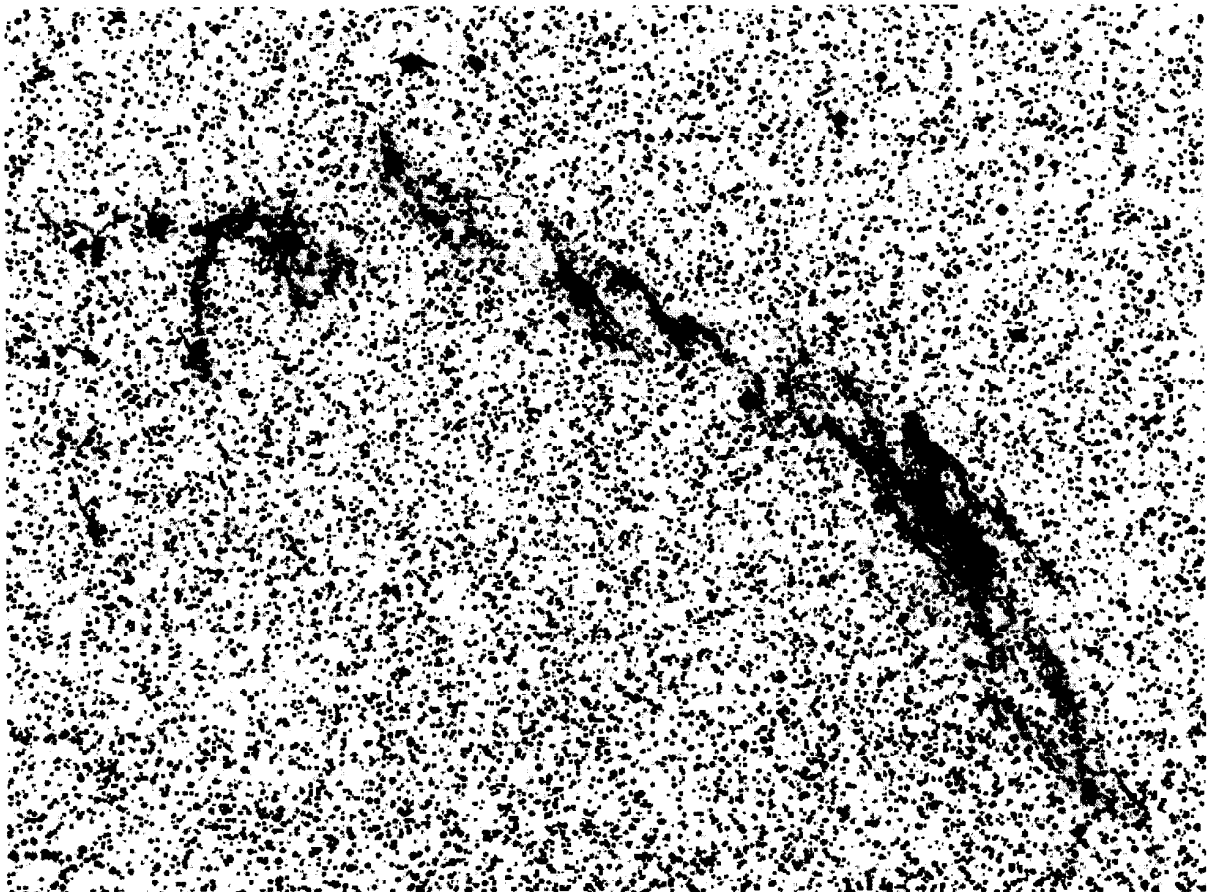


Telescopic Companion to the Finest NGC's



by Roger Fell

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This book was written to provide an easy-to-use resource for use at the eyepiece. The charts are laid out with a 30-degree chart oriented North up, for naked eye use. They are followed by 6-degree charts with a limiting magnitude of tenth magnitude for more precise zeroing with your finder. These charts are in two formats, North down direct view, and North down mirrored view for those that use a diagonal with their finder. Under these are 1-degree charts plotted to the twelfth magnitude with target object deep sky symbols and names removed. These are for sketching purposes.

At the top of the page, you'll find a small area that contains information on the object and features to look for when observing.

I wanted to leave the book as adaptable as possible. Possible uses are for laying out the charts in a sequence, selecting the sheets that would be used on one night. The sheets could be mixed with the Messier charts from my previous book, allowing both projects to worked on simultaneously. The charts are only printed on one side of the paper for similar reasons, also to leave space for comments or sketches that wouldn't fit on the chart.

Included are a checklist, an NGC list in the sequence as found in "The Observers Handbook", and large scale finder charts to aid in planning an observing session. A total of over 550 charts is contained within.

The charts were generated using David Chandlers software **Deep Space** version 5.5. The Skymap database, courtesy of the National Space Science Data Center, was used for the naked eye charts, and the tenth magnitude charts. The Hubble Guide Star catalog was used for the twelfth magnitude charts. If you are impressed with the charts David can be contacted at:

dschandler@frumble.claremont.edu or <http://www.csz.com/dschandler>
Shareware versions of the software are available there. For those without electronic access:
David Chandler Co., P. O. Box 309, La Verne, CA 91750.

Other sources of information:
Burnham's Celestial Handbook, Vol. 1-3, Robert Burnham, Jr.
Observer's Handbook, R.A.S.C., Roy Bishop, editor
Webb Society Deep-Sky Observers Handbooks, Kenneth Glyn Jones, editor
The Universe from your Backyard, David Eicher
Atlas of Deep Sky Splendors, Hans Vehrenberg

A special thanks to Alan Dyer, the original author of this list, for giving me permission to go ahead. Thanks, also Roy Bishop, editor of the RASC Observers Handbook for similar permission.

I'd also like to thank the many that suggested changes and improvements to my earlier work with the Messier list. Most of your suggestions have been applied to this work.

Please send comments, criticisms, and suggestions to:
rfell@telusplanet.net or
Roger Fell, 5610 - 49A St., Vegreville, Alberta, T9C - 1K4.
February 16, 1997

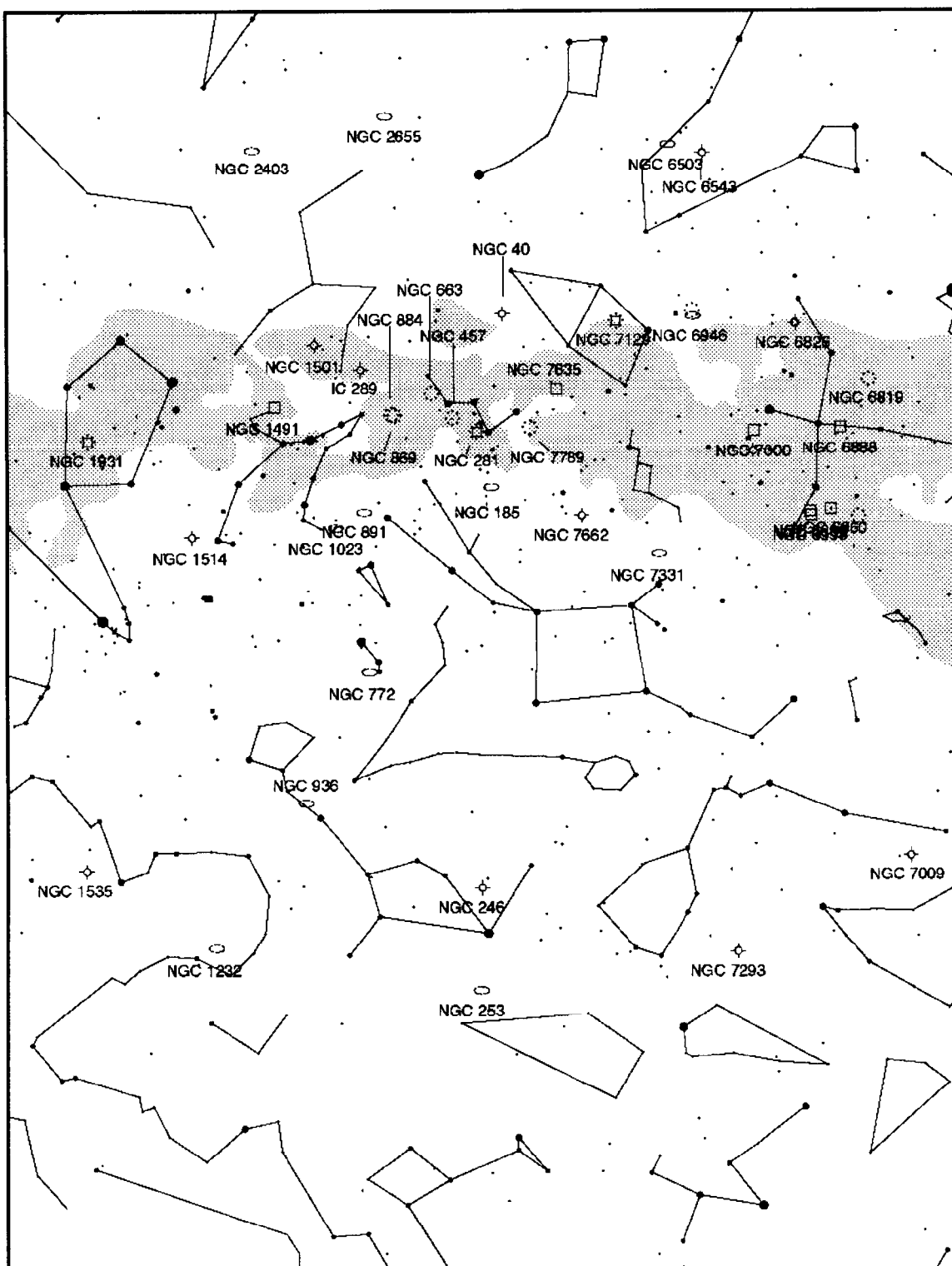
FINEST NGC'S LIST

NGC. #	Mag.	Size	Type of Object	Constellation	Ref#
7009	8.3	25"	Planetary Nebula	Aquarius	1
7293	6.5	770"	Planetary Nebula	Aquarius	2
7331	9.5	10.7 x 4.0	Galaxy-Sb	Pegasus	3
7635	-	15 x 8	Emission Nebula	Cassiopeia	4
7789	6.7	16	Open Cluster	Cassiopeia	5
185	11.7	2 x 2	Galaxy-Eo	Cassiopeia	6
281	-	35 x 30	Emission Nebula	Cassiopeia	7
457	6.4	13	Open Cluster	Cassiopeia	8
663	7.1	16	Open Cluster	Cassiopeia	9
IC 289	12.3	34"	Planetary Nebula	Cassiopeia	10
7662	9.2	20"	Planetary Nebula	Andromeda	11
891	10	13.5 x 2.8	Galaxy-Sb	Andromeda	12
253	7.1	25.1 x 7.4	Galaxy-Scp	Sculptor	13
772	10.3	7.1 x 4.5	Galaxy-Sb	Aries	14
246	8.0	225"	Planetary Nebula	Cetus	15
936	10.1	5.2 x 4.4	Galaxy-Sba	Cetus	16
869/84	4.4	30/30	Open Clusters	Perseus	17
1023	9.5	8.7 x 4.3	Galaxy-E7p	Perseus	18
1491	-	3 x 3	Emission Nebula	Perseus	19
1501	12	52"	Planetary Nebula	Camelopardalis	20
1232	9.9	7.8 x 6.9	Galaxy-Sc	Eridanus	21
1535	10.4	18"	Planetary Nebula	Eridanus	22
1514	10.8	114"	Planetary Nebula	Taurus	23
1931	-	3 x 3	E/R Nebula	Taurus	24
1788	-	8 x 5	Reflection Nebula	Orion	25
1973+	-	40 x 25	E/R Nebula	Orion	26
2022	12.4	18"	Planetary Nebula	Orion	27
2024	-	10	Emission Nebula	Orion	28
2194	8.5	10	Open Cluster	Orion	29
2371/2	13.0	55"	Planetary Nebula	Gemini	30
2392	8.3	13"	Planetary Nebula	Gemini	31
2237+	-	80 x 60	Emission Nebula	Monoceros	32
2261	var.	2 x 1	E/R Nebula	Monoceros	33
2359	-	8 x 6	Emission Nebula	Canis Major	34
2440	10.3	14"	Planetary Nebula	Puppis	35
2539	6.5	22	Open Cluster	Puppis	36
2403	8.4	17.8 x 11	Galaxy-Sc	Camelopardalis	37
2655	10.1	5.1 x 4.4	Galaxy-Sa	Camelopardalis	38
2683	9.7	9.3 x 2.5	Galaxy-Sb	Lynx	39
2841	9.3	8.1 x 3.8	Galaxy-Sb	Ursa Major	40
3079	10.6	7.6 x 1.7	Galaxy-Sb	Ursa Major	41
3184	9.7	6.9 x 6.8	Galaxy-Sb	Ursa Major	42
3877	10.9	5.4 x 1.5	Galaxy-Sb	Ursa Major	43
3941	9.8	3.8 x 2.5	Galaxy-E3	Ursa Major	44
4026	10.7	5.1 x 1.4	Galaxy-S0	Ursa Major	45
4088	11.5	5.8 x 2.5	Galaxy-Sc	Ursa Major	46
4157	11.9	6.9 x 1.7	Galaxy-Sb	Ursa Major	47
4605	9.6	5.5 x 2.3	Galaxy-SBcp	Ursa Major	48
3115	9.2	8.3 x 3.2	Galaxy-E6	Sextans	49
3242	8.6	16"	Planetary Nebula	Hydra	50

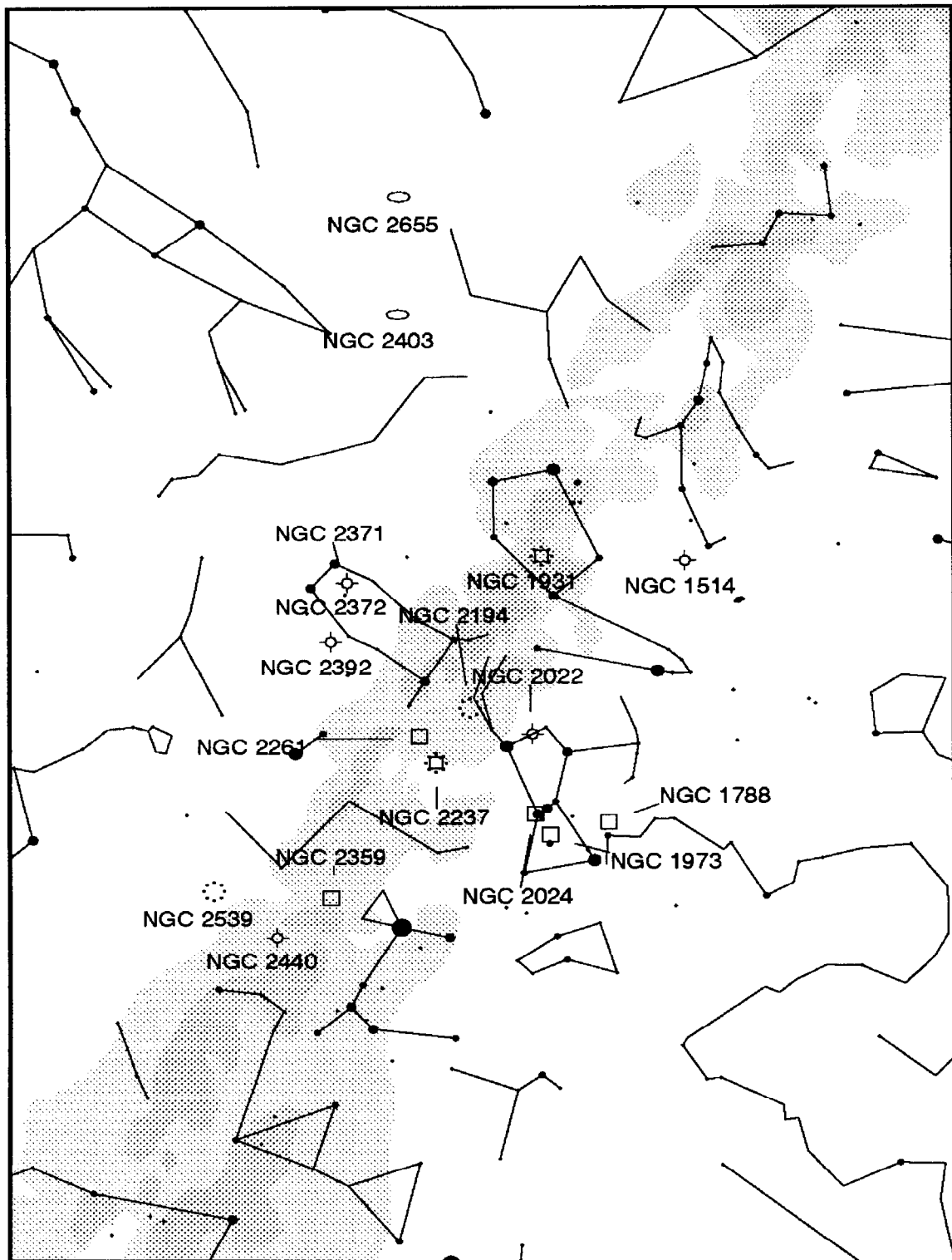
NGC. #	Mag.	Size	Type of Object	Constellation	Ref#
3003	11.7	5.9 x 1.7	Galaxy-Sc	Leo Minor	51
3344	9.9	6.9 x 6.5	Galaxy-Sc	Leo Minor	52
3432	11.3	6.2 x 1.5	Galaxy-Sbm	Leo Minor	53
2903	8.9	12.6 x 6.6	Galaxy-Sb	Leo	54
3384	9.9	5.9 x 2.6	Galaxy-E7	Leo	55
3521	8.7	9.5 x 5.0	Galaxy-Sb	Leo	56
3607	10.0	3.7 x 3.2	Galaxy-E1	Leo	57
3628	9.5	14.8 x 3.6	Galaxy-Sb	Leo	58
4111	10.8	4.8 x 1.1	Galaxy-S0	Canes Venatici	59
4214	9.7	7.9 x 6.3	Galaxy-irr	Canes Venatici	60
4244	10.2	16.2 x 2.5	Galaxy-S	Canes Venatici	61
4449	9.4	5.1 x 3.7	Galaxy-irr	Canes Venatici	62
4490	9.8	5.9 x 3.1	Galaxy-Sc	Canes Venatici	63
4631	9.3	15.1 x 3.3	Galaxy-Sc	Canes Venatici	64
4656/7	10.4	13.8 x 3.3	Galaxy-Sc	Canes Venatici	65
5005	9.8	5.4 x 2.7	Galaxy-Sb	Canes Venatici	66
5033	10.1	10.5 x 5.6	Galaxy-Sb	Canes Venatici	67
4274	10.4	6.9 x 2.8	Galaxy-Sb	Coma Berenices	68
4414	10.2	3.6 x 2.2	Galaxy-Sc	Coma Berenices	69
4494	9.8	4.8 x 3.8	Galaxy-E1	Coma Berenices	70
4559	9.8	10.5 x 4.9	Galaxy-Sc	Coma Berenices	71
4565	9.6	16.2 x 2.8	Galaxy-Sb	Coma Berenices	72
4725	9.2	11.0 x 7.9	Galaxy-Sb	Coma Berenices	73
4038/9	10.7	3 x 2	Galaxy-Sc	Corvus	74
4361	10.3	45"	Planetary Nebula	Corvus	75
4216	9.9	8.3 x 2.2	Galaxy-Sb	Virgo	76
4388	11.0	5.1 x 1.4	Galaxy-Sb	Virgo	77
4438	10.1	9.3 x 3.9	Galaxy-Sap	Virgo	78
4517	10.5	10.2 x 1.9	Galaxy-Sc	Virgo	79
4526	9.6	7.6 x 2.3	Galaxy-E7	Virgo	80
4535	9.8	6.8 x 5.0	Galaxy-Sc	Virgo	81
4567/8	~11	4.6 x 2.1	Galaxy-Sc	Virgo	82
4699	9.6	3.5 x 2.7	Galaxy-Sa	Virgo	83
4762	10.2	8.7 x 1.6	Galaxy-S80	Virgo	84
5746	10.6	7.9 x 1.7	Galaxy-Sb	Virgo	85
5466	9.1	11.0	Globular Cluster	Bootes	86
5907	10.4	12.3 x 1.8	Galaxy-Sb	Draco	87
6503	10.2	6.2 x 2.3	Galaxy-Sb	Draco	88
6543	8.8	18"	Planetary Nebula	Draco	89
6210	9.3	14"	Planetary Nebula	Hercules	90
6369	10.4	30"	Planetary Nebula	Ophiuchus	91
6572	9.0	8"	Planetary Nebula	Ophiuchus	92
6633	4.6	27	Open Cluster	Ophiuchus	93
6712	8.2	7.2	Globular Cluster	Scutum	94
6781	11.8	109"	Planetary Nebula	Aquila	95
6819	7.3	5	Open Cluster	Cygnus	96
6826	9.8	30"	Planetary Nebula	Cygnus	97
6888	-	20 x 10	Supernova Remnant?	Cygnus	98
6960	-	70 x 6	Supernova Remnant	Cygnus	99a
6992/5	-	78 x 8	Supernova Remnant	Cygnus	99b
7000	-	120 x 100	Emission Nebula	Cygnus	100
7027	10.4	15"	Planetary Nebula?	Cygnus	101
6445	11.8	34"	Planetary Nebula	Sagittarius	102
6520	8.1	6	Open Cluster	Sagittarius	103
6818	9.9	17"	Planetary Nebula	Sagittarius	104
6802	8.8	3.2	Open Cluster	Vulpecula	105
6940	6.3	31	Open Cluster	Vulpecula	106
6939	7.8	8	Open Cluster	Cepheus	107
6946	8.9	11.0 x 9.8	Galaxy-Sc	Cepheus	108
7129	-	8 x 7	Reflection Nebula	Cepheus	109
40	10.2	37"	Planetary Nebula	Cepheus	110

NGC 7009 _____	1	NGC 2194 _____	29	NGC 3607 _____	57	NGC 5746 _____	85
NGC 7293 _____	2	NGC 2371/2 _____	30	NGC 3628 _____	58	NGC 5466 _____	86
NGC 7331 _____	3	NGC 2392 _____	31	NGC 4111 _____	59	NGC 5907 _____	87
NGC 7635 _____	4	NGC 2237+ _____	32	NGC 4214 _____	60	NGC 6503 _____	88
NGC 7789 _____	5	NGC 2261 _____	33	NGC 4244 _____	61	NGC 6543 _____	89
NGC 185 _____	6	NGC 2359 _____	34	NGC 4449 _____	62	NGC 6210 _____	90
NGC 281 _____	7	NGC 2440 _____	35	NGC 4490 _____	63	NGC 6369 _____	91
NGC 457 _____	8	NGC 2539 _____	36	NGC 4631 _____	64	NGC 6572 _____	92
NGC 663 _____	9	NGC 2403 _____	37	NGC 4656/7 _____	65	NGC 6633 _____	93
IC 289 _____	10	NGC 2655 _____	38	NGC 5005 _____	66	NGC 6712 _____	94
NGC 7662 _____	11	NGC 2683 _____	39	NGC 5033 _____	67	NGC 6781 _____	95
NGC 891 _____	12	NGC 2841 _____	40	NGC 4274 _____	68	NGC 6819 _____	96
NGC 253 _____	13	NGC 3079 _____	41	NGC 4414 _____	69	NGC 6826 _____	97
NGC 772 _____	14	NGC 3184 _____	42	NGC 4494 _____	70	NGC 6888 _____	98
NGC 246 _____	15	NGC 3877 _____	43	NGC 4559 _____	71	NGC 6960 _____	99a
NGC 936 _____	16	NGC 3941 _____	44	NGC 4565 _____	72	NGC 6992/5 _____	99b
NGC 869/84 _____	17	NGC 4026 _____	45	NGC 4725 _____	73	NGC 7000 _____	100
NGC 1023 _____	18	NGC 4088 _____	46	NGC 4038/9 _____	74	NGC 7027 _____	101
NGC 1491 _____	19	NGC 4157 _____	47	NGC 4361 _____	75	NGC 6445 _____	102
NGC 1501 _____	20	NGC 4605 _____	48	NGC 4216 _____	76	NGC 6520 _____	103
NGC 1232 _____	21	NGC 3115 _____	49	NGC 4388 _____	77	NGC 6818 _____	104
NGC 1535 _____	22	NGC 3242 _____	50	NGC 4438 _____	78	NGC 6802 _____	105
NGC 1514 _____	23	NGC 3003 _____	51	NGC 4517 _____	79	NGC 6940 _____	106
NGC 1931 _____	24	NGC 3344 _____	52	NGC 4526 _____	80	NGC 6939 _____	107
NGC 1788 _____	25	NGC 3432 _____	53	NGC 4535 _____	81	NGC 6946 _____	108
NGC 1973+ _____	26	NGC 2903 _____	54	NGC 4567/8 _____	82	NGC 7129 _____	109
NGC 2022 _____	27	NGC 3384 _____	55	NGC 4699 _____	83	NGC 40 _____	110
NGC 2024 _____	28	NGC 3521 _____	56	NGC 4762 _____	84		

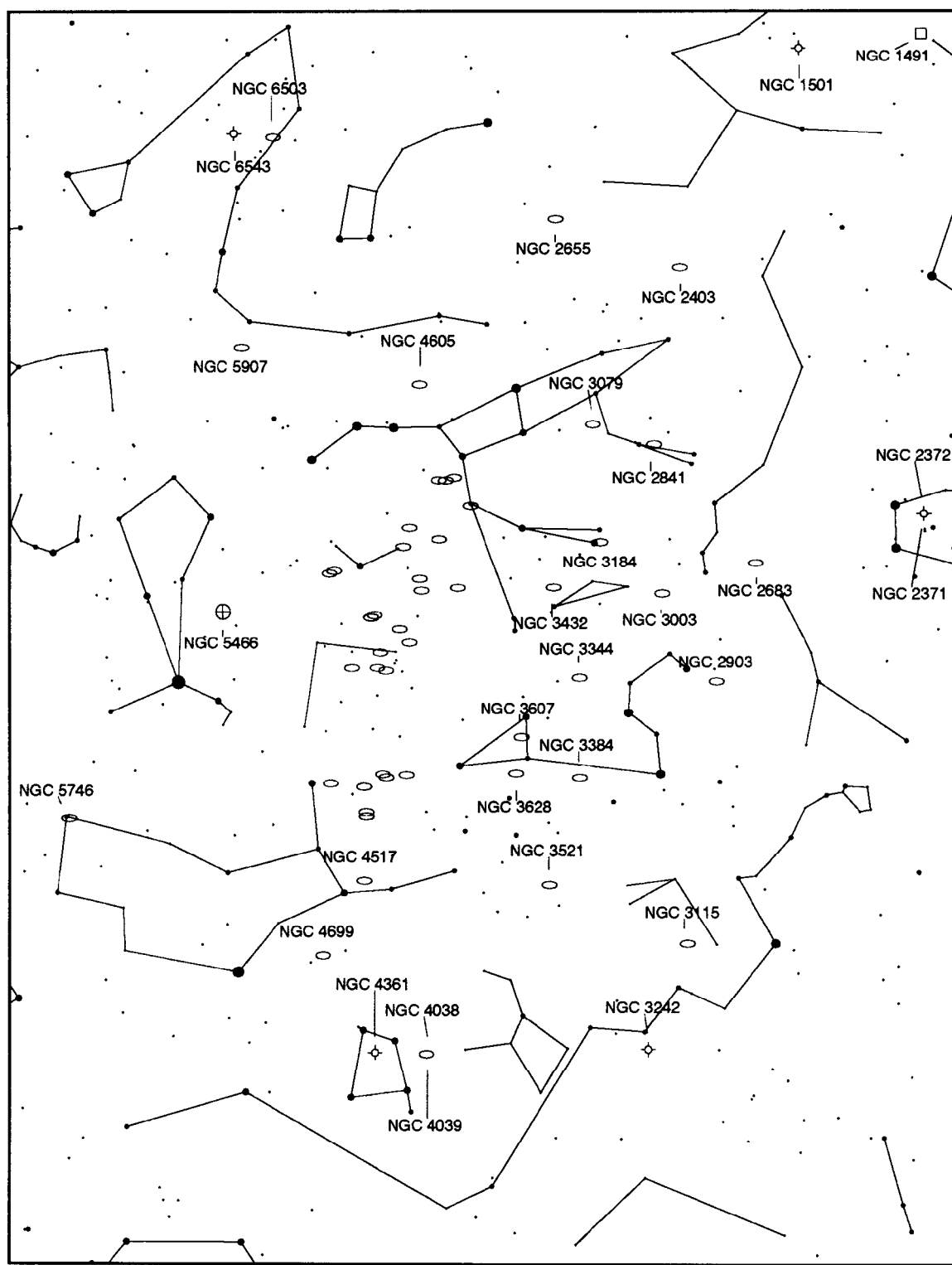
THE AUTUMN SKY



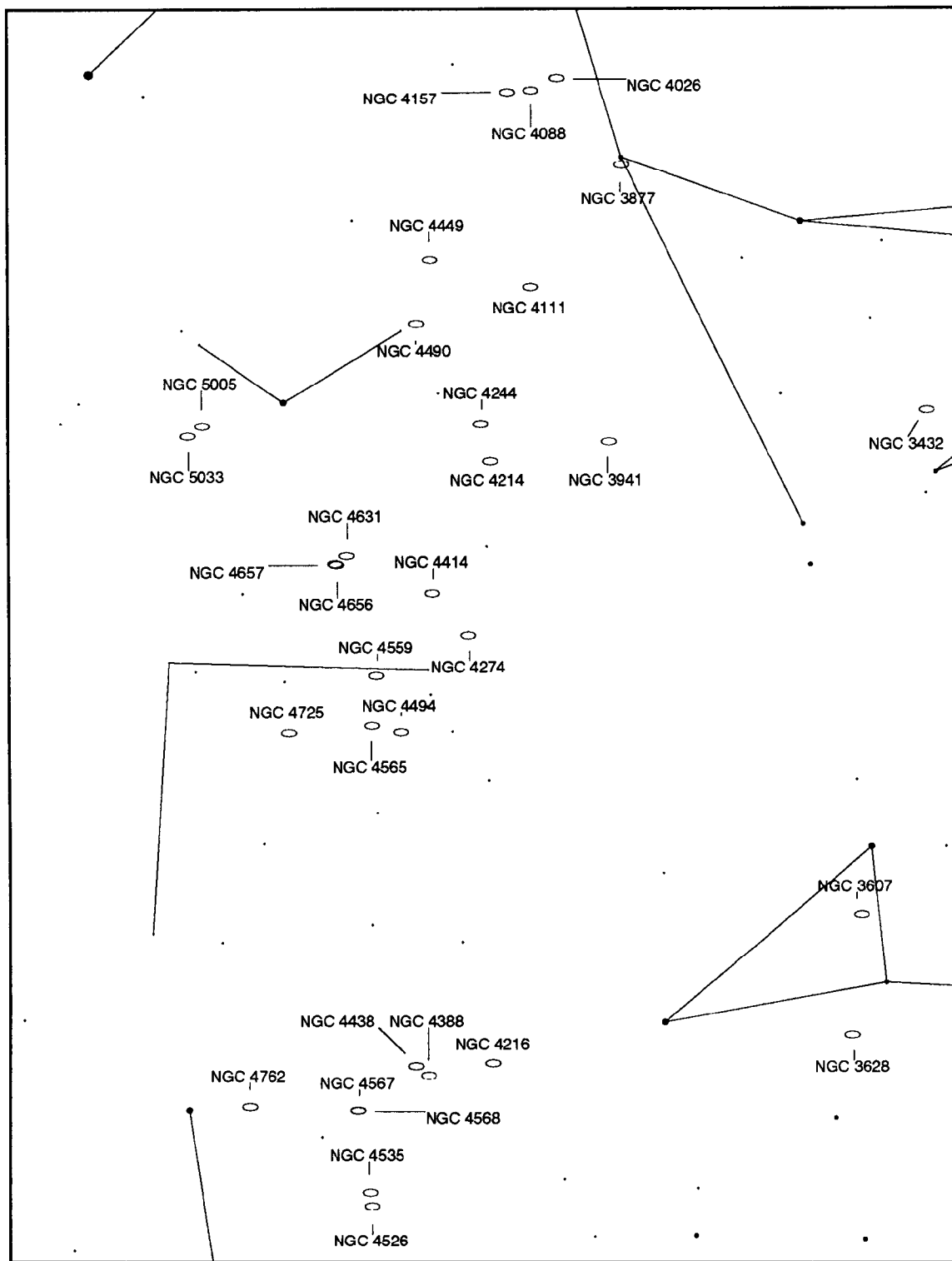
THE WINTER SKY



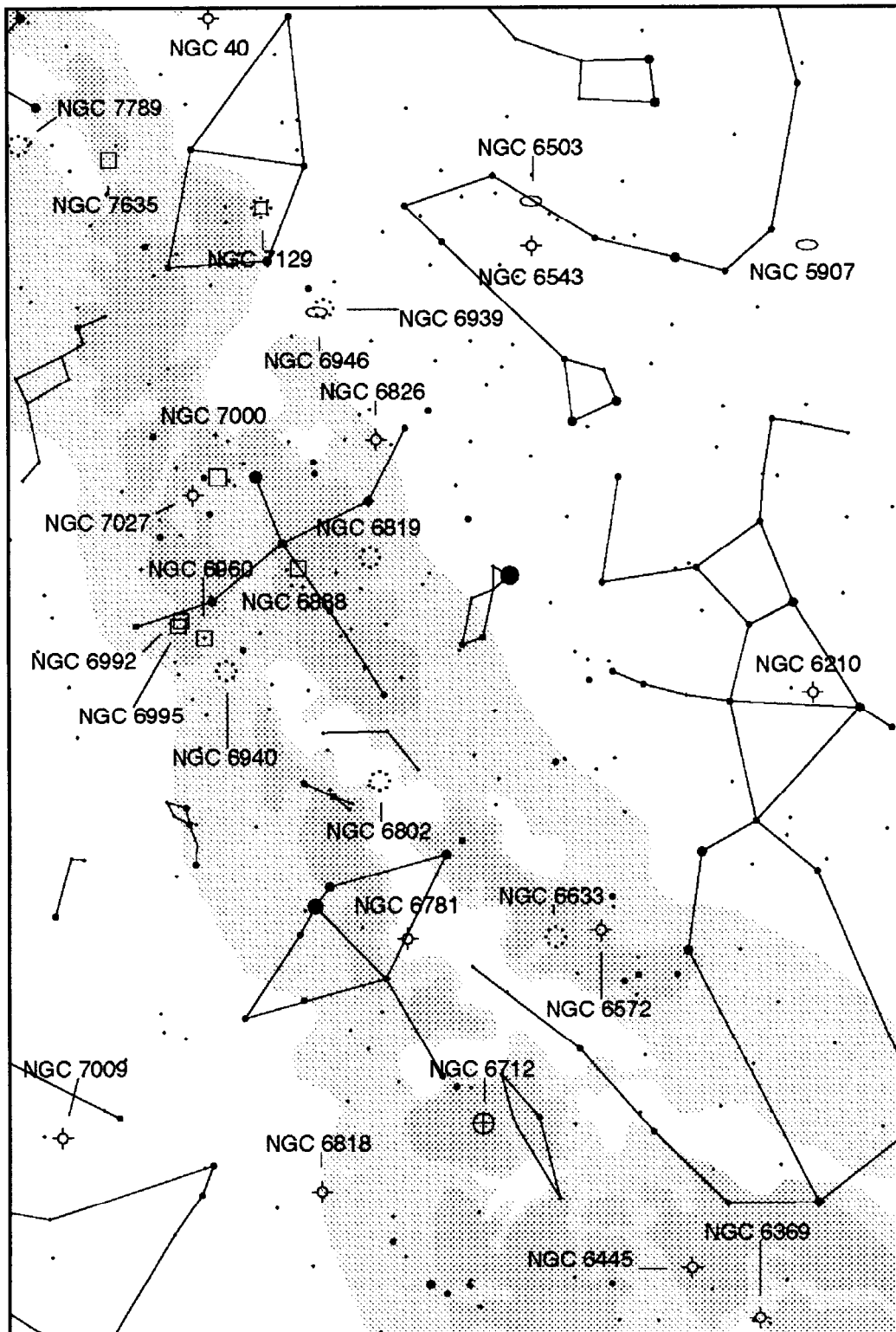
THE SPRING SKY



DETAIL ON CROWDED AREAS IN THE SPRING SKY



THE SUMMER SKY



AQR MAG: 8.3 Planetary Nebula 21h 4m13s x -11°21'57"

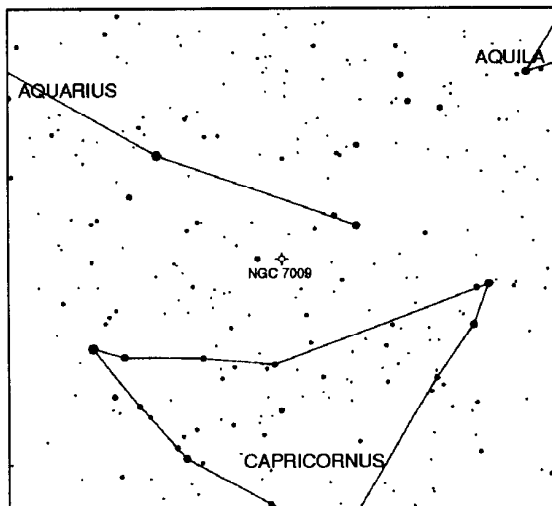
NGC 7009

PK37-34.1 0°28" x 0°23" CLASS:4(6)

1

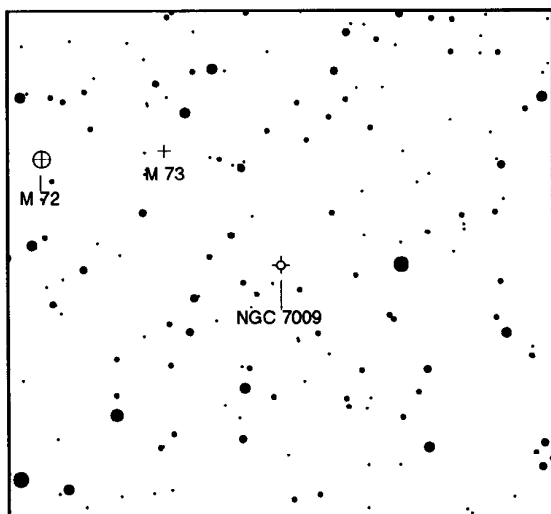
Very remarkable object ,very bright, small, elongated

Saturn Nebula, bright blue-green disk, central star difficult, lost in bright nebula. Look for ansae projecting from sides, up to 44" in width. Central star type C.

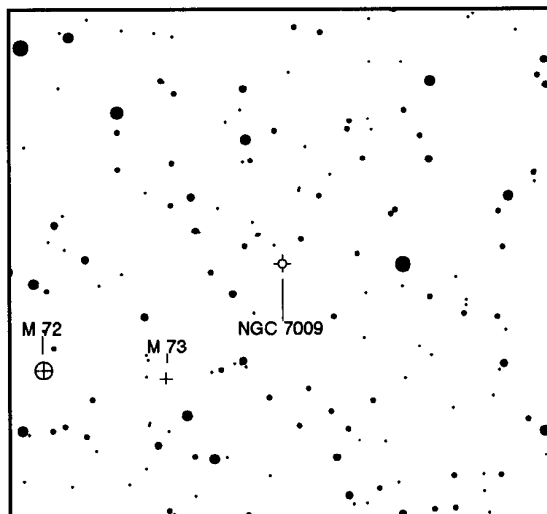


30 degree field, North up

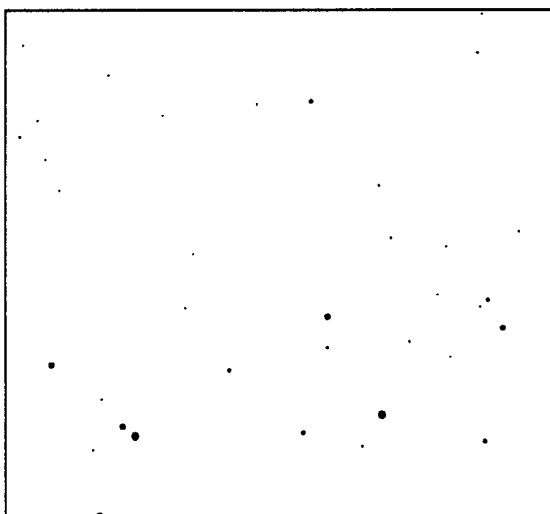
Notes: _____



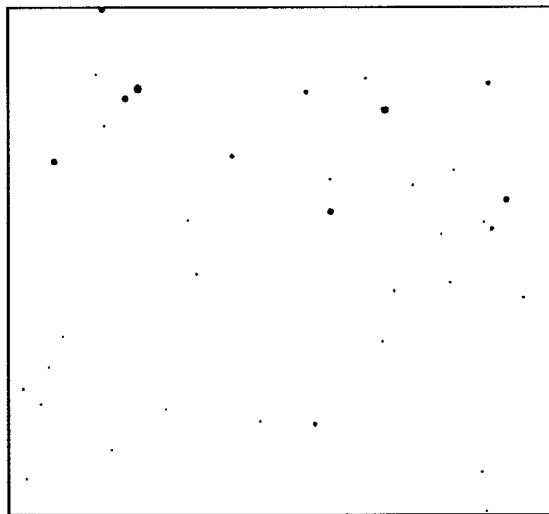
6 degree field, North down



6 degree field, North up, Mirrored



1 degree field, North down



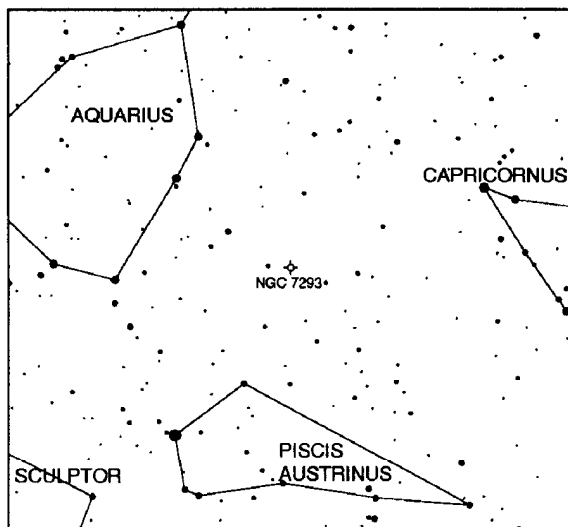
1 degree field, North up, Mirrored

AQR MAG: 6.3 Planetary Nebula 22h29m36s x -20°48' 2"
PK36-57.1 16' 0" x 12' 0" CLASS:4(3)

NGC 7293
2

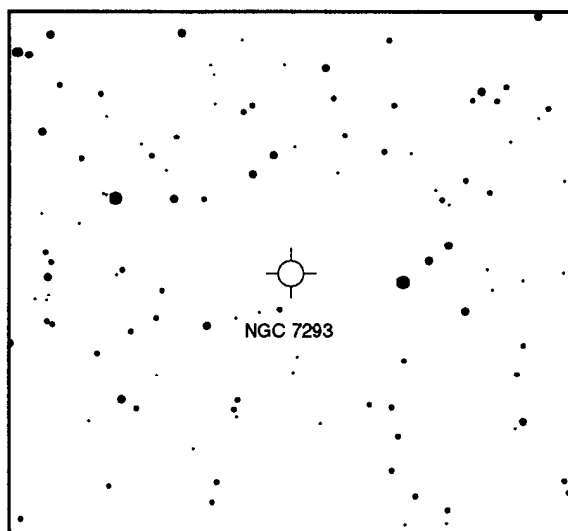
little, pretty faint, very large, elongated

Helical Nebula, low surf brightness, very large but faint translucent donut, brightest on inner and outer edges. 13th mag blue central star. Also known as the Helix or Sunflower.

