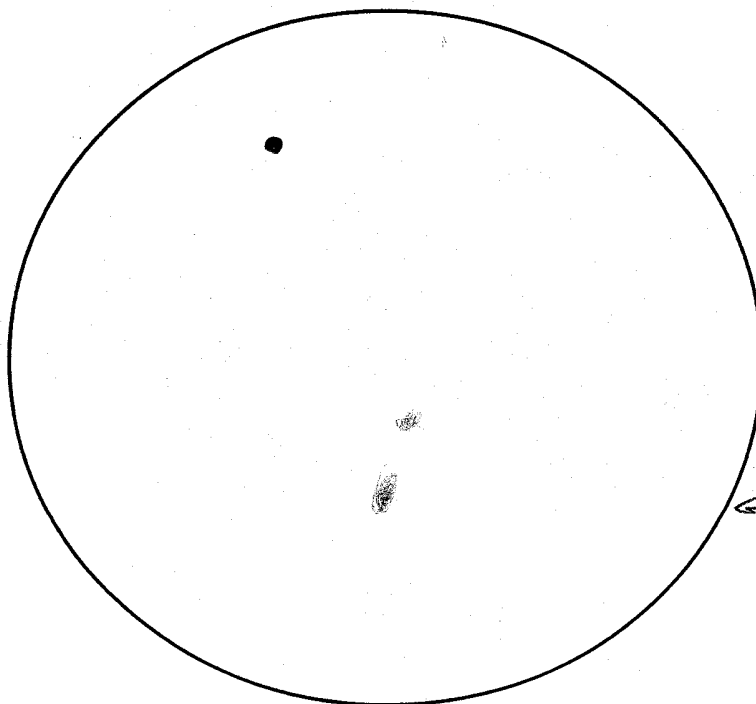
* Are details such as nuclei, dust lanes or spiral arms visible in any of the galaxies? No

* Are any of the galaxies close enough to one another to appear superimposed? If so, are any signs of interaction visible? 382 looks like a piece of 383

Description Quite striking how they line up.

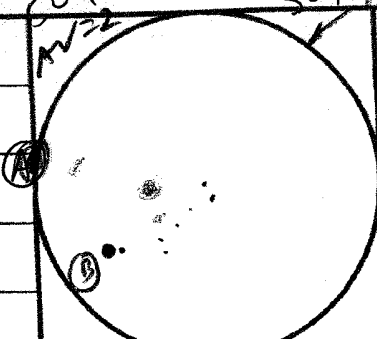
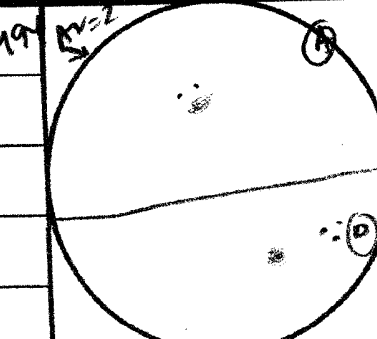
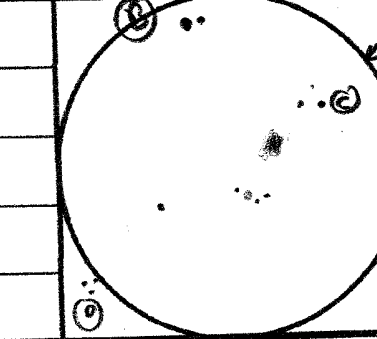
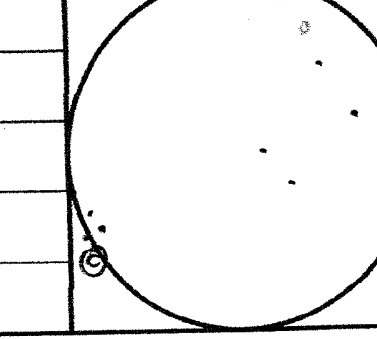
(McGown, Cole-Huston, Pratt 2000)

DATE 11/20/97 TIME 9:00 CST CDT CLARITY I II III IV V SEEING I II III IV V
INSTRUMENT ETX-125 50 x 800 mm RR 10x50 EYE X T-12
POWER 10 47 73 153 316 475 20 30 64 80 133 200
OBJECT AGG #7 FILTER NO NB WB OIII
OBS. PROGRAM GG8C LOCATION RMCC HOME



Both DV! vae N for shapes though, slight
details to elongated one. >15m's not seen
12", 1500mm fil, 10mm EP. No shape, no overlap
N.E. Star = 5.8m

GALAXY GROUP AND CLUSTER OBSERVATIONS

NGC 507 Group CONST Psc No. OF GALAXIES (AV) 9 DATE 10/16/9 TIME 10:00 pm		SITE RMCC INSTR X-12 SEEING II TRANS II EYEPIECE 10 POWER 150 COMMENTS Wonderful large group 507 easy large round glow 508 tiny spot 504 elong, a little dim
NGC 494 CONST AV=2 No. OF GALAXIES (AV) AV=2 DATE AV=2 TIME AV=2		SITE AV=2 INSTR AV=2 SEEING AV=2 TRANS AV=2 EYEPIECE AV=2 POWER AV=2 COMMENTS 494 definitely elongated nze field AV=2 AV=1 Easy oval glow next to Δ of stars
NGC 499 CONST AV=2 No. OF GALAXIES (AV) AV=2 DATE AV=2 TIME AV=2		SITE AV=2 INSTR AV=2 SEEING AV=2 TRANS AV=2 EYEPIECE AV=2 POWER AV=2 COMMENTS 499 AV=1 Easy & large oval AV=2 495 nze in line w/ stars 501 very difficult
NGC 517 CONST AV=1 No. OF GALAXIES (AV) AV=1 DATE AV=1 TIME AV=1		SITE AV=1 INSTR AV=1 SEEING AV=1 TRANS AV=1 EYEPIECE AV=1 POWER AV=1 COMMENTS Born easy, 517 elongated

The AV scale for averted vision is used to classify the difficulty of observation. This 1-5 scale is further explained on pages 137-138.

AGG #8

GALAXY GROUP AND CLUSTER OBSERVATIONS

NGC <i>See 177</i>		SITE <i>RMCC</i>	SEEING <i>I</i>	TRANS <i>I</i>
CONST		INSTR <i>12"</i>	EYEPIECE <i>10</i>	POWER <i>150</i>
No. OF GALAXIES (AV) <i>6</i>		COMMENTS		
DATE <i>4/8/10</i>				
TIME <i>11:00</i>				
NGC <i>2535/2536</i>		SITE <i>11</i>	SEEING <i>11</i>	TRANS <i>11</i>
CONST		INSTR <i>11</i>	EYEPIECE <i>11</i>	POWER <i>11</i>
No. OF GALAXIES (AV) <i>1</i>		COMMENTS <i>Looks misshapen - but is a effect of line of 3 stars?</i>		
DATE <i>4/8/10</i>				
TIME <i>11:30</i>				
NGC <i>2537/1c 2233</i>		SITE <i>11</i>	SEEING <i>11</i>	TRANS <i>11</i>
CONST		INSTR <i>11</i>	EYEPIECE <i>11</i>	POWER <i>11</i>
No. OF GALAXIES (AV) <i>2</i>		COMMENTS <i>162233 Av=3</i>		
DATE <i>4/9/10</i>				
TIME <i>12:50</i>				

Av 12
Av 8
Av 6

The AV scale for averted vision is used to classify the difficulty of observation. This 1-5 scale is further explained on pages 137-138.

12:51 W W m
✓ = 8.0
PM

Observing Log

Object type: ~~Globular Cluster~~ Galaxy

AGG
#16

Object ID: N3152/60/58/51/59/61/63

Const.: _____

Observer B. Young

RA: _____ Dec.: _____

Date 4/11/10

Mag: 3152M Size: 3160

Time 12:40

Location RMCC

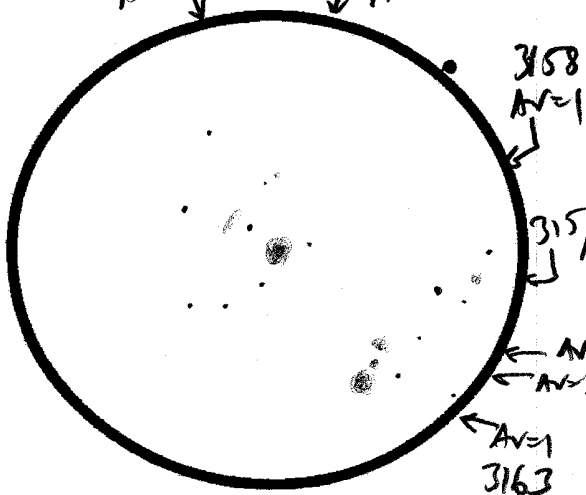
Seeing II- Transparency I

Instrument Xt-12"

Size 12"

Eyepiece 10mm

Field of view 0.3 Power 150X



- Can this cluster be seen with direct vision, or is averted vision required? See AV notes
- ~~Is the core unusually bright, compact or not distinguishable?~~ 2 clumps of galaxies
- Is this globular cluster highly or loosely concentrated? →
- Is any part of the cluster resolved into stars? 3152 faint but saw long dm streak. 3158 seems like a spiral
- Is any mottling visible? 3163 also. 3159/61 smaller, with
- Can the edges be resolved? some detail & shape. 3160/3151 just
- Are there any other deep-sky objects in the same field of view? If so, what? seen - no detail

Description _____

7.4 Local Group & Galactic Neighborhood Observations (choose one)

Object M66 Group
 R.A. _____
 Dec _____
 Magnitude _____
 Constellation Leo
 Transparency II -
 Seeing III

Date 6/18/9
 Time 10:30 pm CST
 Location RMCC
 Instrument X512
 Eyepiece 2x42
 Power (X) 90
 Field of View 0°6

Aperture & Focal Length 12" 1500mm
 Faintest Naked Eye Star 5.5
 # of averted vision galaxies 0
 # of direct vision galaxies 4
 Group or Cluster M66



- * Can the faintest galaxy/galaxies be seen with direct vision, or is averted vision required? If averted vision is required, give an estimate on the AV scale for all objects that require it.
- * Is there any grouping or clustering apparent? Any interaction between galaxies? YES
- * Do the galaxies form any particular pattern? Are they evenly or unevenly distributed? NO
- * Are details such as nuclei, dust lanes or spiral arms visible in any of the galaxies? Δ+1
- * Are any of the galaxies close enough to one another to appear superimposed? If so, are any signs of interaction visible? NO

Description WONDERFUL GROUP - GETTING LOW BUT
STILL EASILY SEEN

Local Group & Galactic Neighborhood, McGown & Murray

Observing Log

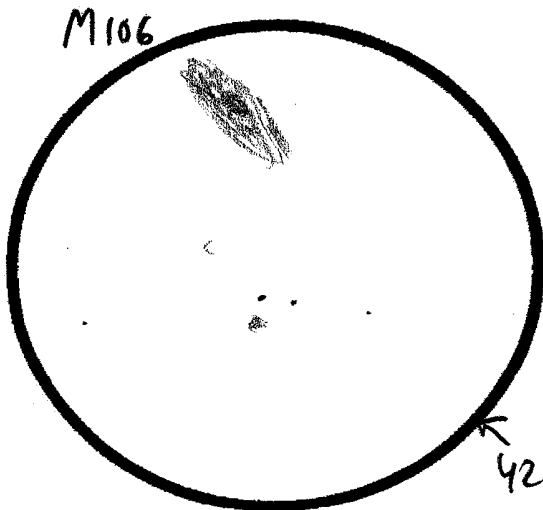
Object type: Galaxy

Object ID: NGC 4248

Const.: CVn

RA: _____ Dec.: _____

Mag: _____ Size: _____



Observer B. Young (part 2)

Date 3/25/9

Time 9:55 PM

Location RMCC

Seeing II Transparency I

Instrument XT-12

Size 12

Eyepiece 2x42

Field of view _____ Power 75x

- Can this galaxy be seen with direct vision, or is use averted vision required?
- What is the overall shape? oval
- Is a core noticeable? No
- Is the core compact or stellar? —
- Can any detail be seen between the core and the outer envelope of the object? No
- Are the edges of the outer envelope sharp or diffuse?
- Can any detail or mottling be seen in the outer envelope (bright or dark patches or lanes)? No
- Are there any other deep-sky objects in the same field of view? If so, what? M106

Description _____

OBSERVATION LOG

H2-4217

NAME B. 40-m	DATE 5/18/6	INSTRUMENT XT-12	SEING I-	OBJECT NAME NGC 4248
SITE mce	TIME 1:50	POWER 36	TRANSPARENCY II	CONSTELLATION UMa
DESCRIPTION NW of M106, hard to see. Very small elliptical, blurry even w/Av.				