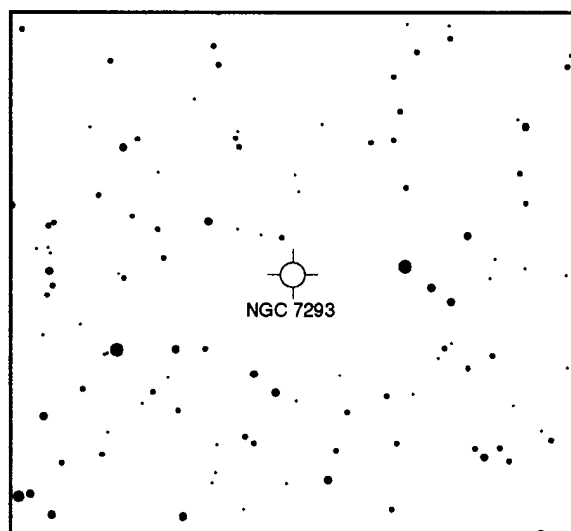


30 degree field, North up

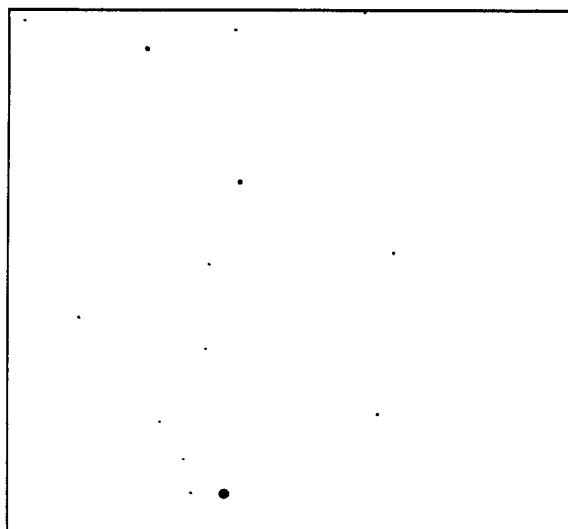
Notes: _____



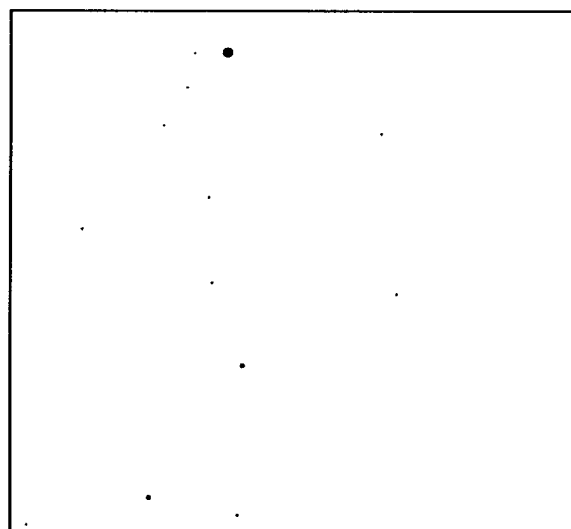
6 degree field, North down



6 degree field, North up, Mirrored



1 degree field, North down



1 degree field, North up, Mirrored

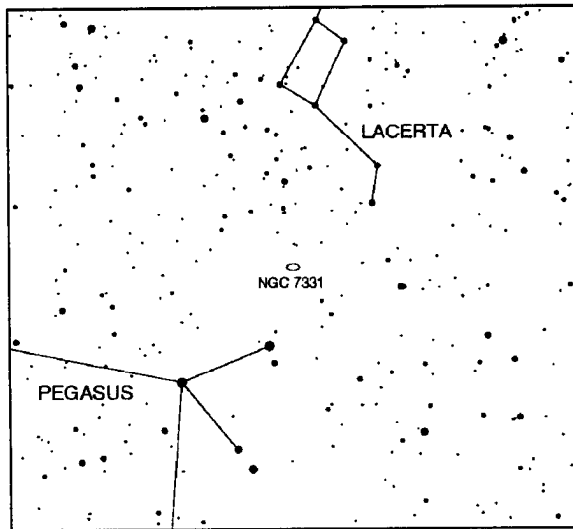
PEG MAG:10.4 Galaxy 22h37m 7s x 34°24'57"

NGC 7331

11'24" x 4' 0" CLASS: PA (dgr):171

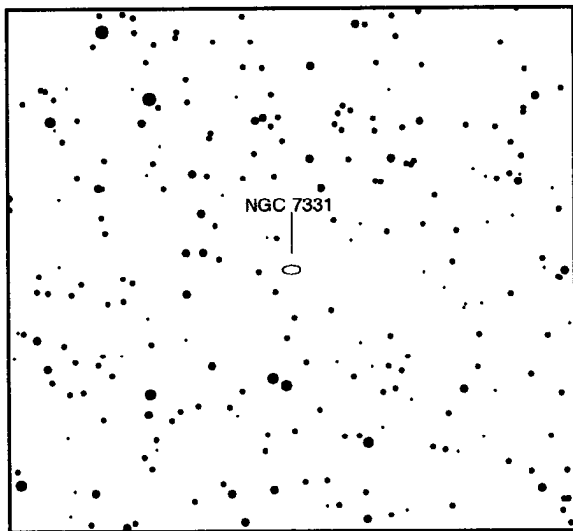
3

Bright, pretty large, pretty much elongated, suddenly much brighter middle
Brightest in group of faint objects, several dark lanes, condensed elongated core.
Stephans quintet 1/2 degree SSW.

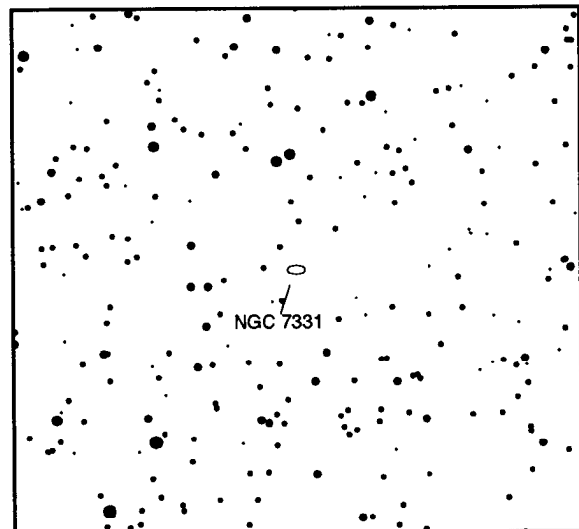


30 degree field, North up

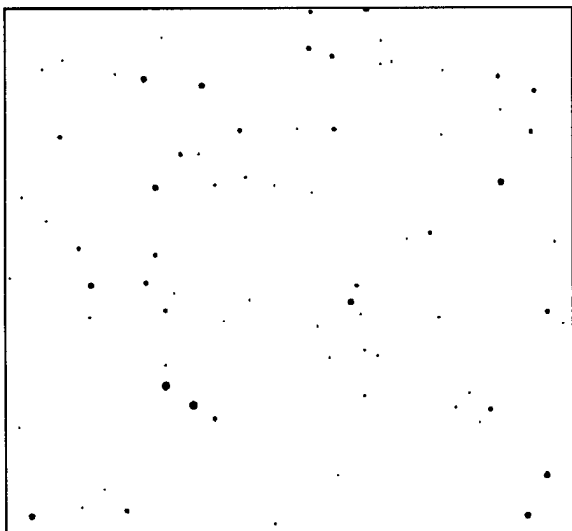
Notes: _____



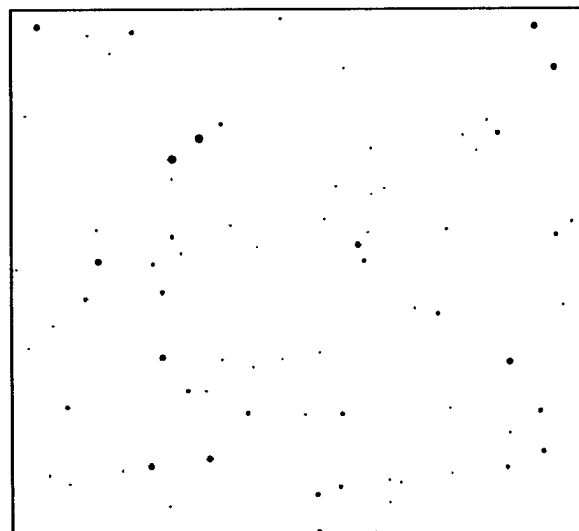
6 degree field, North down



6 degree field, North up, Mirrored



1 degree field, North down



1 degree field, North up, Mirrored

CAS MAG: --- Bright Nebula 23h20m43s x 61°10'55"

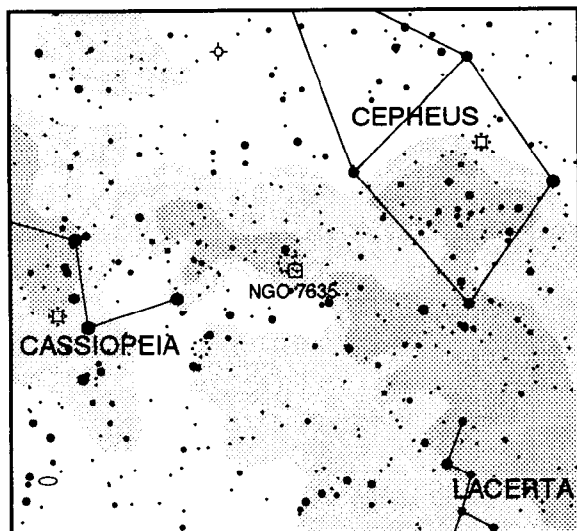
NGC 7635

4

15' 0" x 8' 0" CLASS:E

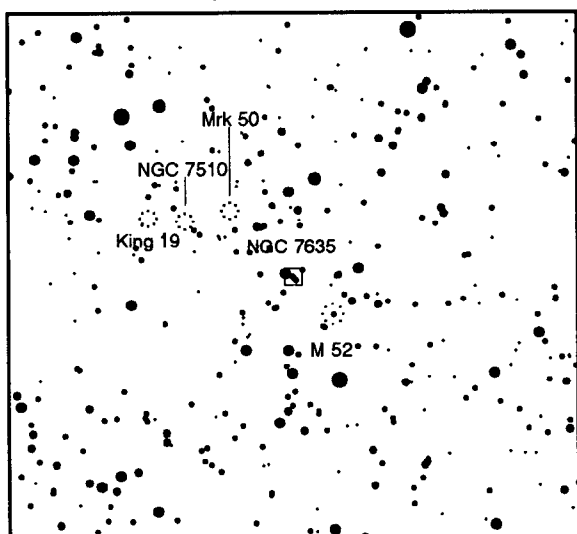
very large, faint, mag 8 star involved, little elongated

Bubble Nebula, large nebulous ring ½ degree SW of M52

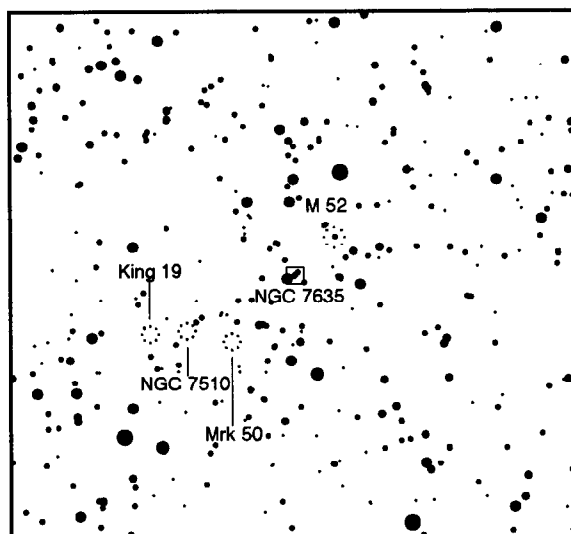


30 degree field, North up

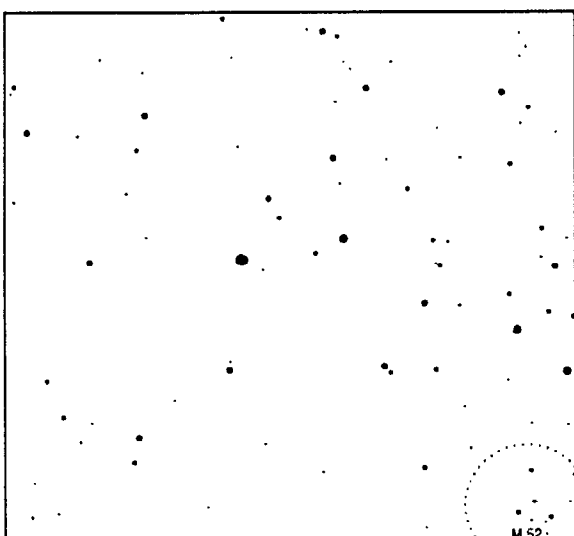
Notes: _____



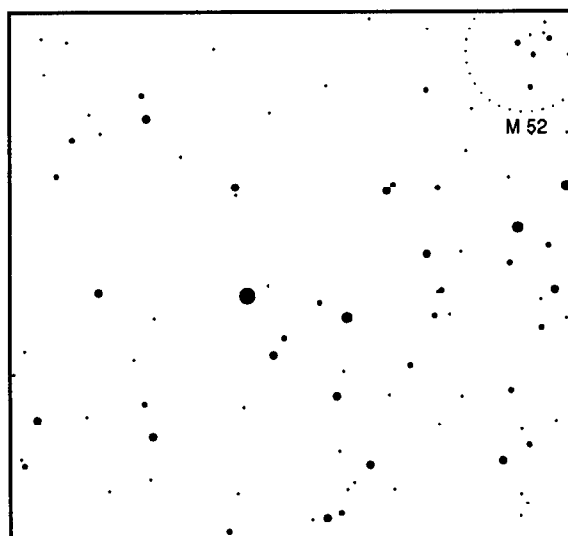
6 degree field, North down



6 degree field, North up, Mirrored



1 degree field, North down



1 degree field, North up, Mirrored

CAS MAG: 6.7 Open Cluster
16' 0" x 16' 0" CLASS: II 1 r

23h57m 1s x 56°43'57"

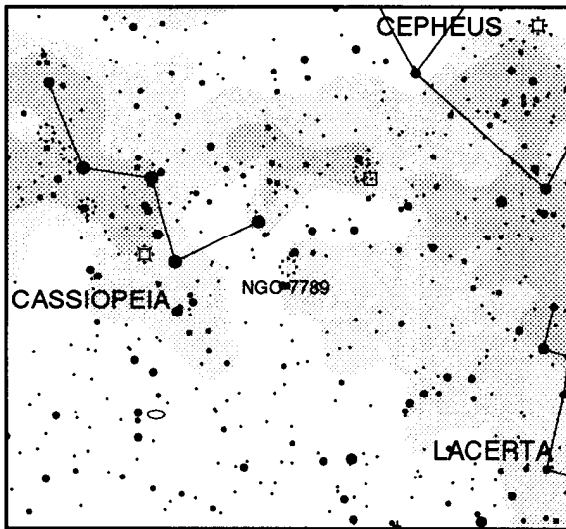
NGC 7789
5

of stars: 300 brightest star: 10.70

very large, very rich, very much compressed

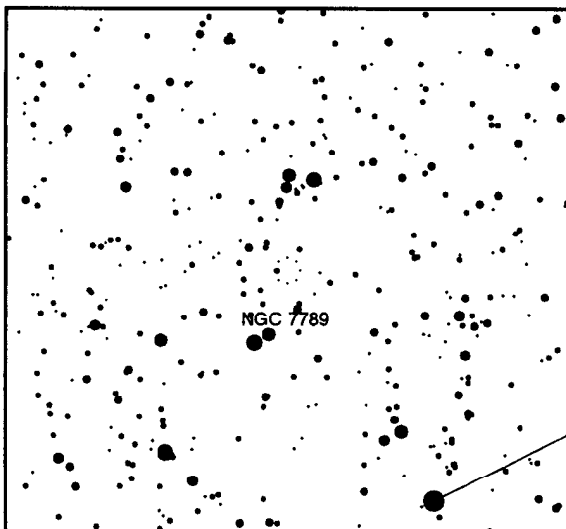
300 stars, 11 to 18 mag. Difficult to fully resolve, very rich and compressed at center.

Look for dark lanes, possibly spiralling patterns.

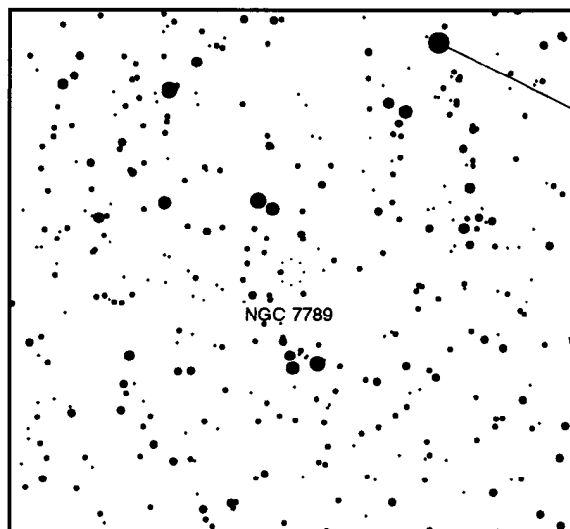


Notes: _____

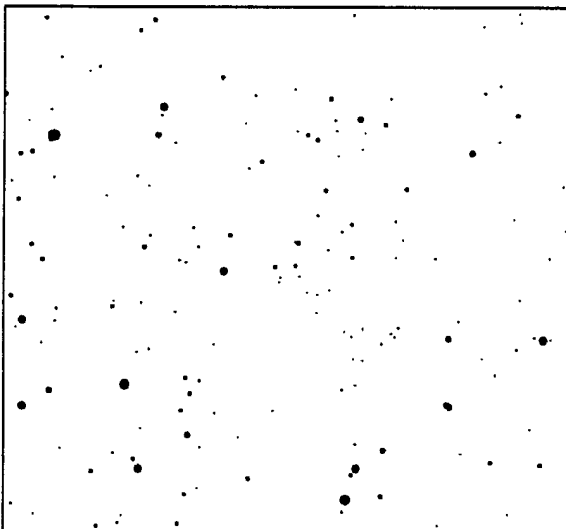
30 degree field, North up



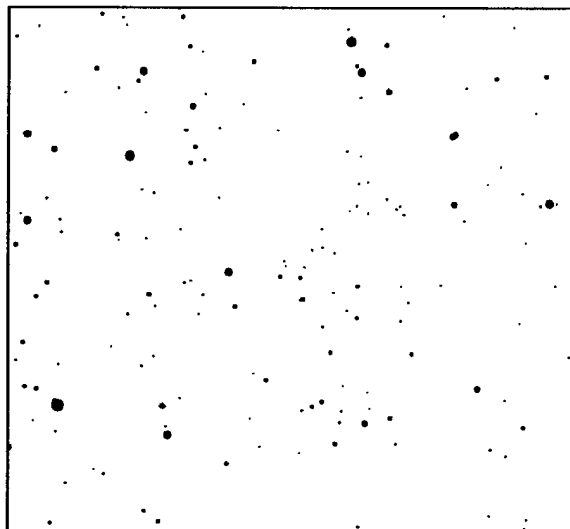
6 degree field, North down



6 degree field, North up, Mirrored



1 degree field, North down



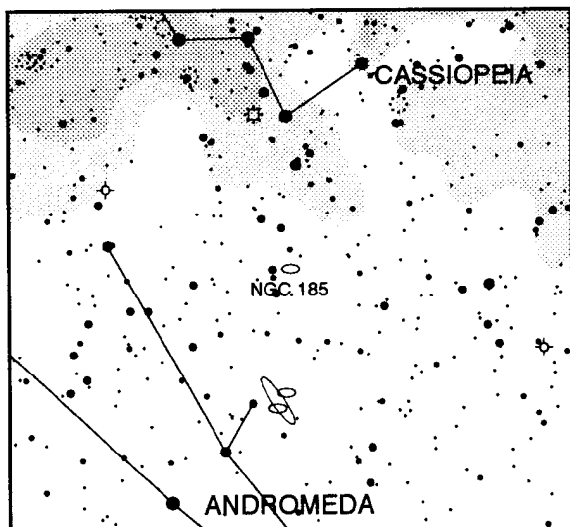
1 degree field, North up, Mirrored

CAS MAG: 9.7 Galaxy
12' 0" x 10' 0" CLASS:dE0

0h38m59s x 48°19'59"
PA (dgr): 35

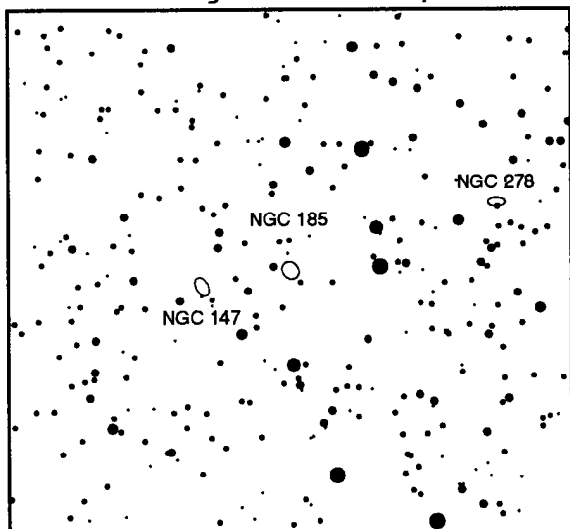
NGC 185
6

pretty bright, very large, irregular round, very gradually much brighter middle
Dwarf elliptical, NGC 147 & 185 are distant companions to M31.

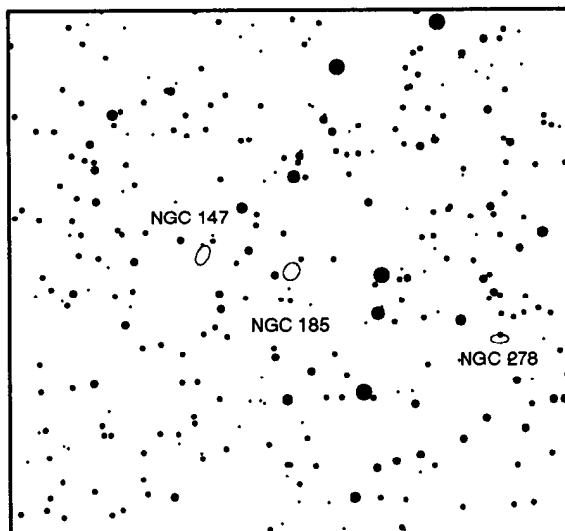


30 degree field, North up

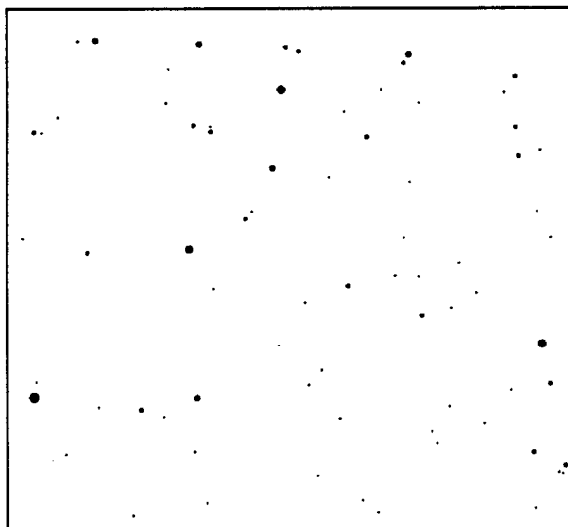
Notes: _____



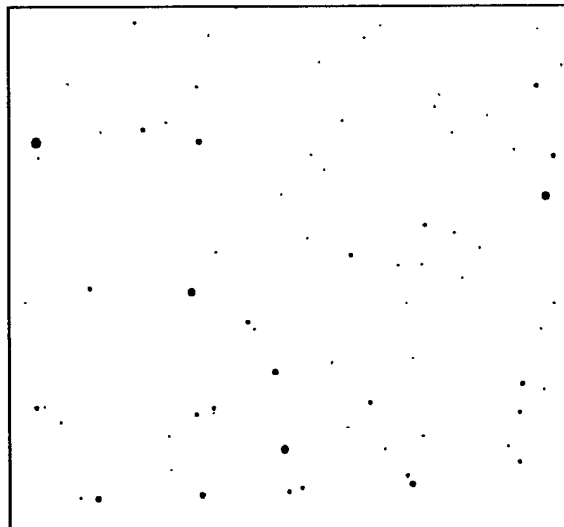
6 degree field, North down



6 degree field, North up, Mirrored



1 degree field, North down



1 degree field, North up, Mirrored

CAS MAG: 7.4 Clstr w/Nebulosity 0h52m47s x 56°37' 1"

NGC 281

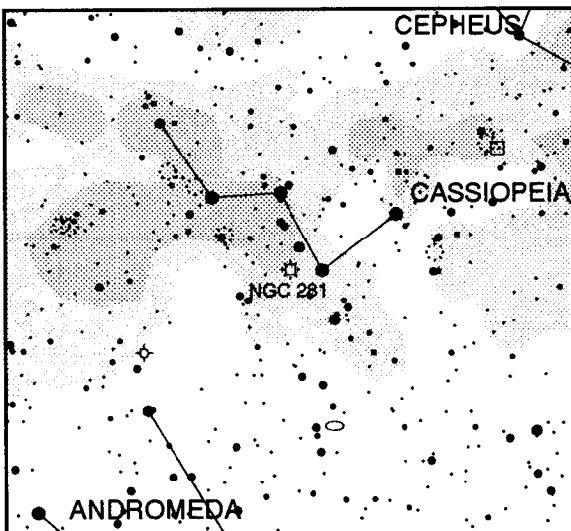
4' 0" x 4' 0" CLASS:n

7

of stars: brightest star: 9.00

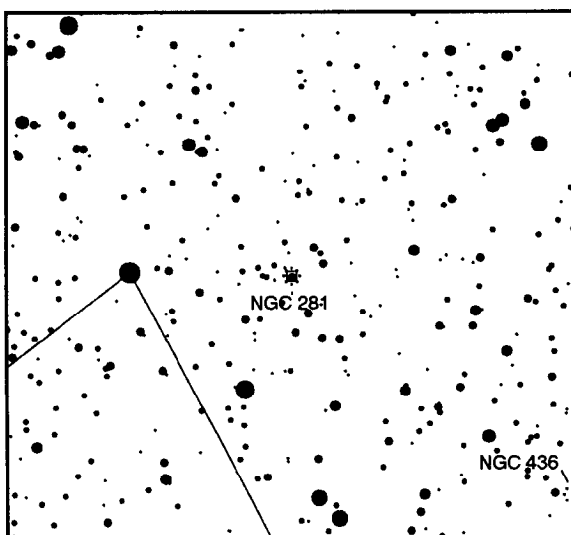
Faint, very large, irregular, S triple * on np edge.

Nebula 35'x30' Type E, nebula filter recommended.

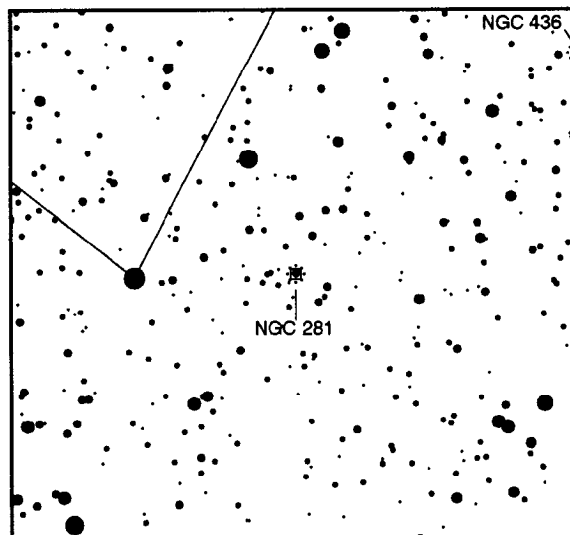


30 degree field, North up

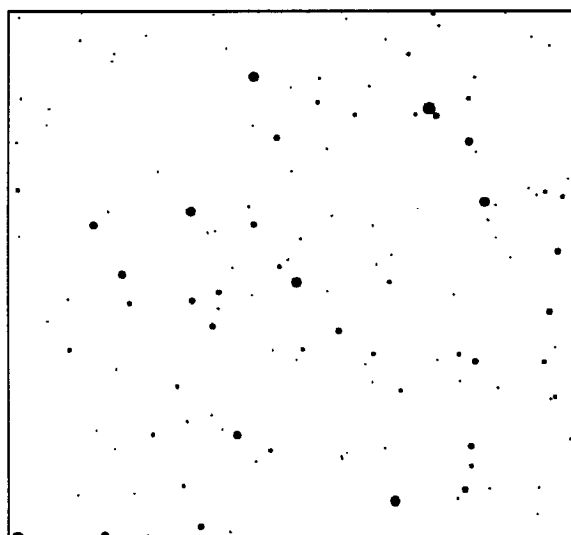
Notes: _____



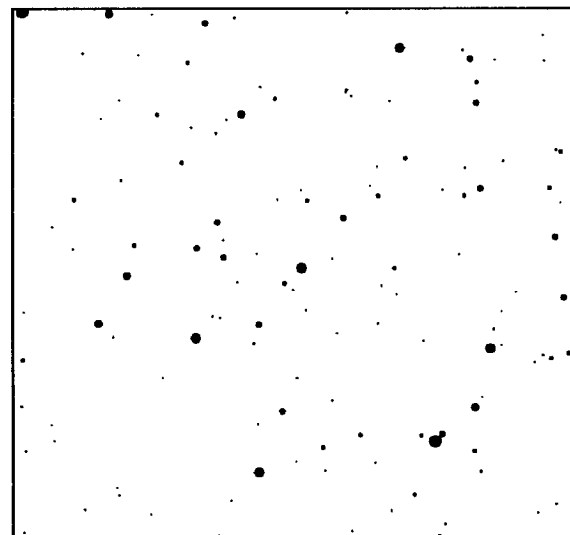
6 degree field, North down



6 degree field, North up, Mirrored



1 degree field, North down



1 degree field, North up, Mirrored

CAS MAG: 6.4 Open Cluster

1h19m 6s x 58°20' 1"

NGC 457

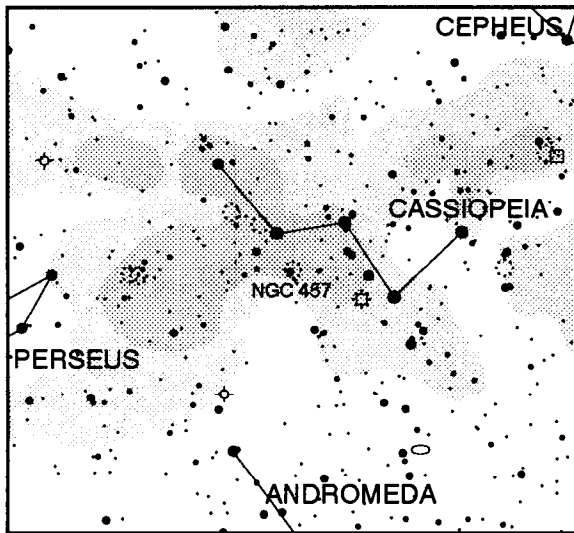
13' 0" x 13' 0" CLASS: I 3 r

8

of stars: 80 brightest star: 8.59

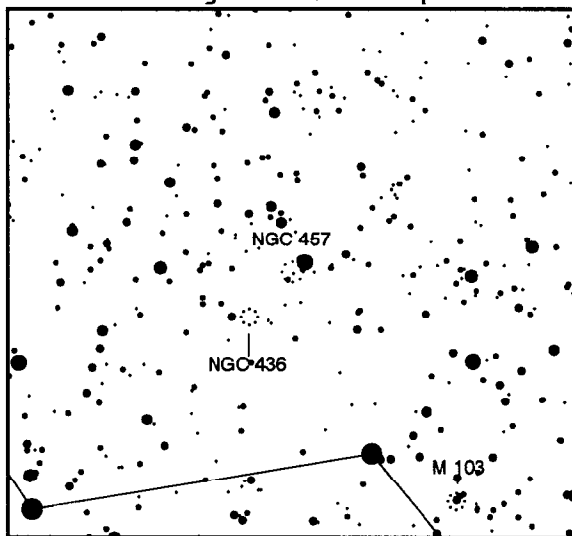
Bright, large, pretty rich, *8,10

Phi Cas is not a member, Not included in mag. Triangles of 9th mag stars grouped mainly in West, stars concentrated into small groups.

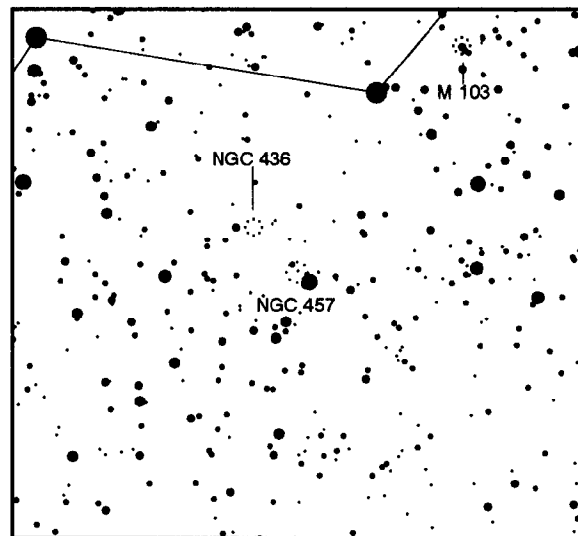


Notes: _____

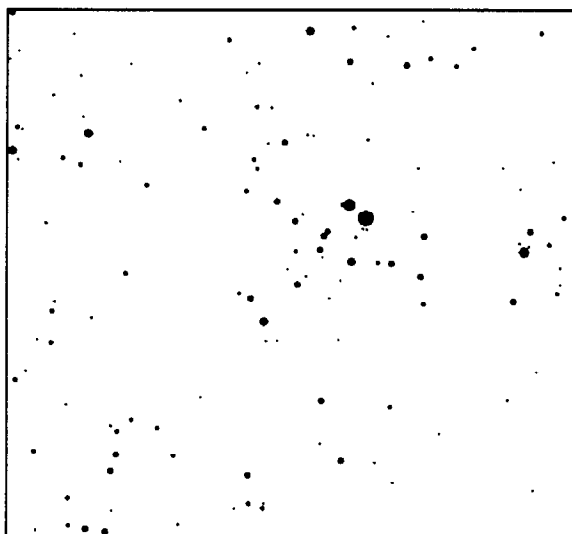
30 degree field, North up



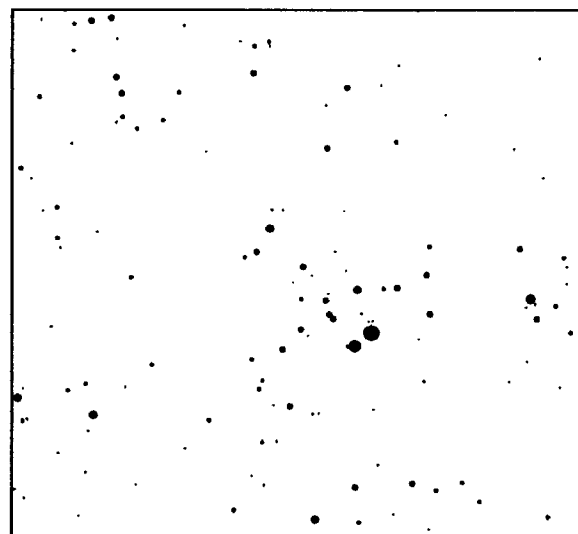
6 degree field, North down



6 degree field, North up, Mirrored



1 degree field, North down

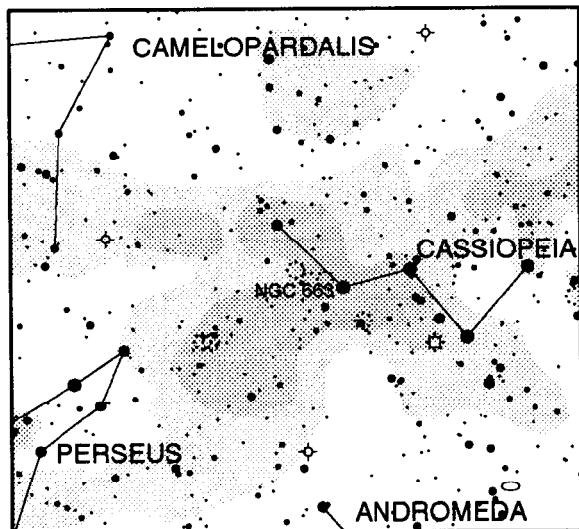


1 degree field, North up, Mirrored

CAS MAG: 7.1 Open Cluster
 16' 0" x 16' 0" CLASS: III 2 m
 # of stars: 80 brightest star: 8.42
 Bright, large, extremely rich, irregular
 Look for NGC 654 and NGC 659 nearby

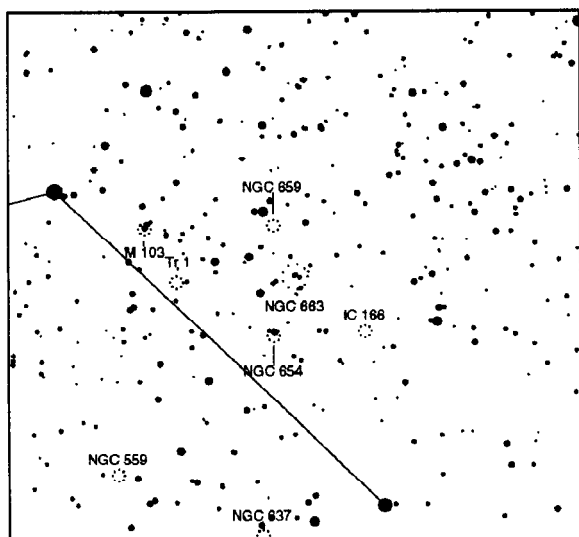
1h45m60s x 61°15' 2"

NGC 663
 9

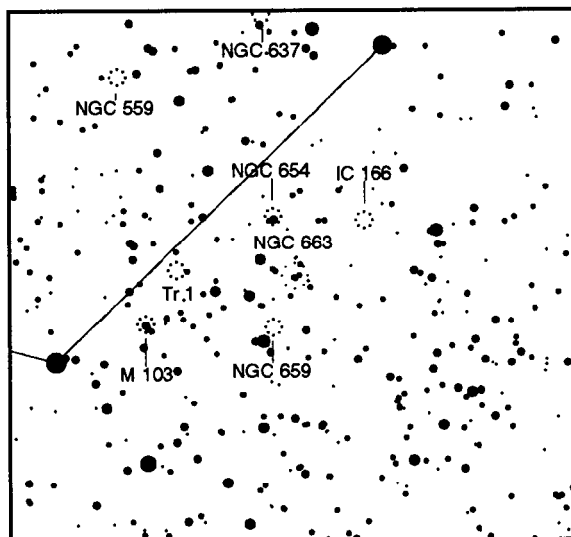


30 degree field, North up

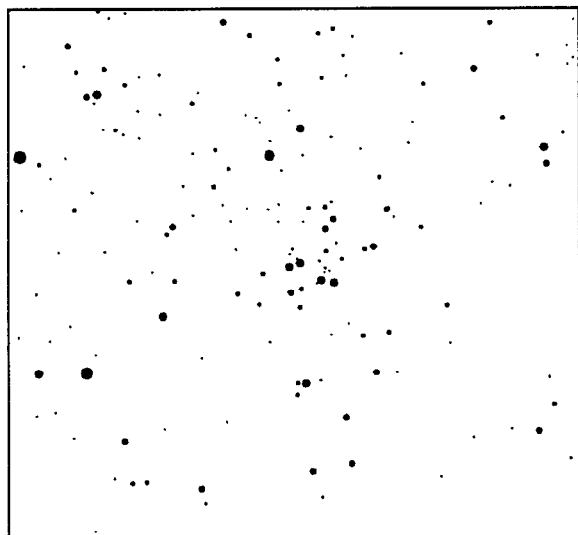
Notes: _____



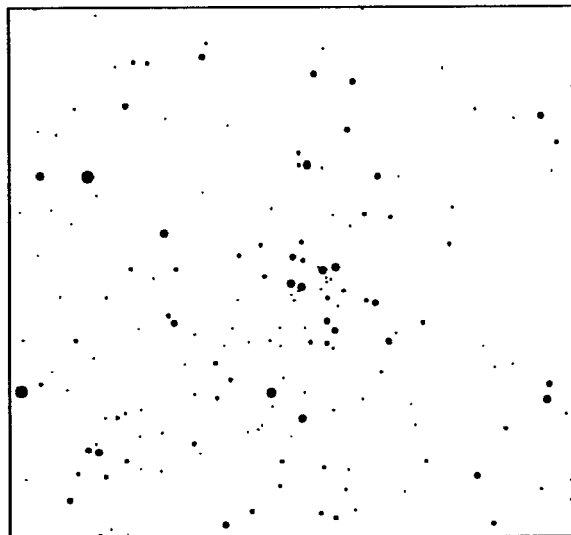
6 degree field, North down



6 degree field, North up, Mirrored



1 degree field, North down



1 degree field, North up, Mirrored

CAS MAG:12.0 Planetary Nebula 3h10m17s x 61°19'59"

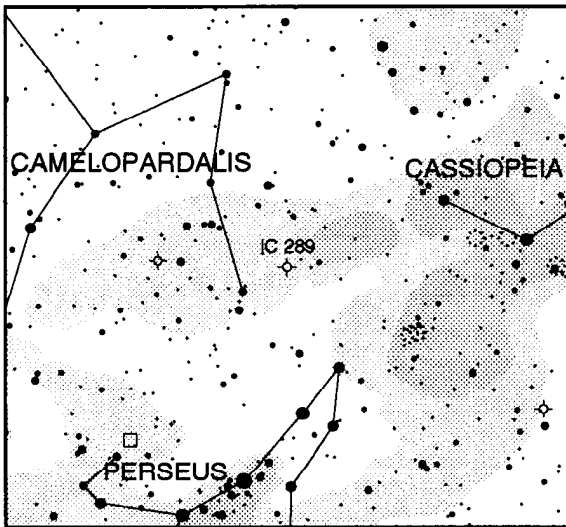
IC 289

PK138+2.1 1'45" x 1'30" CLASS:4(2)

10

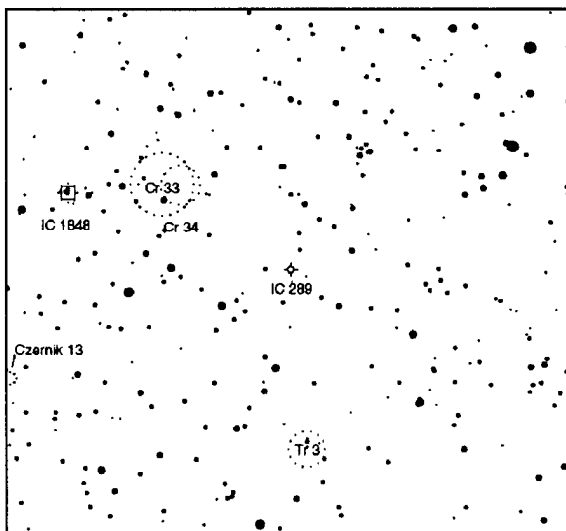
pretty bright, pretty large, round, between 2 very faint stars

faint oval nebula set in a line of 10th to 12th mag stars. Use nebula filter.

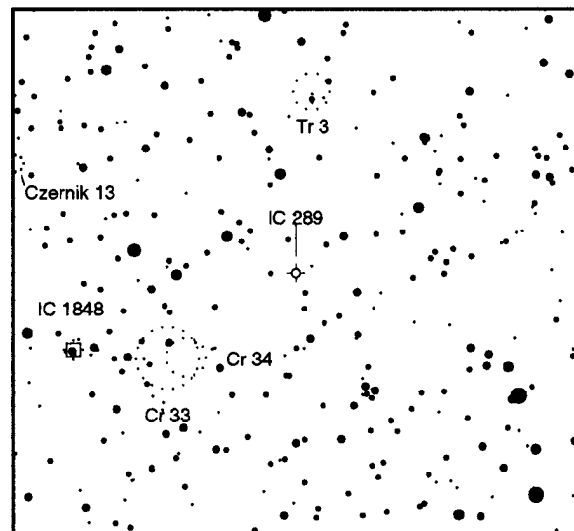


30 degree field, North up

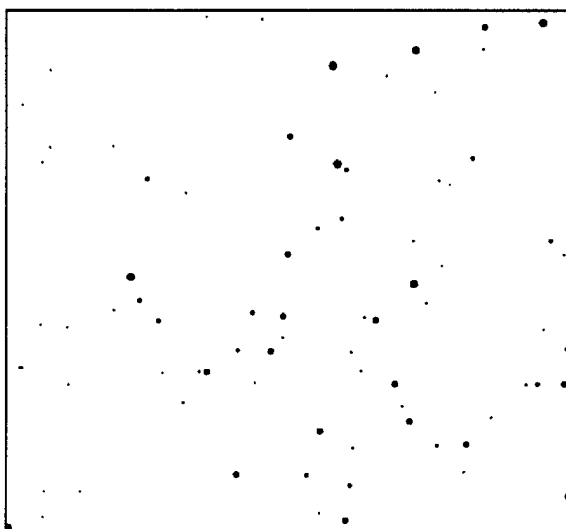
Notes: _____



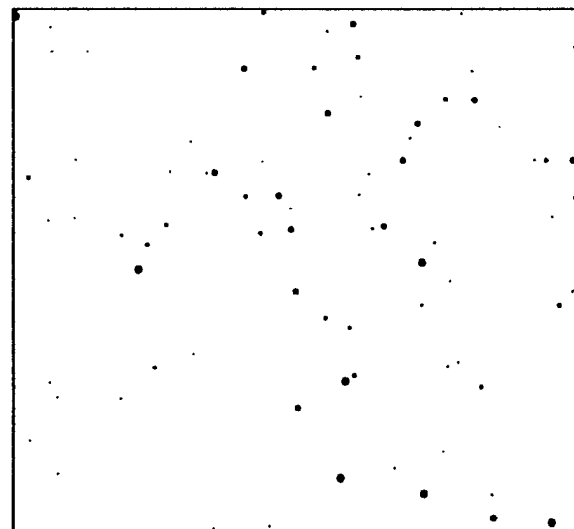
6 degree field, North down



6 degree field, North up, Mirrored



1 degree field, North down

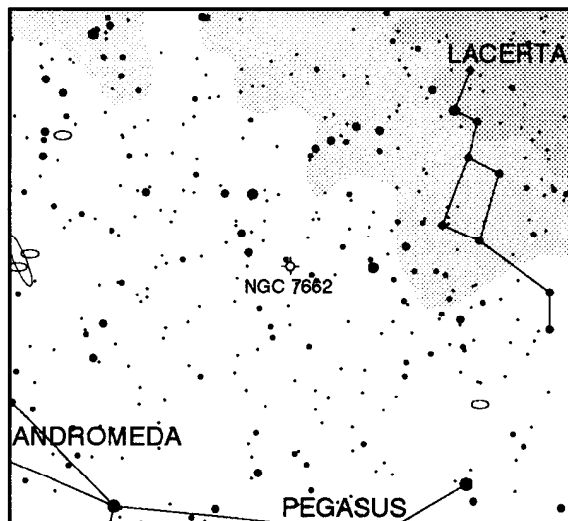


1 degree field, North up, Mirrored

AND MAG: 8.6 Planetary Nebula 23h25m54s x 42°33' 5"
PK106-17.1 0'17" x 0'14" CLASS:4(3)

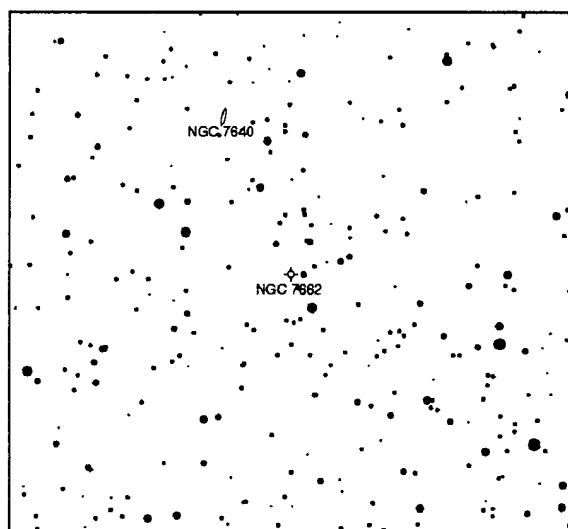
NGC 7662
11

remarkable object, planetary or annular neb, very bright, pretty small, round, blue
Blue Snowball Nebula, Barnard-cent * variable? Elliptical ring with dark center, 13th mag
central star.

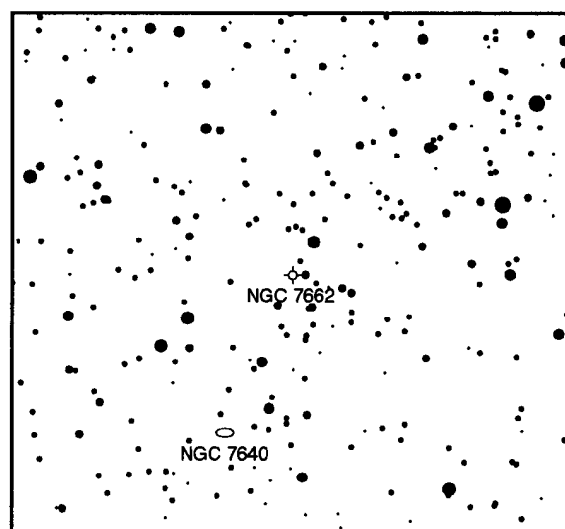


30 degree field, North up

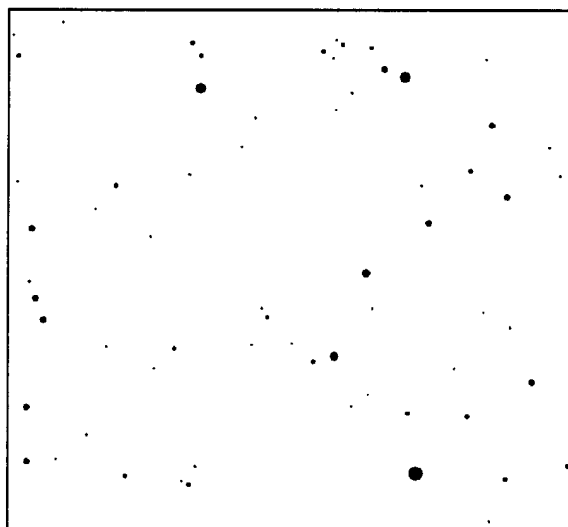
Notes: _____



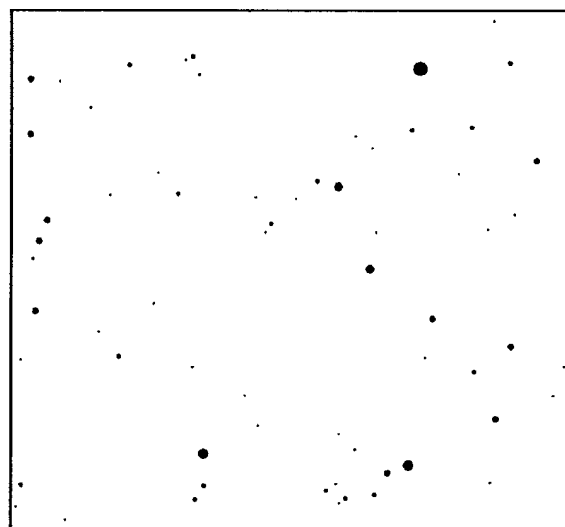
6 degree field, North down



6 degree field, North up, Mirrored

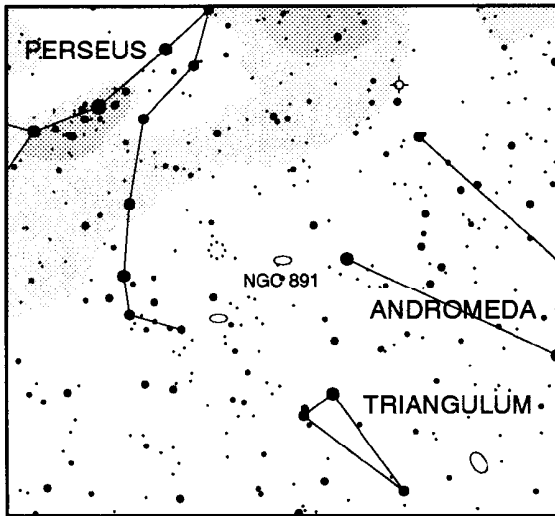


1 degree field, North down



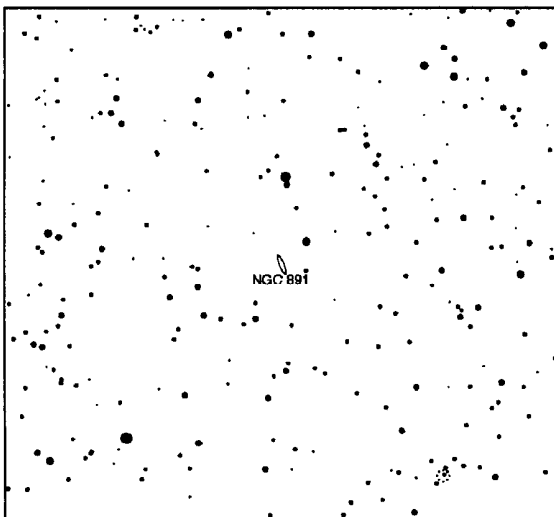
1 degree field, North up, Mirrored

AND MAG:11.5 Galaxy 2h22m36s x 42°21' 3"
 14' 0" x 3' 0" CLASS:Sb PA (dgr): 22 NGC 891
 Bright, very large, very much elongated
 NGC 1023 group, Lord Rosse drawing shows dark lane. Thin spindle of nebulosity
 with a bright central bulge and a narrow dust lane.

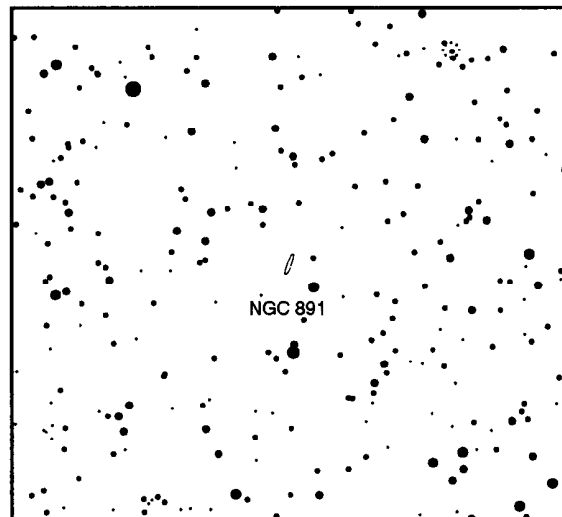


30 degree field, North up

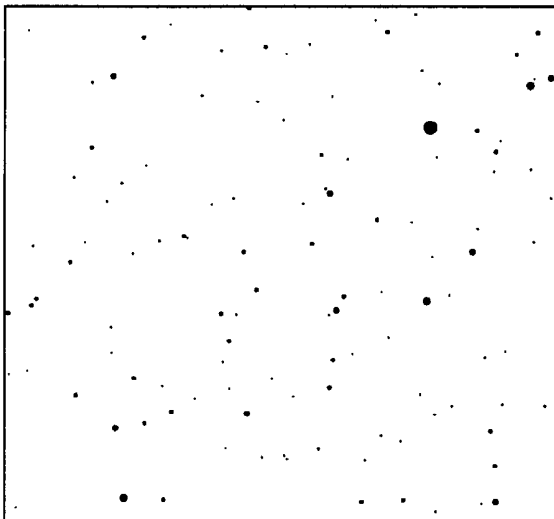
Notes: _____



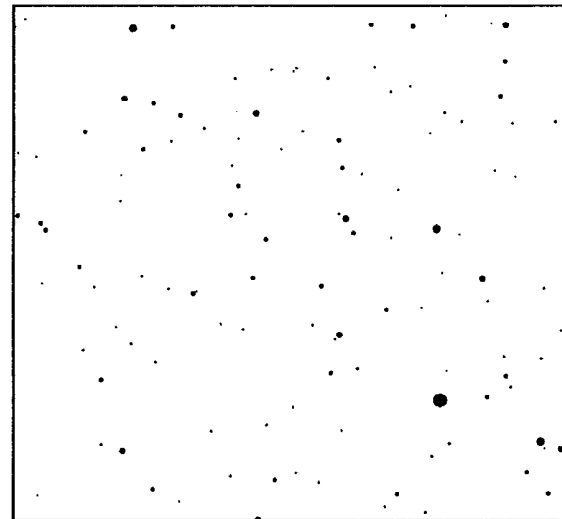
6 degree field, North down



6 degree field, North up, Mirrored



1 degree field, North down



1 degree field, North up, Mirrored

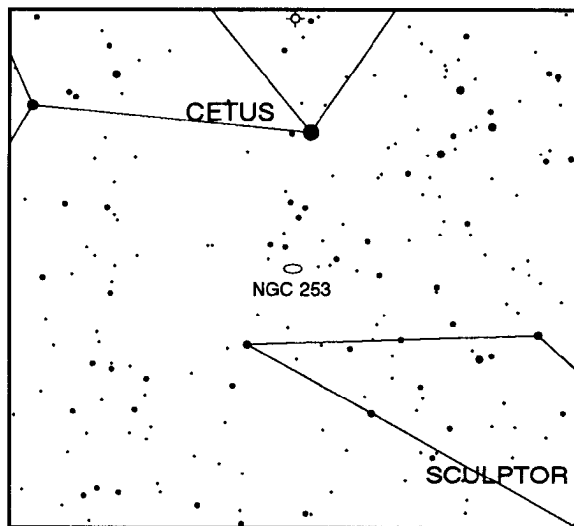
SCL MAG: 7.1 Galaxy
25' 0" x 7' 0" CLASS: Scp

0h47m30s x -25°17'58"

NGC 253
13

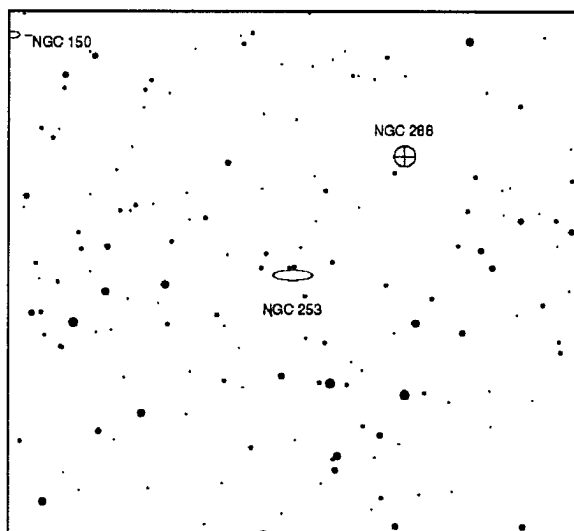
very remarkable object, very very bright, very very large, very much elongated,
54 degrees, gradually brighter middle

Sculptor Galaxy, Sandage-arms are more defined by dust than * Look for mottling, the
stellar nucleus, and subtle spiral structure.

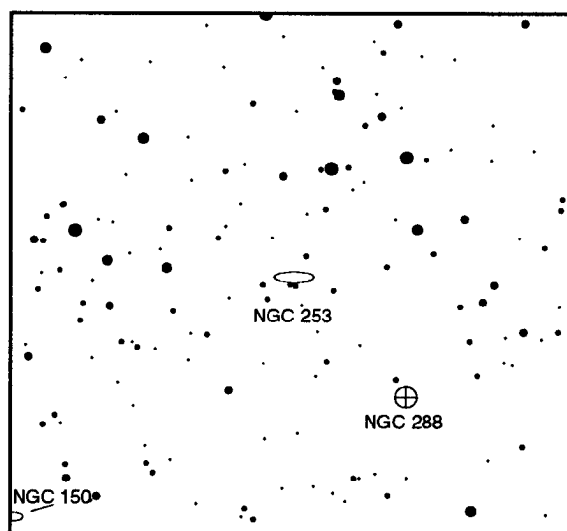


Notes: _____

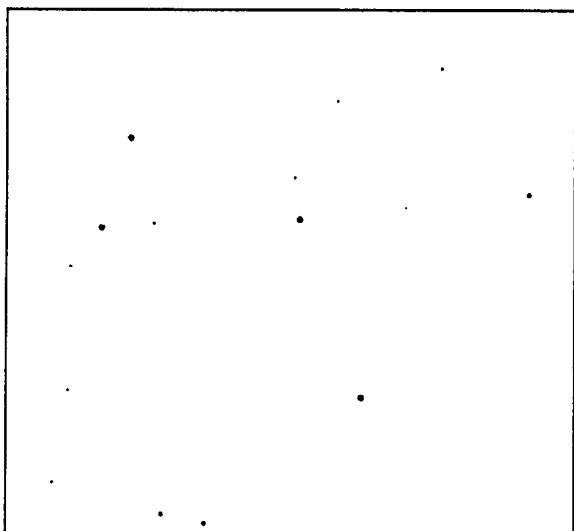
30 degree field, North up



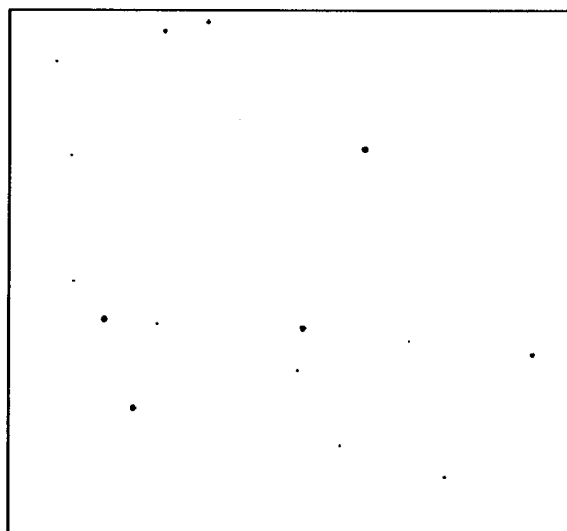
6 degree field, North down



6 degree field, North up, Mirrored



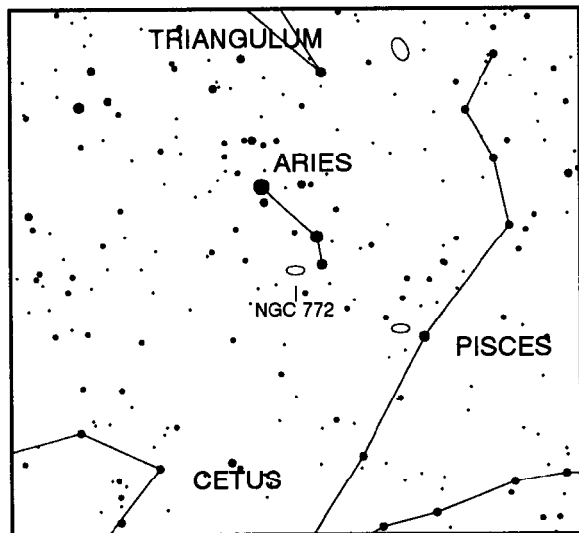
1 degree field, North down



1 degree field, North up, Mirrored

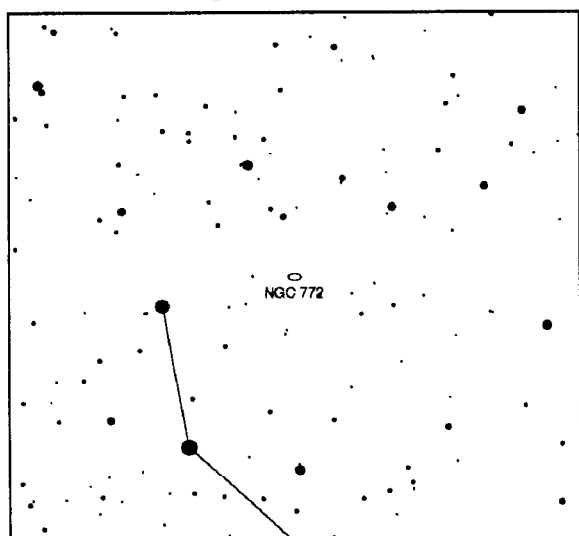
ARI MAG:11.5 Galaxy 1h59m24s x 18°59'55"
 8' 0" x 5' 0" CLASS:Sb PA (dgr):130
 bright, considerably large, round, gradually brighter middle, not well resolved
 Several tightly coiled arms bright on NW side

NGC 772
 14

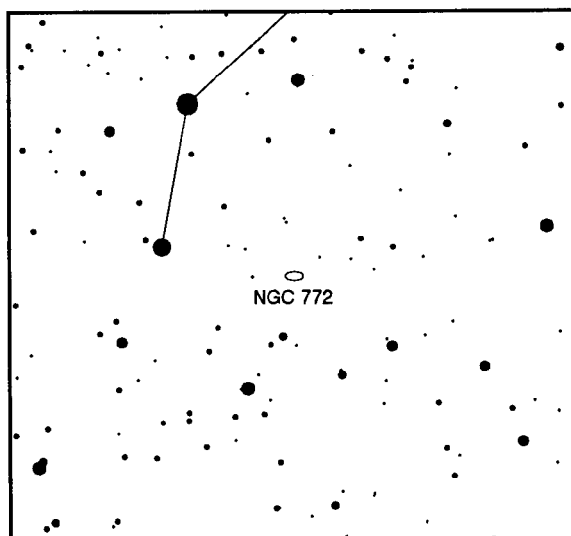


30 degree field, North up

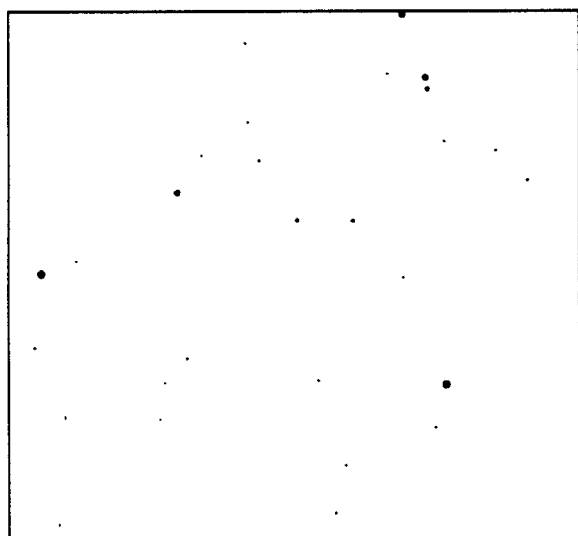
Notes: _____



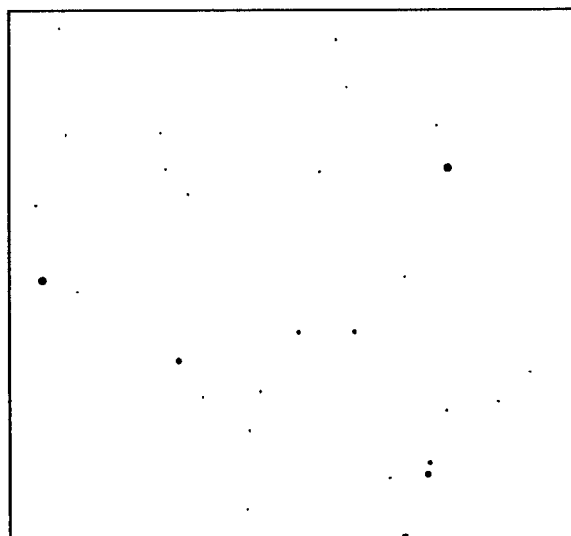
6 degree field, North down



6 degree field, North up, Mirrored



1 degree field, North down



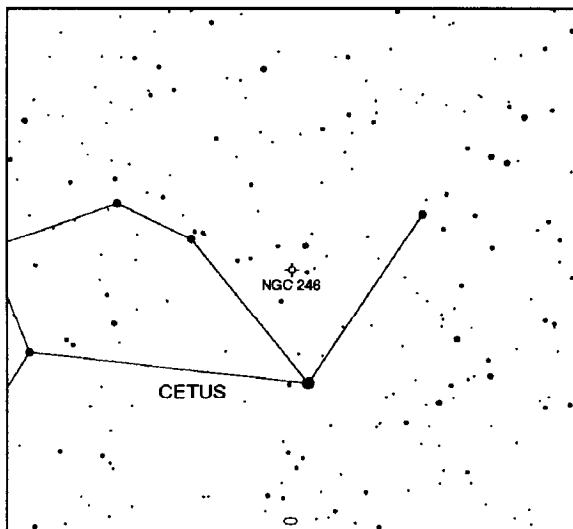
1 degree field, North up, Mirrored

CET MAG: 8.5 Planetary Nebula 0h47m 7s x -11°52'55"
PK118-74.1 4' 0" x 4'30" CLASS:3b

NGC 246
15

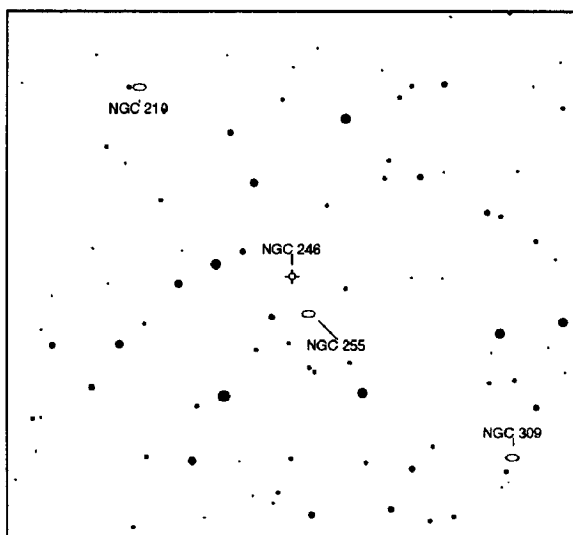
very faint, large, little elongated, 12th mag O7 central *

Galaxy NGC 255 15' NNE, 4 * within ring, low surface brightness, uneven appearance,
incomplete ring in smaller scopes, dark mottling.

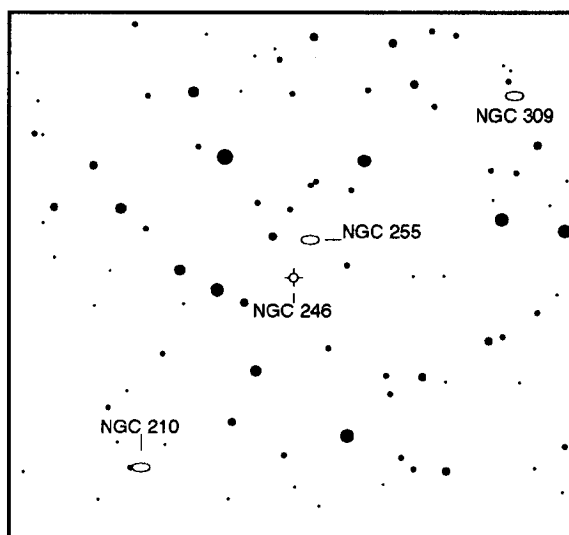


Notes: _____

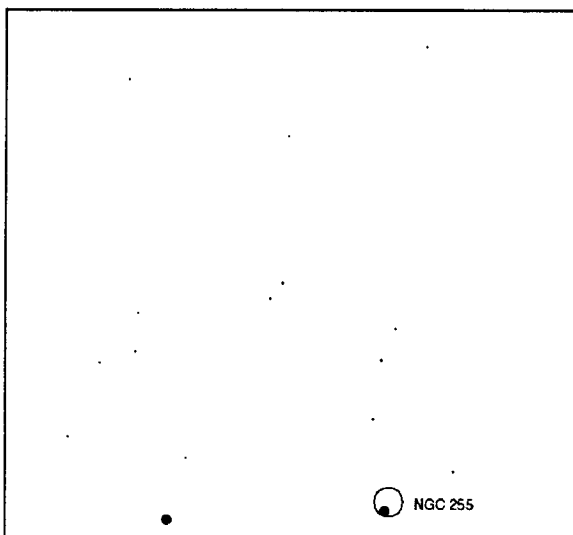
30 degree field, North up



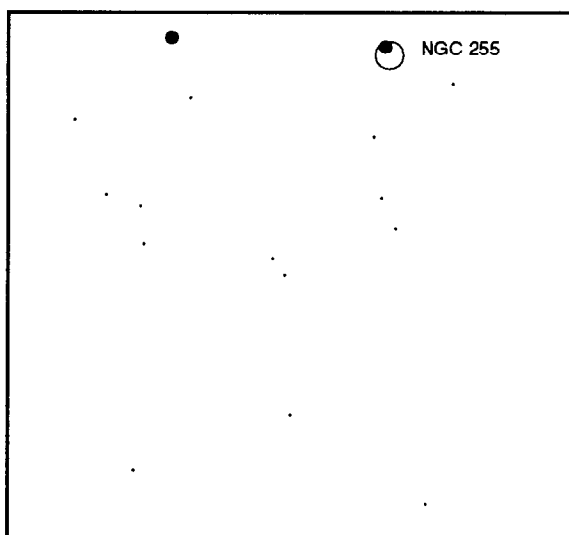
6 degree field, North down



6 degree field, North up, Mirrored



1 degree field, North down



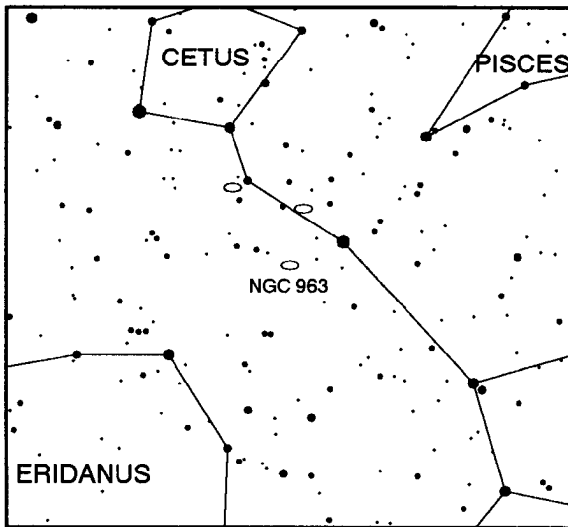
1 degree field, North up, Mirrored

CET MAG:11.0 Galaxy
6'36" x 5'30" CLASS:SBa

2h27m42s x -1° 9' 3"
PA (dgr):135

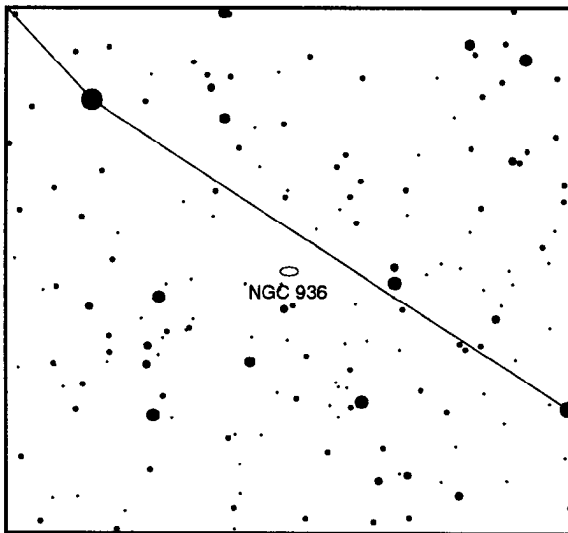
NGC 936
16

very bright, very large, little elongated, much brighter middle nucleus
nucleus is a radio source, shows a nebulous knot at center surrounded by faint haze,
NGC 941 12' West

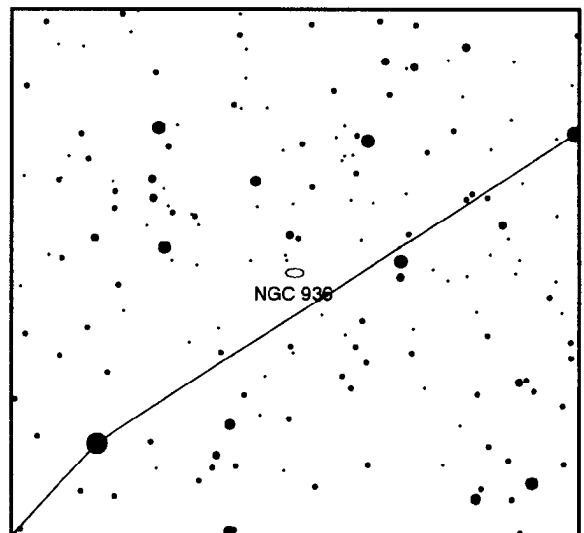


30 degree field, North up

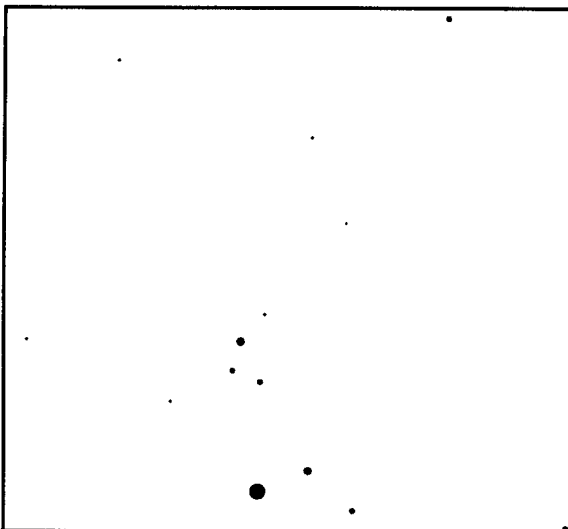
Notes: _____



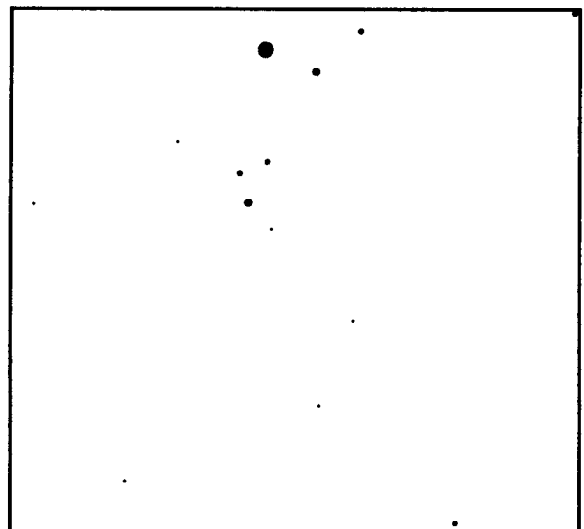
6 degree field, North down



6 degree field, North up, Mirrored

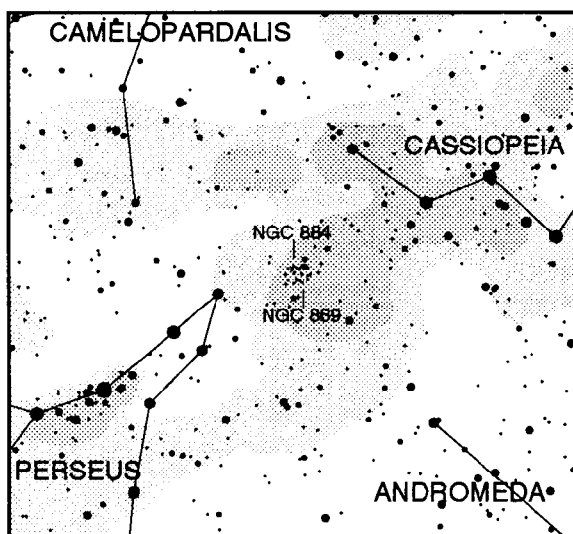


1 degree field, North down



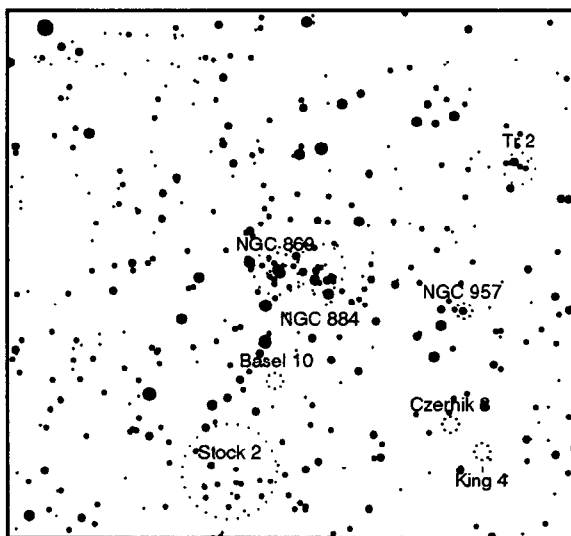
1 degree field, North up, Mirrored

PER MAG: 4.3/4.4 Open Clusters 2h19m 0s x 57° 8'60"/2h22m23s x 57° 7' 1"
 30' 0" x 30' 0" CLASS:I 3 r # of stars: 200, brightest star:6.55 NGC 869/84
 30' 0" x 30' 0" CLASS:I 3 r # of stars:150 brightest star:8.05 17
 very very large, very rich, *7...14 / very large, very rich, ruby*M chi Per, look for other
 red *, Double Cluster

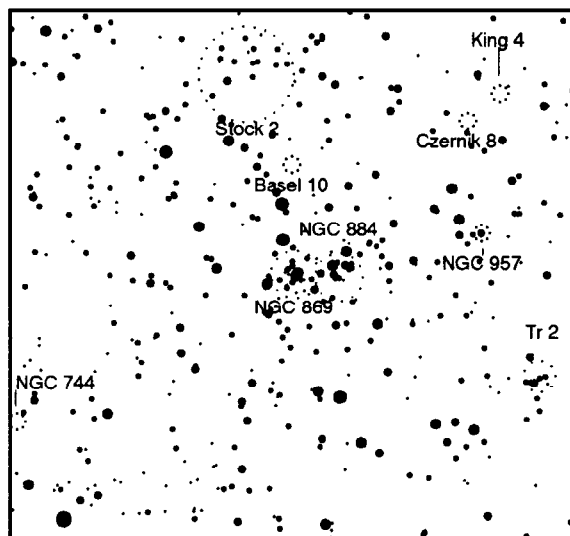


Notes: _____

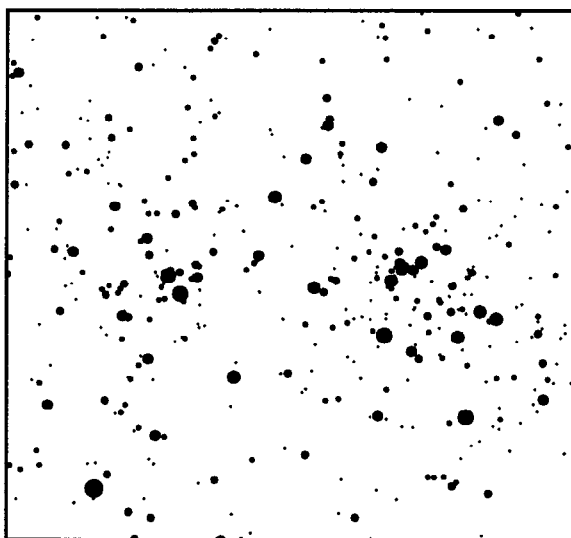
30 degree field, North up



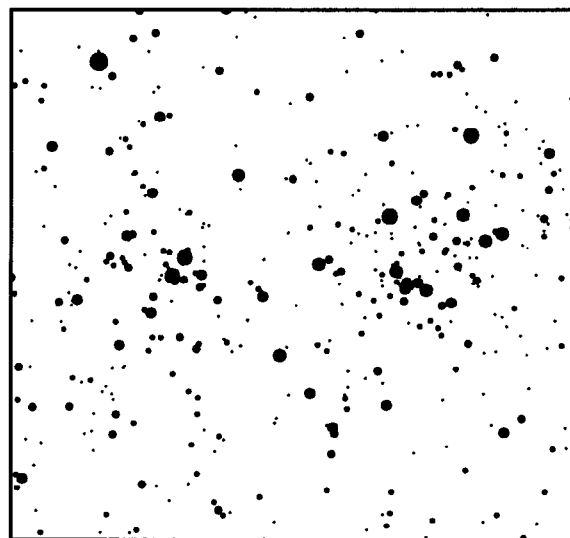
6 degree field, North down



6 degree field, North up, Mirrored



1 degree field, North down



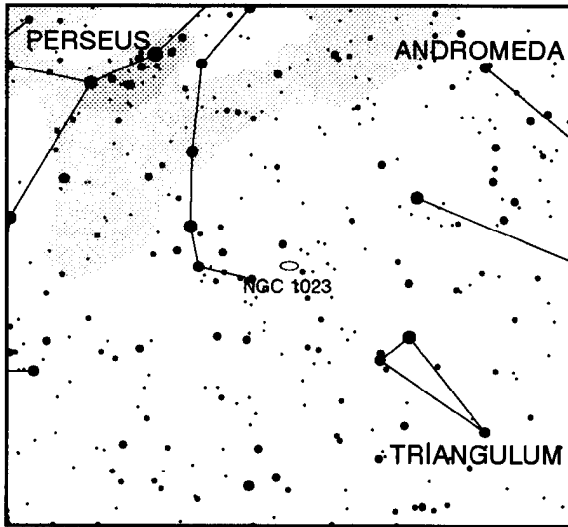
1 degree field, North up, Mirrored

PER MAG:11.0 Galaxy
9' 0" x 4' 0" CLASS:E7p

2h40m30s x 39° 2'58"
PA (dgr): 87

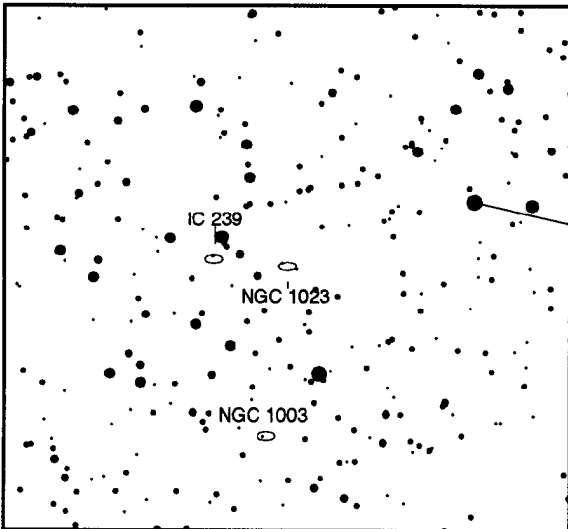
NGC 1023
18

very bright, very large, very much elongated, very very much brighter middle
brightest in group, more neb 10' East, lens shaped E-W, tuft on East tip, radio source.