↑ BOTH AGG #24 ↓ (PART 2)

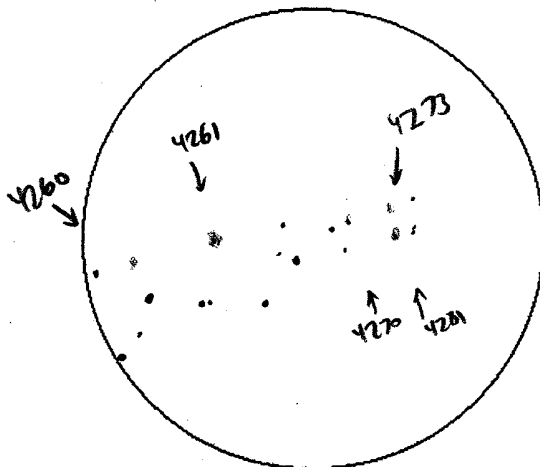
NAME u	DATE u	INSTRUMENT u	SEING u	OBJECT NAME NGC 4217
SITE u	TIME 1:55	POWER 190X	TRANSPARENCY u	CONSTELLATION UMa
DESCRIPTION W of brighter star of 4 in row near M106 & small 190x brings out NE of 4th star, unmarked 2 stars, elong, irregular.				

NAME	DATE	INSTRUMENT	SEING	OBJECT NAME
SITE	TIME	POWER	TRANSPARENCY	CONSTELLATION
DESCRIPTION				

NAME	DATE	INSTRUMENT	SEING	OBJECT NAME
SITE	TIME	POWER	TRANSPARENCY	CONSTELLATION
DESCRIPTION				

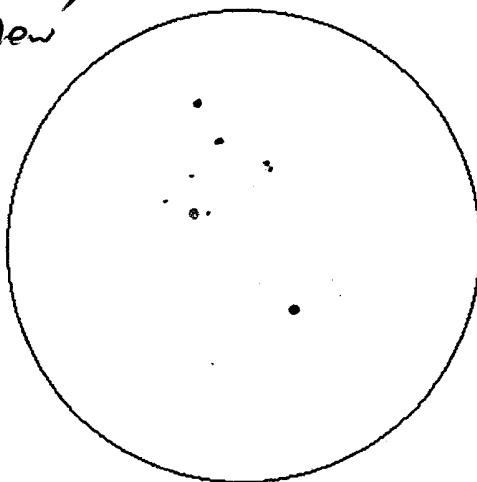
Object N6c 4260 4273 4281 Date 4/22/6
 Constellation _____ Time 1130 EDT
 Magnitude _____ Seeing: Transparency II
 Concentration Class _____ Steadiness II-
 Location _____ Telescope X5-12
 Eyepiece / Magnification 42/37x

Notes: Great field!



Object N6c 4339 Date 4/22/6
 Constellation _____ Time 1145 EDT
 Magnitude _____ Seeing: Transparency II
 Concentration Class _____ Steadiness II-
 Location _____ Telescope X5-12
 Eyepiece / Magnification 42/37x

Notes: Not too dim, random glow



H II
 (426084270)
 84339
 A66
 #25

Observing Log
Object type: Galaxy

H2

AGG

#26

Object ID: NGC 4312

Const.: Com

RA: _____ Dec.: _____

Mag: _____ Size: _____

Observer B. Yant

Date 4/5/18

Time 12:45

Location NMCC

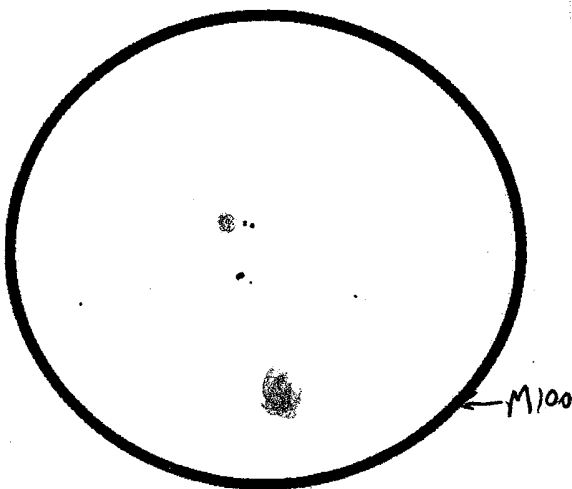
Seeing II Transparency II

Instrument X5-12

Size 12

Eyepiece 42+2X

Field of view _____ Power 72



- Can this galaxy be seen with direct vision, or is averted vision required?
- What is the overall shape? Round
- Is a core noticeable? No
- Is the core compact or stellar? —
- Can any detail be seen between the core and the outer envelope of the object? No
- Are the edges of the outer envelope sharp or diffuse?
- Can any detail or mottling be seen in the outer envelope (bright or dark patches or lanes)? No
- Are there any other deep-sky objects in the same field of view? If so, what? M100

Description _____

666
Abb
#27

7.4 Local Group & Galactic Neighborhood Observations (choose one)

Object M84/M86 clump Date 6/26/9
 R.A. _____ Time 1:30 CDT
 Dec _____ Location RMCC
 Magnitude _____ Instrument XT-12
 Constellation _____ Eyepiece 2X42
 Transparency II Power (X) 75
 Seeing II Field of View 0°.6

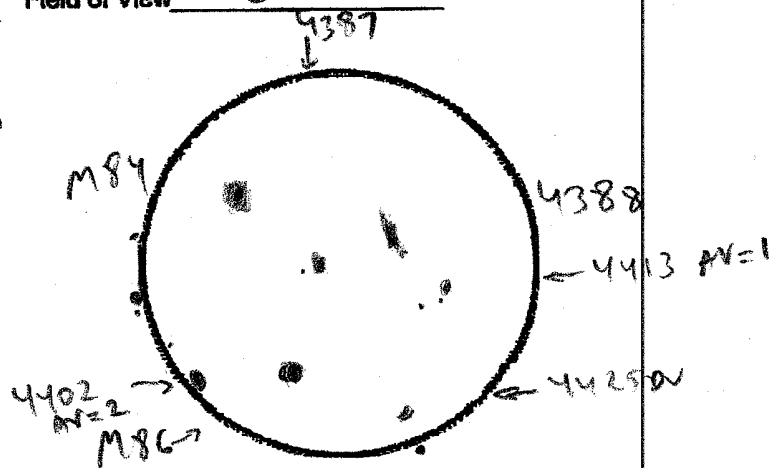
Aperture & Focal Length 12" 1500mm

Faintest Naked Eye Star 5.5

of averted vision galaxies 1

of direct vision galaxies 8

Group or Cluster Virgo SC



- * Can the faintest galaxy/galaxies be seen with direct vision, or is averted vision required? If averted vision is required, give an estimate on the AV scale for all objects that require it. *See notes*
- * Is there any grouping or clustering apparent? Any interaction between galaxies? *Obvious* **No**
- * Do the galaxies form any particular pattern? Are they evenly or unevenly distributed? *Not obvious*
- * Are details such as nuclei, dust lanes or spiral arms visible in any of the galaxies? *Some details in M84 + M86 + 4388*
- * Are any of the galaxies close enough to one another to appear superimposed? If so, are any signs of interaction visible? **No**

Description What A cluster!

Object Type: Galaxy Group or Galaxy Cluster

AGG
#28

Observer B. Young

Date 3/4/10

Time 10:15 pm

Location KMCC

Seeing III Transparency 1-

Faintest Naked Eye Star 6.0

Instrument XT-12

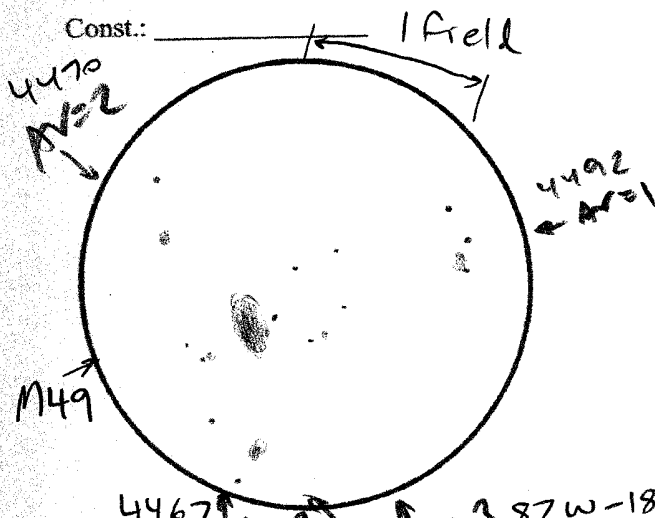
Aperture and Focal Length 12" 1500mm

1. Eyepiece 10mm

Magnification 150x Field of view 0.4

No. of averted vision galaxies 3

No. of direct vision galaxies 2



* Estimate the apparent size of the galaxy group or cluster. $\sim 1/2$ degree

* Do the galaxies form any particular pattern? Are they evenly or unevenly distributed?
No

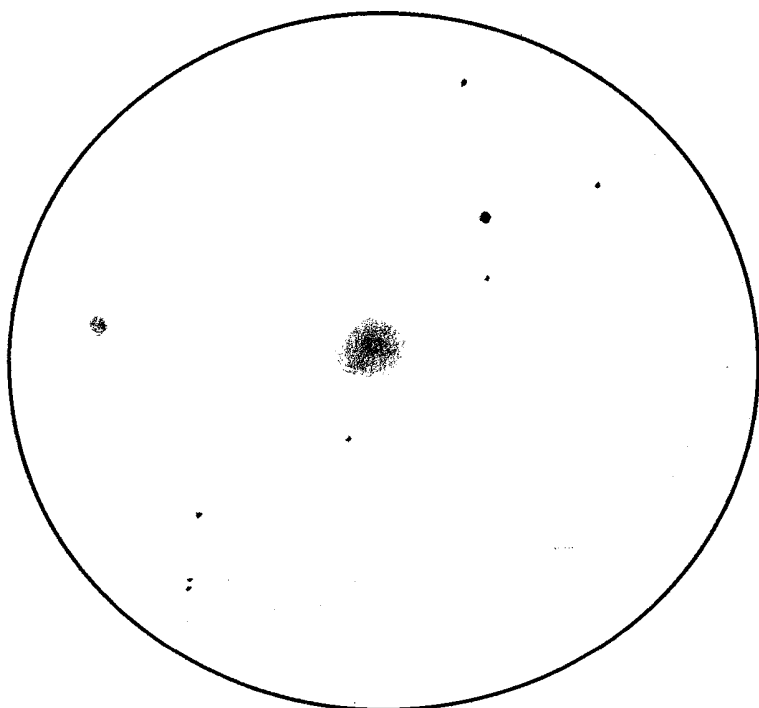
- * Are details such as nuclei, dust lanes or spiral arms visible in any of the galaxies? *Some hints in M49, which is huge*
- * Are any of the galaxies close enough to one another to appear superimposed? If so, are any signs of interaction visible? *✓*

Description _____

(McGown, Cole-Huston, Pratt 2000)

AGG
#29

DATE 4/20/13 TIME 10:15 CST DT CLARITY I II III IV V SEEING I II III IV V
INSTRUMENT ETX-125 10x50 EYE POWER 10X 73X 153X 475X
OBJECT M87 + NGC 4478 LOCATION RMCC HOME _____



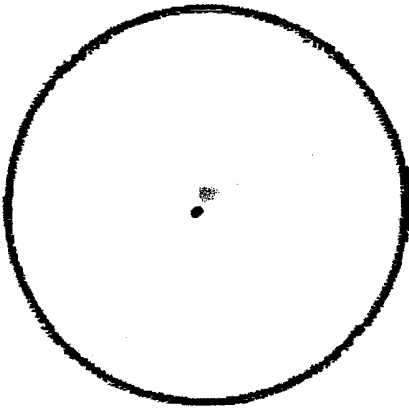
Great sig! 11-5 - M87 is awesome
NGC 4478 no slash - round small glow

(31) → 1244
+13
Fader
Vingo 50

Local Group & Galactic Neighborhood Observations

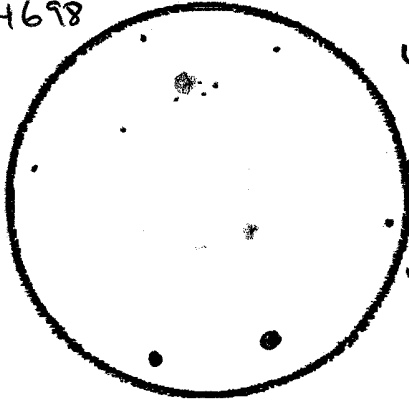
Object: N4871
Date: 6/27/9
Instrument: XT-12
Seeing: II
Transparency: II
Eyepiece: 2x42
Power: 75x
Time: 11:50
of Galaxies: 1
FOV: 0°.6
AV scale: —
Dimmest LM star: —

Notes: 150x no more detail



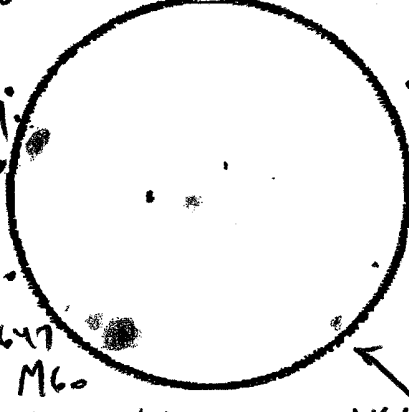
Object: N4596/4608/4698
Date: 6/28/9
Instrument: XT-12
Seeing: II
Transparency: II
Eyepiece: 2x42
Power: 75x
Time: 12:00
of Galaxies: 3
FOV: 0°.6
AV scale: —
Dimmest LM star: 32-30

Notes: medium size & bright
4596 round glow - small nuc
4698
size glow w/
nucleus seen
easily
4608
Small glow w/ compact nuc.



Object: M59/60
Date: 6/28/9
Instrument: XT-12
Seeing: II
Transparency II
Eyepiece 2x42
Power: 75x
Time: 12:15
of Galaxies: 7 (α) + 1 (AV)
FOV: 0°.6
AV scale: 4641 = AV 3
Dimmest LM star: 14

Notes: 4641 AV=3
4638/4637
150x to split
(not obvious @ 75x)
150x detail
4660
M60
Slight overlap
Confirmed w/ 150x



The AV scale for averted vision is used to classify the difficulty of observation. This 1-5 scale is explained in Appendix V, #4.

Local Group & Galactic Neighborhood, McGown & Murray

↑
Good work! Another
GREAT "CLUMP"
AGG #30
34

Observing Log
Object type: Galaxy

A66
#31

Object ID: NGC 5037/5044

Const.: Vir

RA: _____ Dec.: _____

Mag: _____ Size: _____

Observer BY

Date 5/20/7

Time 1:00 EDT

Location RMCC

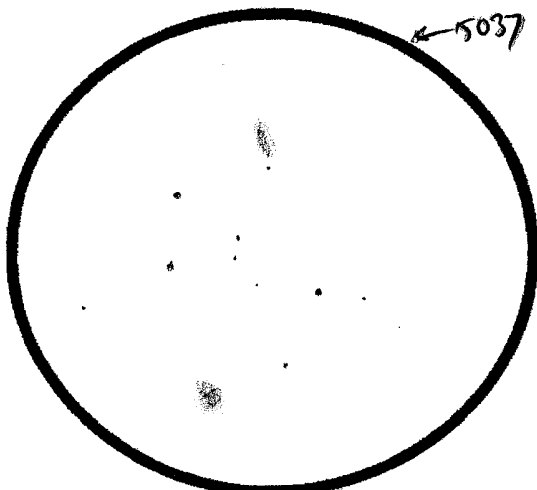
Seeing II Transparency II

Instrument XT-12

Size 12

Eyepiece 10 mm

Field of view 0.3 Power 150X



- Can this galaxy be seen with direct vision, or is averted vision required?
- What is the overall shape? Elong / round
- Is a core noticeable? No / yes
- Is the core compact or stellar?
- Can any detail be seen between the core and the outer envelope of the object? No
- Are the edges of the outer envelope sharp or diffuse?
- Can any detail or mottling be seen in the outer envelope (bright or dark patches or lanes)? No
- Are there any other deep-sky objects in the same field of view? If so, what? each other

Description _____

Observing Log

Object Type: Galaxy Group or Galaxy Cluster

Object ID: AGG #32

R.A.: _____

Dec.: _____

Magnitude: _____

Const.: _____

Observer B. Young

Date 4/10/10

Time 11:20

Location RMCC

Seeing III Transparency I

Faintest Naked Eye Star 6.0

Instrument 12

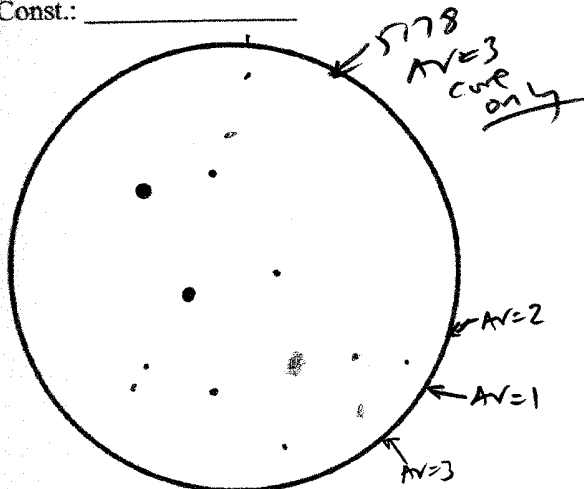
Aperture and Focal Length 12" 1500mm

Eyepiece 10

Magnification 150 Field of view 0.3

No. of averted vision galaxies 3

No. of direct vision galaxies 1

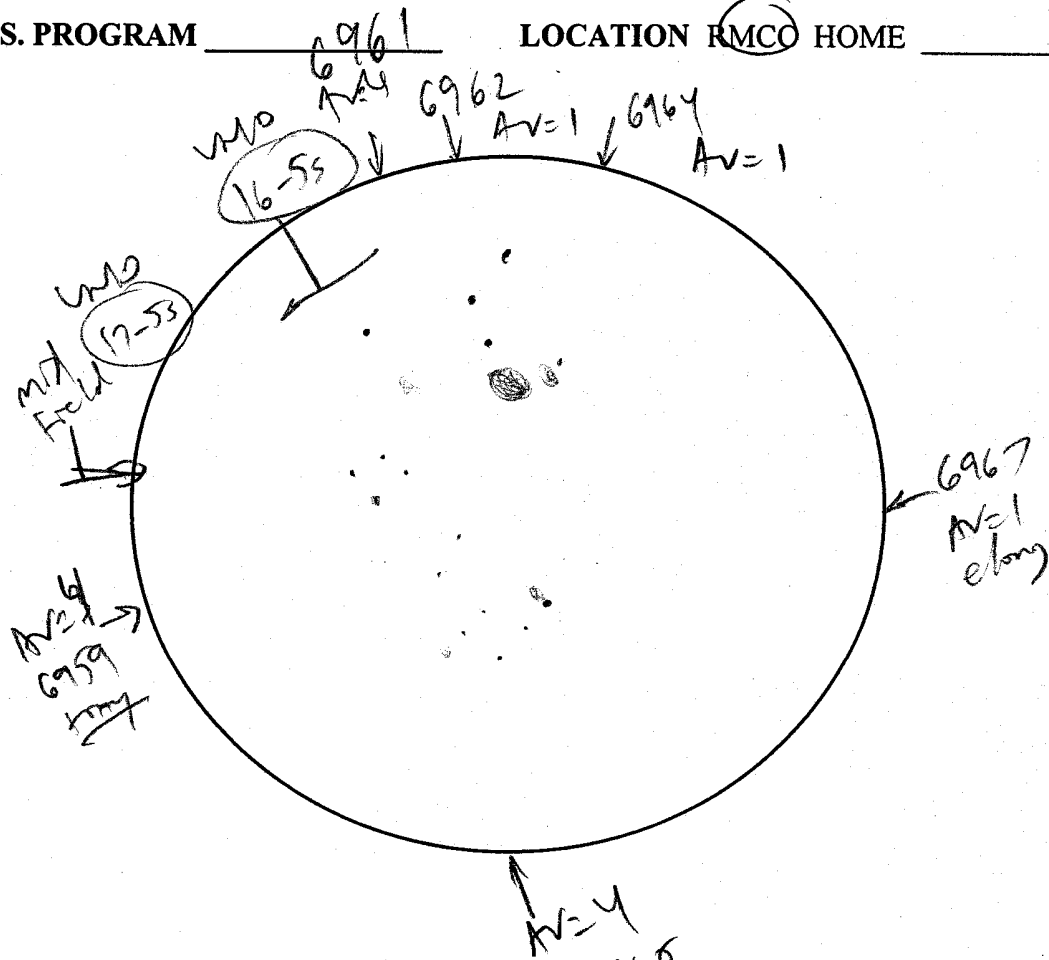


- * Can the faintest galaxy/galaxies be seen with direct vision, or is averted vision required? If averted vision is required, give an estimate on the AV scale for all objects that require it.
- * Estimate the apparent size of the galaxy group or cluster. 0°.2
- * Do the galaxies form any particular pattern? Are they evenly or unevenly distributed?
- * Are details such as nuclei, dust lanes or spiral arms visible in any of the galaxies? No
- * Are any of the galaxies close enough to one another to appear superimposed? If so, are any No signs of interaction visible?

Description _____

(McGown, Cole-Huston, Pratt 2000)

DATE 12/18/9 TIME 7:40 PM CST CDT CLARITY (I) II III IV V SEEING (I) II III IV V
 INSTRUMENT ETX-125 50 x 800 mm RR 10x50 EYE XT-12
 POWER 10 47 73 (150) 316 475 20 30 64 80 133 200
 OBJECT AGG # 44 FILTER (NO) NB WB OIII
 OBS. PROGRAM 6961 LOCATION (RMCO) HOME



Amazing Field. Took 6965 a while to see
 all these well north of. 30V, 3AV galaxies
 Some detail to 6962, 6967 elongated. No overlap
 No particular pattern. Group > 0.2 size
 N.E. Star = 6.2 12" 1500mm fl. 10mm EP

Observing Log

Object Type: Galaxy Group or Galaxy Cluster

Object ID: AGG 45

R.A.: _____

Dec.: _____

Magnitude: _____

Const.: _____

Observer B. Young

Date 12/18/9

Time 6:40

Location RMCC

Seeing I Transparency II

Faintest Naked Eye Star 6.1

Instrument Xt-12

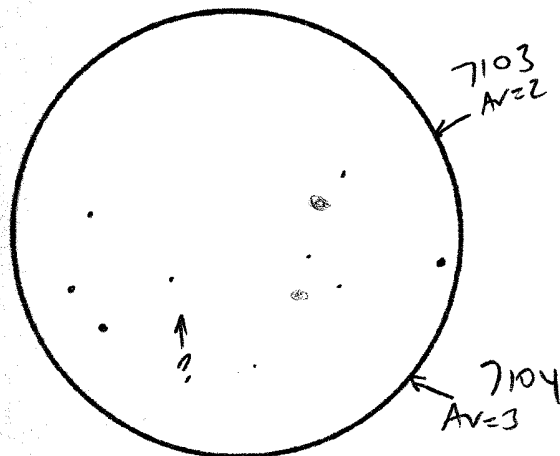
Aperture and Focal Length 12", 1500mm

Eyepiece 10mm

Magnification 150X Field of view 0.2

No. of averted vision galaxies 0

No. of direct vision galaxies 2



- * Can the faintest galaxy/galaxies be seen with direct vision, or is averted vision required? If averted vision is required, give an estimate on the AV scale for all objects that require it. see diag
- * Estimate the apparent size of the galaxy group or cluster. ~0.1
- * Do the galaxies form any particular pattern? Are they evenly or unevenly distributed? No
- * Are details such as nuclei, dust lanes or spiral arms visible in any of the galaxies? No
- * Are any of the galaxies close enough to one another to appear superimposed? If so, are any No signs of interaction visible?

Description Both faint but definitely seen

(McGown, Cole-Huston, Pratt 2000)

Observing Log

Object Type: Galaxy Group or Galaxy Cluster

Object ID: AGC A46

R.A.: _____

Dec.: _____

Magnitude: _____

Const.: _____

Observer B. Y. G. W. G.