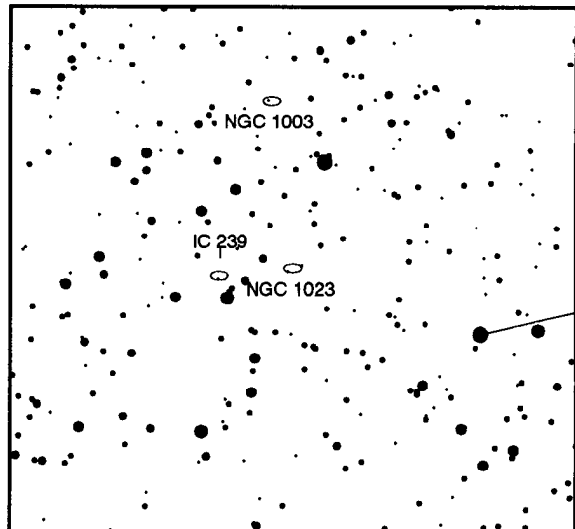


Notes: _____

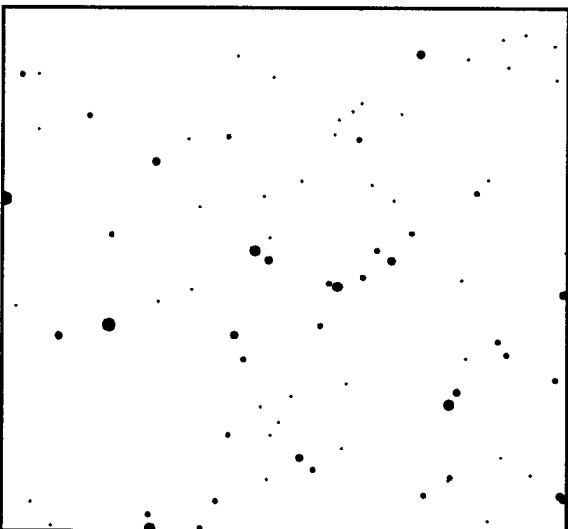
30 degree field, North up



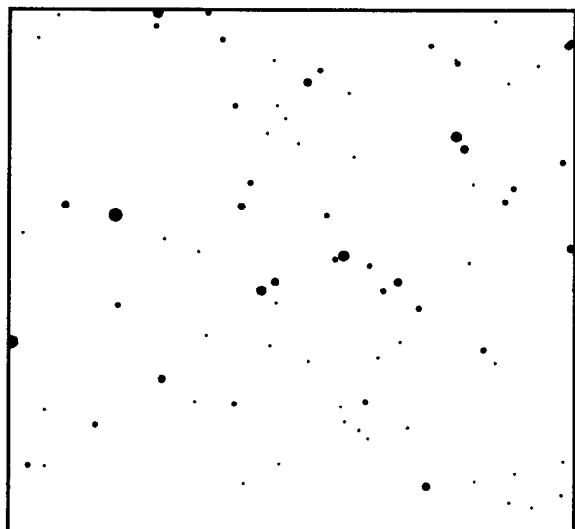
6 degree field, North down



6 degree field, North up, Mirrored



1 degree field, North down



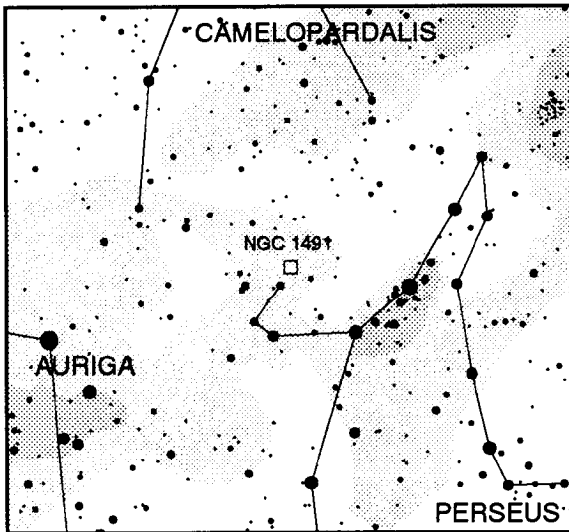
1 degree field, North up, Mirrored

PER MAG: --- Bright Nebula
3' 0" x 3' 0" CLASS: E

4h 3m17s x 51°17'58"

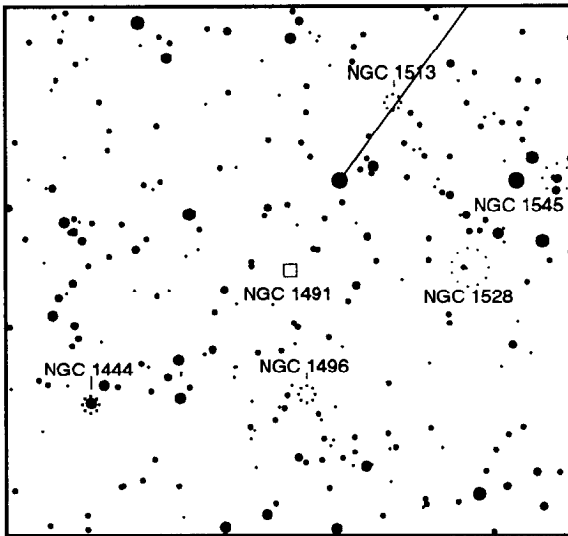
NGC 1491
19

very bright, small, irregular figure, bright middle, not well resolved, mottled
11 mag BO * involved, faint outer wisps

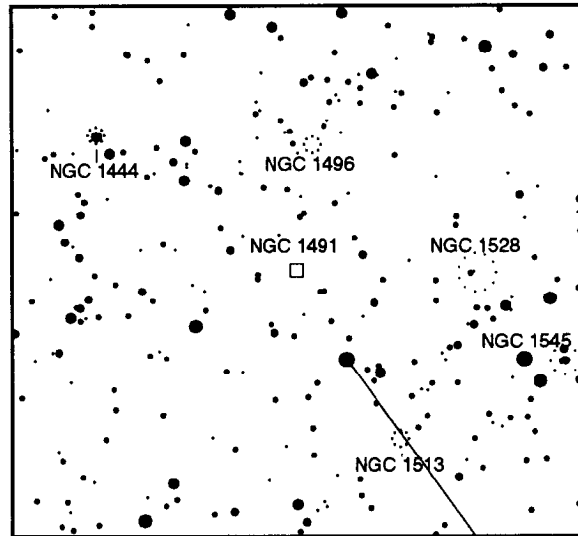


Notes: _____

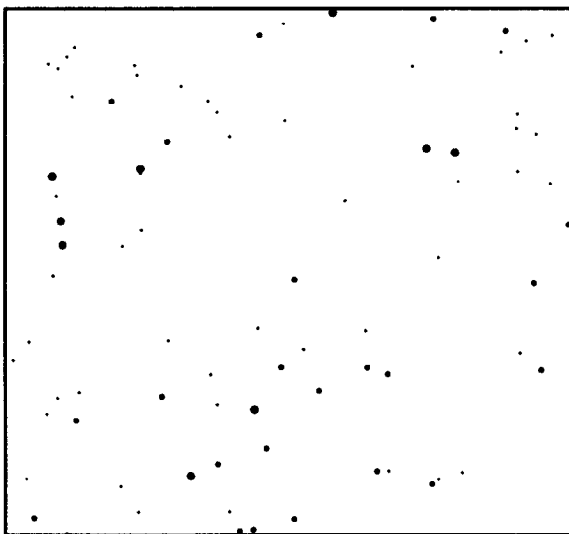
30 degree field, North up



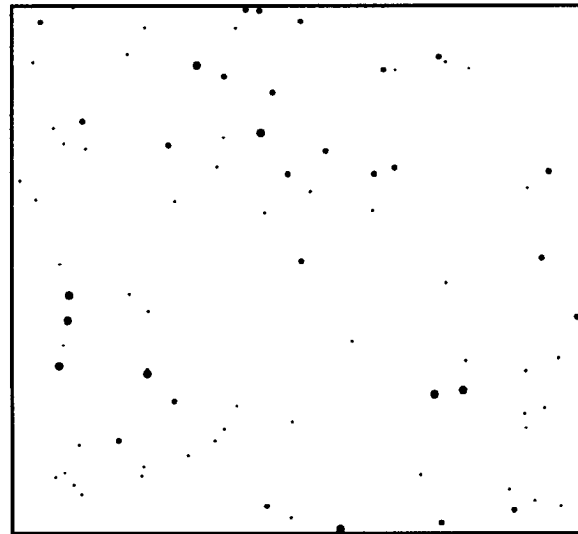
6 degree field, North down



6 degree field, North up, Mirrored



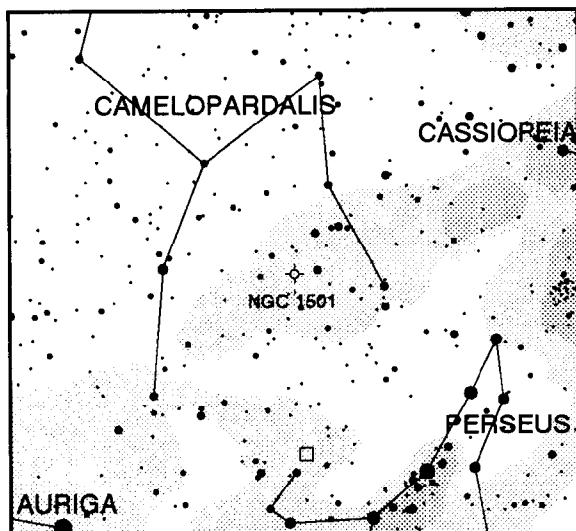
1 degree field, North down



1 degree field, North up, Mirrored

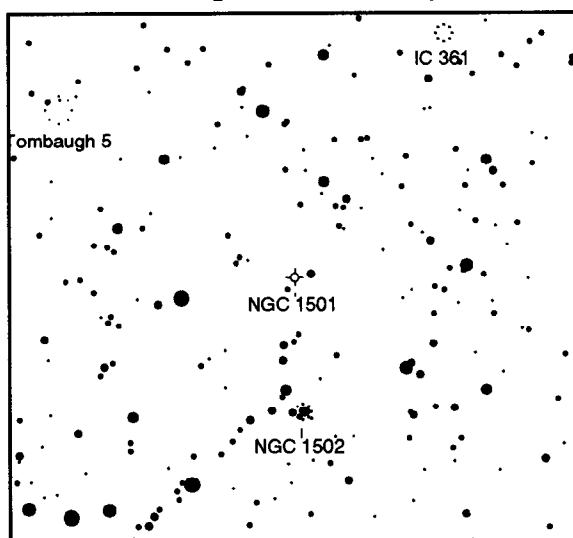
CAM MAG:12.0 Planetary Nebula 4h 6m59s x 60°54'56"
 PK144+6.1 1'56" x 1'48" CLASS:3
 pretty bright, pretty small, very little elongated
 small, bright, thick smoke ring with 13.5 mag central star

NGC 1501
 20

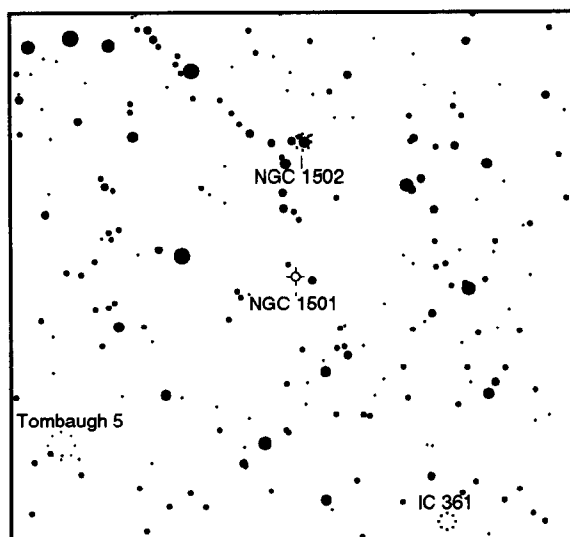


30 degree field, North up

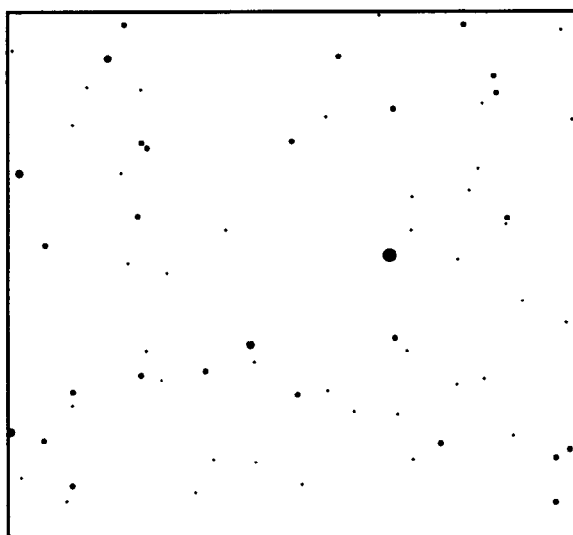
Notes: _____



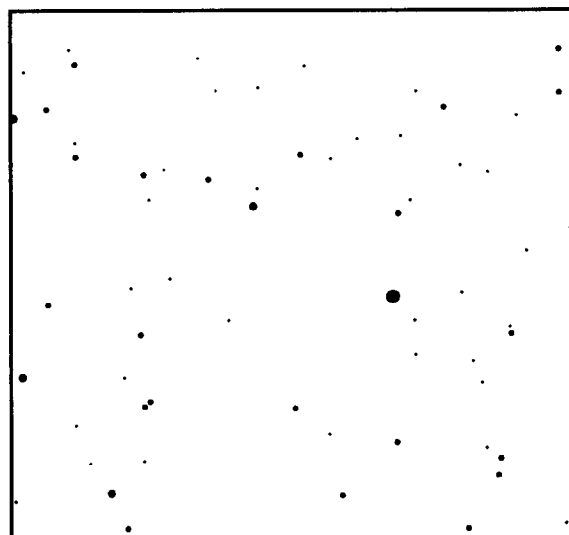
6 degree field, North down



6 degree field, North up, Mirrored



1 degree field, North down



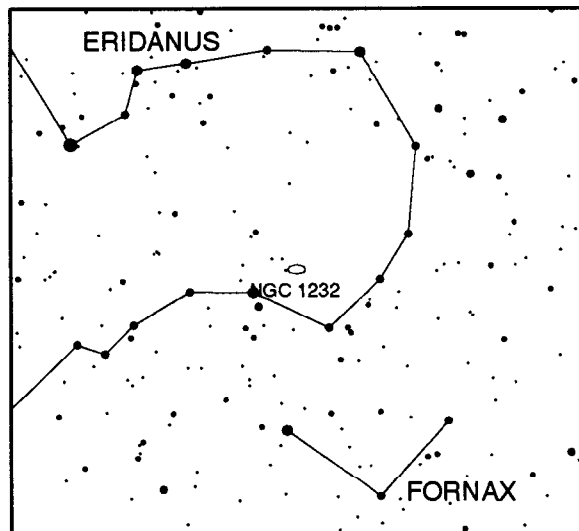
1 degree field, North up, Mirrored

ERI MAG:10.5 Galaxy
8' 0" x 7' 0" CLASS:Sc

3h 9m43s x -20°34' 1"

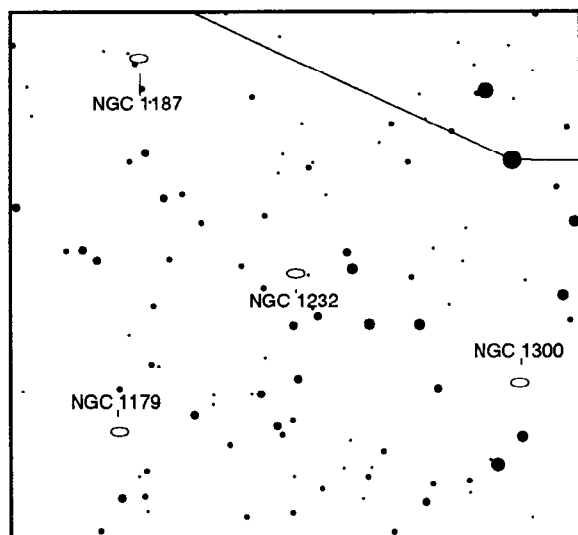
NGC 1232
21

pretty bright, considerably large, round, gradually brighter middle
Excellent face-on, many armed spiral, larger scope required to define arms

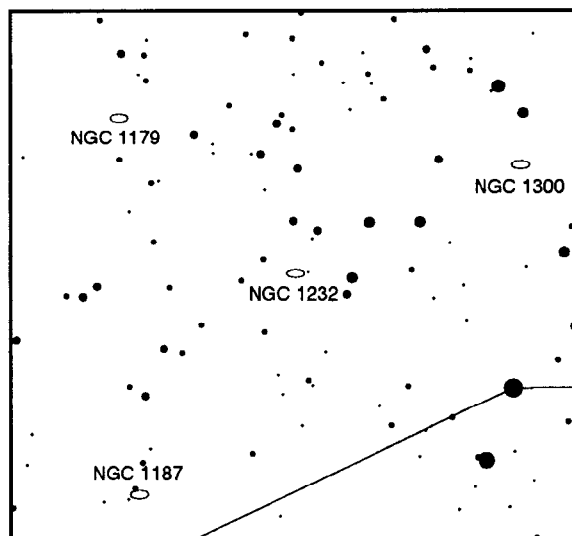


Notes: _____

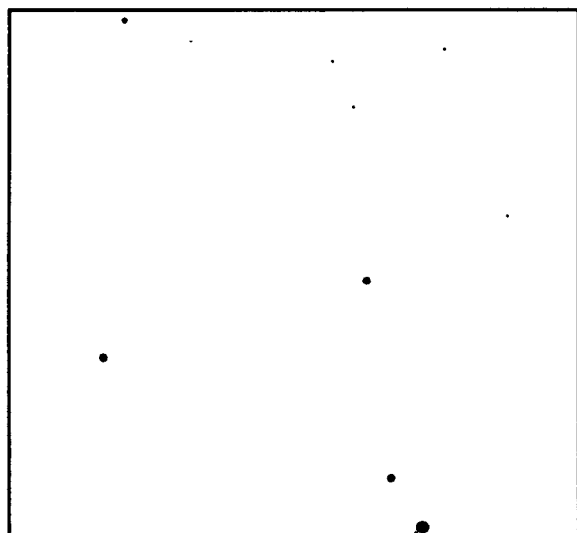
30 degree field, North up



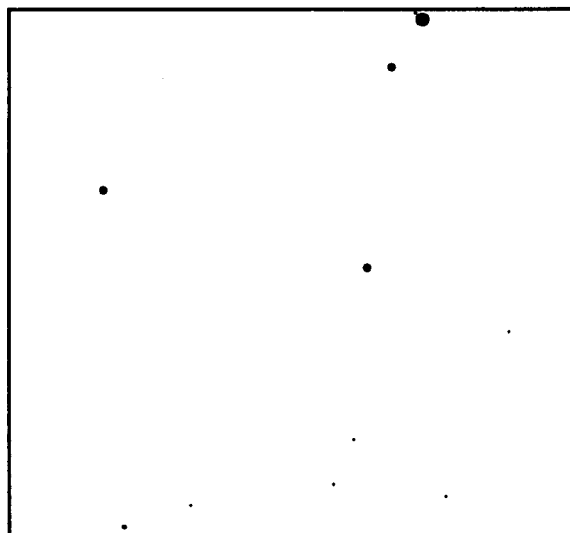
6 degree field, North down



6 degree field, North up, Mirrored



1 degree field, North down

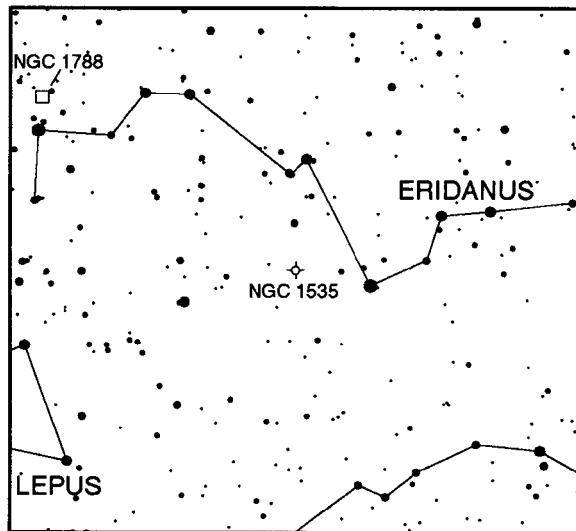


1 degree field, North up, Mirrored

ERI MAG:10.4 Planetary Nebula 4h14m11s x -12°44' 1"
PK206-40.1 0°20" x 0°17" CLASS:4(2c)

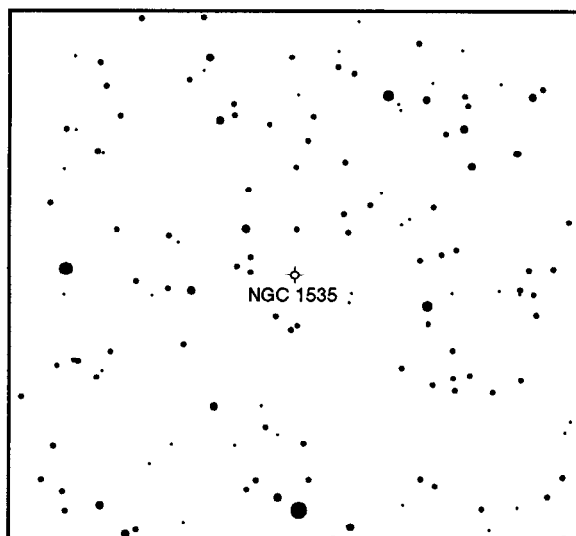
NGC 1535
22

very bright, small, round, very small brighter middle, not well resolved
Though very small, shows strong blue-green hue with 11.5 mag central *

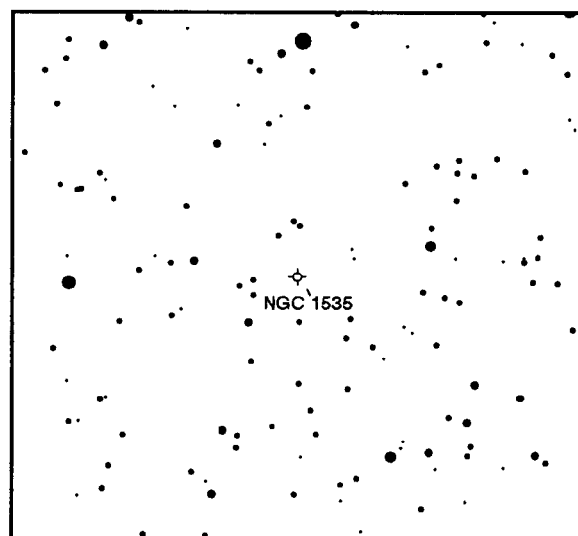


Notes: _____

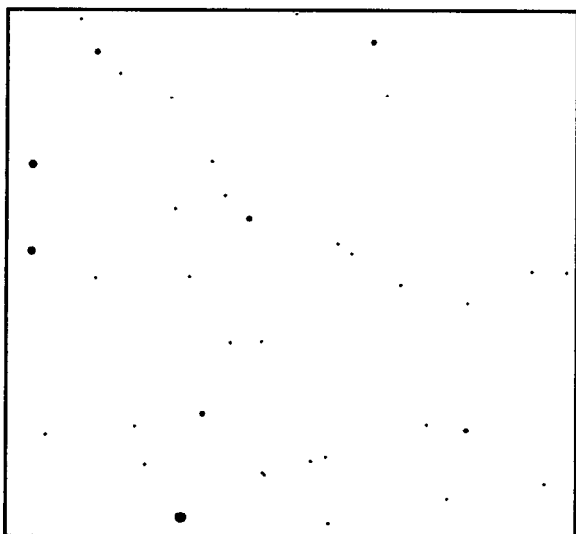
30 degree field, North up



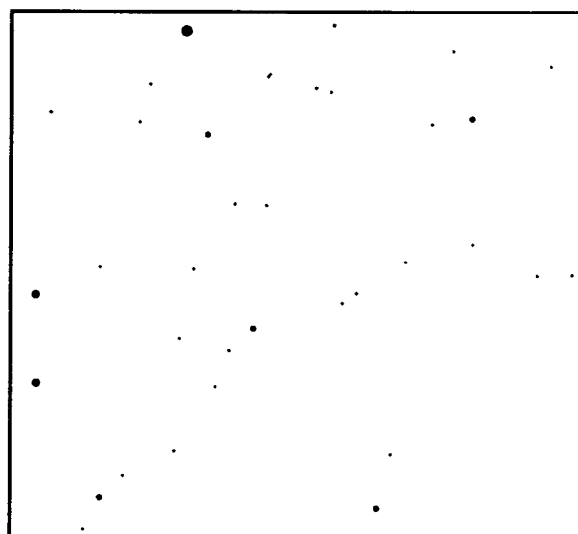
6 degree field, North down



6 degree field, North up, Mirrored



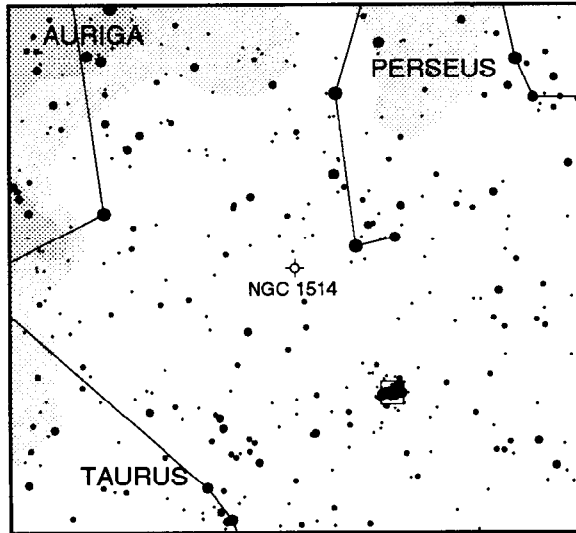
1 degree field, North down



1 degree field, North up, Mirrored

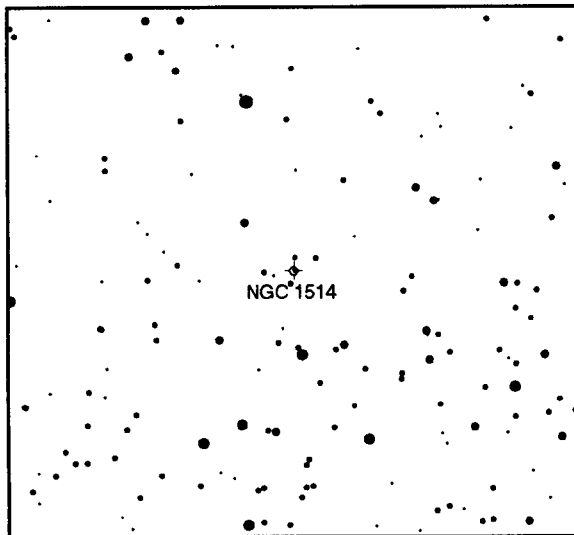
TAU MAG:10.8 Planetary Nebula 4h 9m13s x 30°47' 5"
 PK165-15.1 2' 0" x 2'30" CLASS:3(2)
 large, faint
 Faint, circular nebula with 9 mag O8/B9 central *. Difficult with 8"

NGC 1514
 23

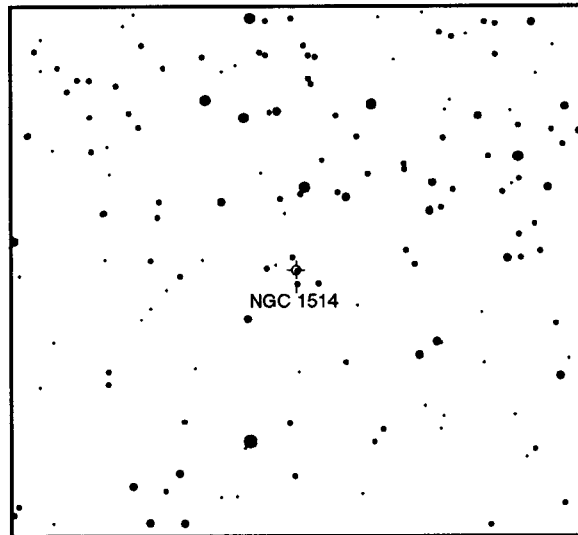


Notes: _____

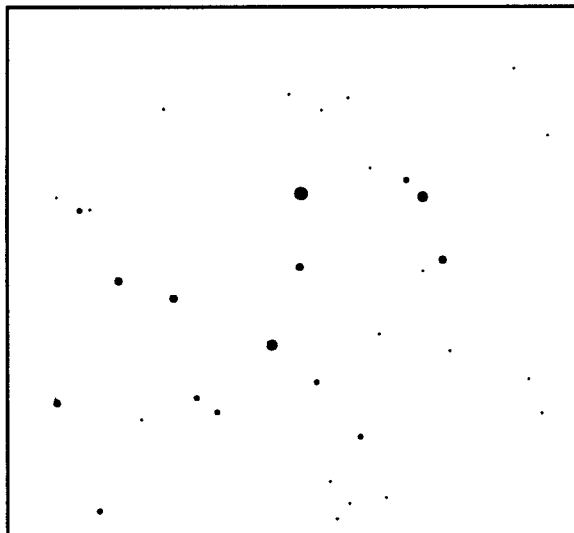
30 degree field, North up



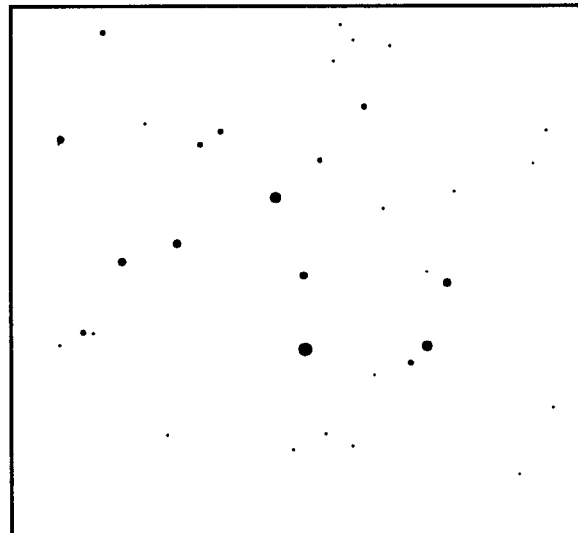
6 degree field, North down



6 degree field, North up, Mirrored



1 degree field, North down



1 degree field, North up, Mirrored

AUR MAG:11.3 Clstr w/Nebulosity 5h31m24s x 34°15' 3"

NGC 1931

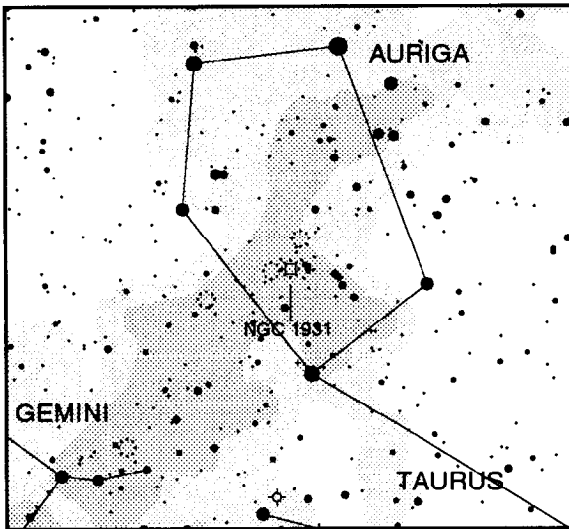
3' 0" x 3' 0" CLASS:E+R

24

of stars: ? brightest star:11.49

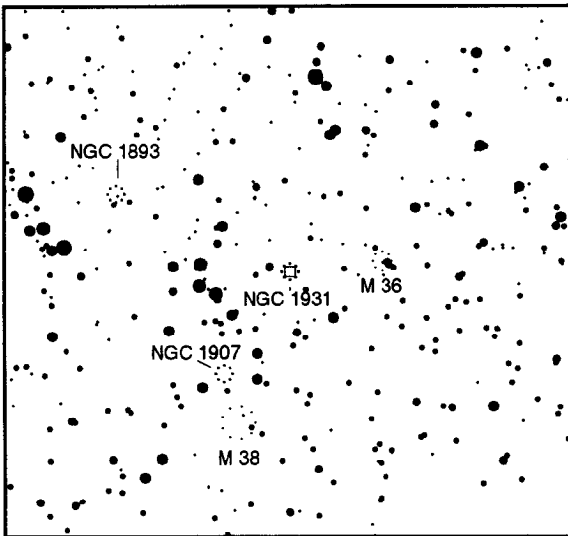
very bright, large, round, bright stars in middle

8" shows as double lobed patch of greenish light with a few brighter stars involved.

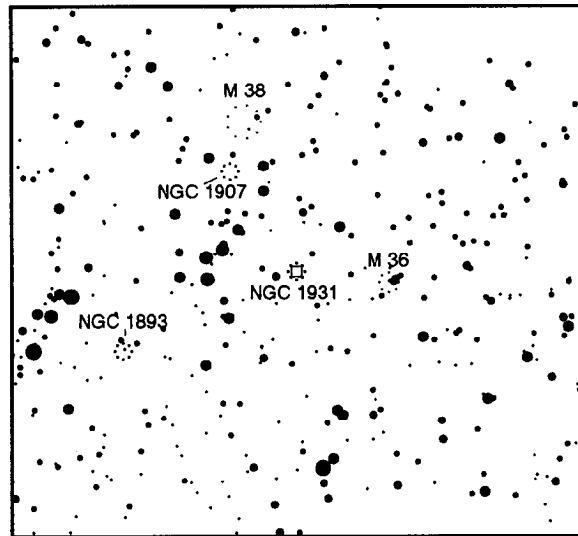


30 degree field, North up

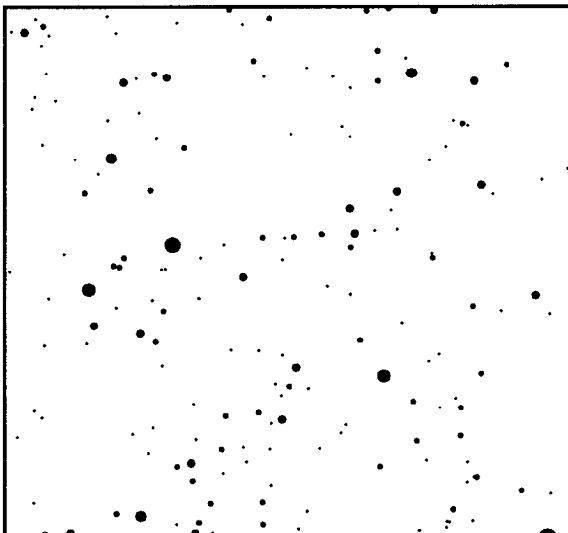
Notes: _____



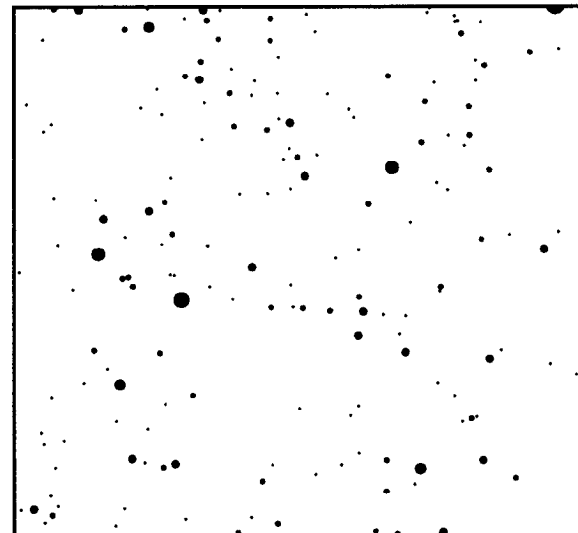
6 degree field, North down



6 degree field, North up, Mirrored



1 degree field, North down



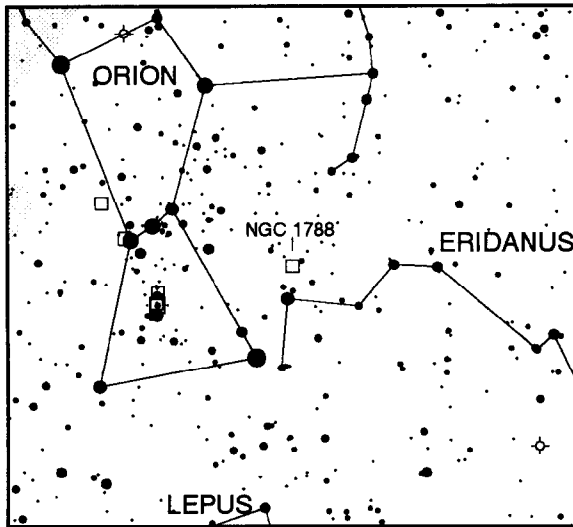
1 degree field, North up, Mirrored

ORI MAG: --- Bright Nebula
8' 0" x 5' 0" CLASS:R

5h 6m53s x - 3°20' 4"

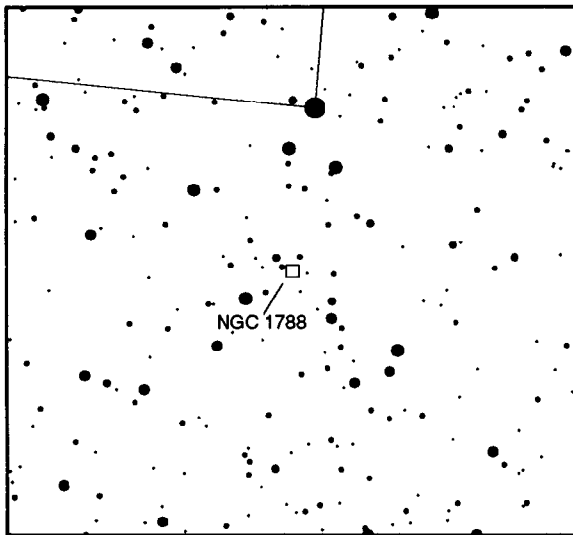
NGC 1788
25

bright, considerably large, round, bright middle
B9 10 mag * involved in the nebula