Date 12/18/9

Time 7:00

Location RMCC

Seeing I Transparency II

Faintest Naked Eye Star 6.1

Instrument XT-12

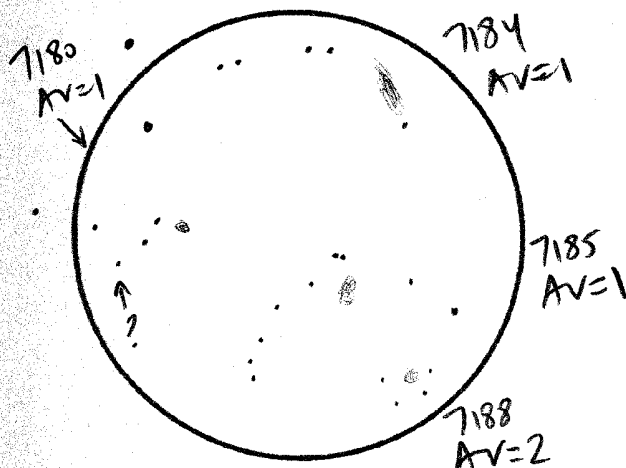
Aperture and Focal Length 12" 1500mm

Eyepiece 10mm

Magnification 150X Field of view _____

No. of averted vision galaxies 3

No. of direct vision galaxies 1



* Can the faintest galaxy/galaxies be seen with direct vision, or is averted vision required? If averted vision is required, give an estimate on the AV scale for all objects that require it. see Aug

* Estimate the apparent size of the galaxy group or cluster. ~0.5

* Do the galaxies form any particular pattern? Are they evenly or unevenly distributed? No

* Are details such as nuclei, dust lanes or spiral arms visible in any of the galaxies? 7184 elong w/nuct, glow

* Are any of the galaxies close enough to one another to appear superimposed? If so, are any signs of interaction visible? No 7185 some detail w/ REAV

Description 7188 dm, rand

(McGown, Cole-Huston, Pratt 2000)

Observing Log

Object Type: Galaxy Group or Galaxy Cluster

NGC 7331

Group

AGG
#47

Object ID: _____

R.A.: _____

Dec.: _____

Magnitude: _____

Const.: _____

Observer _____

Date 9/20/9

Time 9:30

Location O-T

Seeing I- Transparency F-

Faintest Naked Eye Star _____

Instrument XT-12

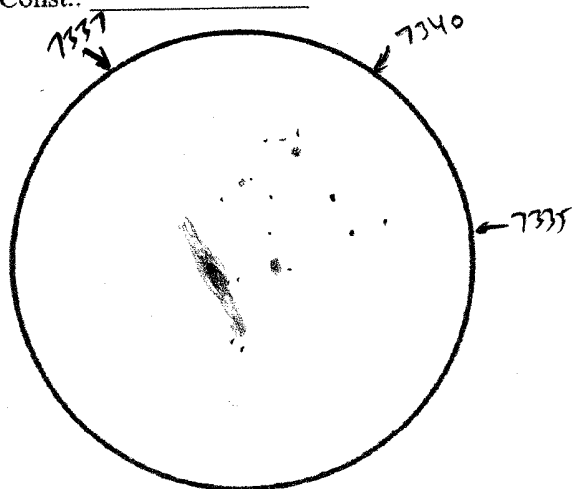
Aperture and Focal Length 12" 1500mm

Eyepiece 10

Magnification 150 Field of view _____

No. of averted vision galaxies _____

No. of direct vision galaxies _____



- * Can the faintest galaxy/galaxies be seen with direct vision, or is averted vision required? If averted vision is required, give an estimate on the AV scale for all objects that require it.
- * Estimate the apparent size of the galaxy group or cluster.
- * Do the galaxies form any particular pattern? Are they evenly or unevenly distributed?
- * Are details such as nuclei, dust lanes or spiral arms visible in any of the galaxies?
- * Are any of the galaxies close enough to one another to appear superimposed? If so, are any signs of interaction visible?

Description _____

(McGown, Cole-Huston, Pratt 2000)

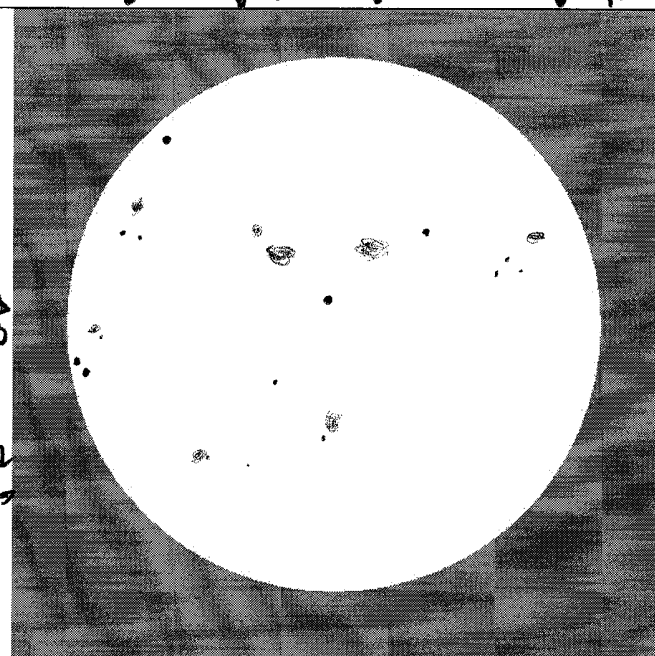
7611 7617 N
7619 7626

7631
M=2 com
elongate
too much

668c
A66#50

UBe
12076
M=3

7615
M=2



Observer's name: B. Young
 Comet: Pegasus I Choser
 Date / Time: 9/19/9 11:50
 Observing location: Okie-Tex
 Instrument / eyepiece / magnification / field of view: XT-12/10mm/150/0.3
 Comet sky location (constellation, nearest star, or RA/DEC):
FL=1500mm

Sky & Star steadiness					Sky transparency
boiling	(circle one)			steady	Un-aided zenith magnitude limit: <u>II = 6+</u>
5	4	3	<u>2</u>	1	

Comet description (magnitude, coma size, condensation, tail(s), color, shape, texture, motion):

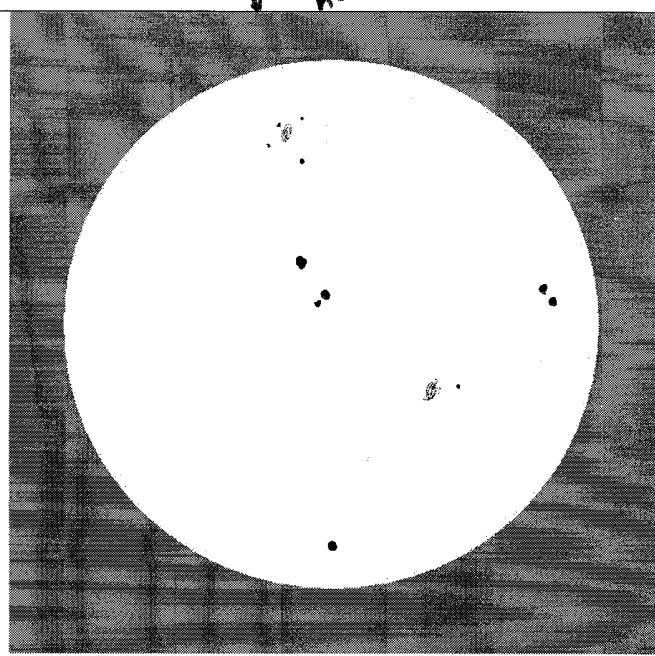
4 DV galaxies, 5 AV galaxies Nbe

Observing notes (difficulty, observing partners, interesting objects in field, general comments):

105309
M=2

7619 Gnor

Pegasus
I



Note: This can be the second drawing of the same comet above to show motion compared to background stars. Or, if a second position is indicated in the first drawing, this can be a different comet observation.

Comet: Scattered (pattern)
 Date / Time:

Observing location:

Instrument / eyepiece / magnification / field of view:

Comet sky location (constellation, nearest star, or RA/DEC):

Sky & Star steadiness					Sky transparency
boiling	(circle one)			steady	Un-aided zenith magnitude limit:
5	4	3	<u>2</u>	1	

Comet description (magnitude, coma size, condensation, tail(s), color, shape, texture, motion):

7608
M=3

Observing notes (difficulty, observing partners, interesting objects in field, general comments):

||||

Be sure to indicate North & East on your drawings.

||||

Observing Log

Abell

1

Object Type: Galaxy Group or Galaxy Cluster

Object ID: Abell 14

R.A.: _____

Dec.: _____

Magnitude: _____

Const.: CetObserver B. YantDate 10/5/10Time 12:40Location O-TexSeeing II Transparency IIFaintest Naked Eye Star 6.2Instrument XT-12Aperture and Focal Length 12" 1500mmEyepiece 10Magnification 150 Field of view 0°3No. of averted vision galaxies 4

No. of direct vision galaxies _____

* Can the faintest galaxy/galaxies be seen with direct vision, or is averted vision required? If averted vision is required, give an estimate on the AV scale for all objects that require it.

* Estimate the apparent size of the galaxy group or cluster. 0°2

* Do the galaxies form any particular pattern? No Are they evenly or unevenly distributed?

* Are details such as nuclei, dust lanes or spiral arms visible in any of the galaxies? No

* Are any of the galaxies close enough to one another to appear superimposed? If so, are any signs of interaction visible? No

Description See handbook drawing

(McGown, Cole-Huston, Pratt 2000)

Observing Log

Ab#2

Object Type: Galaxy Group or Galaxy Cluster

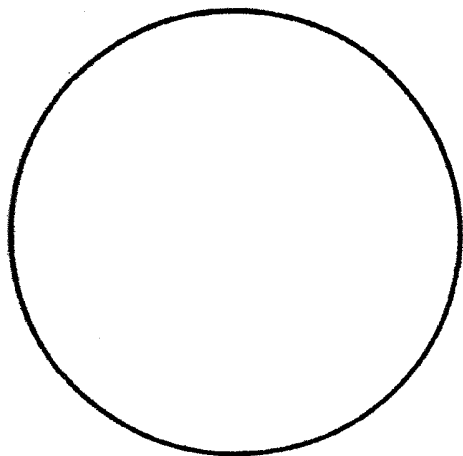
Object ID: Abell 76

R.A.: _____

Dec.: _____

Magnitude: _____

Const.: Psc



Observer B. Young

Date 10/7/10

Time 10:00 pm

Location Onie-Tex

Seeing II Transparency II

Faintest Naked Eye Star 6.2

Instrument XT-12

Aperture and Focal Length 12" 1500mm

Eyepiece 10

Magnification 150 Field of view 0°3

No. of averted vision galaxies 4

No. of direct vision galaxies 0

* Can the faintest galaxy/galaxies be seen with direct vision, or is averted vision required? If averted vision is required, give an estimate on the AV scale for all objects that require it.

* Estimate the apparent size of the galaxy group or cluster. 0°3

* Do the galaxies form any particular pattern? Are they evenly or unevenly distributed? No

* Are details such as nuclei, dust lanes or spiral arms visible in any of the galaxies?

* Are any of the galaxies close enough to one another to appear superimposed? If so, are any signs of interaction visible? Only 1 @ 190

Description See drwg - extra star ?

(McGown, Cole-Huston, Pratt 2000)

Observing Log

Object Type: Galaxy Group or Galaxy Cluster

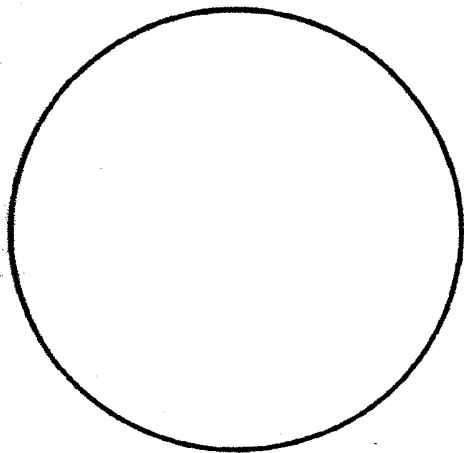
Object ID: Abell 147

R.A.: _____

Dec.: _____

Magnitude: _____

Const.: Cet



Observer B. York

Date 10/8/10

Time 12:05

Location Ohio-Tex

Seeing II Transparency II

Faintest Naked Eye Star 6.2

Instrument XT-12

Aperture and Focal Length 12" 1500mm

Eyepiece 10

Magnification 150X Field of view 0°.3

No. of averted vision galaxies 6

No. of direct vision galaxies 0

* Can the faintest galaxy/galaxies be seen with direct vision, or is averted vision required? If averted vision is required, give an estimate on the AV scale for all objects that require it.

* Estimate the apparent size of the galaxy group or cluster. 0°.6

* Do the galaxies form any particular pattern? Are they evenly or unevenly distributed?

* Are details such as nuclei, dust lanes or spiral arms visible in any of the galaxies? Seeding

* Are any of the galaxies close enough to one another to appear superimposed? If so, are any signs of interaction visible? No

Description _____

(McGown, Cole-Huston, Pratt 2000)

Observing Log

AL#5

Object Type: Galaxy Group or Galaxy Cluster

Object ID: Abell 157

R.A.: _____

Dec.: _____

Magnitude: _____

Const.: Cet

Observer B. Yang

Date 10/8/10

Time 12:30

Location Onie-Tex

Seeing II Transparency II

Faintest Naked Eye Star 6.2

Instrument XT-12

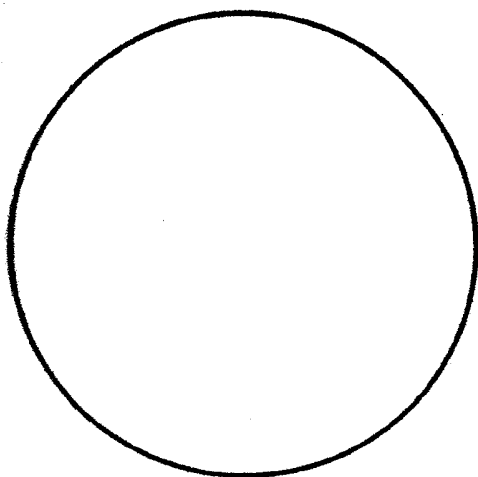
Aperture and Focal Length 12" 1500mm

Eyepiece 10

Magnification 150x Field of view 0°.3

No. of averted vision galaxies 2

No. of direct vision galaxies 1



* Can the faintest galaxy/galaxies be seen with direct vision, or is averted vision required? If averted vision is required, give an estimate on the AV scale for all objects that require it.