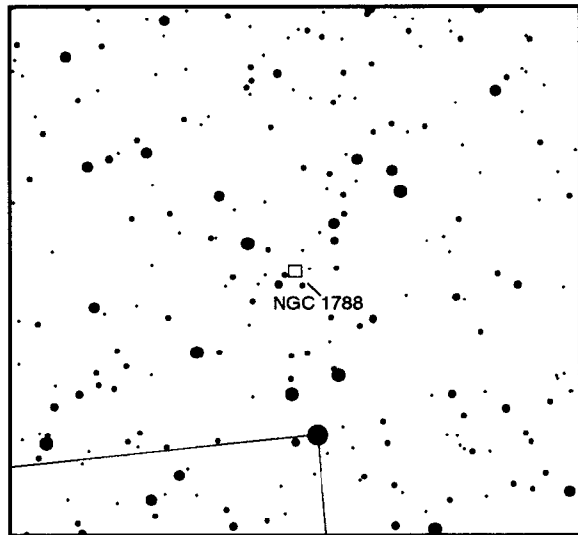


30 degree Field, North up

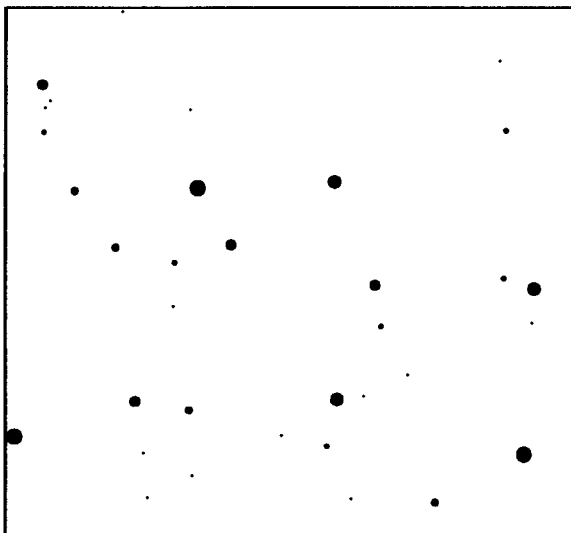
Notes: _____



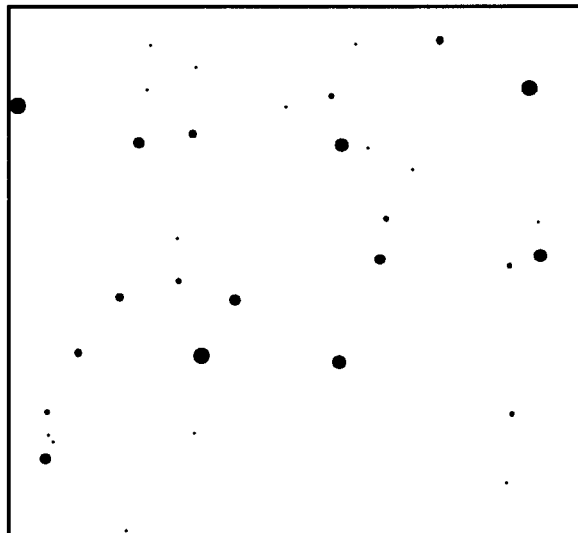
6 degree field, North down



6 degree field, North up, Mirrored



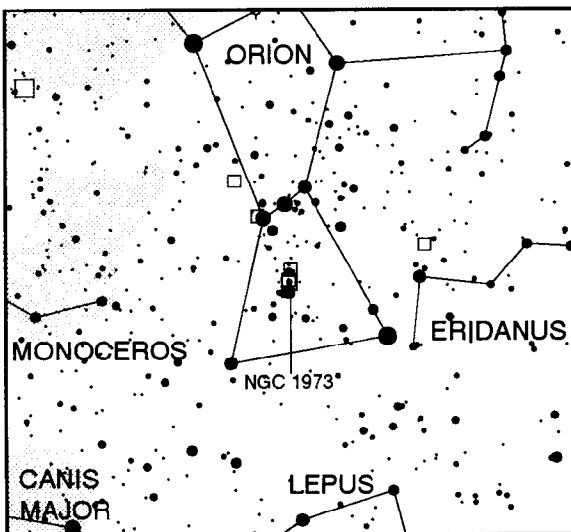
1 degree field, North down



1 degree field, North up, Mirrored

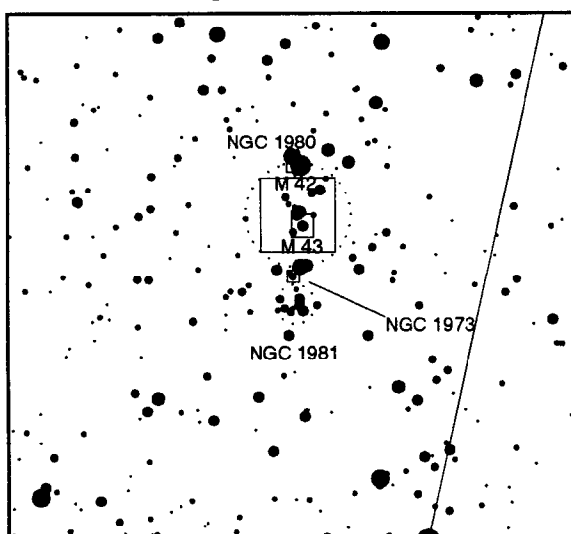
ORI MAG: --- Bright Nebula 5h35m 6s x - 4°43'57"
 5' 0" x 5' 0" CLASS: E+R
 *8,9 involved in nebula, near M42/43 often neglected

NGC 1973
 26

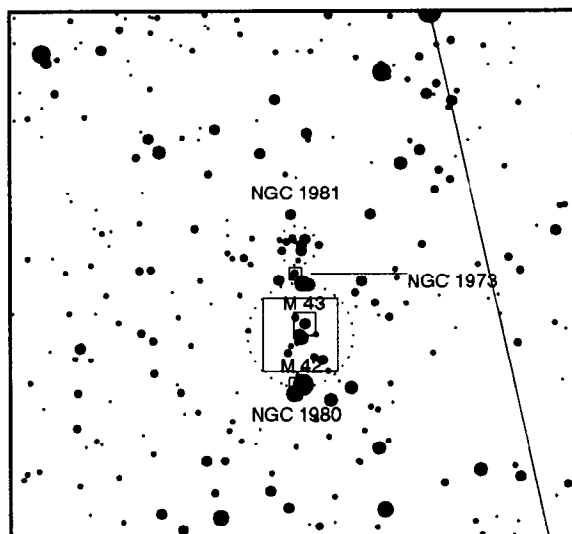


Notes: _____

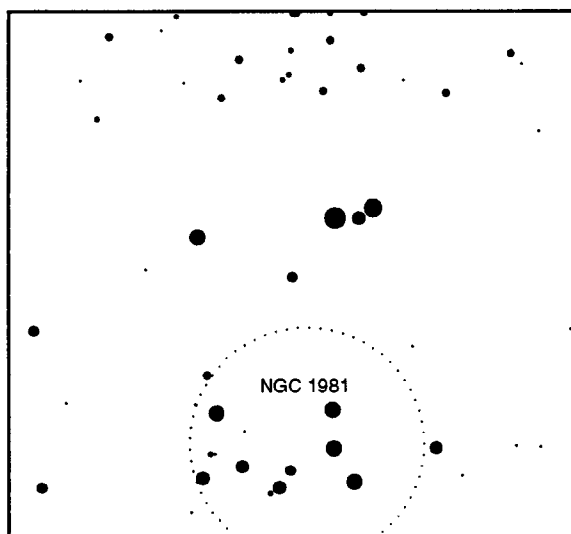
30 degree field, North up



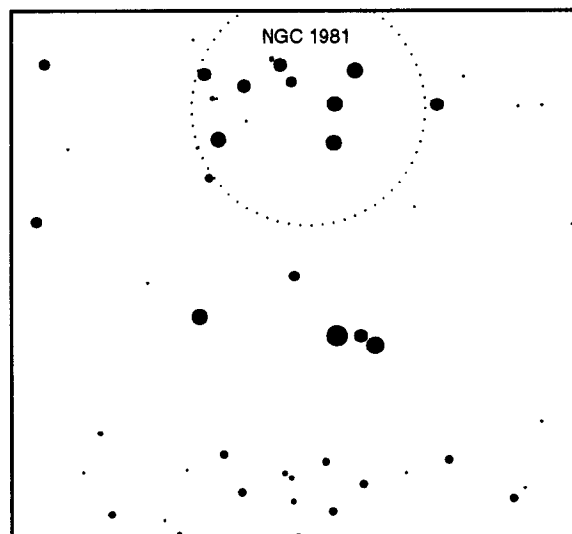
6 degree field, North down



6 degree field, North up, Mirrored



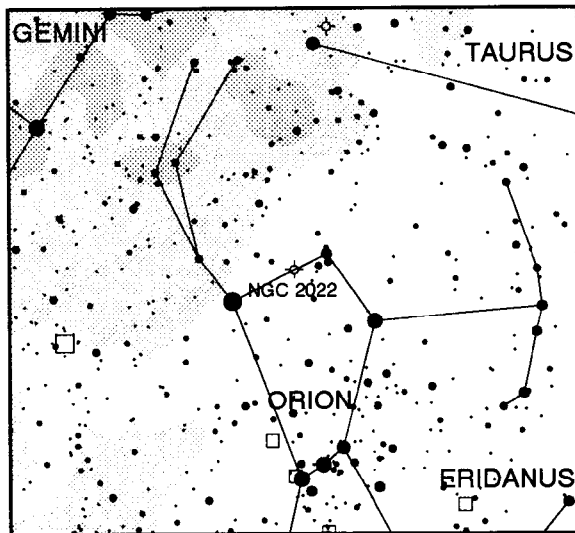
1 degree field, North down



1 degree field, North up, Mirrored

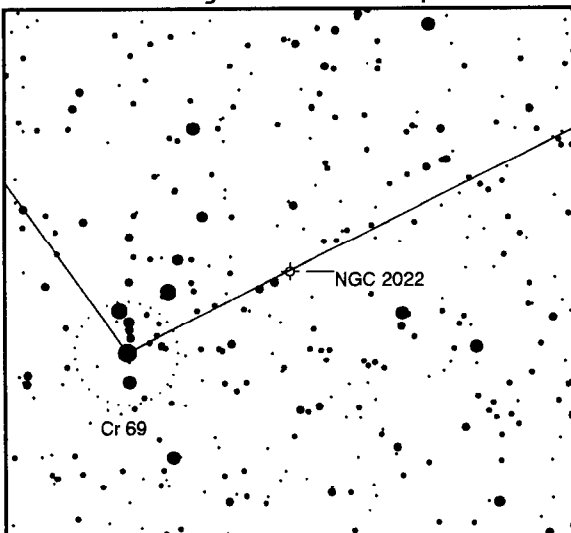
ORI MAG:12.8 Planetary Nebula 5h42m 5s x 9° 4'60"
 PK196-10.1 0'28" x 0'27" CLASS:4(2)
 pretty bright,very small, very little elongated
 small, faint and distinct with annular form, 14 mag central *,

NGC 2022
 27

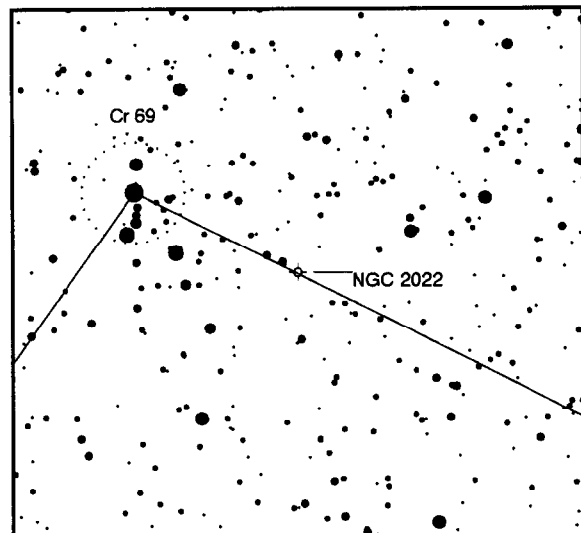


30 degree field, North up

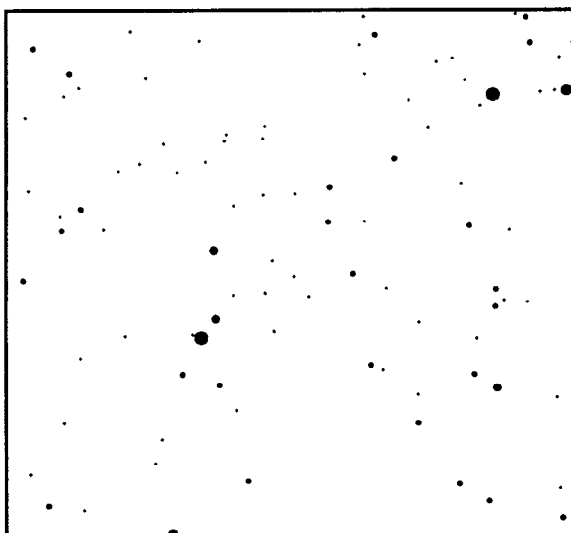
Notes: _____



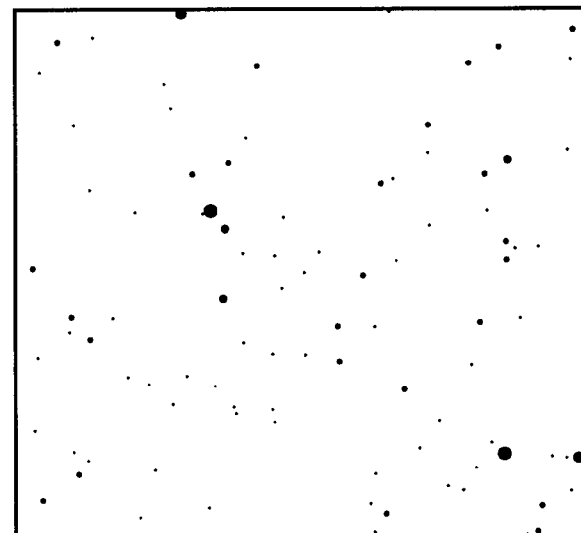
6 degree field, North down



6 degree field, North up, Mirrored



1 degree field, North down



1 degree field, North up, Mirrored

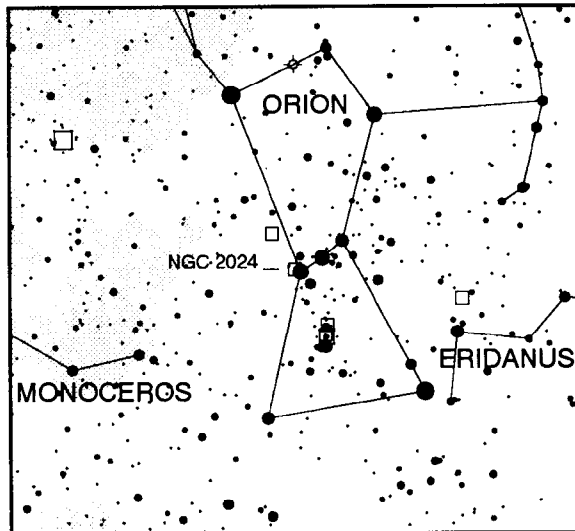
ORI MAG: --- Bright Nebula
30' 0" x 30' 0" CLASS: E

5h41m60s x -1°49'55"

NGC 2024
28

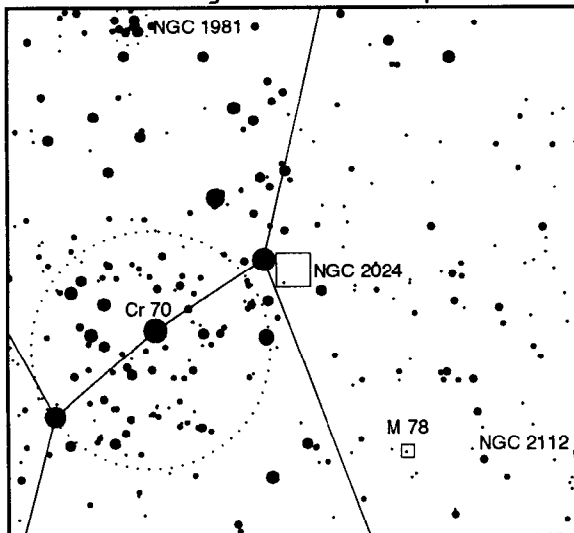
remarkable object, irregular, bright, very very large

Tank Track Nebula, bright but masked by glow of Zeta Ori, conspicuous dark band that bisects disk.

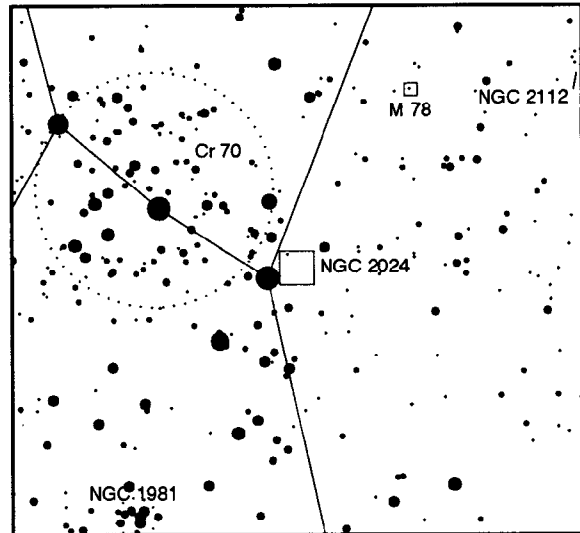


Notes: _____

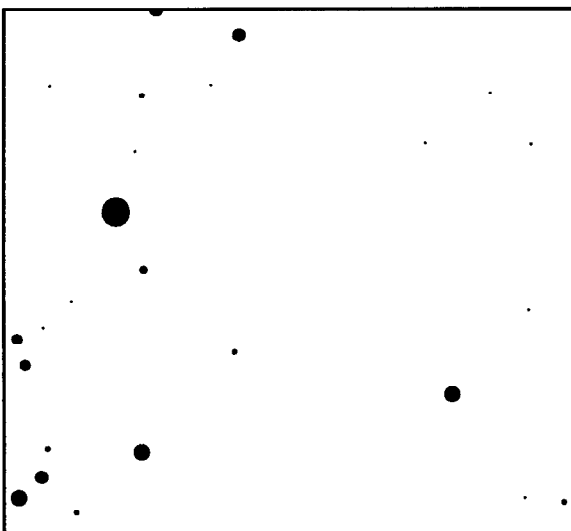
30 degree field, North up



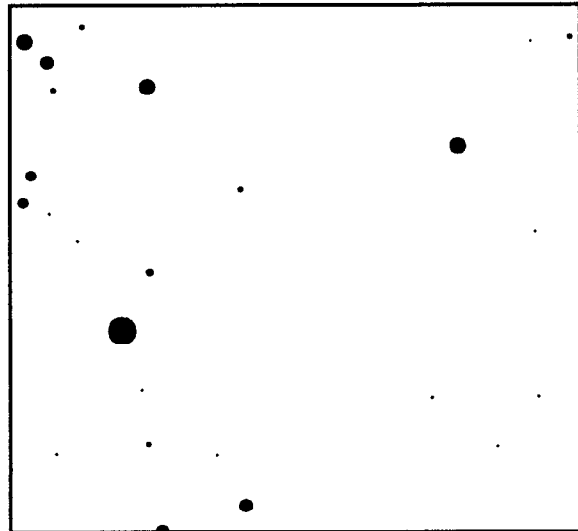
6 degree field, North down



6 degree field, North up, Mirrored



1 degree field, North down



1 degree field, North up, Mirrored

ORI MAG: 8.5 Open Cluster

6h13m49s x 12° 47'58"

NGC 2194

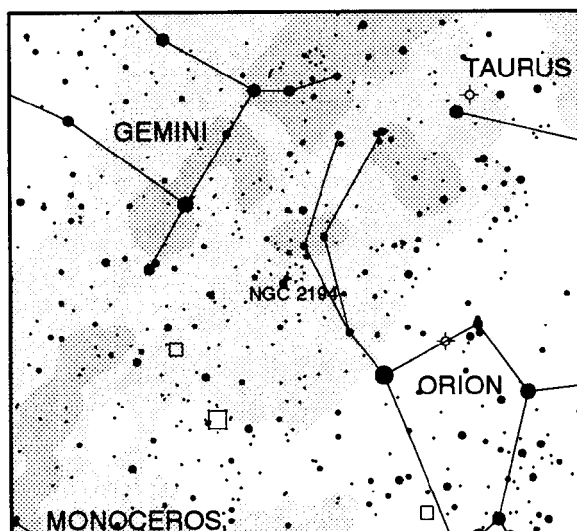
10' 0" x 10' 0" CLASS: III 1 r

29

of stars: 80 brightest star: 12.07

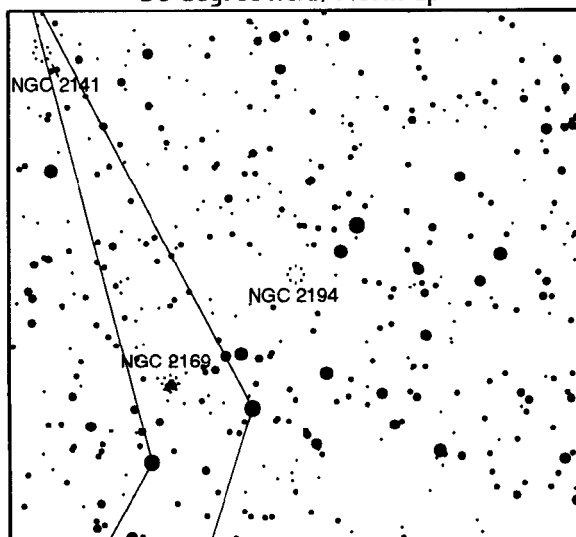
Large, rich, gradually very much compressed middle

faint, rich, look for 2169 nearby

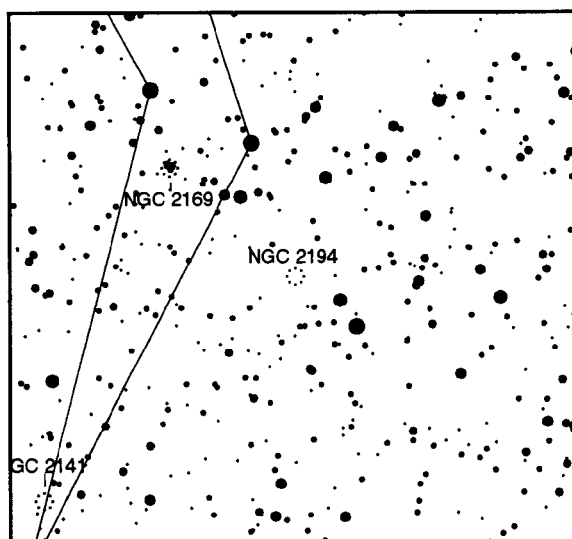


Notes: _____

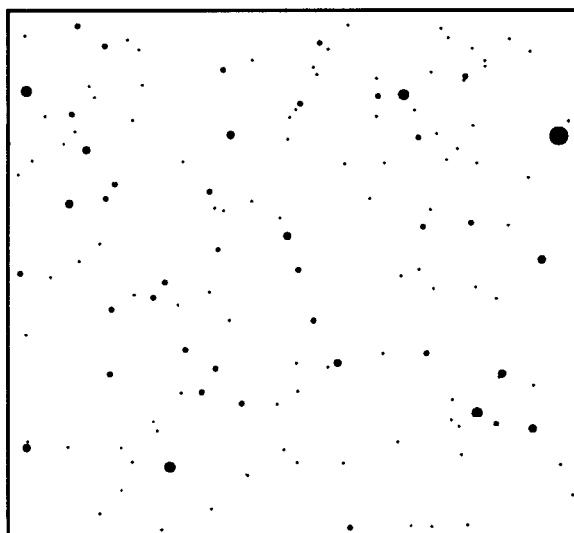
30 degree field, North up



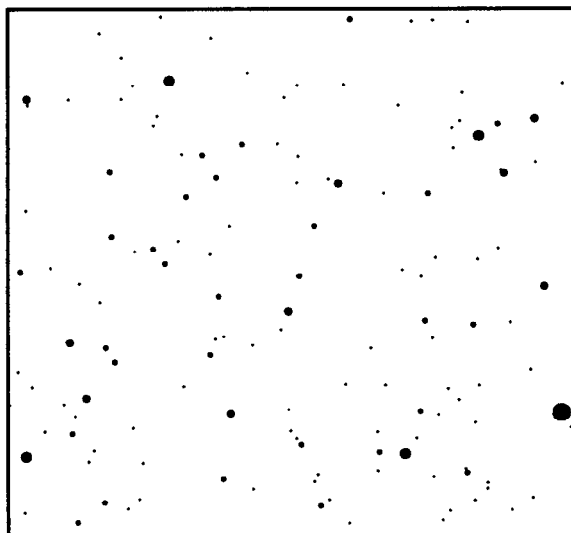
6 degree field, North down



6 degree field, North up, Mirrored



1 degree field, North down



1 degree field, North up, Mirrored

GEM MAG:13.0 Planetary Nebula 7h25m37s x 29°28'58"

NGC 2371/72

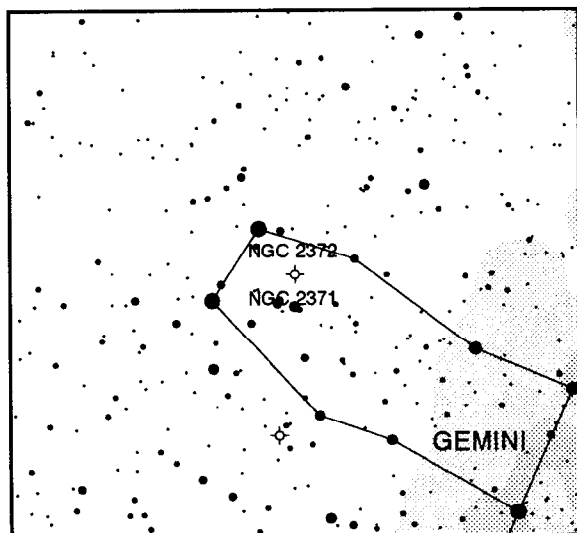
1'14" x 1'54" CLASS:3a+6/CLASS:3a(4) PK189+19.1

30

bright, small, round, brighter middle nucleus, preceding of double nebula/

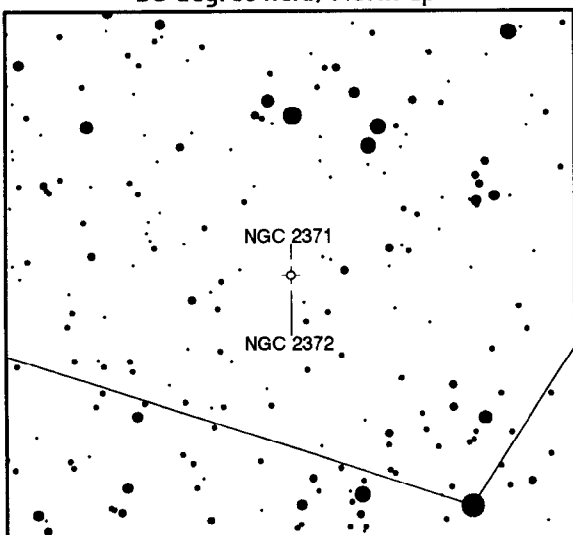
pretty bright, small, round, brighter middle nucleus, following of double nebula

faint double-lobed planetary, use filter, with mag 12.5 central*

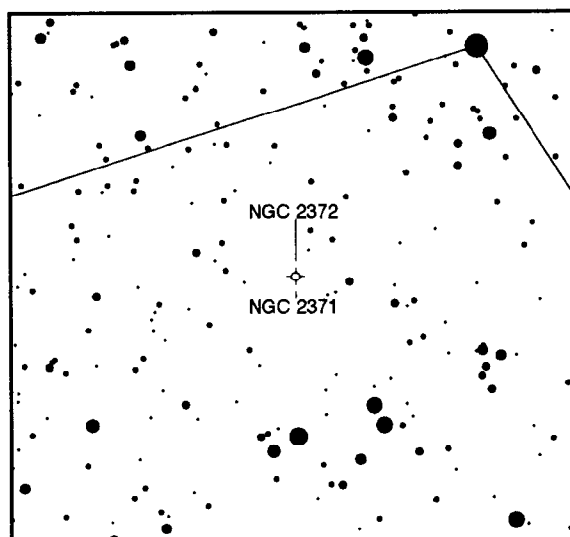


30 degree field, North up

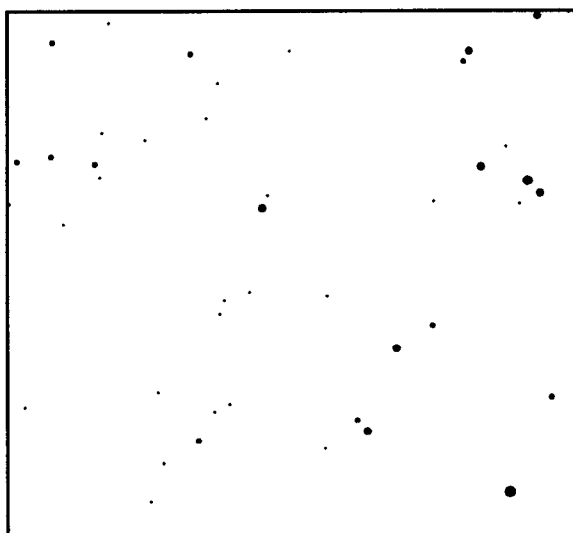
Notes: _____



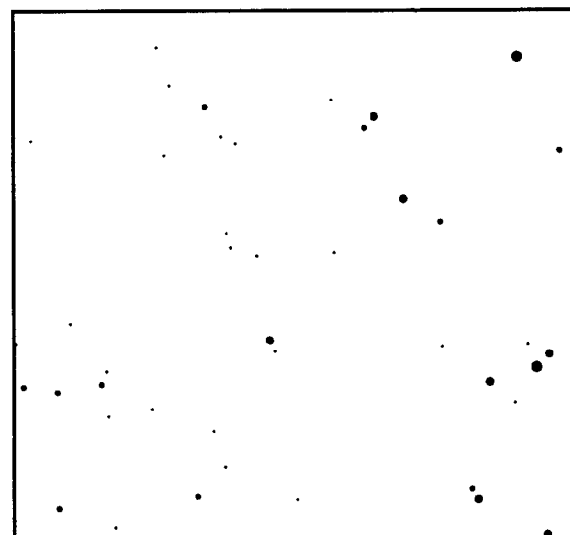
6 degree field, North down



6 degree field, North up, Mirrored



1 degree field, North down



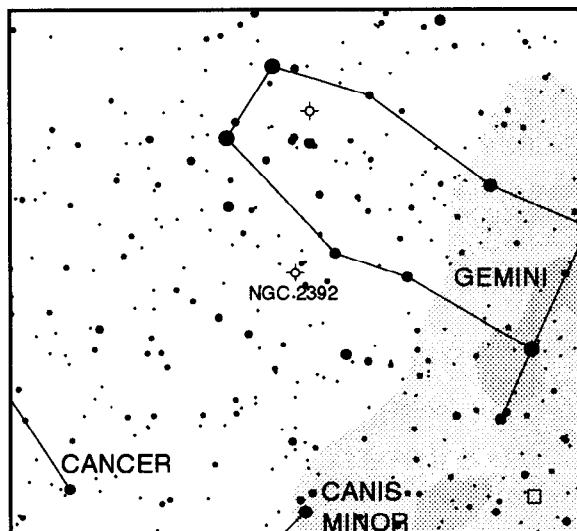
1 degree field, North up, Mirrored

GEM MAG: 8.6 Planetary Nebula 7h29m11s x 20°54'57"
PK197+17.1 1'47" x 1'43" CLASS:3b(3b)

NGC 2392
31

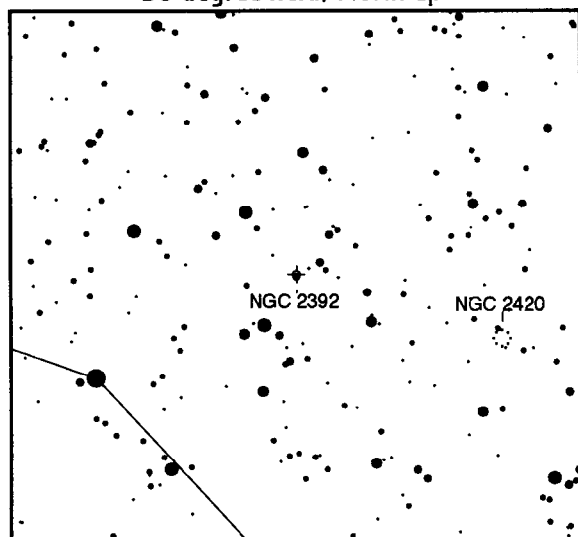
bright, small, round, 10th mag central*

Clown Face or Eskimo Nebula. At low power, it appears as a tiny out of focus star with a noticeable blue-green light.

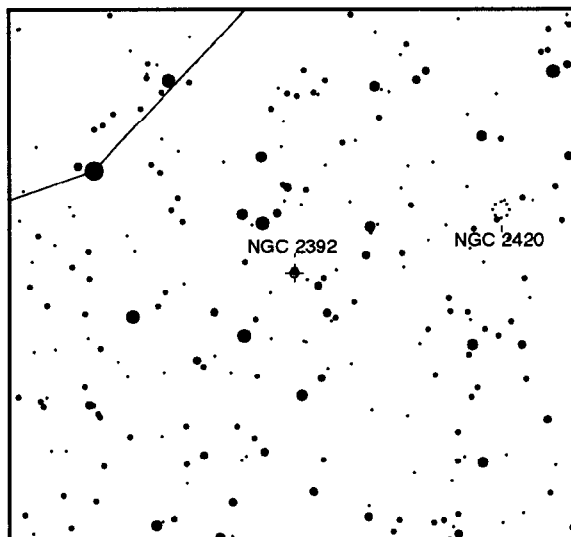


Notes: _____

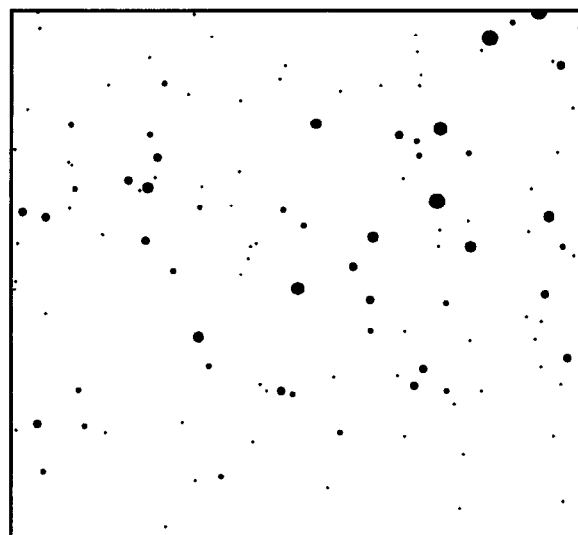
30 degree field, North up



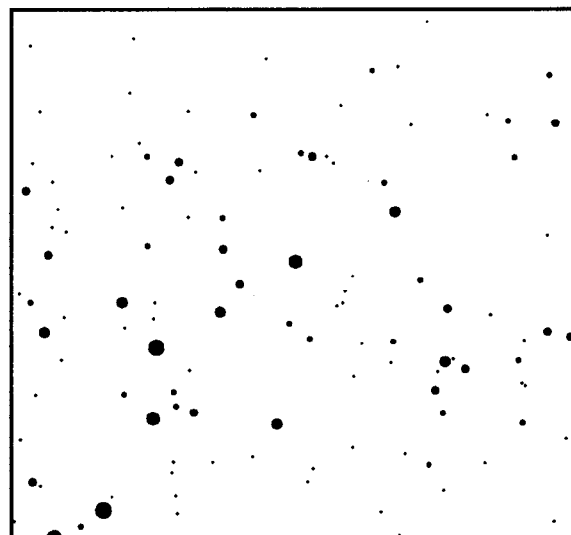
6 degree field, North down



6 degree field, North up, Mirrored



1 degree field, North down



1 degree field, North up, Mirrored

MON MAG: 5.5 Clstr w/Nebulosity 6h30m17s x 5° 3' 4"

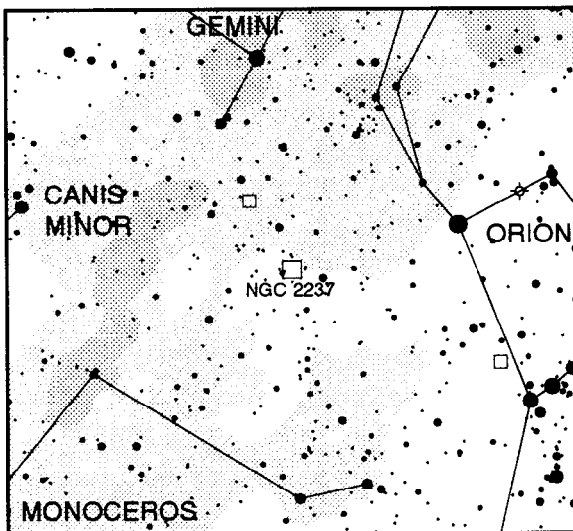
NGC 2237
32

80' 0" x 60' 0" CLASS: E

of stars: 15 brightest star: 6

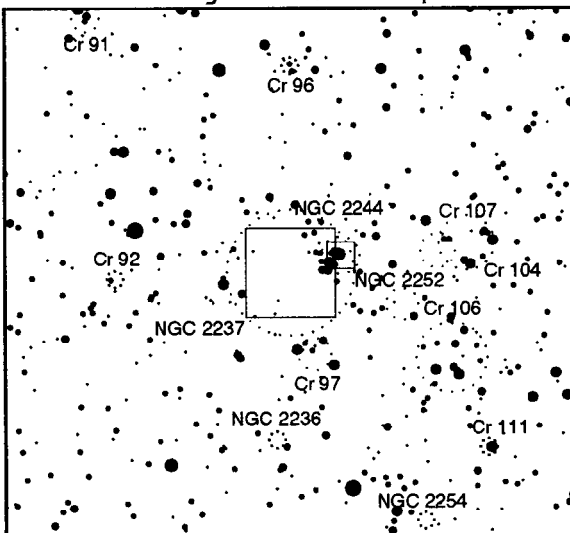
pretty bright, very very large, diffuse, part of extremely large nebulosity ring around NGC 2239

Rosette nebula. Stars are easy, but nebulosity requires dark, transparent skies.

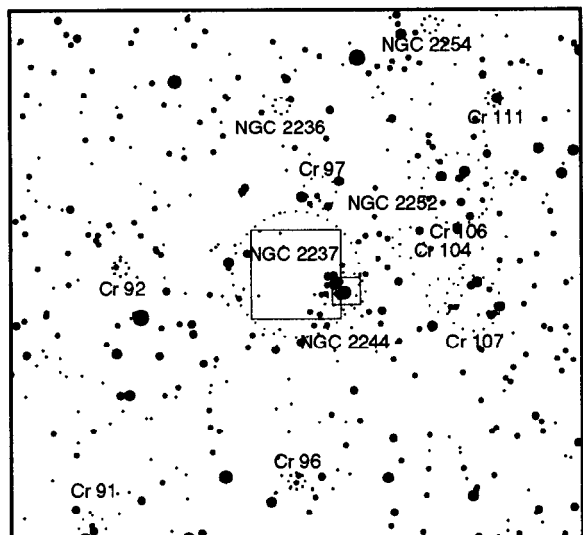


Notes: _____

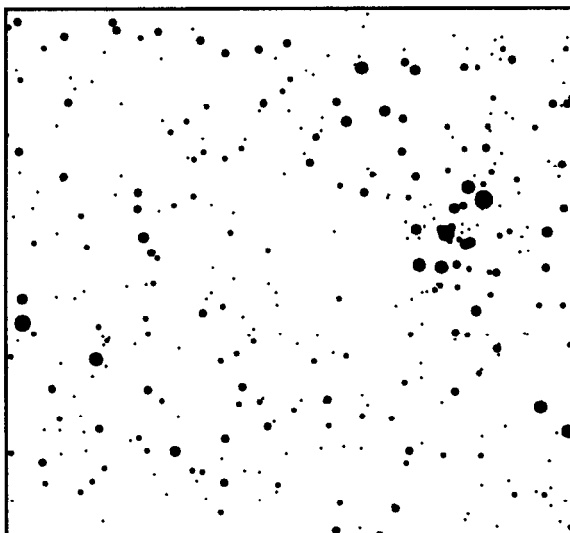
30 degree field, North up



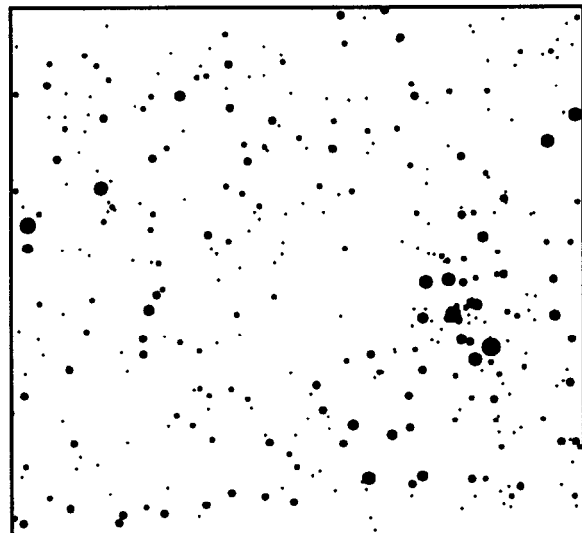
6 degree field, North down



6 degree field, North up, Mirrored



1.5 degree field, North down



1.5 degree field, North up, Mirrored

MON MAG: --- Bright Nebula

6h39m13s x 8°44' 4"

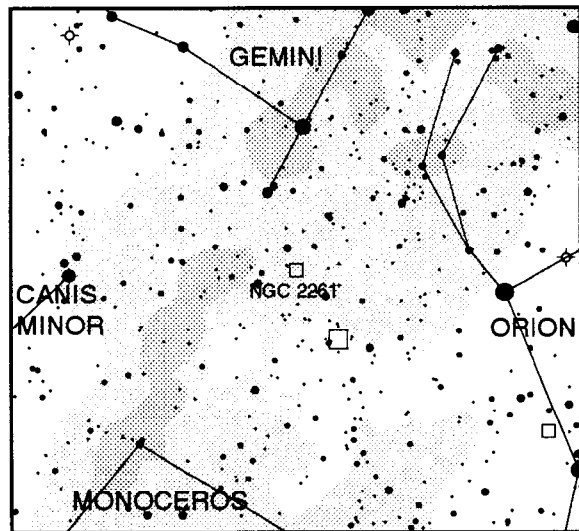
NGC 2261

2' 0" x 1' 0" CLASS: E(R)

33

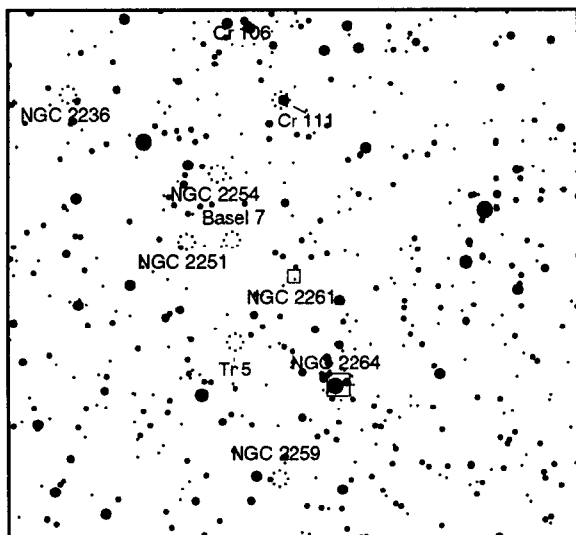
bright, very much elongated

Hubble's variable nebula, comet shape with variable * R MON involved. Appears to change shape over relatively short period of time, possibly caused by dark material orbiting R MON and casting shadows on nebula.