* Estimate the apparent size of the galaxy group or cluster. 0°.2

* Do the galaxies form any particular pattern? Are they evenly or unevenly distributed?

* Are details such as nuclei, dust lanes or spiral arms visible in any of the galaxies? No

* Are any of the galaxies close enough to one another to appear superimposed? If so, are any signs of interaction visible? No

Description _____

(McGown, Cole-Huston, Pratt 2000)

Observing Log

A6 #8

Object Type: Galaxy Group or Galaxy Cluster

Object ID: Abell 347

Observer B. Yano

R.A.: _____

Date 10/6/10

Dec.: _____

Time 4:15

Magnitude: _____

Location Ohre-Tex

Const.: And

Seeing II Transparency II

Faintest Naked Eye Star 6.2

Instrument XT-12

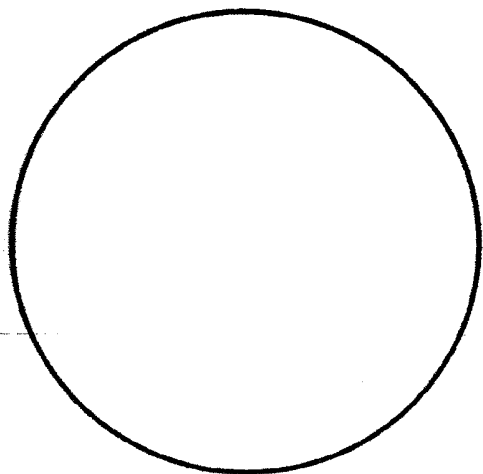
Aperture and Focal Length 12" 1500mm

Eyepiece 10

Magnification 150x Field of view 0.3

No. of averted vision galaxies 5

No. of direct vision galaxies 4 (incl. N891)



* Can the faintest galaxy/galaxies be seen with direct vision, or is averted vision required? If averted vision is required, give an estimate on the AV scale for all objects that require it.

* Estimate the apparent size of the galaxy group or cluster. 1°

* Do the galaxies form any particular pattern? Are they evenly or unevenly distributed?
No

* Are details such as nuclei, dust lanes or spiral arms visible in any of the galaxies? See log

* Are any of the galaxies close enough to one another to appear superimposed? If so, are any signs of interaction visible?
No

Description 914 = "amorphous w/ 2 stars"

(McGown, Cole-Huston, Pratt 2000)

Observing Log

Object Type: Galaxy Group or Galaxy Cluster

Ab# 9

Object ID: Abell 397

Observer B. Young

R.A.: _____

Date 10/6/10

Dec.: _____

Time 4:55

Magnitude: _____

Location Ohio-Tex

Const.: Ar1

Seeing II Transparency II

Faintest Naked Eye Star 6.2

Instrument XT-12

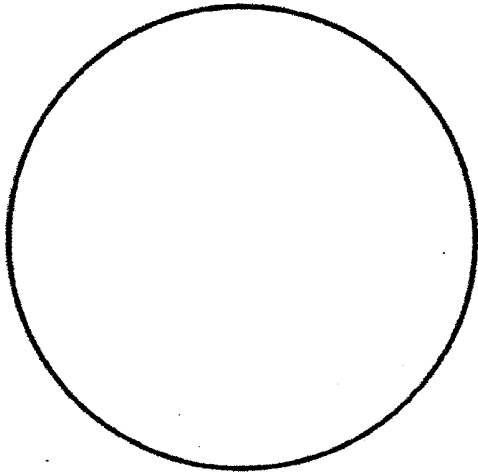
Aperture and Focal Length 12" 1500mm

Eyepiece 10

Magnification 150X Field of view 0°.3

No. of averted vision galaxies 4

No. of direct vision galaxies 0



- * Can the faintest galaxy/galaxies be seen with direct vision, or is averted vision required? If averted vision is required, give an estimate on the AV scale for all objects that require it.
- * Estimate the apparent size of the galaxy group or cluster. 0°.5
- * Do the galaxies form any particular pattern? Are they evenly or unevenly distributed?
No
- * Are details such as nuclei, dust lanes or spiral arms visible in any of the galaxies?
- * Are any of the galaxies close enough to one another to appear superimposed? If so, are any signs of interaction visible?
No

Description See handbook dwg

(McGown, Cole-Huston, Pratt 2000)

Observing Log

Object Type: Galaxy Group or Galaxy Cluster

Ab# 10

Object ID: Abell 400

R.A.: _____

Dec.: _____

Magnitude: _____

Const.: Cet

Observer B. Young

Date 10/8/10

Time 2:45

Location Ohio-Tex

Seeing II Transparency II

Faintest Naked Eye Star 6.2

Instrument XT-12

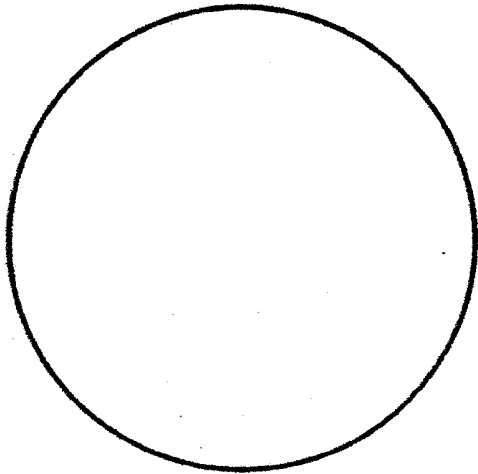
Aperture and Focal Length 12" 1500mm

Eyepiece 10

Magnification 150X Field of view 0°:3

No. of averted vision galaxies 4

No. of direct vision galaxies 0



- * Can the faintest galaxy/galaxies be seen with direct vision, or is averted vision required? If averted vision is required, give an estimate on the AV scale for all objects that require it.
- * Estimate the apparent size of the galaxy group or cluster. 0°:5
- * Do the galaxies form any particular pattern? Are they evenly or unevenly distributed?
No
- * Are details such as nuclei, dust lanes or spiral arms visible in any of the galaxies? No
- * Are any of the galaxies close enough to one another to appear superimposed? If so, are any signs of interaction visible?
No

Description See handbook dwg

(McGown, Cole-Huston, Pratt 2000)

Observing Log

Object Type: Galaxy Group or Galaxy Cluster

Abell #11

Object ID: Perseus Group

Observer B. Young

R.A.: _____

Date 10/18/9

Dec.: _____

Time 11:40

Magnitude: _____

Location RMCC

Const.: _____

Seeing IV Transparency I

Faintest Naked Eye Star 6.10

Instrument X+12

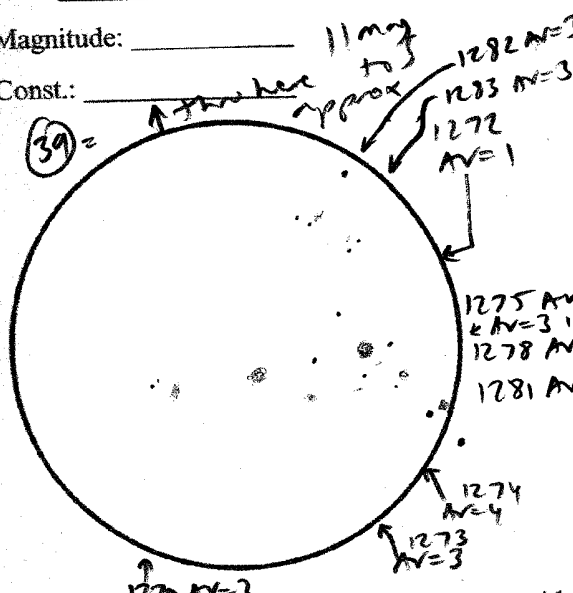
Aperture and Focal Length 1500mm

Eyepiece 10

Magnification 150x Field of view 0.93

No. of averted vision galaxies 8

No. of direct vision galaxies 2



* Can the faintest galaxy/galaxies be seen with direct vision, or is averted vision required? If averted vision is required, give an estimate on the AV scale for all objects that require it. see above

* Estimate the apparent size of the galaxy group or cluster. > 1° (several fields)

* Do the galaxies form any particular pattern? Are they evenly or unevenly distributed?

* Are details such as nuclei, dust lanes or spiral arms visible in any of the galaxies? Almost shaped like the constellation

* Are any of the galaxies close enough to one another to appear superimposed? If so, are any signs of interaction visible? 1275 has a small nucleus.

* Are any of the galaxies close enough to one another to appear superimposed? If so, are any signs of interaction visible? No

Description What a great group!

(McGown, Cole-Huston, Pratt 2000)

Observing Log

Object Type: Galaxy Group or Galaxy Cluster

Ab# 12

Object ID: Abell 539

Observer B. Young

R.A.: _____

Date 10/8/10

Dec.: _____

Time 5:10

Magnitude: _____

Location Ohio-Tex

Const.: OM

Seeing II Transparency II

Faintest Naked Eye Star 6.2

Instrument XT-12

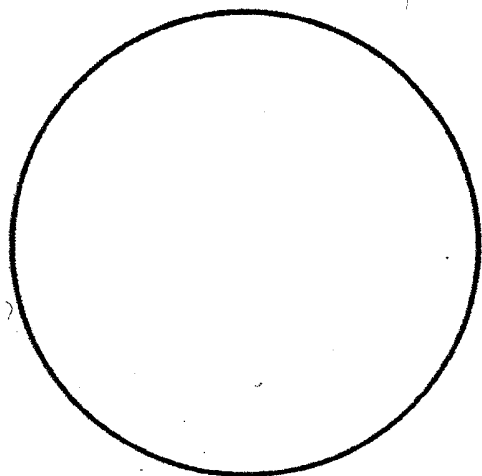
Aperture and Focal Length 12" 1500mm

Eyepiece 10

Magnification 150X Field of view 0°.3

No. of averted vision galaxies 2

No. of direct vision galaxies 0



* Can the faintest galaxy/galaxies be seen with direct vision, or is averted vision required? If averted vision is required, give an estimate on the AV scale for all objects that require it.

* Estimate the apparent size of the galaxy group or cluster. 0°.2

* Do the galaxies form any particular pattern? Are they evenly or unevenly distributed?

No

* Are details such as nuclei, dust lanes or spiral arms visible in any of the galaxies? No

* Are any of the galaxies close enough to one another to appear superimposed? If so, are any signs of interaction visible? No

Description See handbook dwg

(McGown, Cole-Huston, Pratt 2000)

Observing Log

Ab# 13

Object Type: Galaxy Group or Galaxy Cluster

Object ID: Abell 548

Observer B. Young

R.A.: _____

Date 10/8/10

Dec.: _____

Time 5:25

Magnitude: _____

Location Ohio-Tex

Const.: _____

Seeing II Transparency II

Faintest Naked Eye Star 6.2

Instrument XT-12

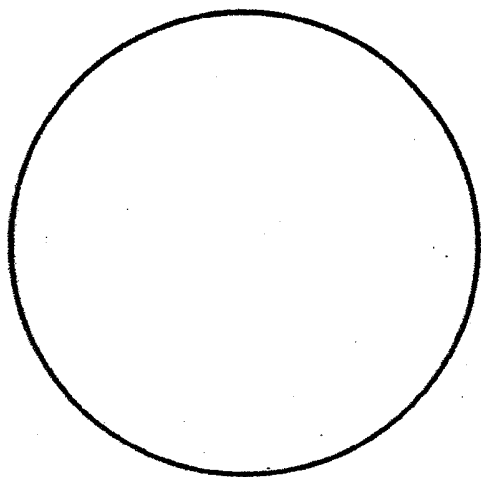
Aperture and Focal Length 12" 1500mm

Eyepiece 10

Magnification 150X Field of view 0.3

No. of averted vision galaxies 5

No. of direct vision galaxies 0



* Can the faintest galaxy/galaxies be seen with direct vision, or is averted vision required? If averted vision is required, give an estimate on the AV scale for all objects that require it.

* Estimate the apparent size of the galaxy group or cluster. 1°

* Do the galaxies form any particular pattern? Are they evenly or unevenly distributed?
No

* Are details such as nuclei, dust lanes or spiral arms visible in any of the galaxies? No

* Are any of the galaxies close enough to one another to appear superimposed? If so, are any signs of interaction visible?
ESO 488-7 (?)

Description See handbook dwg

(McGown, Cole-Huston, Pratt 2000)

Observing Log

Object Type: Galaxy Group or Galaxy Cluster

Ab# 14

Object ID: Abell 569

Observer B. Young

R.A.: _____

Date 10/8/10

Dec.: _____

Time 3:30

Magnitude: _____

Location Ohio-Tex

Const.: Lyn

Seeing II

Transparency II

Faintest Naked Eye Star 6.2

Instrument XT-12

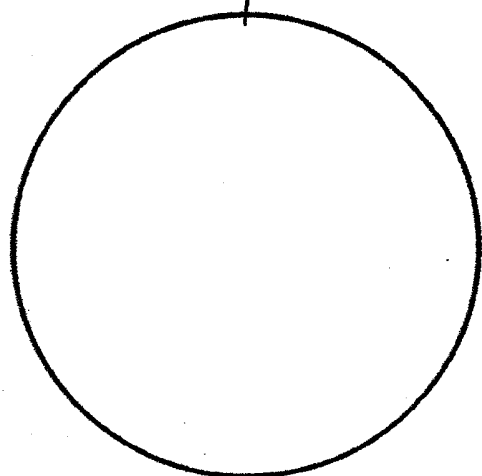
Aperture and Focal Length 12" 1500mm

Eyepiece 10

Magnification 150X Field of view 0°3

No. of averted vision galaxies 6

No. of direct vision galaxies 1



- * Can the faintest galaxy/galaxies be seen with direct vision, or is averted vision required? If averted vision is required, give an estimate on the AV scale for all objects that require it.
- * Estimate the apparent size of the galaxy group or cluster. 0°8
- * Do the galaxies form any particular pattern? Are they evenly or unevenly distributed?
No
- * Are details such as nuclei, dust lanes or spiral arms visible in any of the galaxies?
- * Are any of the galaxies close enough to one another to appear superimposed? If so, are any No signs of interaction visible?

Description See handbook dwg

Note reads: Bigger, less bright but nice
nucleus also

(McGown, Cole-Huston, Pratt 2000)

Observing Log

Object Type: Galaxy Group or Galaxy Cluster

Ab# 15

Object ID: Abell 576

Observer B. Young

R.A.: _____

Date 10/8/10

Dec.: _____

Time 3:00

Magnitude: _____

Location Ohio-Tex

Const.: Lyn

Seeing II Transparency II

Faintest Naked Eye Star 6.2

Instrument XT-12

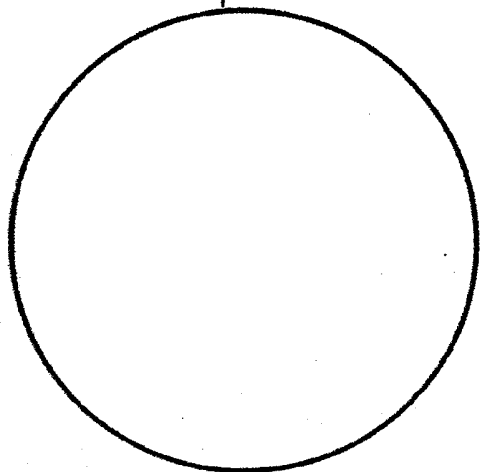
Aperture and Focal Length 12" 1500mm

Eyepiece 10

Magnification 150X Field of view 0°.3

No. of averted vision galaxies 3

No. of direct vision galaxies 0



* Can the faintest galaxy/galaxies be seen with direct vision, or is averted vision required? If averted vision is required, give an estimate on the AV scale for all objects that require it.

* Estimate the apparent size of the galaxy group or cluster. 0°.5

* Do the galaxies form any particular pattern? Are they evenly or unevenly distributed?

* Are details such as nuclei, dust lanes or spiral arms visible in any of the galaxies? see dwg

* Are any of the galaxies close enough to one another to appear superimposed? If so, are any signs of interaction visible? No

Description See handbook dwg

(McGown, Cole-Huston, Pratt 2000)

Observing Log

Object Type: Galaxy Group or Galaxy Cluster

Ab# 16

Object ID: Abell 634

Observer B. Young

R.A.: _____

Date 10/8/10

Dec.: _____

Time 3:15

Magnitude: _____

Location Ohio-Tex

Const.: Lyn

Seeing I Transparency II

Faintest Naked Eye Star 6.2

Instrument XT-12

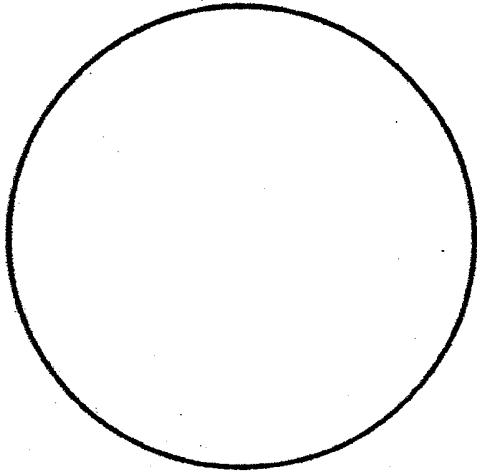
Aperture and Focal Length 12" 1500mm

Eyepiece 10

Magnification 150X Field of view 0°3

No. of averted vision galaxies 3

No. of direct vision galaxies 3



- * Can the faintest galaxy/galaxies be seen with direct vision, or is averted vision required? If averted vision is required, give an estimate on the AV scale for all objects that require it.
- * Estimate the apparent size of the galaxy group or cluster. 0°5
- * Do the galaxies form any particular pattern? Are they evenly or unevenly distributed? No
- * Are details such as nuclei, dust lanes or spiral arms visible in any of the galaxies? See notes
- * Are any of the galaxies close enough to one another to appear superimposed? If so, are any signs of interaction visible? No

Description See handbook dwg

Great little double spl.? N 2521 also seen

(McGown, Cole-Huston, Pratt 2000)

Observing Log

Object type: Nebula GALAXY

Abell
#19

Object ID: Abell 779 (#19)

Const.: _____

Observer B. YOUNG

RA: _____ Dec.: _____

Date 4/11/10

Mag: _____ Size: _____

Time 12:00

Location RMCC

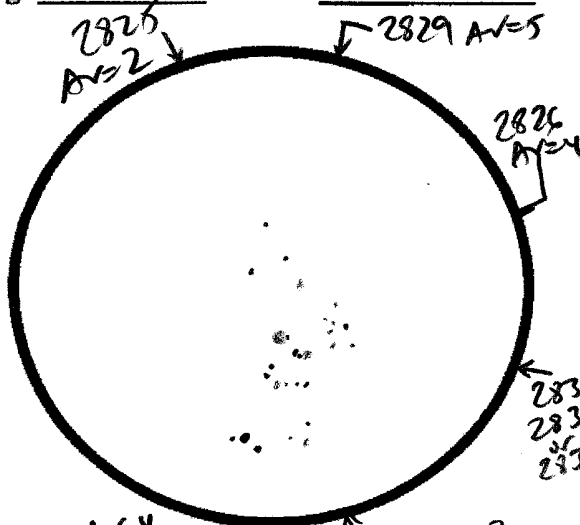
Seeing II - Transparency I

Instrument XT-12

Size 12"

Eyepiece 10mm

Field of view 0.3 Power 150x



ARP
315
(N2832)

2 FIELDS

- Can this nebula be seen with direct vision, or is averted vision required? SEE AV NOTES
- Is there an overall shape of the ^{GROUP} object or is it simply irregular? Fairly clumpy
- Is any part of the outer ^{galaxy} edge of the nebula sharply defined? No details to any-
- Is any part of the nebula brighter or more concentrated? Small round glows
- Is there any particular area where you notice an absence of ^{galaxies} stars in this cluster? No
- Are there any voids or dark patches, or lanes in the ^{galaxies} nebula? Any bright filaments or streamers? No
- Is there an open cluster nearby or involved or any obvious stars involved with this ^{group} nebula? No
- Any suggestions for observing this nebula (I.e. filter, power, field of view, etc.)? More field
- Are there any other deep-sky objects in the same field of view? If so, what? Each other

Description _____

Observing Log

Object Type: Galaxy Group or Galaxy Cluster

A 27

Object ID: Abell 1367

Observer B. Young

R.A.: _____

3862

Date 3/13/10

Dec.: _____

Time 9:15 CST

Magnitude: 14.7 3842

Location RMCC

Const. 14.7 3842 AV=1

Seeing II Transparency II

Faintest Naked Eye Star 6.0

Instrument XT-12

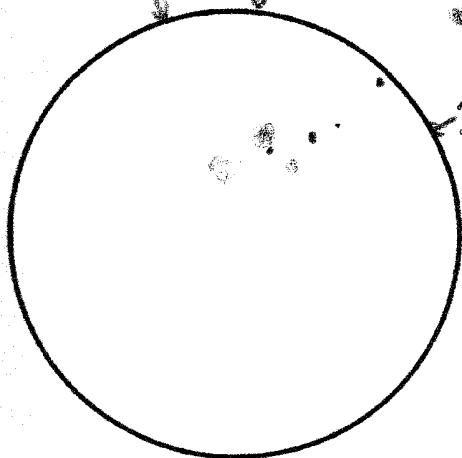
Aperture and Focal Length 12" 1500mm

Eyepiece 10

Magnification 150 Field of view 0.3

No. of averted vision galaxies 5

No. of direct vision galaxies 2



several
fields

* Can the faintest galaxy/galaxies be seen with direct vision, or is averted vision required? If averted vision is required, give an estimate on the AV scale for all objects that require it.

* Estimate the apparent size of the galaxy group or cluster. < 1°

* Do the galaxies form any particular pattern? Are they evenly or unevenly distributed?
No

* Are details such as nuclei, dust lanes or spiral arms visible in any of the galaxies?

* Are any of the galaxies close enough to one another to appear superimposed? If so, are any signs of interaction visible? No, but UGC 6697 seems "misshapen" w/extension to NE

No, but MCC + 370-94 is very near N3861, and very difficult & barely glimpsed

Description Scouted around for others but none seen.

(McGown, Cole-Huston, Pratt 2000)

Object ID: 110011000

R.A.: _____

Dec.: _____

Magnitude: _____

Const.: _____

Date 3/13/10

Time 9:45 CST

Location RMCC

Seeing II Transparency II

Faintest Naked Eye Star 6.0

Instrument X-12

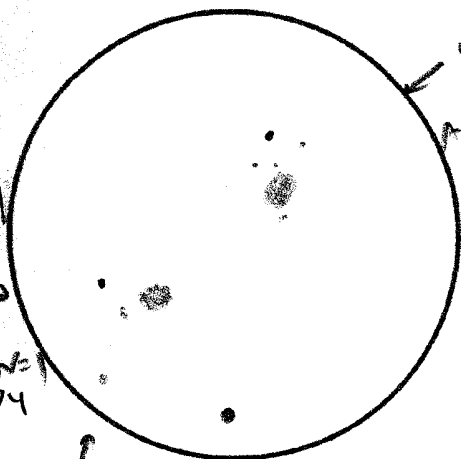
Aperture and Focal Length 12" 1500mm

Eyepiece 10

Magnification 150 Field of view 0°.3

No. of averted vision galaxies 3

No. of direct vision galaxies 2



* Can the faintest galaxy/galaxies be seen with direct vision, or is averted vision required? If averted vision is required, give an estimate on the AV scale for all objects that require it.

* Estimate the apparent size of the galaxy group or cluster. 0°.2 for my observation

* Do the galaxies form any particular pattern? Are they evenly or unevenly distributed?

2 big galaxies with several satellites

* Are details such as nuclei, dust lanes or spiral arms visible in any of the galaxies?

No

* Are any of the galaxies close enough to one another to appear superimposed? If so, are any signs of interaction visible?

No

Description I had seen the pair before, but not all the attendants.

(McGown, Cole-Huston, Pratt 2000)

MGC 5-32-24 AV=2

GALAXY GROUP AND CLUSTER OBSERVATIONS

NGC	CONST	No. OF GALAXIES (AV)	DATE	TIME	SITE	SEING	TRANS
NGC 3574		5			RMCC	I	I
					INSTR 12	EYEPiece 10	POWER 150
					COMMENTS		
					Very spread out		
					w/ 2 brighter & 3 dms		
NGC 3574			4/8/10	2:00	RMCC	III	I
					INSTR 11	EYEPiece 11	POWER
					COMMENTS		
					Only one glow seen		
NGC 3808+A			4/10/10	10:00	RMCC	III	I
					INSTR 12	EYEPiece 10	POWER 150
					COMMENTS		
					Only one glow seen		
NGC 3719/3800			4/10/10	10:15	RMCC	III	I
					INSTR 11	EYEPiece 11	POWER
					COMMENTS		
					AV=3 (both)		
					Nice, elongated no details		

The AV scale for averted vision is used to classify the difficulty of observation. This 1-5 scale is further explained on pages 137-138.