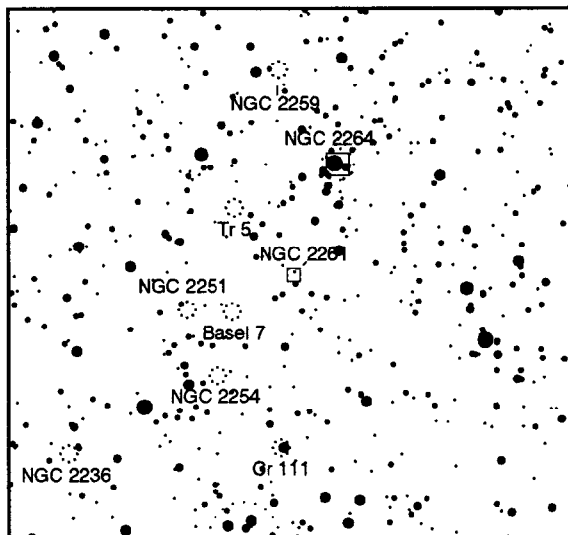


Notes: _____

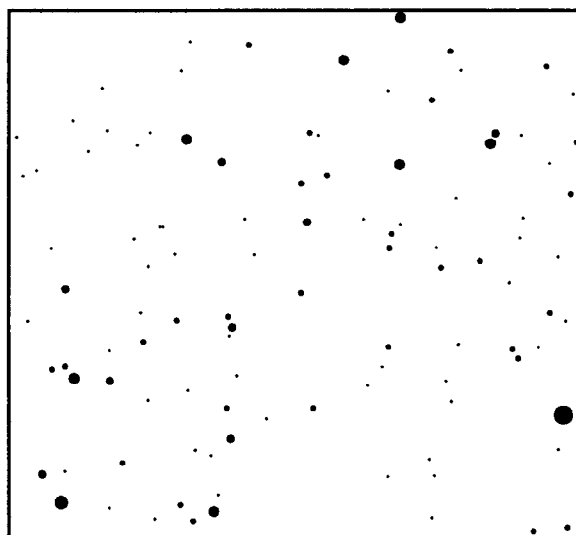
30 degree field, North up



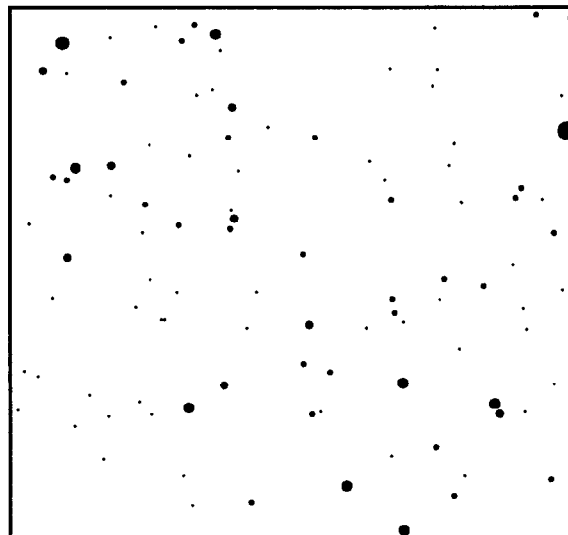
6 degree field, North down



6 degree field, North up, Mirrored



1 degree field, North down



1 degree field, North up, Mirrored

CMA MAG: --- Bright Nebula

7h17m48s x -13°13' 1"

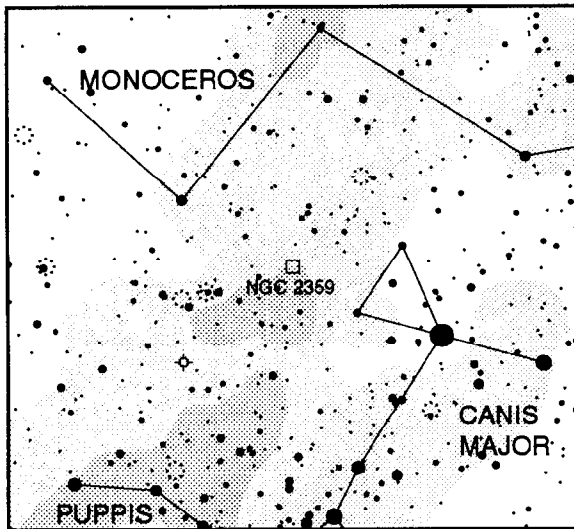
NGC 2359

8' 0" x 8' 0" CLASS:

34

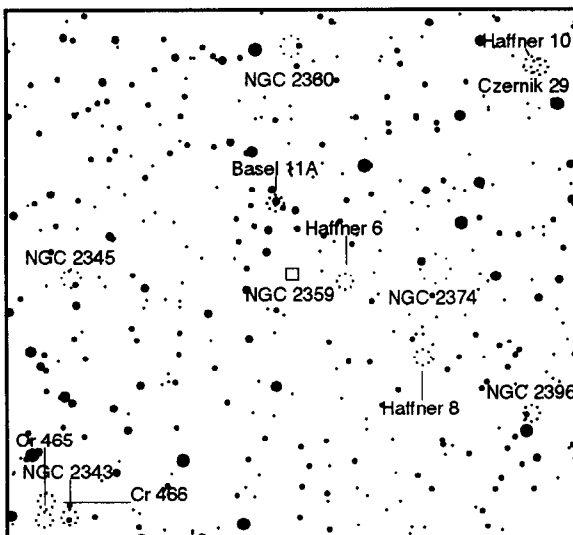
remarkable object, very faint, very very large, very irregular figure

Duck Neb, curved filaments, central * Wolf Rayet, UHC filter helps

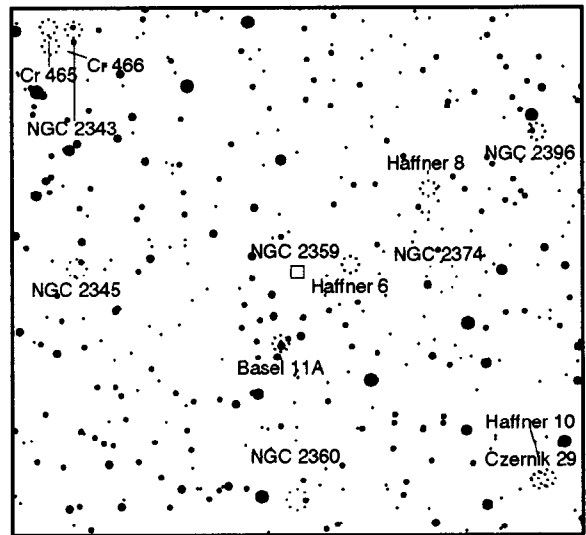


Notes: _____

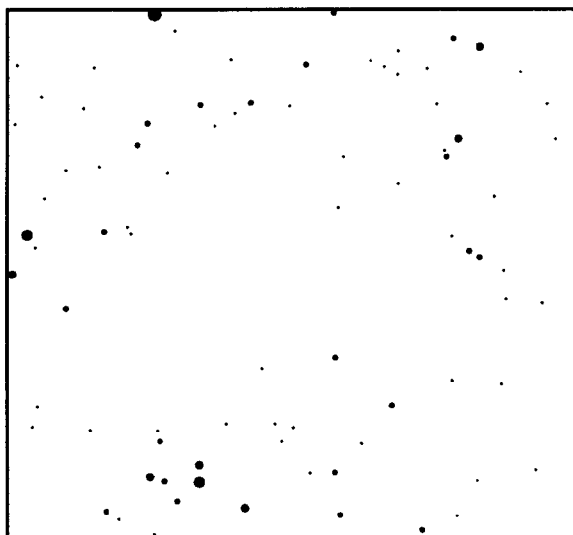
30 degree field, North up



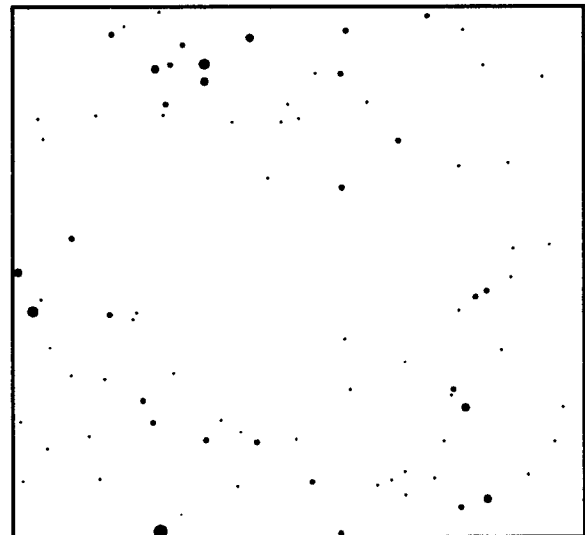
6 degree field, North down



6 degree field, North up, Mirrored



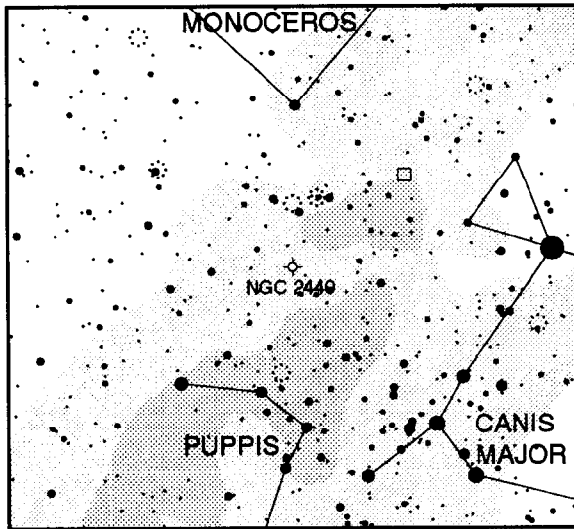
1 degree field, North down



1 degree field, North up, Mirrored

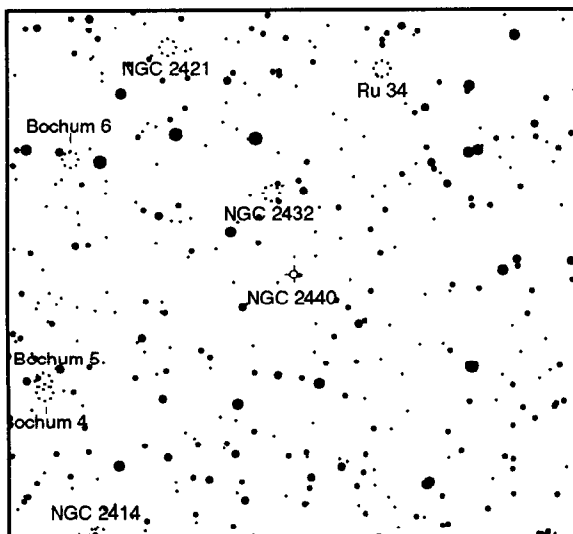
PUP MAG:11.5 Planetary Nebula 7h41m53s x -18°12'57"
 PK234+2.1 1'54" x 0'20" CLASS:5(3)
 considerably bright, not very well defined
 almost starlike, irregular at high power, 16th mag central *

NGC 2440
 35

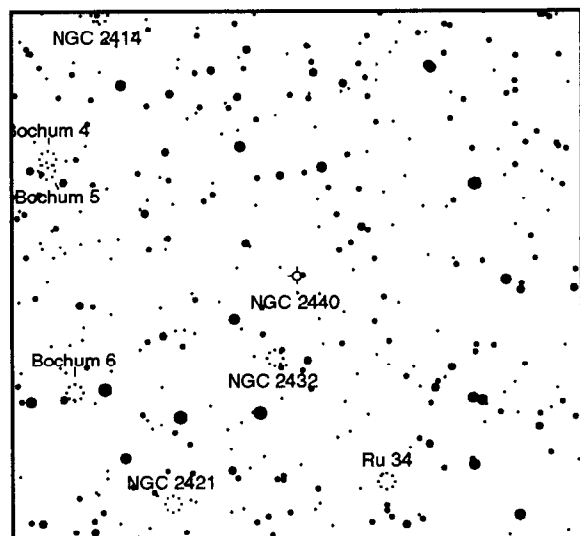


Notes: _____

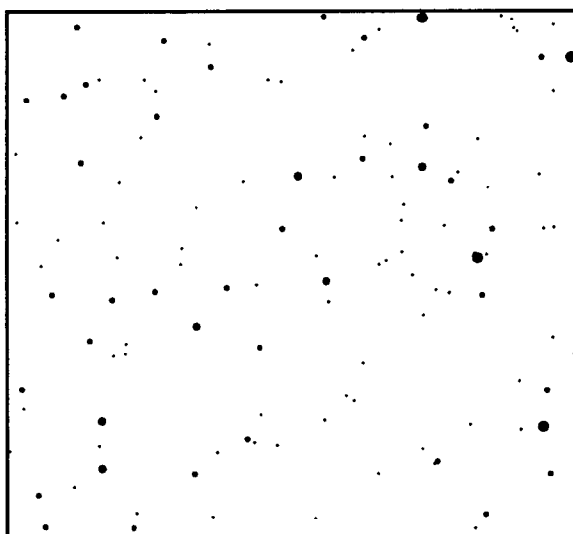
30 degree field, North up



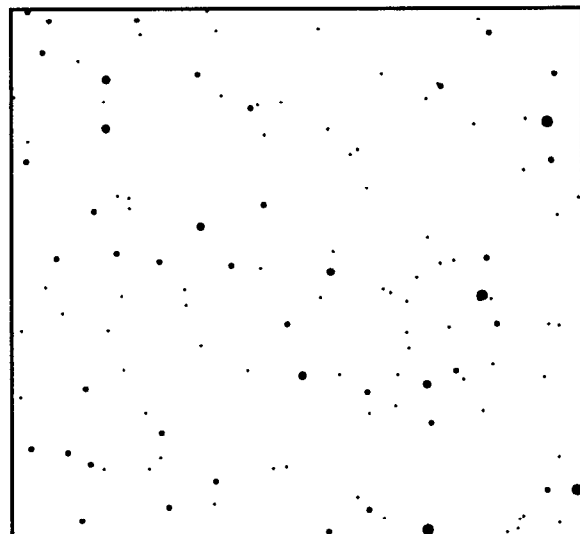
6 degree field, North down



6 degree field, North up, Mirrored



1 degree field, North down



1 degree field, North up, Mirrored

PUP MAG: 6.5 Open Cluster
22' 0" x 22' 0" CLASS: II I m

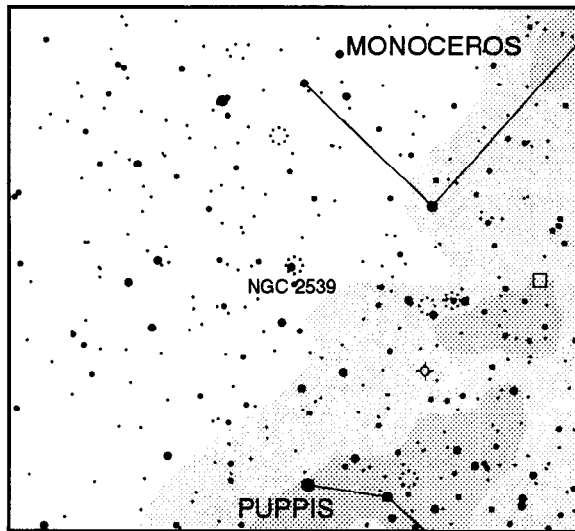
8h10m43s x -12°49'57"

NGC 2539
36

of stars: 50 brightest star: 9.15

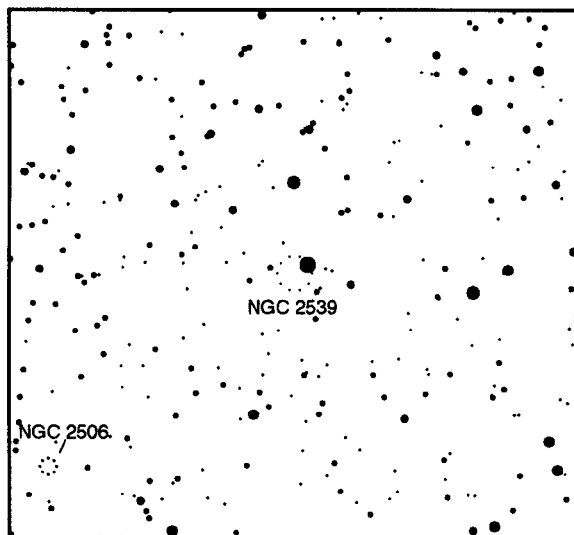
very large, rich, little compressed, *11...13

rich cluster, near M46 and M47, double * 19 PUP in field. Numerous faint stars against dark background.

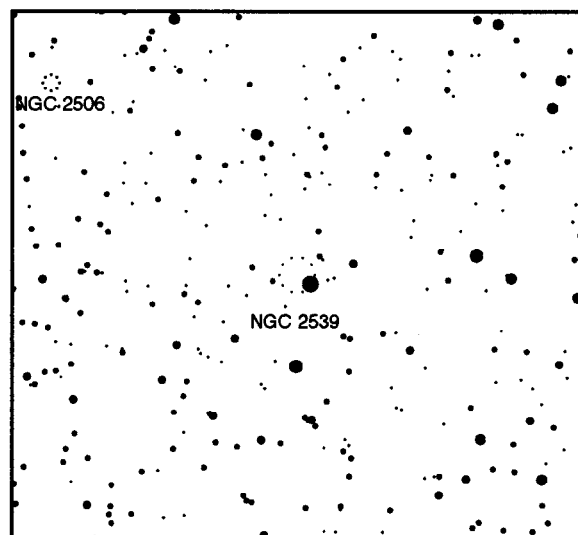


30 degree field, North up

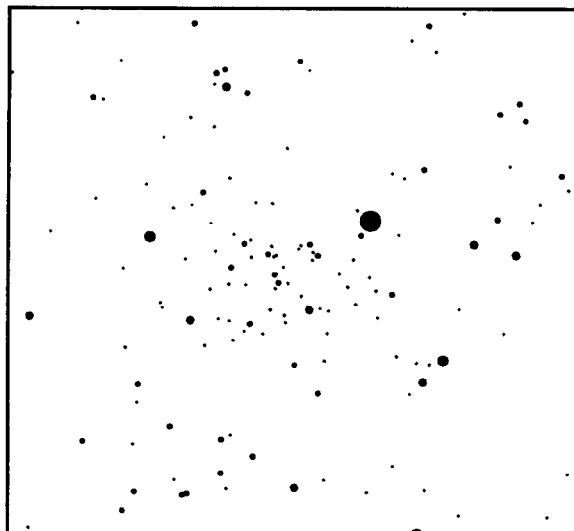
Notes: _____



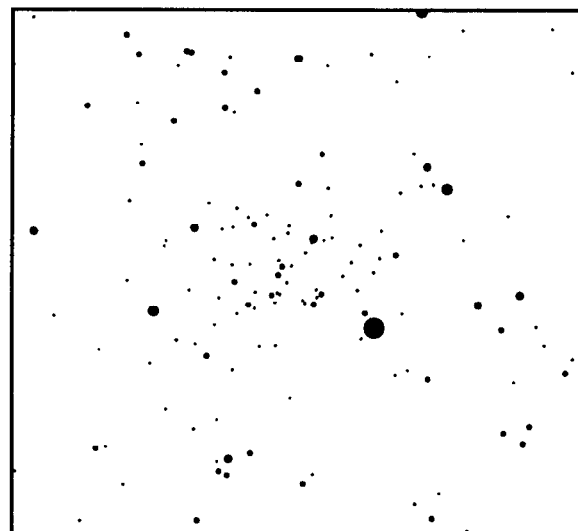
6 degree field, North down



6 degree field, North up, Mirrored



1 degree field, North down



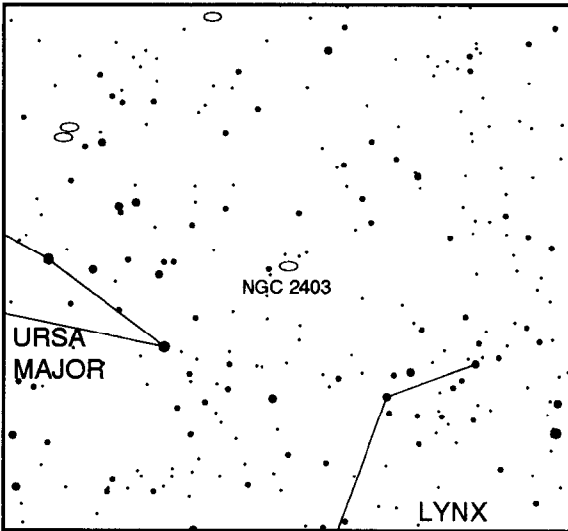
1 degree field, North up, Mirrored

CAM MAG: 9.5 Galaxy
18'48" x 18'48" CLASS: Sc

7h36m47s x 65°37' 4"
PA (dgr): 127

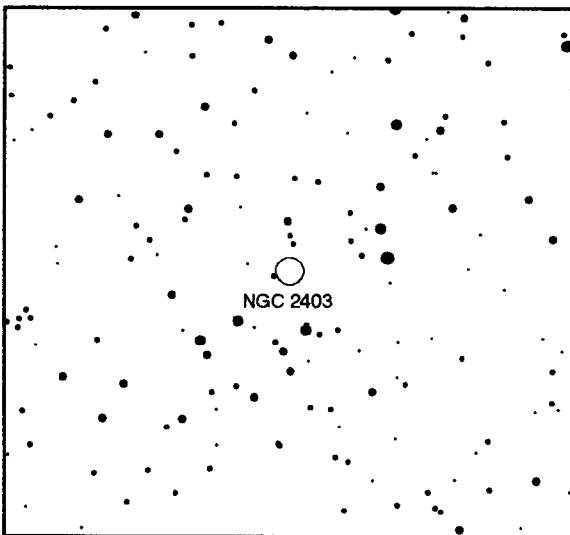
NGC 2403
37

remarkable object, considerably bright, extremely large, very much elongated, very gradually much brighter middle nucleus.
in M81 group, many well resolved irregular arms, broad bar, radio source, arms require larger scope.

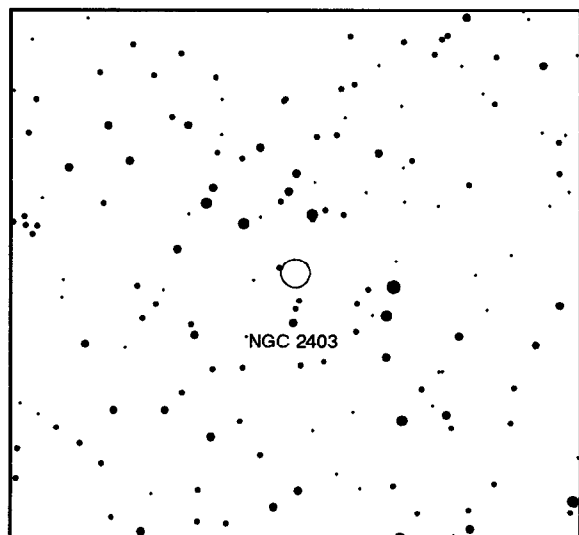


30 degree field, North up

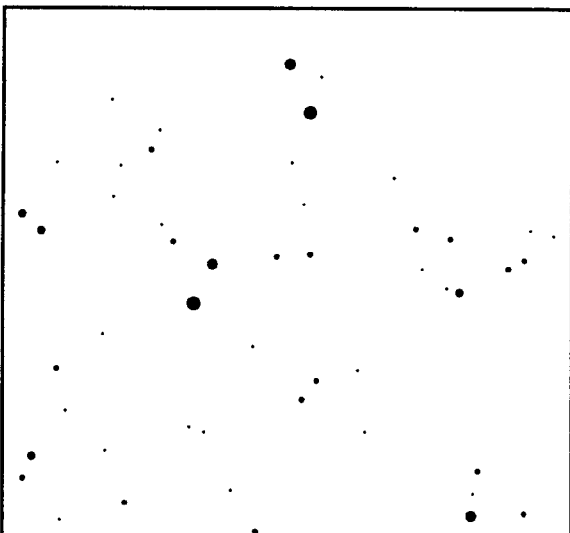
Notes: _____



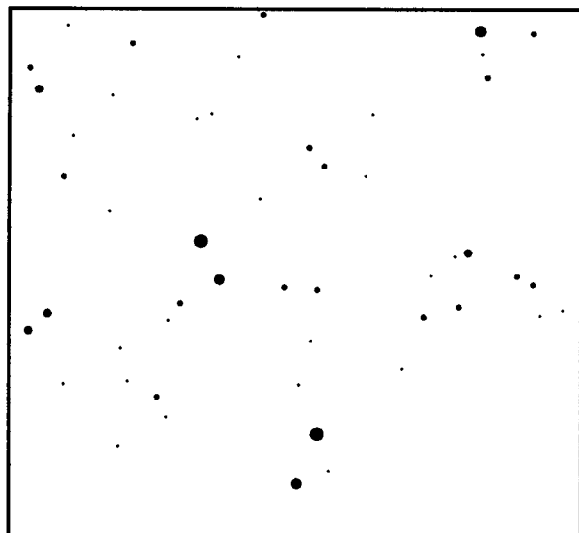
6 degree field, North down



6 degree field, North up, Mirrored



1 degree field, North down



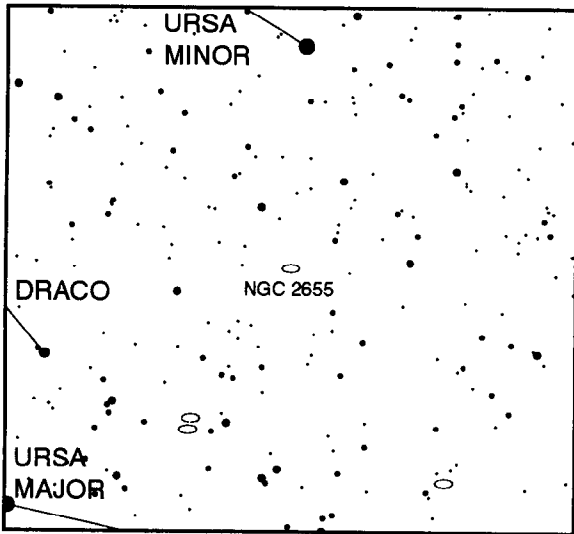
1 degree field, North up, Mirrored

CAM MAG:11.5 Galaxy
7'30" x 6'48" CLASS:S(B)a

8h55m37s x 78°13' 0"

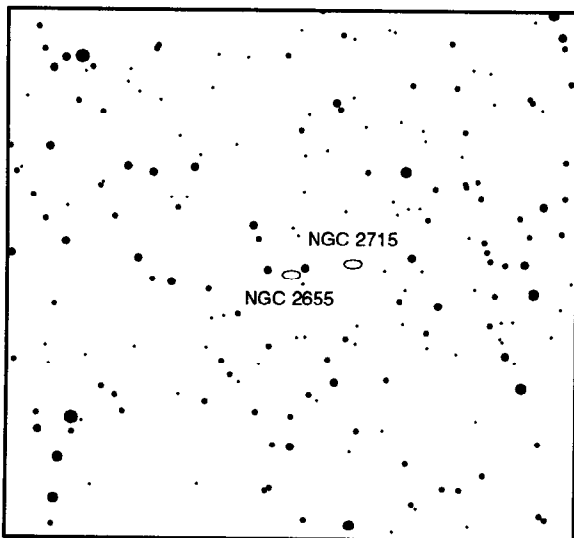
NGC 2655
38

very bright, considerably large, little elongated , gradually suddenly very much brighter
middle, diffuse
large nucleus with asymmetrical dark matter in lens, faint outer whirls

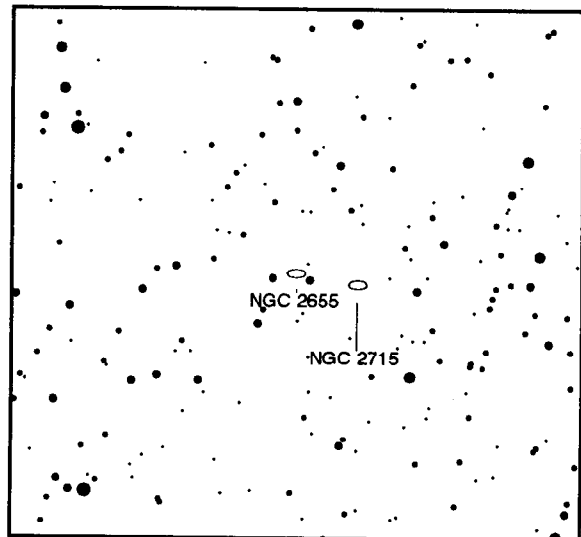


Notes: _____

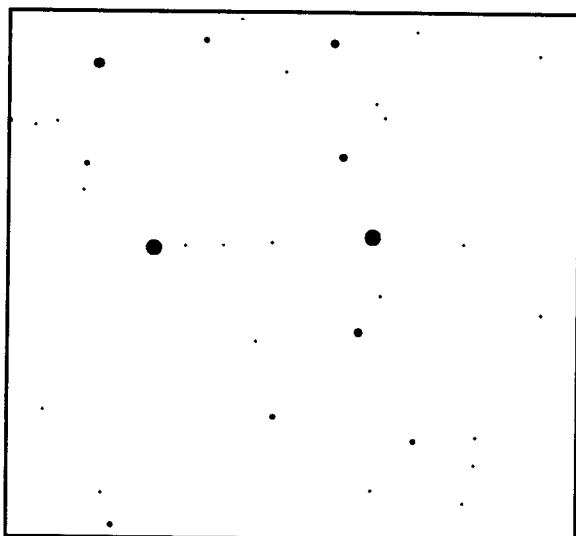
30 degree field, North up



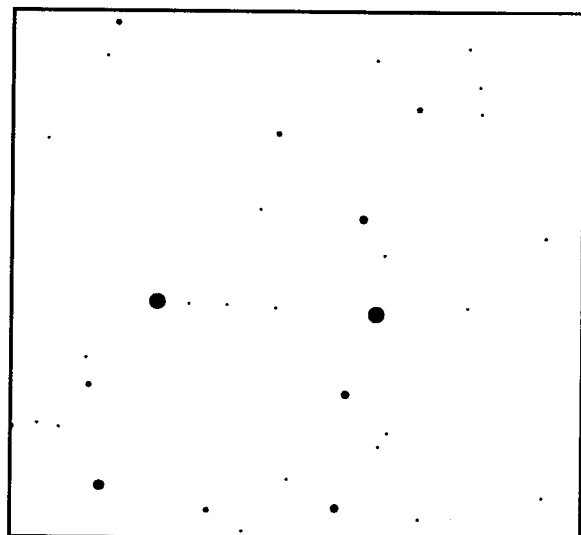
6 degree field, North down



6 degree field, North up, Mirrored

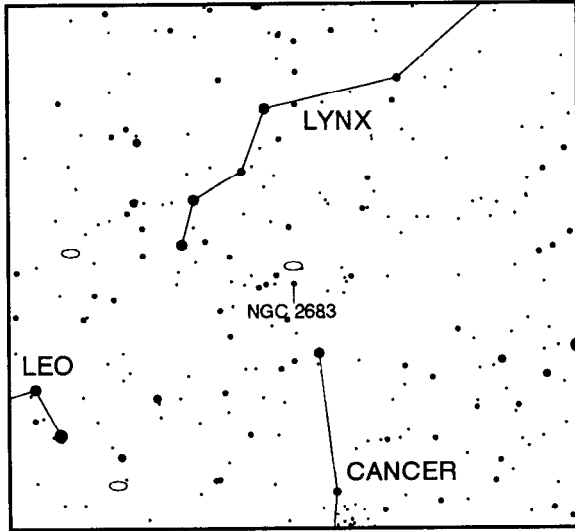


1 degree field, North down



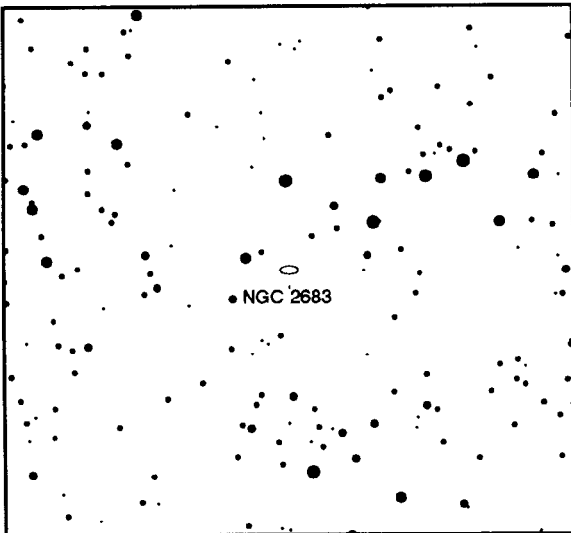
1 degree field, North up, Mirrored

LYN MAG:11.0 Galaxy 8h52m43s x 33°24'57" NGC 2683
 9'12" x 3'36" CLASS:Sb PA (dgr): 44 39
 very bright, very large, very much elongated, gradually much brighter middle
 peanut-shaped bulge, many filaments, arm with dark lanes 1 side, high surface
 brightness

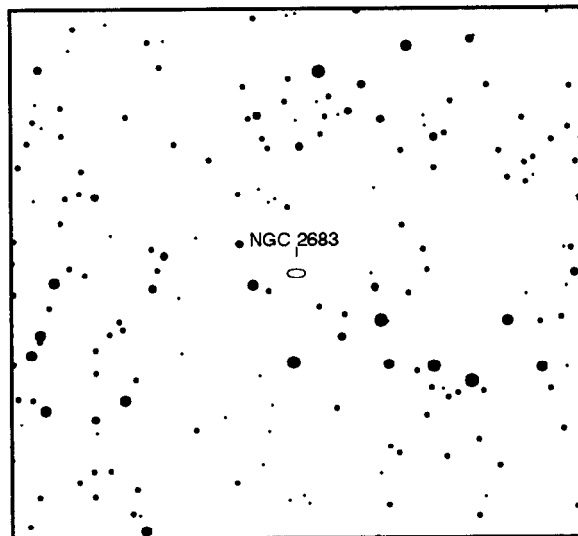


Notes: _____

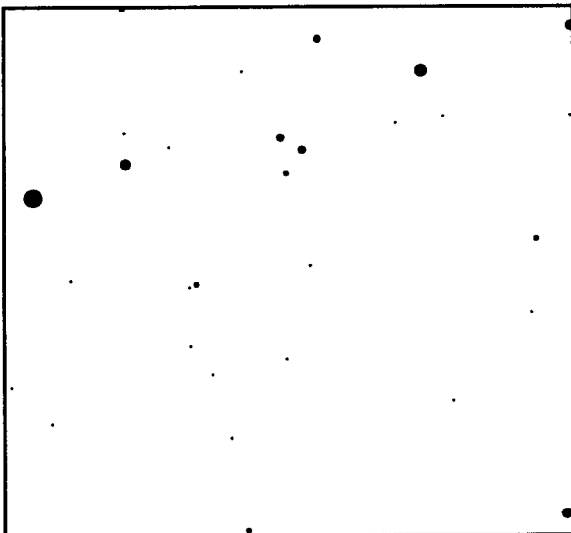
30 degree field, North up



6 degree field, North down



6 degree field, North up, Mirrored



1 degree field, North down



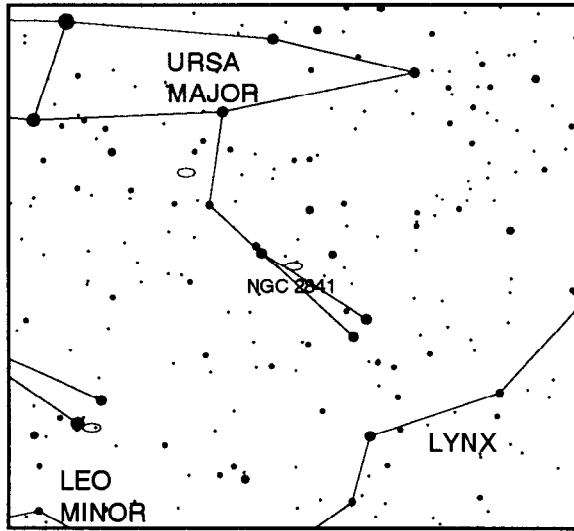
1 degree field, North up, Mirrored

UMA MAG:10.5 Galaxy
7'24" x 4'30" CLASS:Sb

9h21m59s x 50°59' 1"
PA (dgr):147

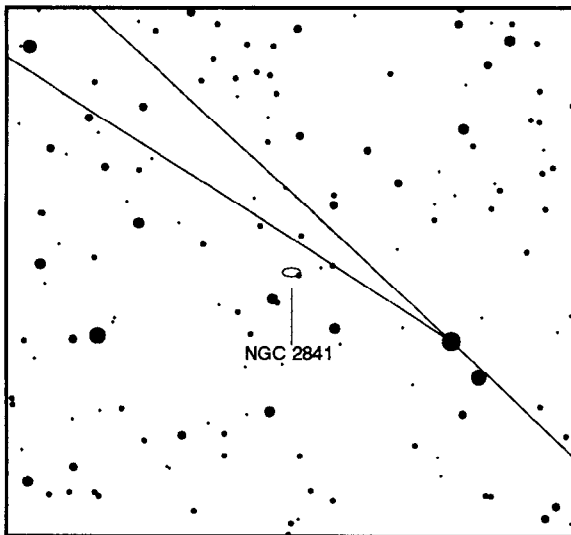
NGC 2841
40

very bright, large, very much elongated, very suddenly much brighter middle
fine spiral with symmetrical whorls, high surface brightness, shows in binoculars or
finder

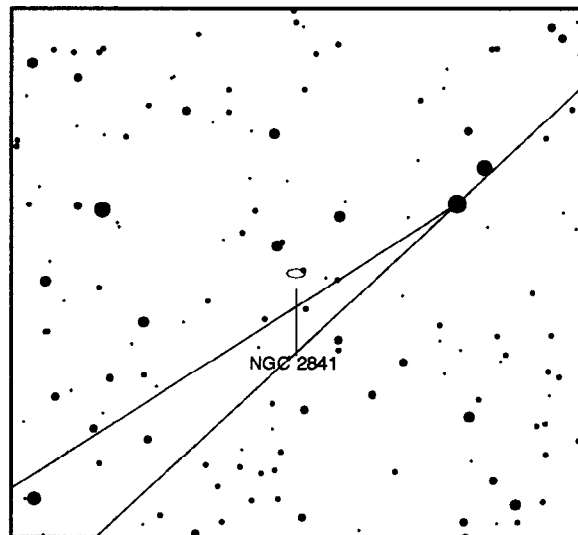


30 degree field, North up

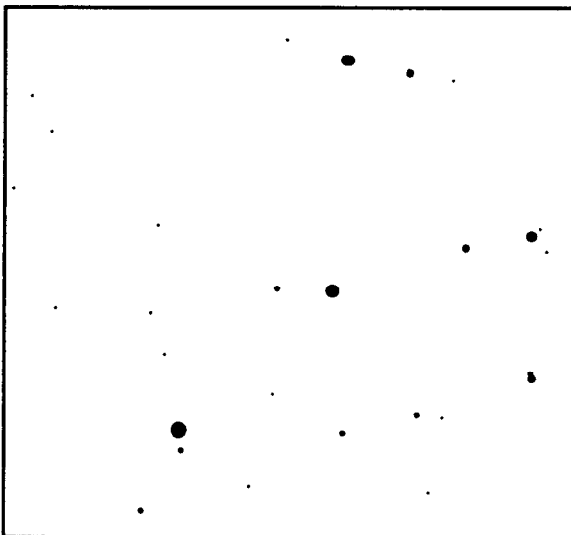
Notes: _____



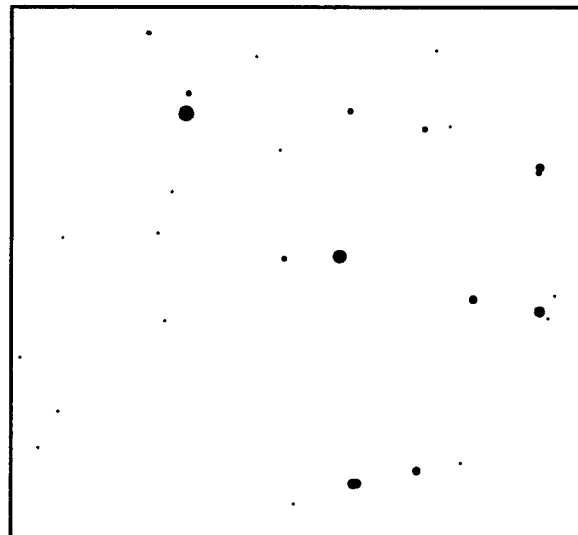
6 degree field, North down



6 degree field, North up, Mirrored



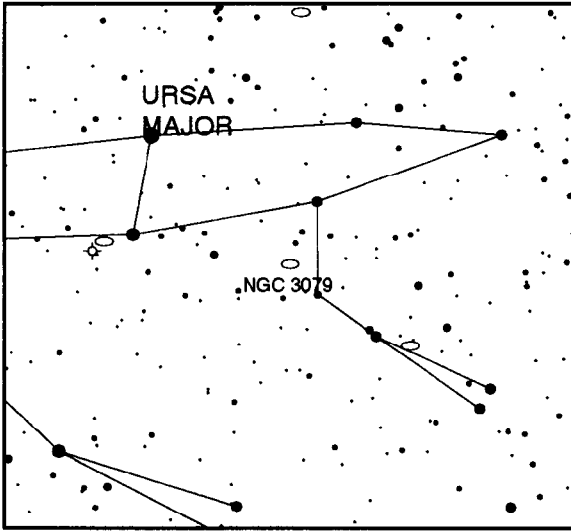
1 degree field, North down



1 degree field, North up, Mirrored

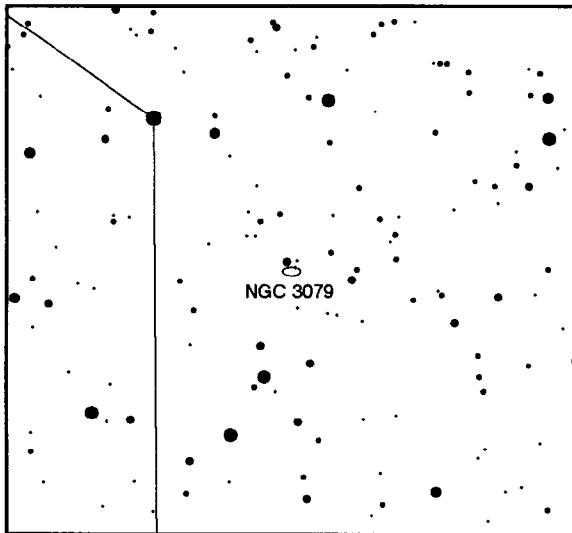
UMA MAG:11.2 Galaxy 10h 1m59s x 55°40'59"
 9'42" x 2'36" CLASS:Sb PA (dgr):165
 very bright, large, much elongated, long streak tilted N-S
 edge-on spiral

NGC 3079
 41

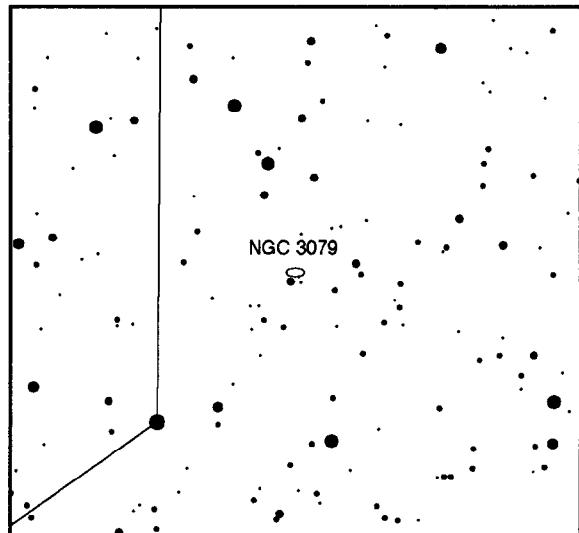


30 degree field, North up

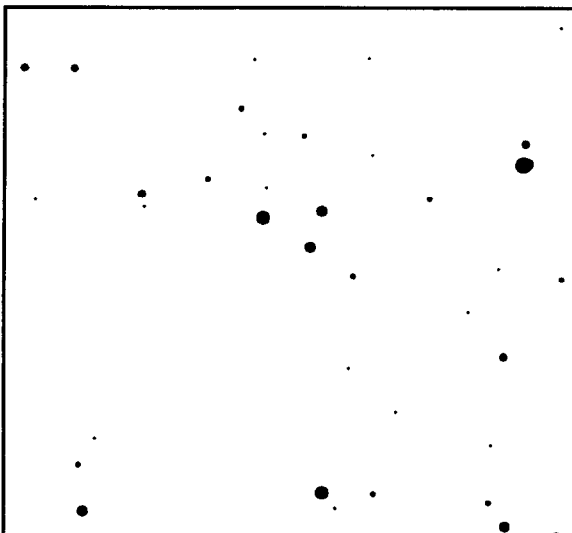
Notes: _____



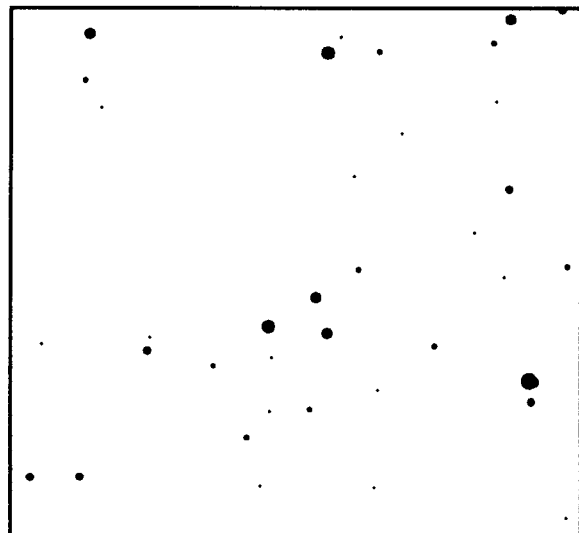
6 degree field, North down



6 degree field, North up, Mirrored



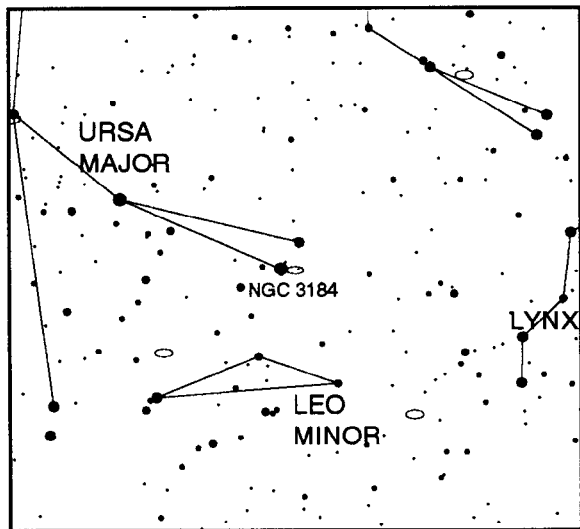
1 degree field, North down



1 degree field, North up, Mirrored

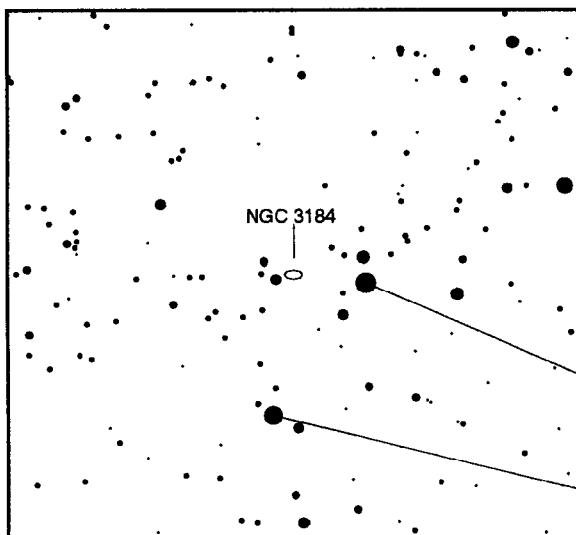
UMA MAG:10.4 Galaxy 10h18m17s x 41°25' 1"
 9'30" x 8'48" CLASS:Sc PA (dgr):135
 pretty bright, very large, round, very gradually brighter middle
 smooth lens with spiral pattern of dark markings

NGC 3184
 42

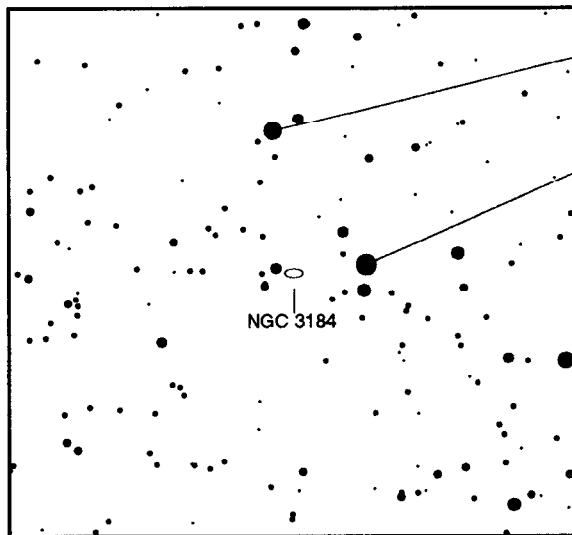


30 degree field, North up

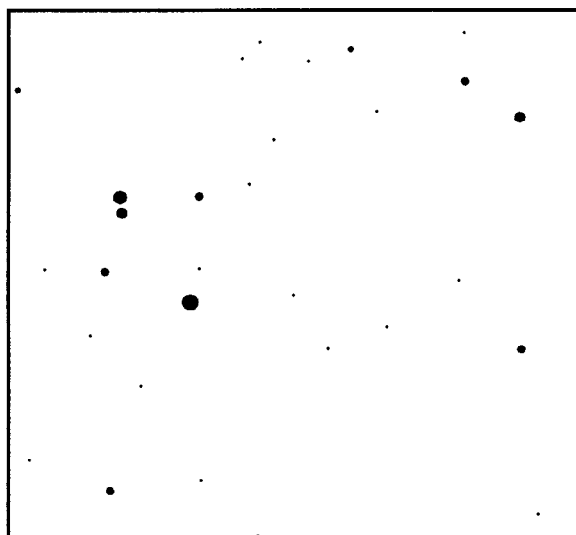
Notes: _____



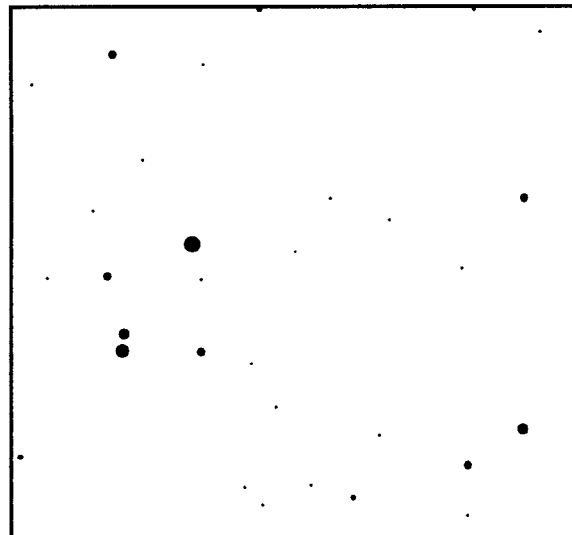
6 degree field, North down



6 degree field, North up, Mirrored



1 degree field, North down



1 degree field, North up, Mirrored

UMA MAG:11.8 Galaxy

11h46m 5s x 47°30' 3"

NGC 3877

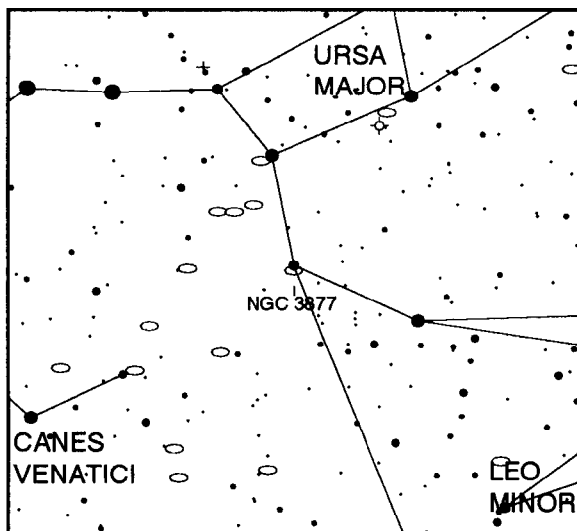
6'36" x 1'12" CLASS:Sc

PA (dgr): 35

43

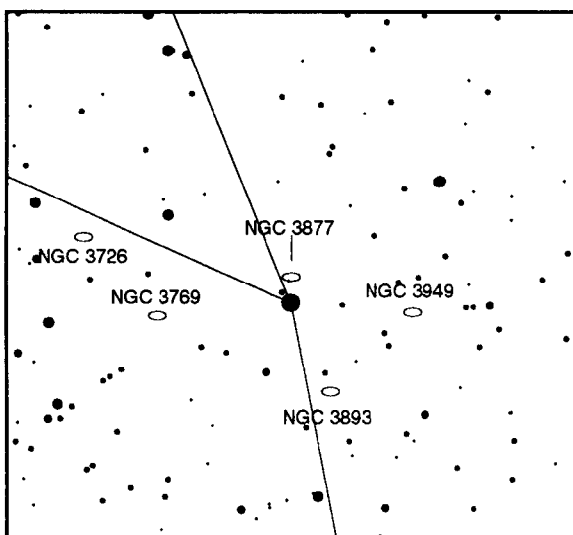
bright, large, much elongated

edge on spiral, 16' south from Chi UMA. * superimposed on nucleus.

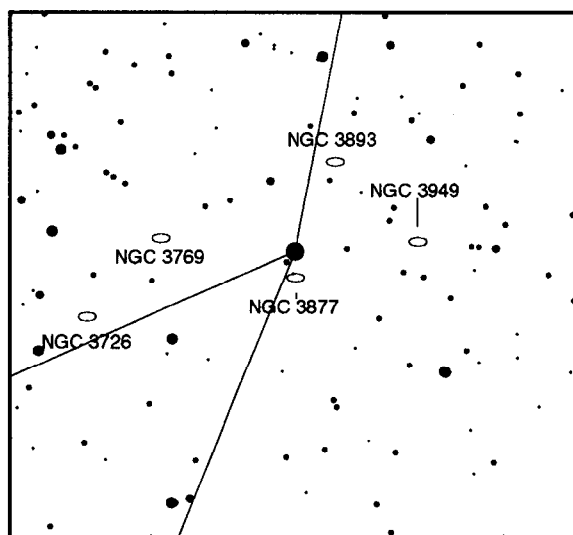


Notes: _____

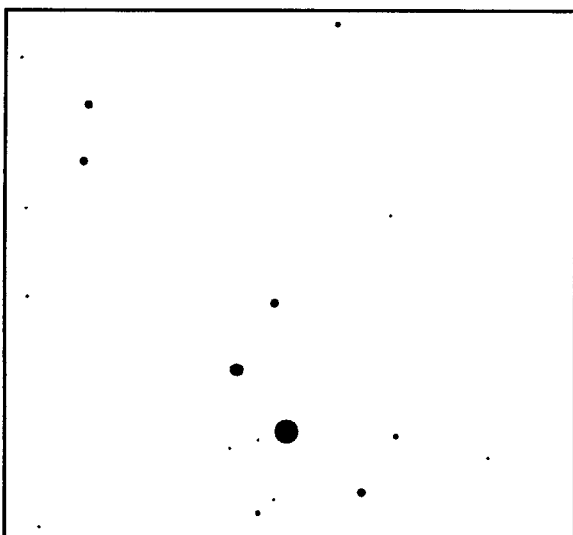
30 degree field, North up



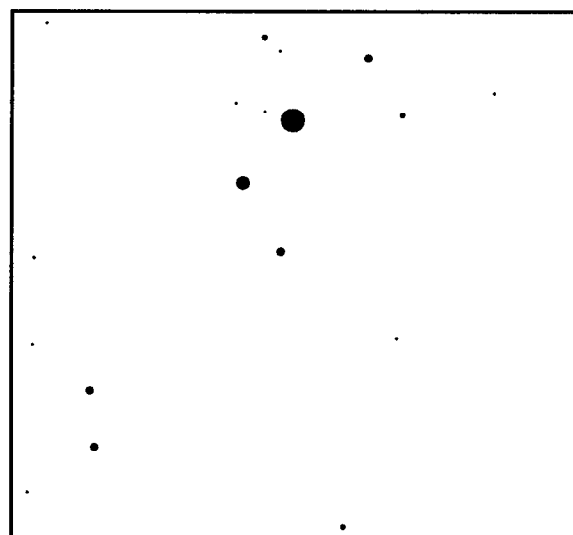
6 degree field, North down



6 degree field, North up, Mirrored



1 degree field, North down



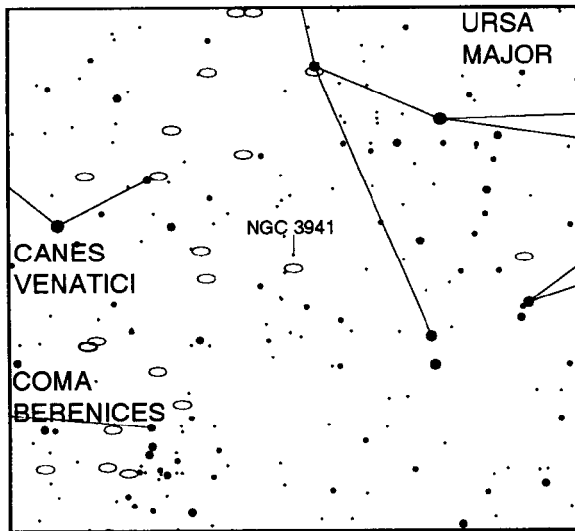
1 degree field, North up, Mirrored

UMA MAG:11.3 Galaxy
4'36" x 3'30" CLASS:E3

11h52m54s x 36°59' 2"
PA (dgr): 10

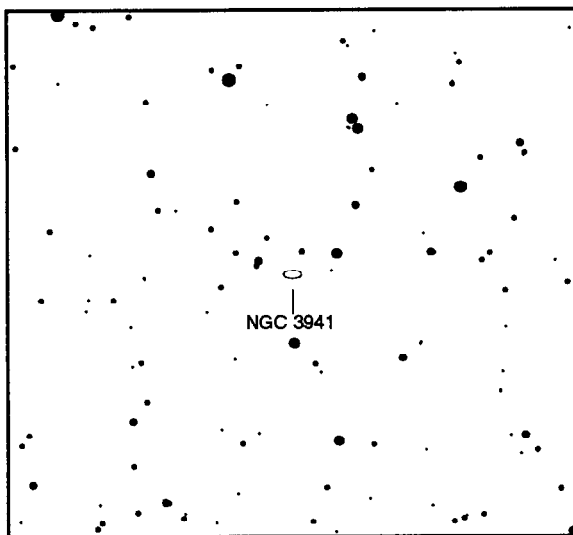
NGC 3941
44

very bright, pretty large, round, suddenly much brighter middle
small, bright elliptical

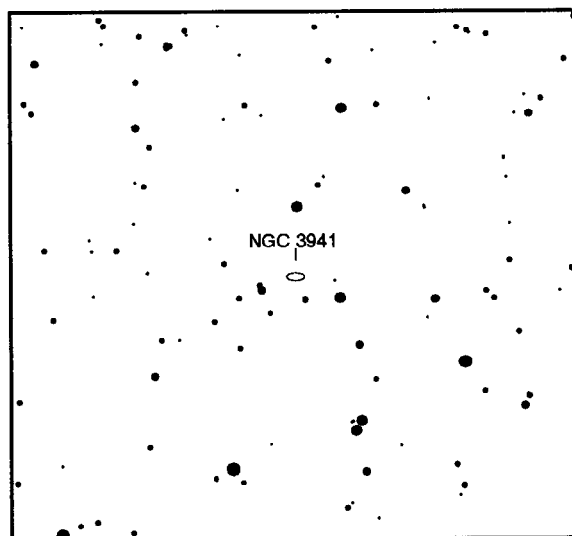


Notes: _____

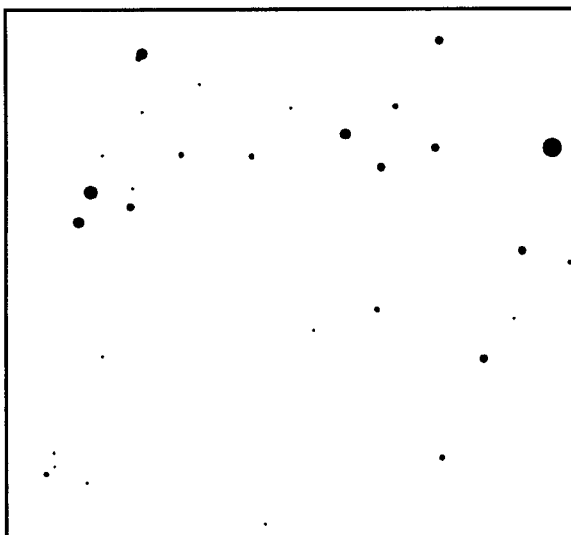
30 degree field, North up



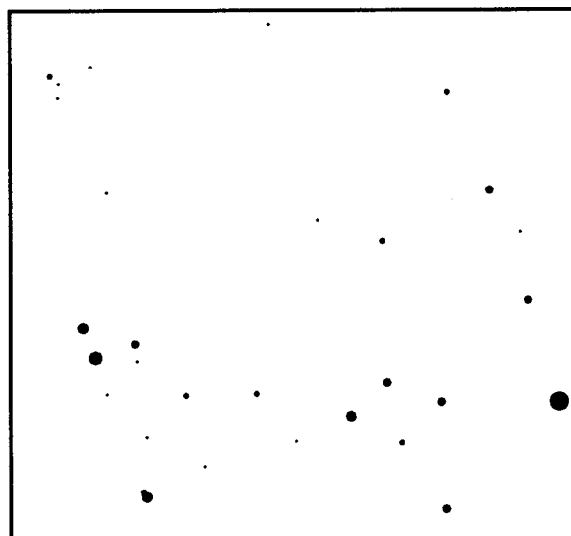
6 degree field, North down



6 degree field, North up, Mirrored



1 degree field, North down



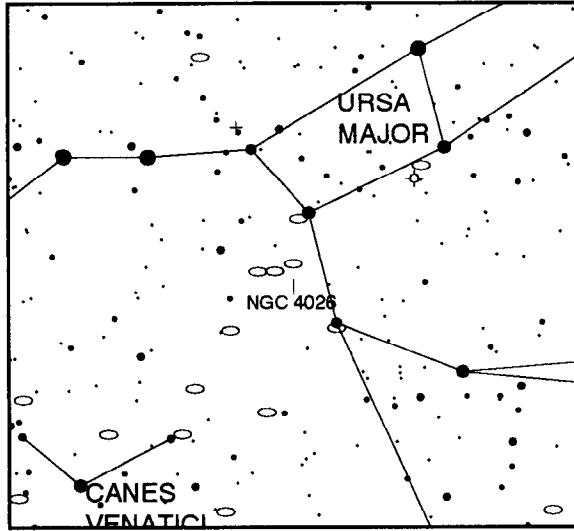
1 degree field, North up, Mirrored

UMA MAG:11.5 Galaxy
5'30" x 1' 6" CLASS:E8

11h59m24s x 50°58' 2"
PA (dgr):178

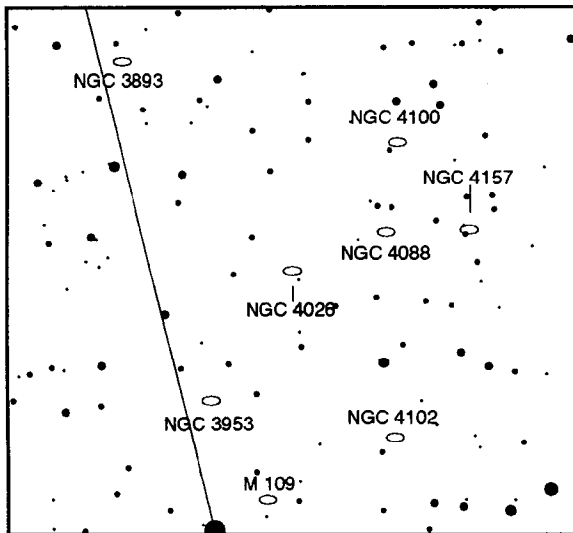
NGC 4026
45

very bright, considerably large, much elongated, very suddenly very much brighter
middle, bright nucleus
edge on lens shape, stellar nucleus with faint outer portions.

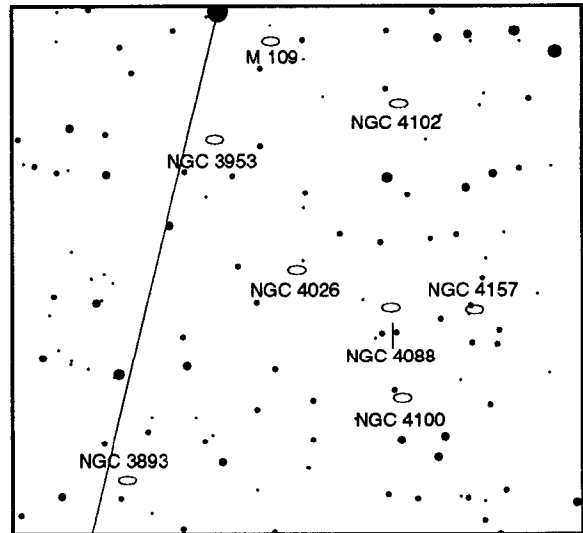


Notes: _____

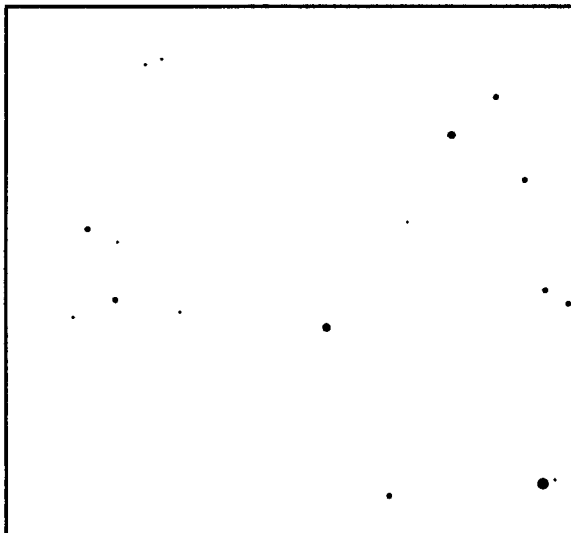
30 degree field, North up



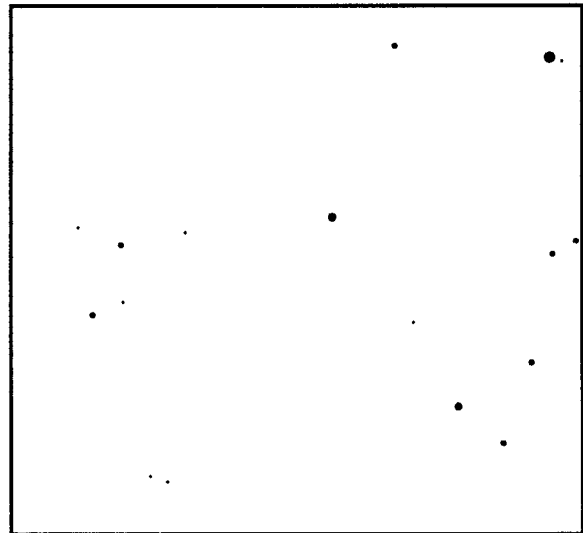
6 degree field, North down



6 degree field, North up, Mirrored



1 degree field, North down



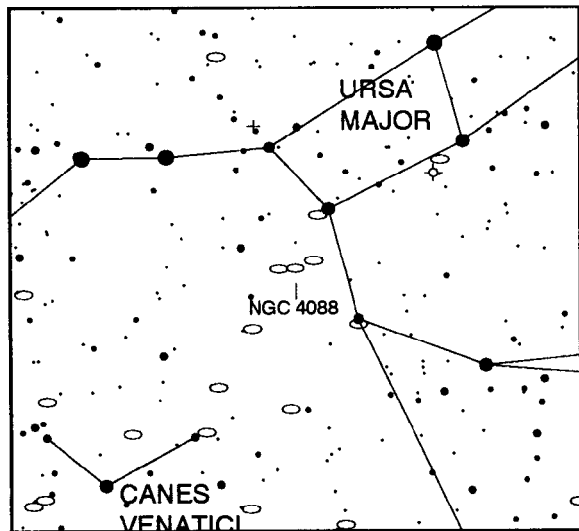
1 degree field, North up, Mirrored

UMA MAG:11.2 Galaxy
6'54" x 2'12" CLASS:Sb

12h 5m36s x 50°32'59"

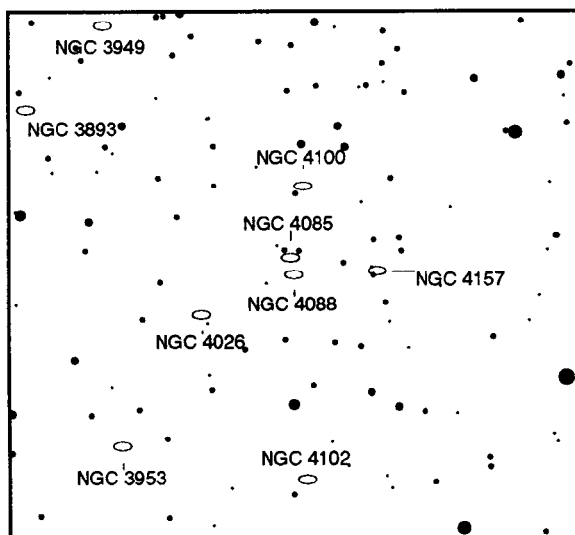
NGC 4088
46

bright, considerably large, elongated 55, little brighter middle
Paired with NGC 4085 11' to south, distorted spiral arms, extended mass on NE tip,
mottled

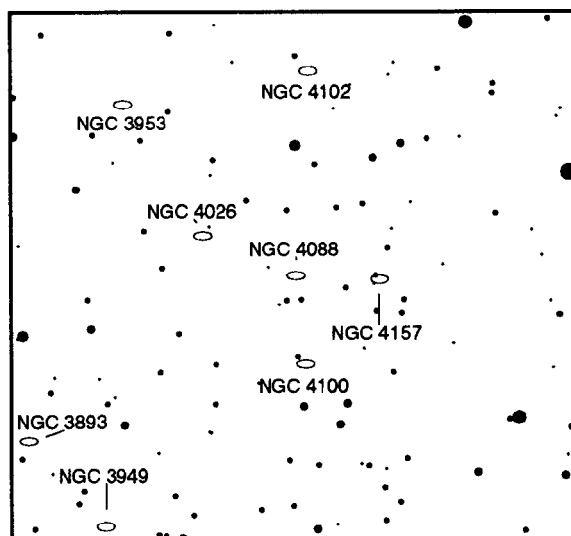


Notes: _____

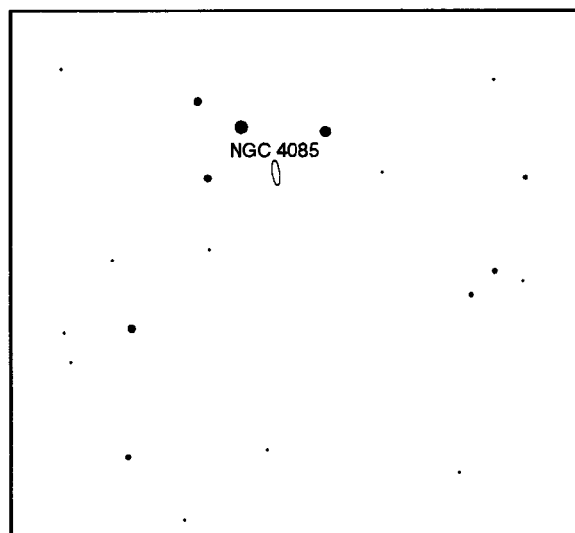
30 degree field, North up



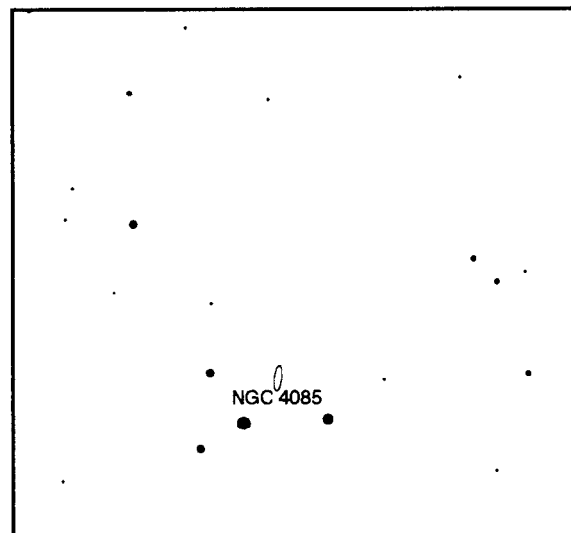
6 degree field, North down



6 degree field, North up, Mirrored



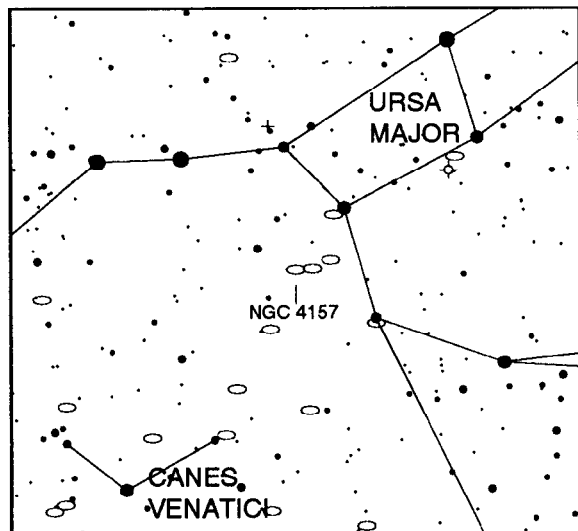
1 degree field, North down



1 degree field, North up, Mirrored

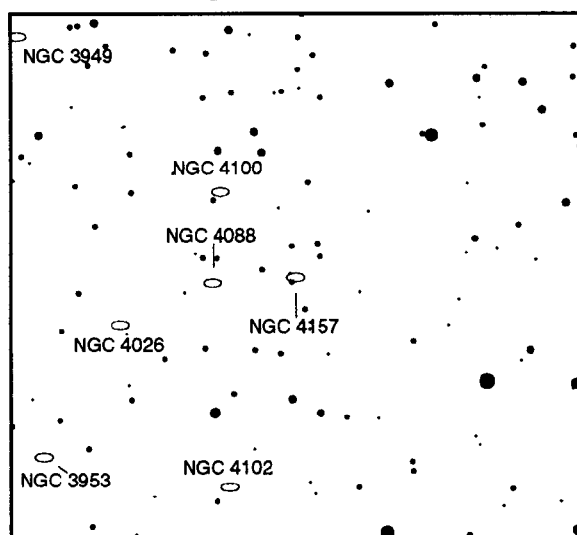
UMA MAG:11.9 Galaxy 12h11m 6s x 50°30' 1"
 8'42" x 1'18" CLASS:Sb PA (dgr): 66
 pretty faint, considerably large, very much elongated
 home of SN 1937a, 1955a, edge on narrow streak

NGC 4157
 47

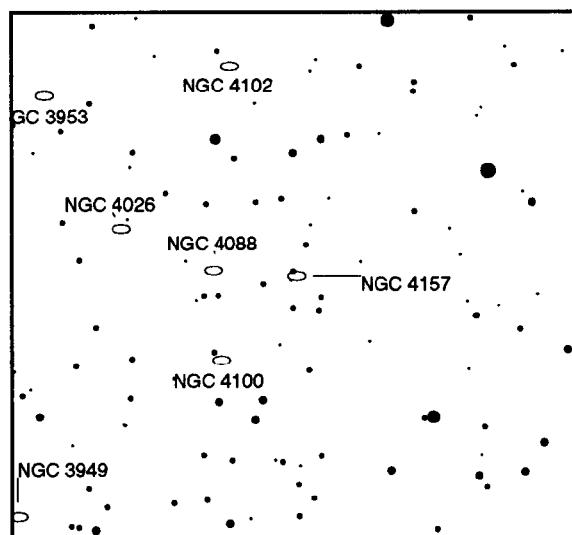


30 degree field, North up

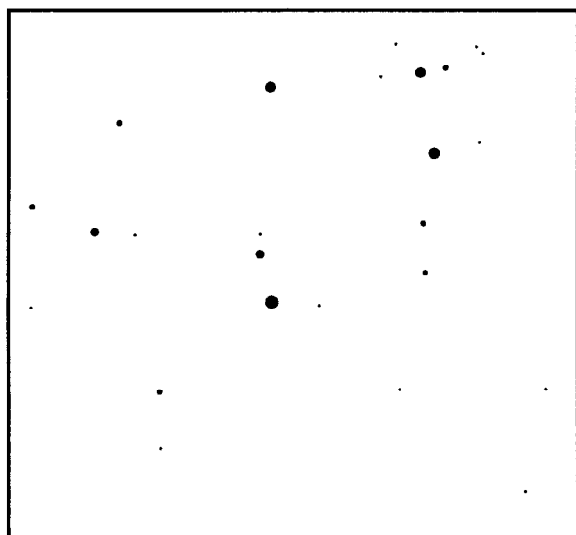
Notes: _____



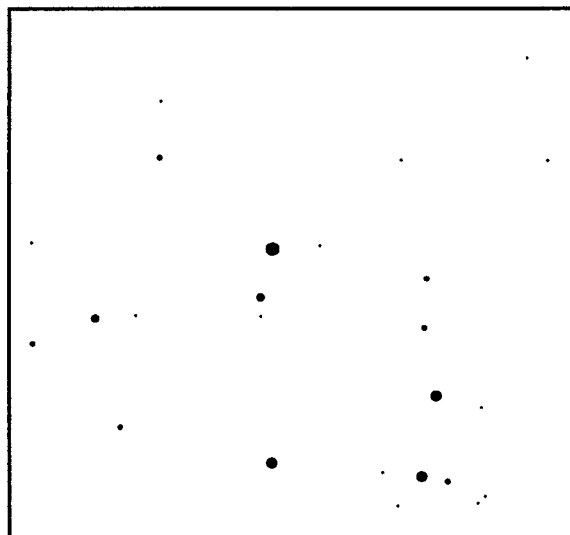
6 degree field, North down



6 degree field, North up, Mirrored



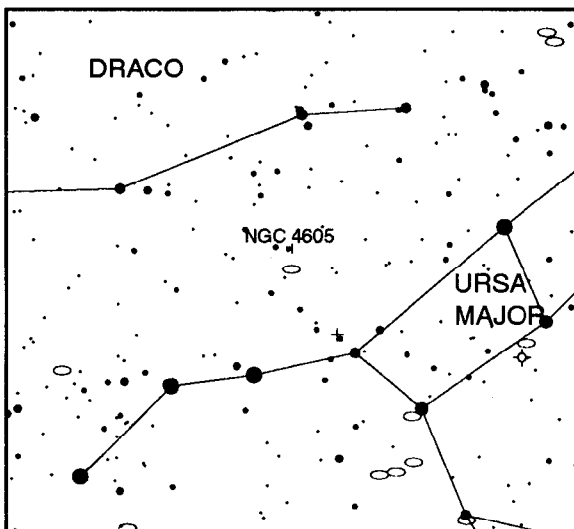
1 degree field, North down



1 degree field, North up, Mirrored

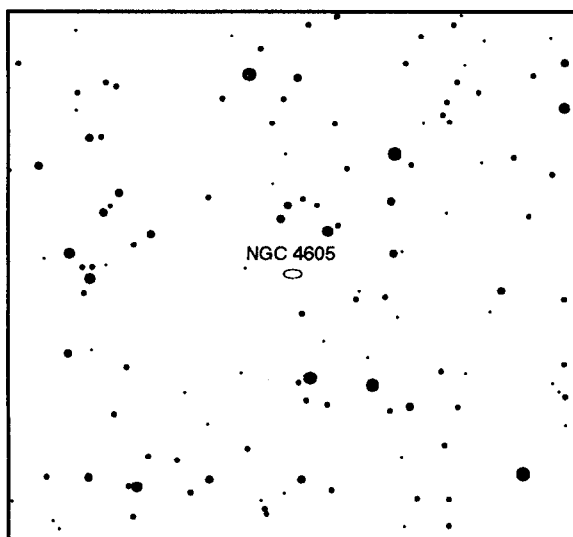
UMA MAG:10.8 Galaxy 12h40m 1s x 61°36'57"
 7' 0" x 3'30" CLASS: Scp PA (dgr):125
 bright, large, very much elongated, gradually little brighter middle
 some mottling
 bright, distinct edge-on spiral

NGC 4605
 48

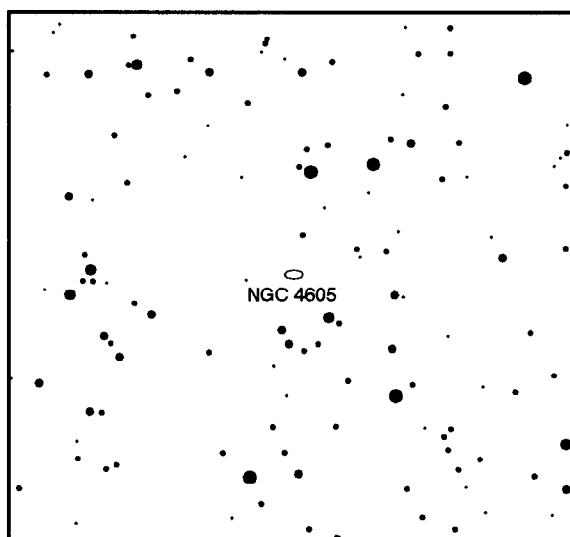


30 degree field, North up

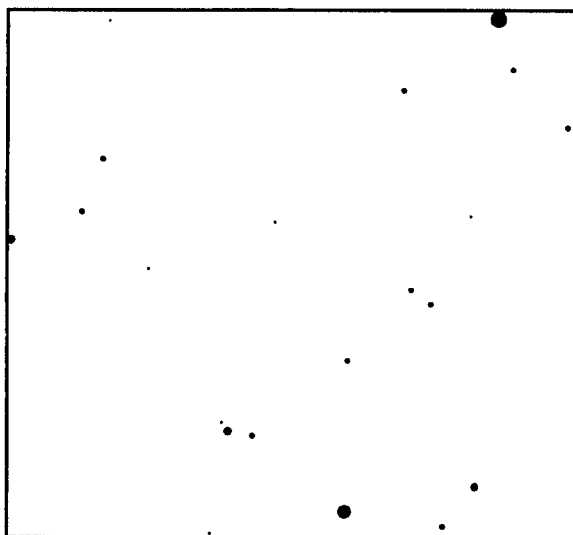
Notes: _____



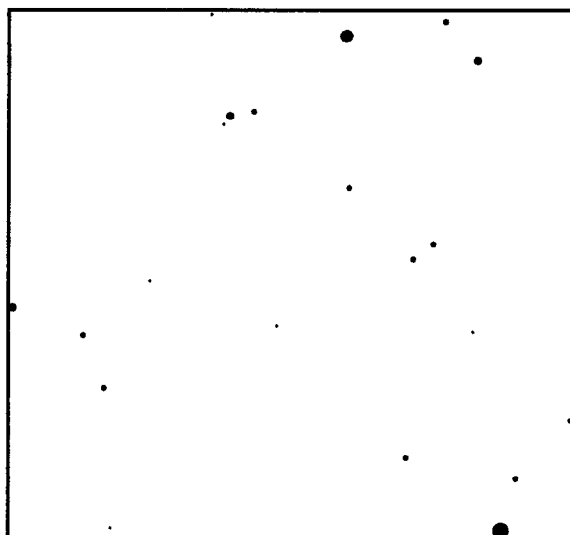
6 degree field, North down



6 degree field, North up, Mirrored



1 degree field, North down



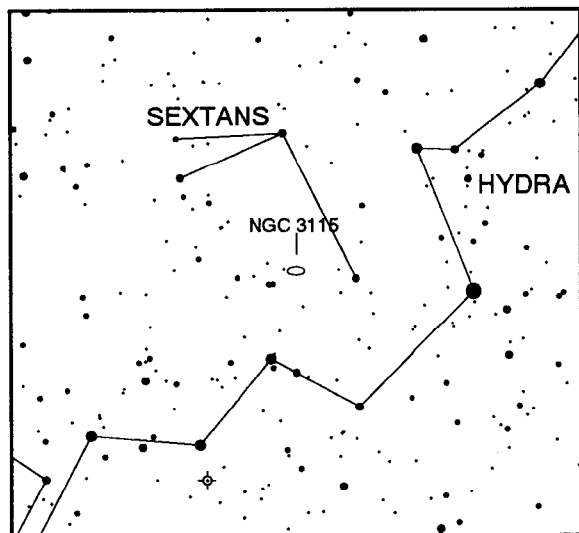
1 degree field, North up, Mirrored

SEX MAG:10.1 Galaxy
8'18" x 3'12" CLASS:E6

10h 5m11s x - 7° 42'55"

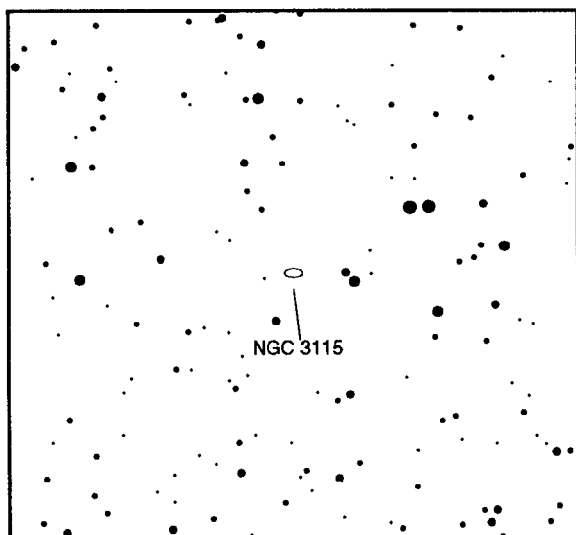
NGC 3115
49

very bright, large, very much elongated, much brighter middle nucleus
Spindle Galaxy, bright center with narrowing extensions