Observing Log

Object Type: Galaxy Group or Galaxy Cluster

Ab# 37

Object ID: Abell 2147

Observer B. Young

R.A.: _____

Date 10/8/10

Dec.: _____

Time 9:00

Magnitude: _____

Location Ohio-Tex

Const.: _____

Seeing II Transparency II

Faintest Naked Eye Star 6.2

Instrument XT-12

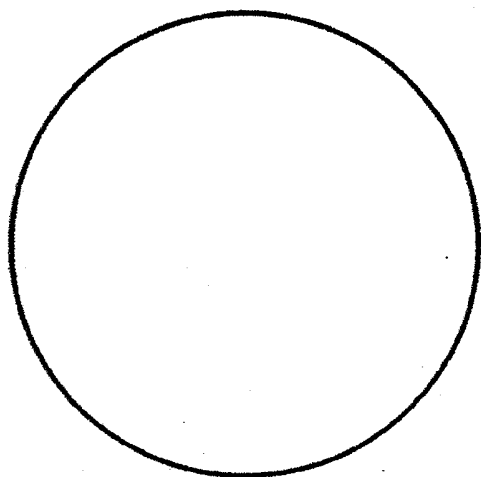
Aperture and Focal Length 12" 1500mm

Eyepiece 10

Magnification 150X Field of view 0°.3

No. of averted vision galaxies 7

No. of direct vision galaxies 2



* Can the faintest galaxy/galaxies be seen with direct vision, or is averted vision required? If averted vision is required, give an estimate on the AV scale for all objects that require it.

* Estimate the apparent size of the galaxy group or cluster. 1°

* Do the galaxies form any particular pattern? Are they evenly or unevenly distributed? No

* Are details such as nuclei, dust lanes or spiral arms visible in any of the galaxies? See log

* Are any of the galaxies close enough to one another to appear superimposed? If so, are any signs of interaction visible? No

Description See handbook dwg

(McGown, Cole-Huston, Pratt 2000)

Observing Log

Object Type: Galaxy Group or Galaxy Cluster

Ab# 38

Object ID: Abell 2151

Observer B. Young

R.A.: _____

Date 10/5/10

Dec.: _____

Time 9:45

Magnitude: _____

Location Ohio-Tex

Const.: Her

Seeing I Transparency II

Faintest Naked Eye Star 6.2

Instrument XT-12

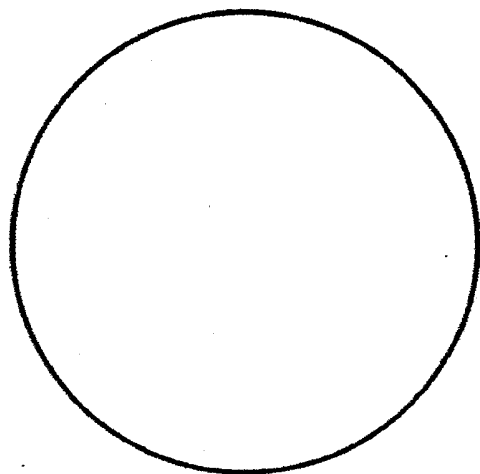
Aperture and Focal Length 12" 1500mm

Eyepiece 10

Magnification 150X Field of view 0°.3

No. of averted vision galaxies 9

No. of direct vision galaxies 3



- * Can the faintest galaxy/galaxies be seen with direct vision, or is averted vision required? If averted vision is required, give an estimate on the AV scale for all objects that require it.
- * Estimate the apparent size of the galaxy group or cluster. 0°.7
- * Do the galaxies form any particular pattern? Are they evenly or unevenly distributed?
N.
- * Are details such as nuclei, dust lanes or spiral arms visible in any of the galaxies? Some notes
- * Are any of the galaxies close enough to one another to appear superimposed? If so, are any signs of interaction visible?
6040A & B

Description See handbook dwg

(McGown, Cole-Huston, Pratt 2000)

Observing Log

Object Type: Galaxy Group or Galaxy Cluster

Ab# 39

Object ID: Abell 2152

Observer B. Young

R.A.: _____

Date 10/5/10

Dec.: _____

Time 9:25

Magnitude: _____

Location Ohio-Tex

Const.: Her

Seeing I Transparency II

Faintest Naked Eye Star 6.2

Instrument XT-12

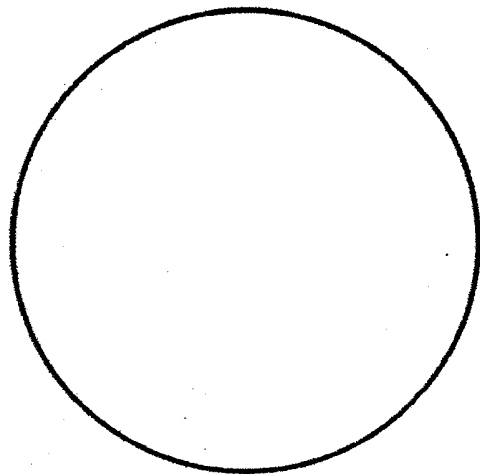
Aperture and Focal Length 12" 1500mm

Eyepiece 10

Magnification 150X Field of view 0°:3

No. of averted vision galaxies 3

No. of direct vision galaxies 1



- * Can the faintest galaxy/galaxies be seen with direct vision, or is averted vision required? If averted vision is required, give an estimate on the AV scale for all objects that require it.
- * Estimate the apparent size of the galaxy group or cluster. 0°.5
- * Do the galaxies form any particular pattern? Are they evenly or unevenly distributed? No
- * Are details such as nuclei, dust lanes or spiral arms visible in any of the galaxies? No
- * Are any of the galaxies close enough to one another to appear superimposed? If so, are any signs of interaction visible?

Description See handbook dwg

(McGown, Cole-Huston, Pratt 2000)

Observing Log

Object Type: Galaxy Group or Galaxy Cluster

Ab# 40

Object ID: Abell 2162

Observer B. Young

R.A.: _____

Date 10/6/10

Dec.: _____

Time 9:15

Magnitude: _____

Location Ohio-Tex

Const.: CrB

Seeing II Transparency II

Faintest Naked Eye Star 6.2

Instrument XT-12

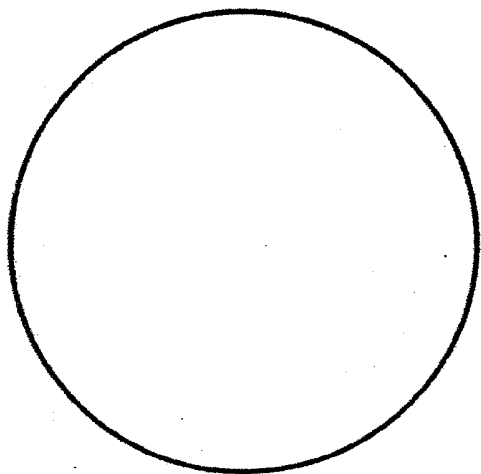
Aperture and Focal Length 12" 1500mm

Eyepiece 10

Magnification 150X Field of view 0°.3

No. of averted vision galaxies 3

No. of direct vision galaxies 1



- * Can the faintest galaxy/galaxies be seen with direct vision, or is averted vision required? If averted vision is required, give an estimate on the AV scale for all objects that require it.
- * Estimate the apparent size of the galaxy group or cluster. 0°.8
- * Do the galaxies form any particular pattern? Are they evenly or unevenly distributed?
- * Are details such as nuclei, dust lanes or spiral arms visible in any of the galaxies? No
- * Are any of the galaxies close enough to one another to appear superimposed? If so, are any signs of interaction visible? No

Description See handbook dwg

(McGown, Cole-Huston, Pratt 2000)

Observing Log

Object Type: Galaxy Group or Galaxy Cluster

Ab# 41

Object ID: Abell 2197

Observer B. Young

R.A.: _____

Date 10/6/10

Dec.: _____

Time 9:40

Magnitude: _____

Location Ohio-Tex

Const.: Hw

Seeing I Transparency II

Faintest Naked Eye Star 6.2

Instrument XT-12

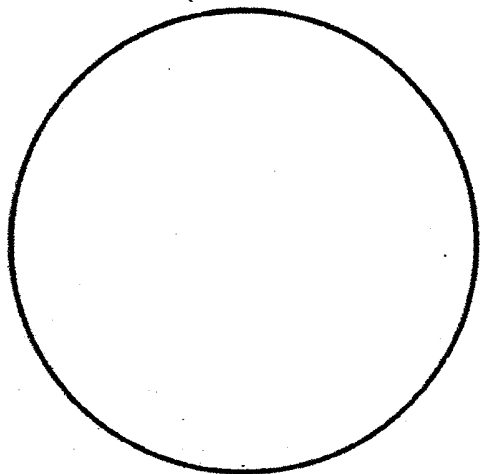
Aperture and Focal Length 12" 1500mm

Eyepiece 10

Magnification 150x Field of view 0°3

No. of averted vision galaxies 2

No. of direct vision galaxies 2



- * Can the faintest galaxy/galaxies be seen with direct vision, or is averted vision required? If averted vision is required, give an estimate on the AV scale for all objects that require it.
- * Estimate the apparent size of the galaxy group or cluster. 0°.7
- * Do the galaxies form any particular pattern? Are they evenly or unevenly distributed? No
- * Are details such as nuclei, dust lanes or spiral arms visible in any of the galaxies? see notes
- * Are any of the galaxies close enough to one another to appear superimposed? If so, are any signs of interaction visible? No

Description See handbook dwg

(McGown, Cole-Huston, Pratt 2000)

Observing Log

Object Type: Galaxy Group or Galaxy Cluster

Ab# 42

Object ID: Abell 2199

Observer B. Young

R.A.: _____

Date 10/6/10

Dec.: _____

Time 9:55

Magnitude: _____

Location Ohio-Tex

Const.: Her

Seeing II Transparency II

Faintest Naked Eye Star 6.2

Instrument XT-12

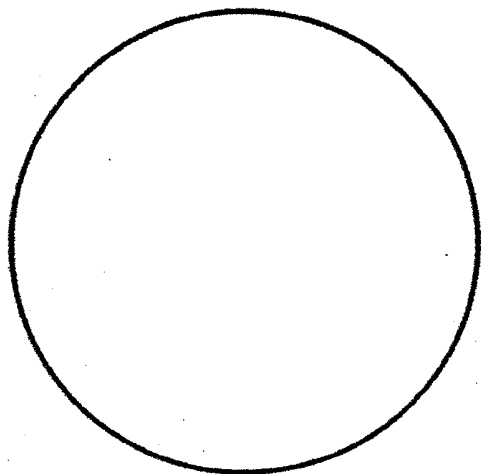
Aperture and Focal Length 12" 1500mm

Eyepiece 10

Magnification 150X Field of view 0°.3

No. of averted vision galaxies 2

No. of direct vision galaxies 1



- * Can the faintest galaxy/galaxies be seen with direct vision, or is averted vision required? If averted vision is required, give an estimate on the AV scale for all objects that require it.
- * Estimate the apparent size of the galaxy group or cluster. 0°.2
- * Do the galaxies form any particular pattern? Are they evenly or unevenly distributed?
- * Are details such as nuclei, dust lanes or spiral arms visible in any of the galaxies? No
- * Are any of the galaxies close enough to one another to appear superimposed? If so, are any signs of interaction visible? No

Description See handbook dwg

(McGown, Cole-Huston, Pratt 2000)

Observing Log

Object type: Galaxy

Abell

#2 #42

Object ID: Ngc 6166 + 6166A

Const.: Her

RA: _____ Dec.: _____

Mag: _____ Size: _____

Observer Brad Young

Date 10/13/7

Time 10:30

Location Uncl

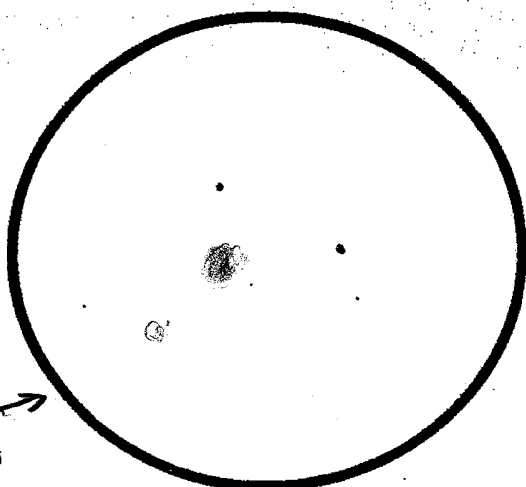
Seeing III Transparency II

Instrument XT12

Size 12

Eyepiece 10

Field of view _____ Power 100



- Can this galaxy be seen with direct vision, or is averted vision required?
- What is the overall shape? oval
- Is a core noticeable? No
- Is the core compact or stellar? No
- Can any detail be seen between the core and the outer envelope of the object? No
- Are the edges of the outer envelope sharp or diffuse?
- Can any detail or mottling be seen in the outer envelope (bright or dark patches or lanes)? No
- Are there any other deep-sky objects in the same field of view? If so, what? Another?

6166-A

Description _____

Observing Log

Object Type: Galaxy Group or Galaxy Cluster

Ab# 45

Object ID: Abell 3744

Observer B. Young

R.A.: _____

Date 10/6/10

Dec.: _____

Time 10:15

Magnitude: _____

Location Ohio-Tex

Const.: Cap

Seeing II Transparency II

Faintest Naked Eye Star 6.2

Instrument XT-12

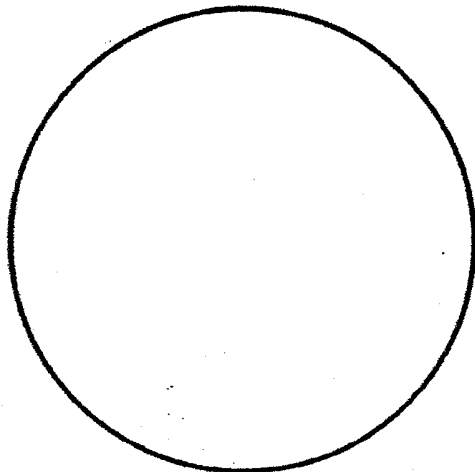
Aperture and Focal Length 12" 1500mm

Eyepiece 10

Magnification 150x Field of view 0°.3

No. of averted vision galaxies 1

No. of direct vision galaxies 1



* Can the faintest galaxy/galaxies be seen with direct vision, or is averted vision required? If averted vision is required, give an estimate on the AV scale for all objects that require it.

* Estimate the apparent size of the galaxy group or cluster. 0°.2

* Do the galaxies form any particular pattern? Are they evenly or unevenly distributed?

* Are details such as nuclei, dust lanes or spiral arms visible in any of the galaxies? No

* Are any of the galaxies close enough to one another to appear superimposed? If so, are any signs of interaction visible?

Not split

Description See handbook dwg

(McGown, Cole-Huston, Pratt 2000)

Observing Log

Object Type: Galaxy Group or Galaxy Cluster

Ab# 46

Object ID: Abell 2589

Observer B. Young

R.A.: _____

Date 10/6/10

Dec.: _____

Time 9:50

Magnitude: _____

Location Ohio-Tex

Const.: Peg

Seeing II Transparency II

Faintest Naked Eye Star 6.2

Instrument XT-12

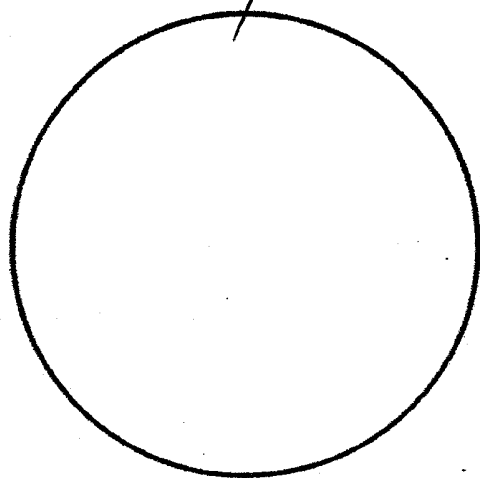
Aperture and Focal Length 12" 1500mm

Eyepiece 10

Magnification 150X Field of view 0°.3

No. of averted vision galaxies 2

No. of direct vision galaxies 0



* Can the faintest galaxy/galaxies be seen with direct vision, or is averted vision required? If averted vision is required, give an estimate on the AV scale for all objects that require it.

* Estimate the apparent size of the galaxy group or cluster. 0°.2

* Do the galaxies form any particular pattern? Are they evenly or unevenly distributed?

* Are details such as nuclei, dust lanes or spiral arms visible in any of the galaxies? No

* Are any of the galaxies close enough to one another to appear superimposed? If so, are any signs of interaction visible? No

Description See handbook dwg

(McGown, Cole-Huston, Pratt 2000)

Observing Log

Object Type: Galaxy Group or Galaxy Cluster

Ab# 47

Object ID: Abell 2593

Observer B. Young

R.A.: _____

Date 10/5/10

Dec.: _____

Time 8:45

Magnitude: _____

Location Ohio-Tex

Const.: Peg

Seeing I Transparency II

Faintest Naked Eye Star 6.2

Instrument XT-12

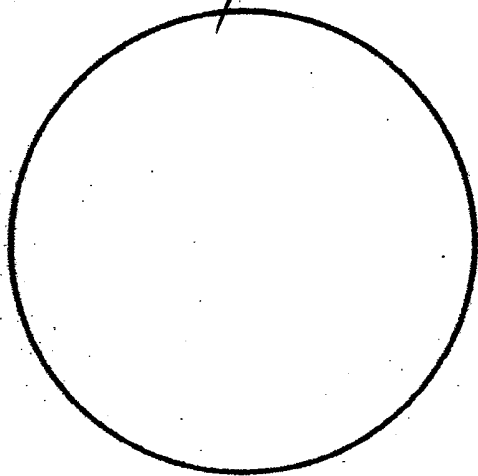
Aperture and Focal Length 12" 1500mm

Eyepiece 10

Magnification 150x Field of view 0.3

No. of averted vision galaxies 1

No. of direct vision galaxies 1



- * Can the faintest galaxy/galaxies be seen with direct vision, or is averted vision required? If averted vision is required, give an estimate on the AV scale for all objects that require it.
- * Estimate the apparent size of the galaxy group or cluster. 0°.2
- * Do the galaxies form any particular pattern? Are they evenly or unevenly distributed? 0
- * Are details such as nuclei, dust lanes or spiral arms visible in any of the galaxies? mostly
- * Are any of the galaxies close enough to one another to appear superimposed? If so, are any signs of interaction visible? —

Description See handbook dwg

(McGown, Cole-Huston, Pratt 2000)

Observing Log

Object Type: Galaxy Group or Galaxy Cluster

Abell 48

Object ID: Abell 2634

Observer B. Young

R.A.: _____

Date 10/5/10

Dec.: _____

Time 9:15

Magnitude: _____

Location Ohio-Tex

Const.: Peg

Seeing II Transparency II

Faintest Naked Eye Star 6.2

Instrument XT-12

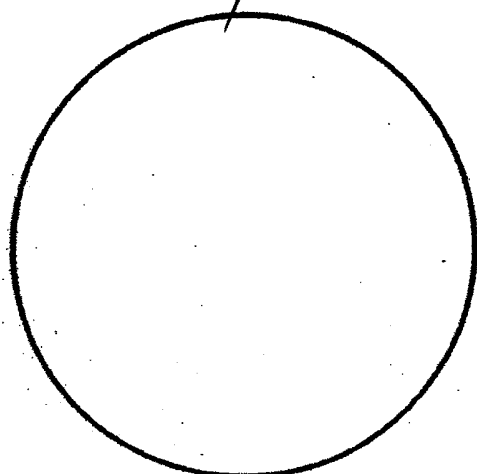
Aperture and Focal Length 12" 1500mm

Eyepiece 10

Magnification 150X Field of view 0°.3

No. of averted vision galaxies 2

No. of direct vision galaxies 2



- * Can the faintest galaxy/galaxies be seen with direct vision, or is averted vision required? If averted vision is required, give an estimate on the AV scale for all objects that require it.
- * Estimate the apparent size of the galaxy group or cluster. 0°.2
- * Do the galaxies form any particular pattern? Are they evenly or unevenly distributed?
- * Are details such as nuclei, dust lanes or spiral arms visible in any of the galaxies? SI elong
- * Are any of the galaxies close enough to one another to appear superimposed? If so, are any close, signs of interaction visible? no overlap

Description See handbook drawing

(McGown, Cole-Huston, Pratt 2000)

Observing Log

Object Type: Galaxy Group or Galaxy Cluster

Ab# 49

Object ID: Abell 4038

Observer B. Young

R.A.: _____

Date 10/5/10

Dec.: _____

Time 10:00

Magnitude: _____

Location Ohio-Tex

Const.: Scl

Seeing I Transparency II

Faintest Naked Eye Star 6.2

Instrument XT-12

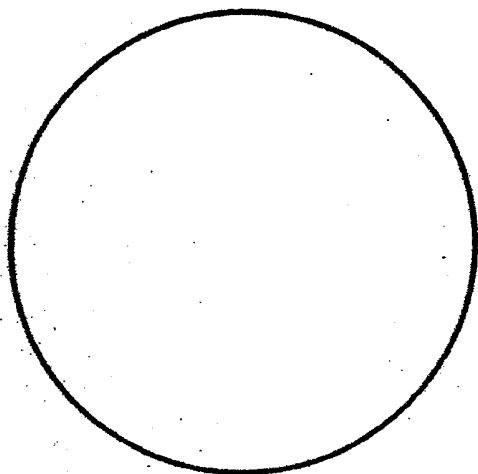
Aperture and Focal Length 12" 1500mm

Eyepiece 10

Magnification 150X Field of view 0°3

No. of averted vision galaxies 1

No. of direct vision galaxies 3



- * Can the faintest galaxy/galaxies be seen with direct vision, or is averted vision required? If averted vision is required, give an estimate on the AV scale for all objects that require it.
- * Estimate the apparent size of the galaxy group or cluster. 0° 5
- * Do the galaxies form any particular pattern? Are they evenly or unevenly distributed?
- * Are details such as nuclei, dust lanes or spiral arms visible in any of the galaxies? No
- * Are any of the galaxies close enough to one another to appear superimposed? If so, are any signs of interaction visible?

Description See handbook dwg

(McGown, Cole-Huston, Pratt 2000)

Observing Log

Object Type: Galaxy Group or Galaxy Cluster

Ab# 50

Object ID: Abell 2666

Observer B. Young

R.A.: _____

Date 10/5/10

Dec.: _____

Time 10:15

Magnitude: _____

Location Ohio-Tex

Const.: Po

Seeing II Transparency II

Faintest Naked Eye Star 6.2

Instrument XT-12

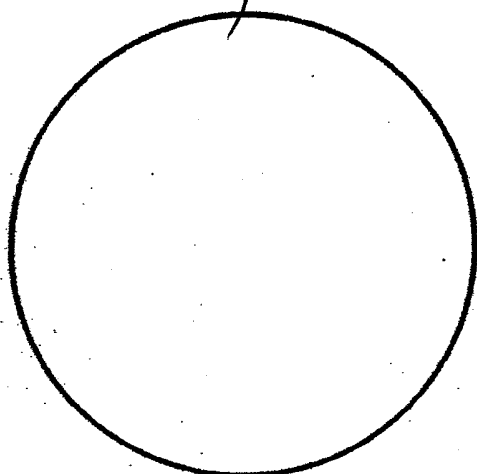
Aperture and Focal Length 12" 1500mm

Eyepiece 10

Magnification 150X Field of view 0°.3

No. of averted vision galaxies 4

No. of direct vision galaxies 1



* Can the faintest galaxy/galaxies be seen with direct vision, or is averted vision required? If averted vision is required, give an estimate on the AV scale for all objects that require it.

* Estimate the apparent size of the galaxy group or cluster. 0°.8

* Do the galaxies form any particular pattern? Are they evenly or unevenly distributed?

* Are details such as nuclei, dust lanes or spiral arms visible in any of the galaxies? See dwg

* Are any of the galaxies close enough to one another to appear superimposed? If so, are any signs of interaction visible?

Description See handbook dwg

(McGown, Cole-Huston, Pratt 2000)

Observing Log

Object Type: Galaxy Group or Galaxy Cluster

Abell 49

Object ID: _____

R.A.: _____

Dec.: _____

Magnitude: _____

Const.: _____

Observer _____

Date 10/5/10

Time 12:05

Location 0-5

Seeing II Transparency II

Faintest Naked Eye Star _____

Instrument _____

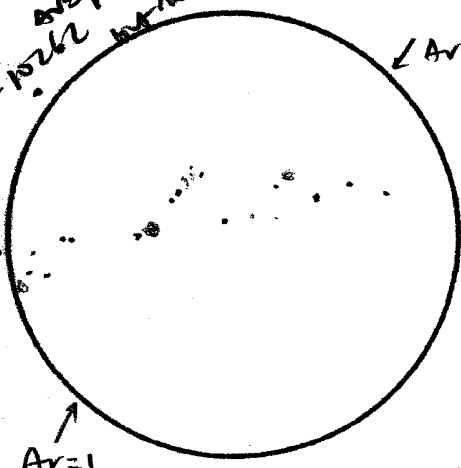
Aperture and Focal Length _____

Eyepiece _____

Magnification 150x Field of view _____

No. of averted vision galaxies _____

No. of direct vision galaxies _____



- * Can the faintest galaxy/galaxies be seen with direct vision, or is averted vision required? If averted vision is required, give an estimate on the AV scale for all objects that require it.
- * Estimate the apparent size of the galaxy group or cluster.
- * Do the galaxies form any particular pattern? Are they evenly or unevenly distributed?
- * Are details such as nuclei, dust lanes or spiral arms visible in any of the galaxies?
- * Are any of the galaxies close enough to one another to appear superimposed? If so, are any signs of interaction visible?

Description _____

(McGown, Cole-Huston, Pratt 2000)

$\beta_{49} = 3.4$