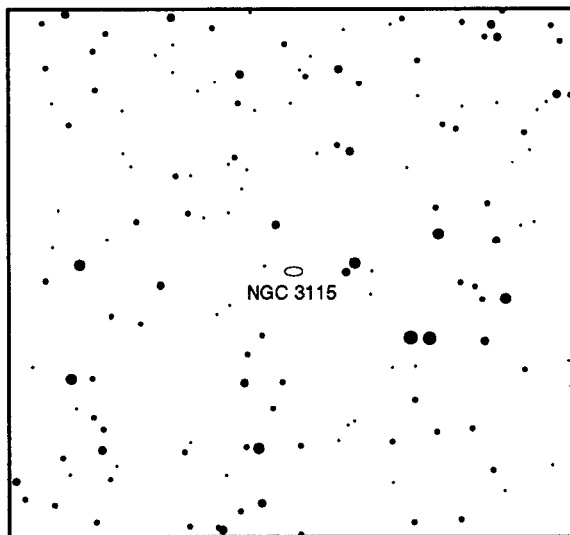


Notes: _____

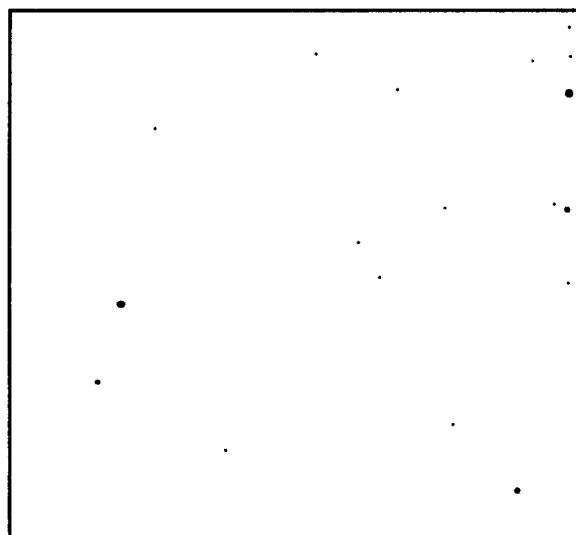
30 degree field, North up



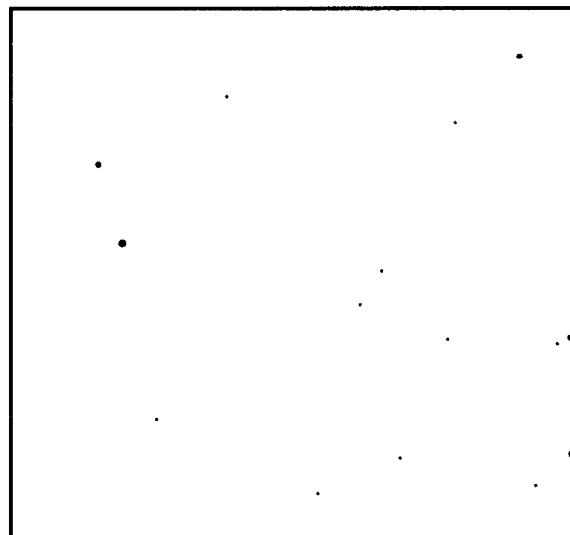
6 degree field, North down



6 degree field, North up, Mirrored



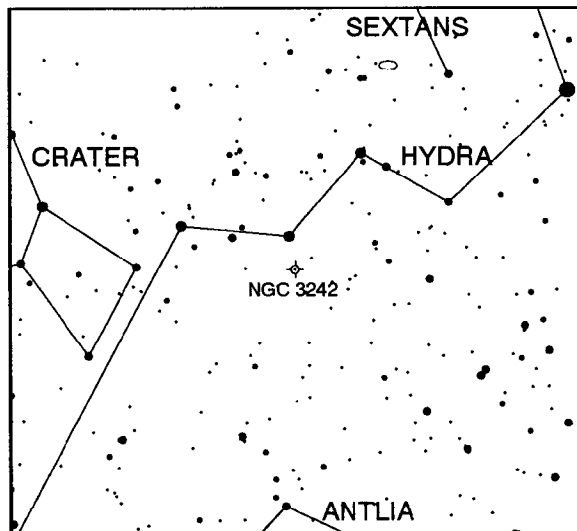
1 degree field, North down



1 degree field, North up, Mirrored

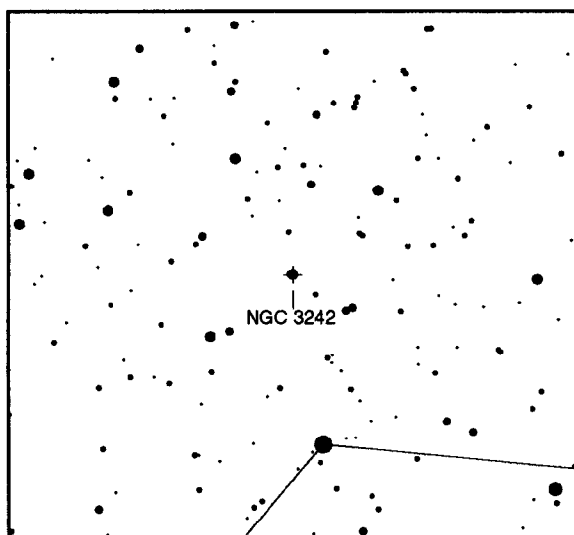
HYA MAG: 8.6 Planetary Nebula 10h24m47s x -18°38' 0"
 PK261+32.1 1'40" x 1'35" CLASS:4(3b)
 remarkable object, very bright, little elongated
 Ghost of Jupiter, 11th mag central *, blueish disk

NGC 3242
 50

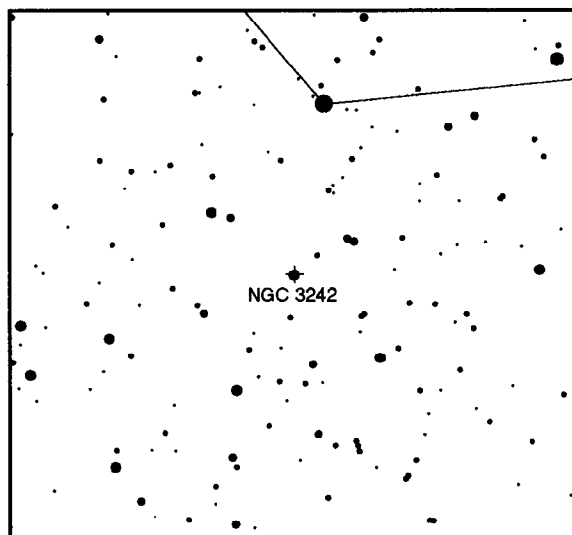


30 degree field, North up

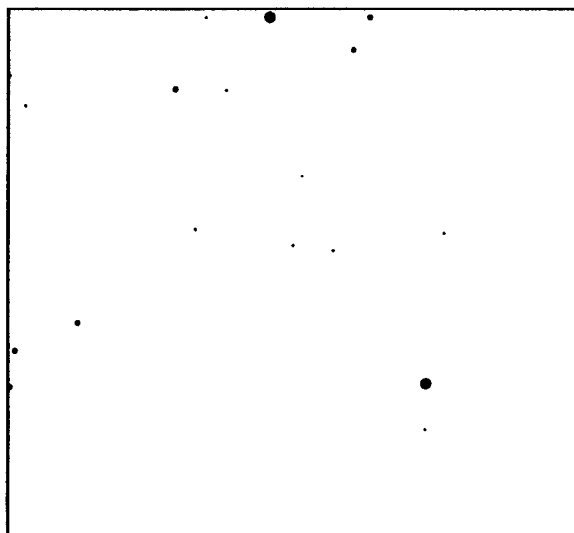
Notes: _____



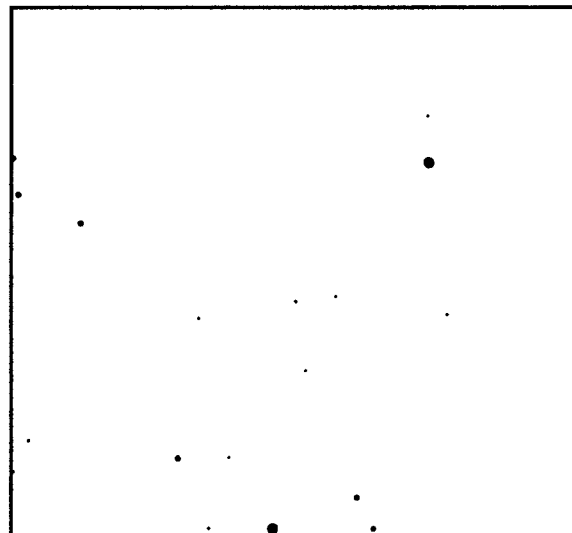
6 degree field, North down



6 degree field, North up, Mirrored

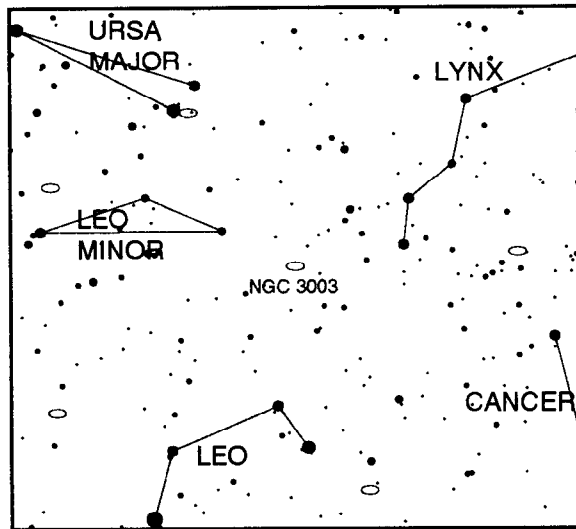


1 degree field, North down



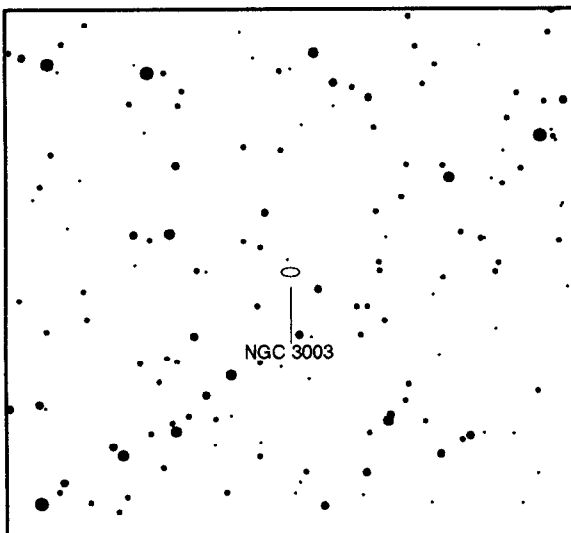
1 degree field, North up, Mirrored

LMI MAG:12.3 Galaxy 9h48m37s x 33°24'57" NGC 3003
 6'42" x 2'42" CLASS:SBc PA (dgr): 79 51
 remarkable object, considerably bright, large, very much elongated
 bright middle, no definite nucleus, dark markings & knots, filamentary arms, near edge-
 on spiral

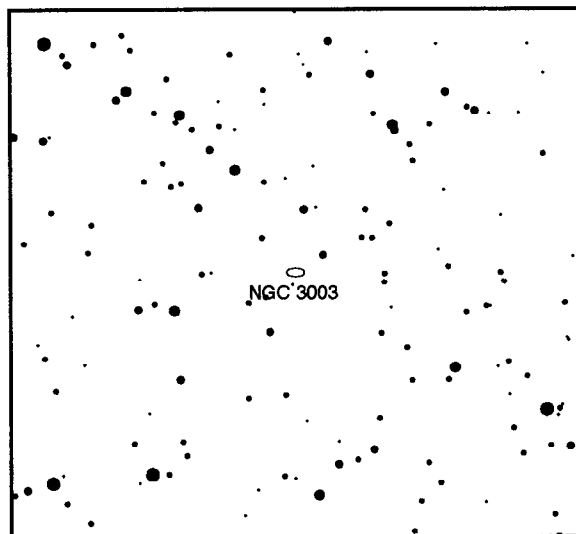


30 degree field, North up

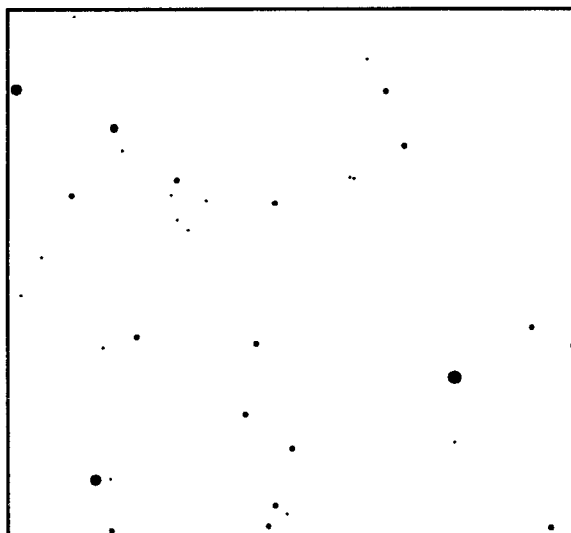
Notes: _____



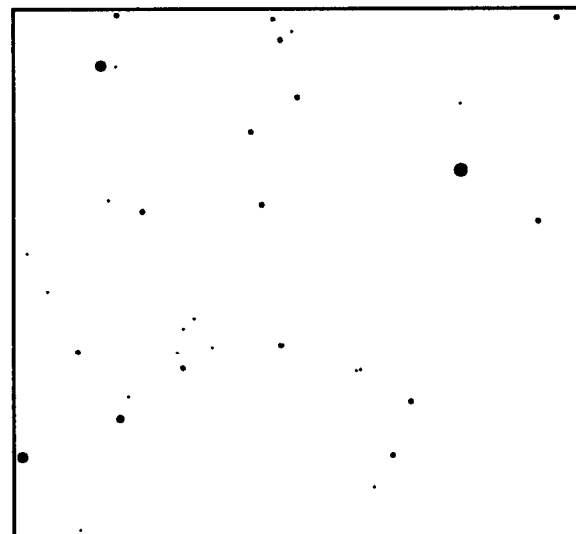
6 degree field, North down



6 degree field, North up, Mirrored



1 degree field, North down



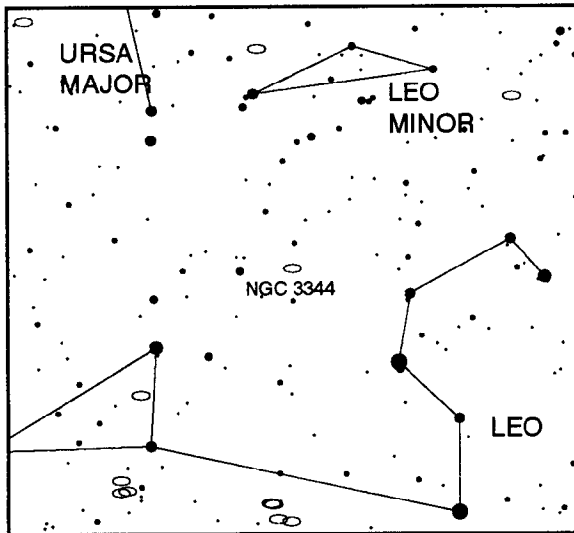
1 degree field, North up, Mirrored

LMI MAG:11.1 Galaxy
8'30" x 7' 0" CLASS: Sc

10h43m31s x 24°55' 4"

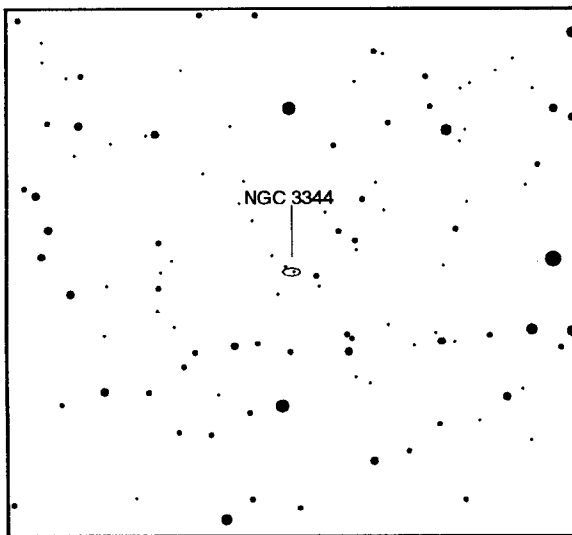
NGC 3344
52

considerably bright, large, gradually brighter middle
fine face-on spiral, soft glow surrounding a stellar nucleus

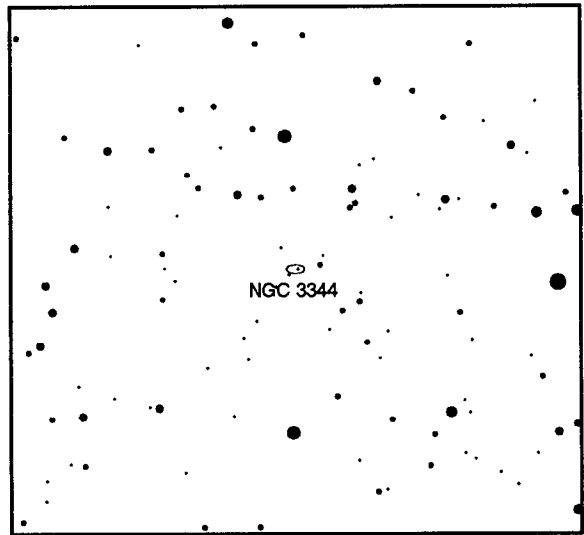


Notes: _____

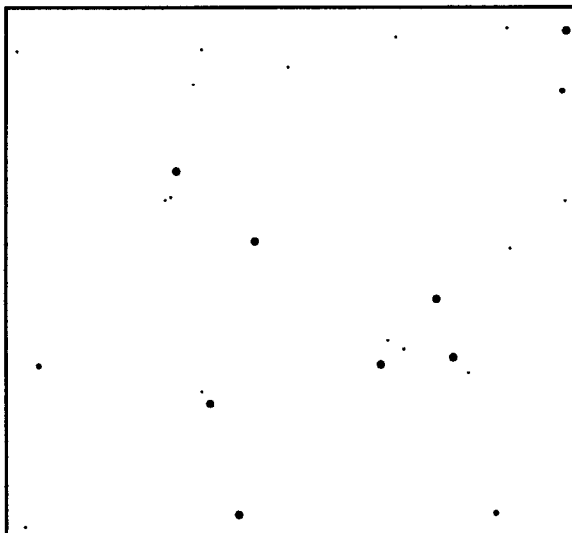
30 degree field, North up



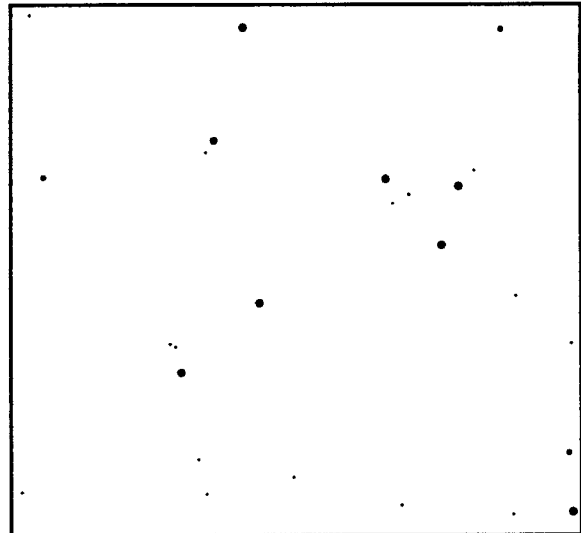
6 degree field, North down



6 degree field, North up, Mirrored



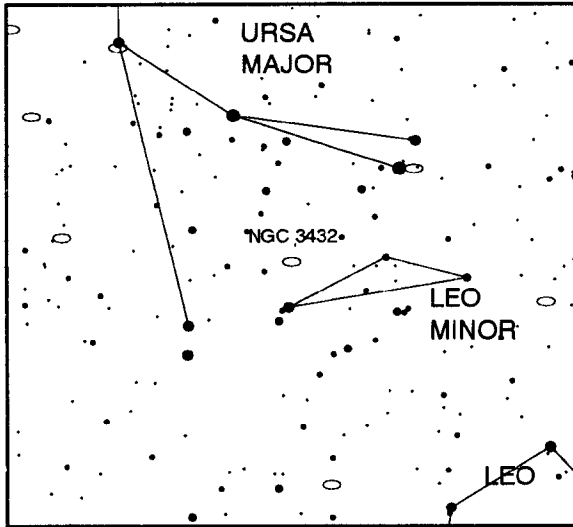
1 degree field, North down



1 degree field, North up, Mirrored

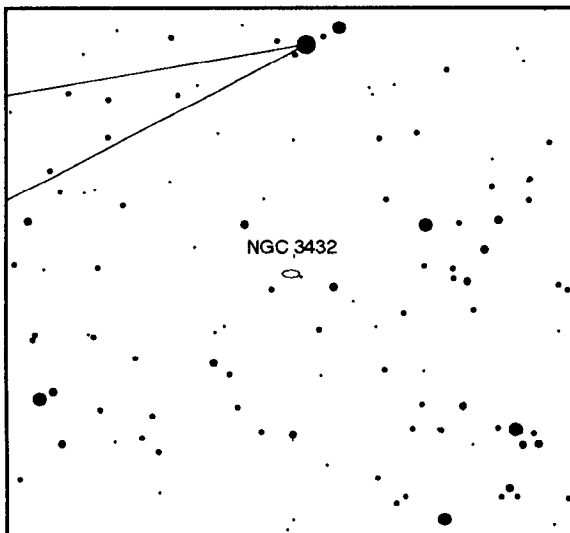
LMI MAG:11.7 Galaxy 10h52m31s x 36°36'57"
 8'30" x 2'0" CLASS: PA (dgr): 38
 pretty bright, pretty large, very much elongated
 flat streak, near edge-on spiral, two faint * at SW end

NGC 3432
 53

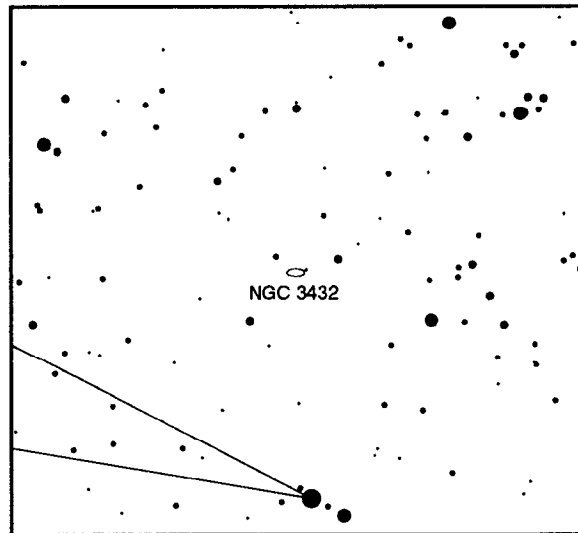


30 degree field, North up

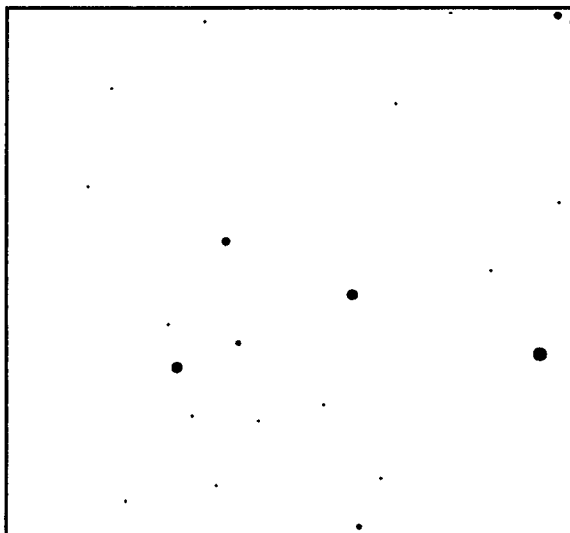
Notes: _____



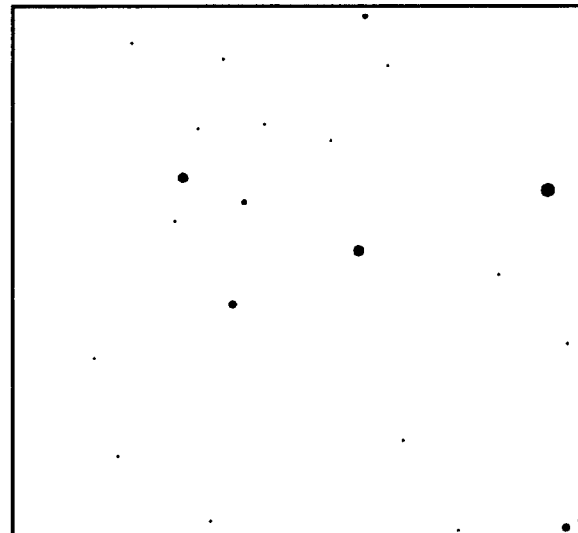
6 degree field, North down



6 degree field, North up, Mirrored



1 degree field, North down



1 degree field, North up, Mirrored

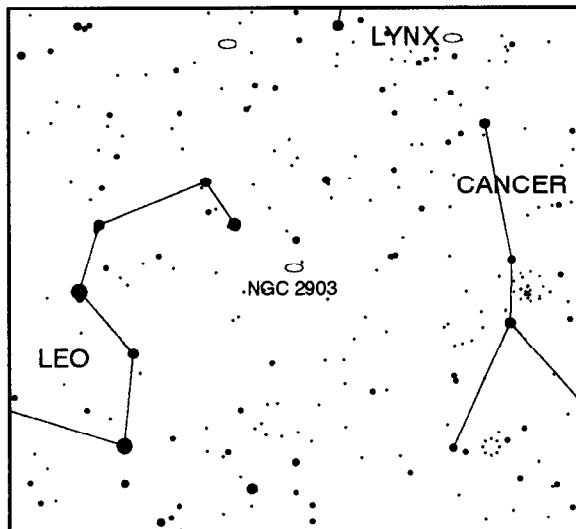
LEO MAG:10.0 Galaxy
13'18" x 6'0" CLASS:Sb

9h32m11s x 21°29' 4"
PA (dgr): 17

NGC 2903
54

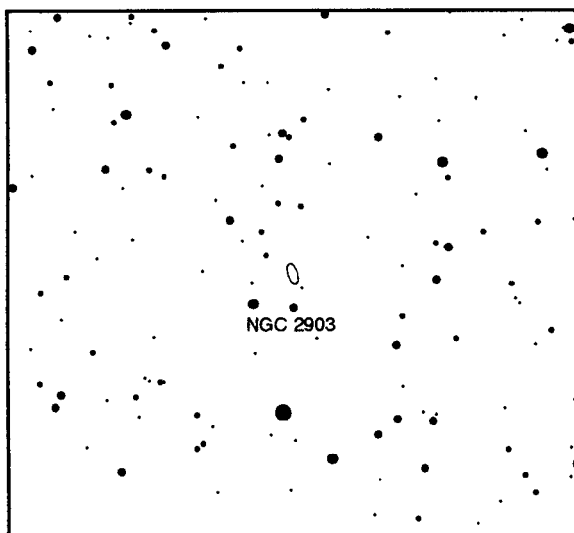
considerably bright, very large, elongated, gradually much brighter middle, not well resolved

short bright mottled nucleus bar, fine multi arm spiral

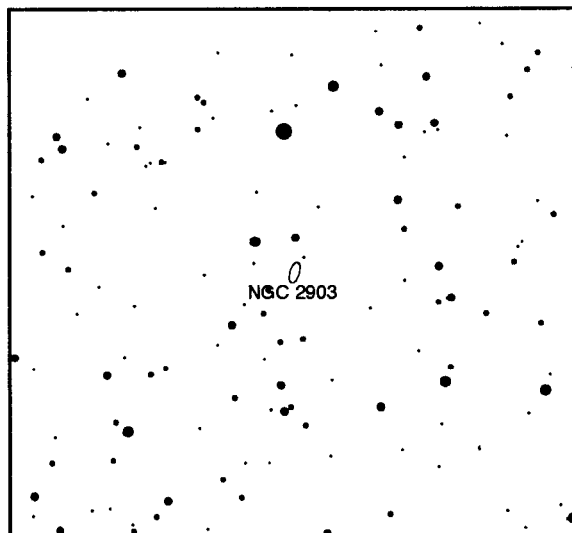


Notes: _____

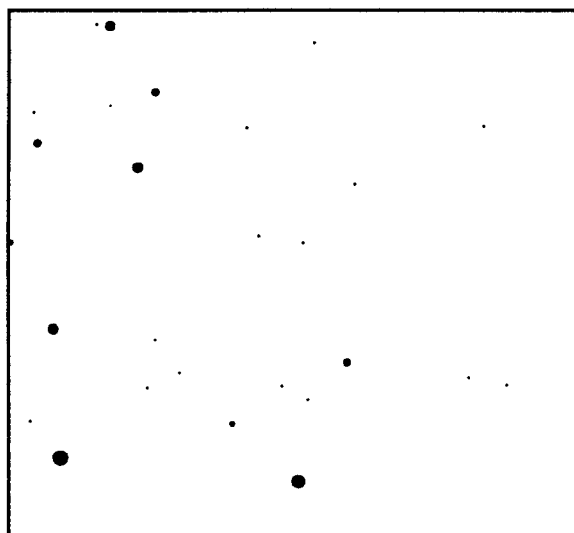
30 degree field, North up



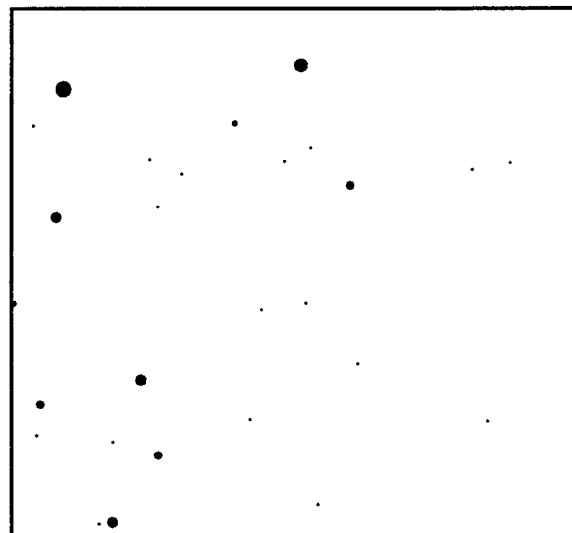
6 degree field, North down



6 degree field, North up, Mirrored



1 degree field, North down



1 degree field, North up, Mirrored

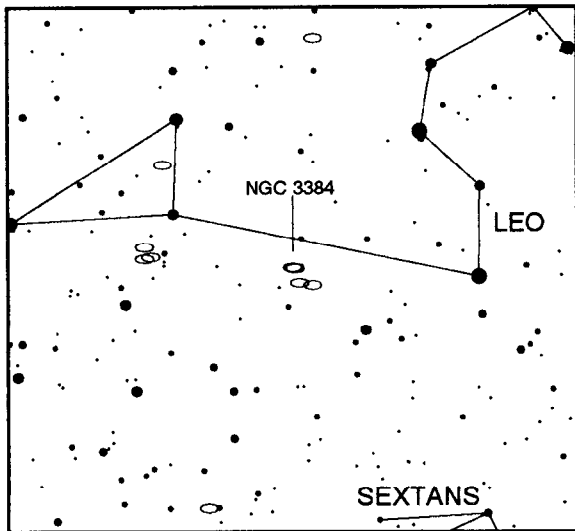
LEO MAG:10.0 Galaxy
5'24" x 3'48" CLASS:E7

10h48m18s x 12°38' 5"

NGC 3384
55

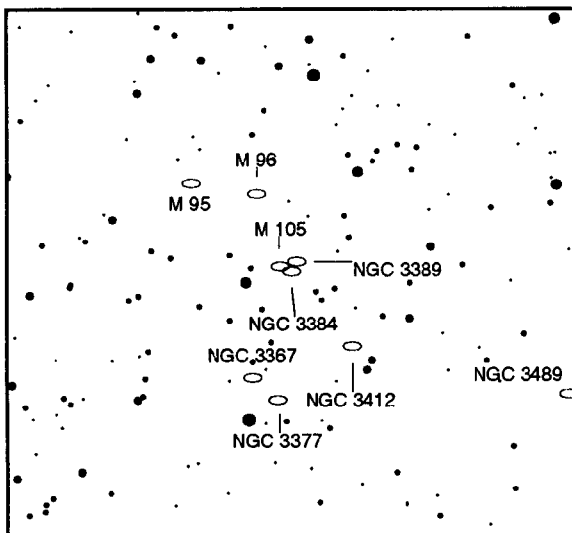
PA (dgr): 53

very bright, large, round, suddenly much brighter middle, 2nd of 3
Leo group; in triple group with M105 and NGC 3389. Stellar nucleus.

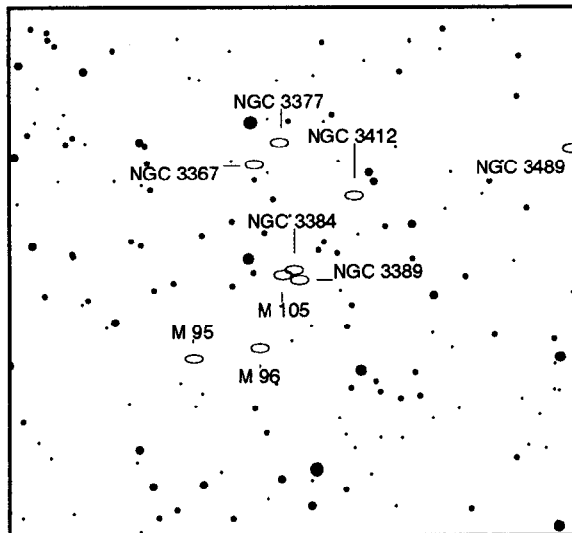


Notes: _____

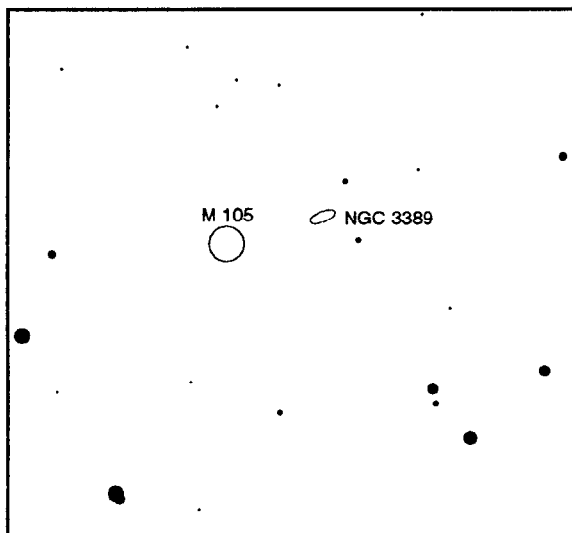
30 degree field, North up



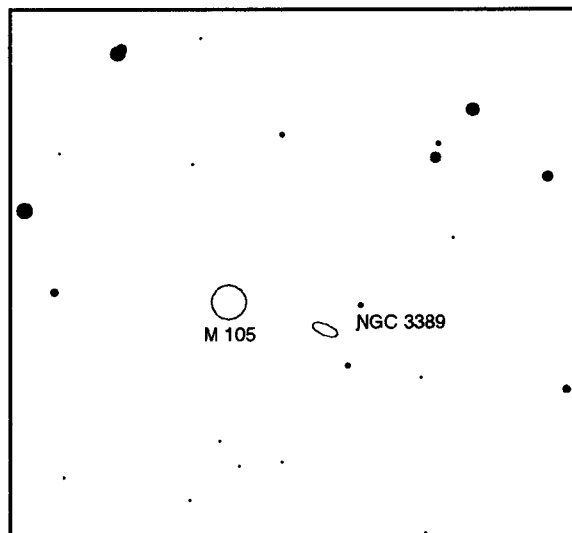
6 degree field, North down



6 degree field, North up, Mirrored



1 degree field, North down



1 degree field, North up, Mirrored

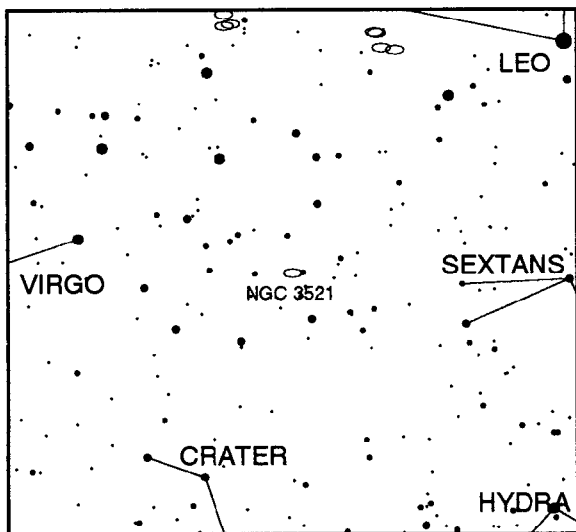
LEO MAG:10.1 Galaxy
14'30" x 7' 0" CLASS: Sb

11h 5m48s x - 0° 1'59"
PA (dgr):163

NGC 3521
56

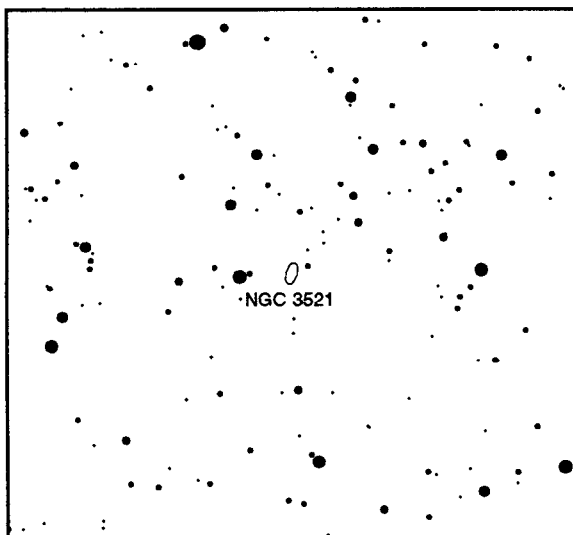
considerably bright, considerably large, much elongated, very suddenly much brighter
middle nucleus

radio source, multi-armed spiral, extensive envelope around bright center

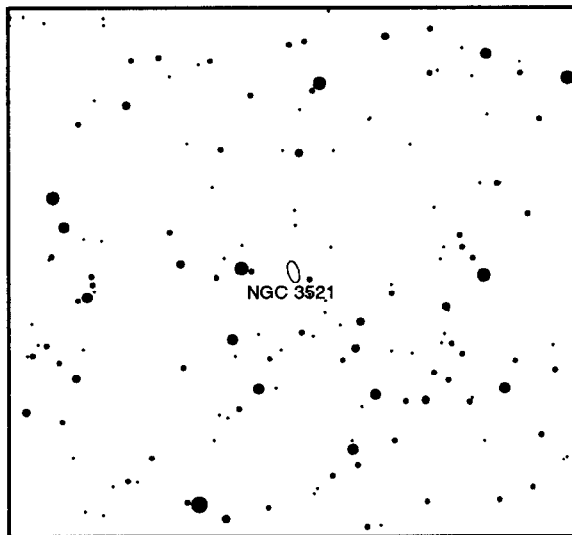


Notes: _____

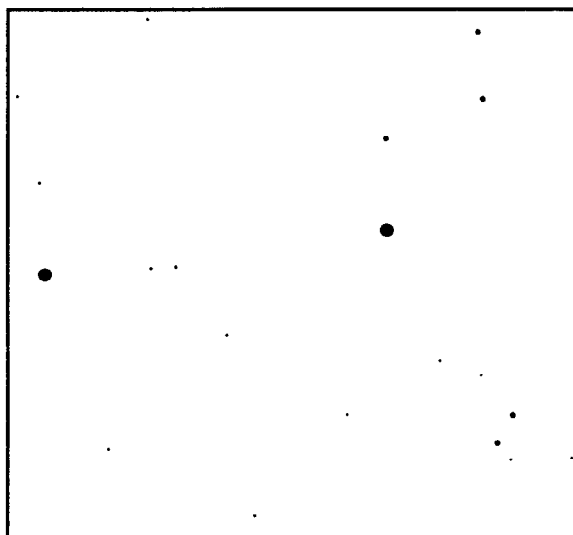
30 degree field, North up



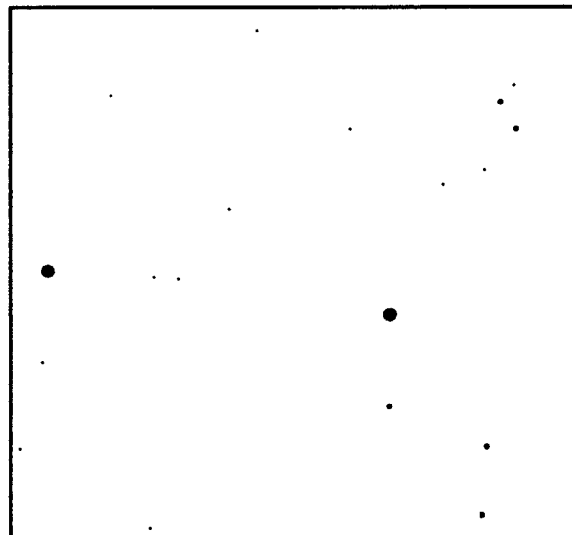
6 degree field, North down



6 degree field, North up, Mirrored



1 degree field, North down



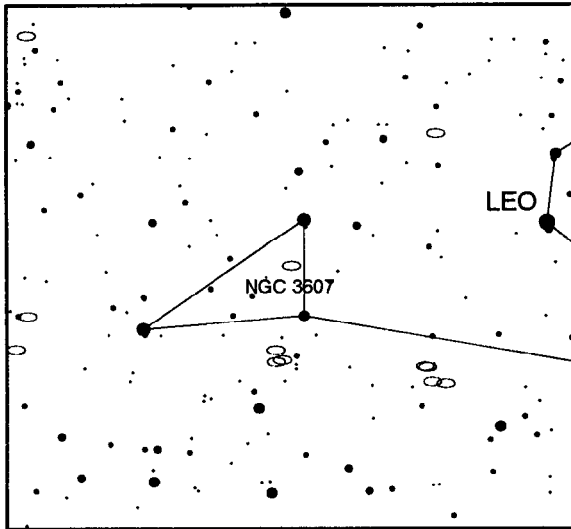
1 degree field, North up, Mirrored

LEO MAG:10.2 Galaxy
5'30" x 4' 0" CLASS: E1/S0

11h16m55s x 18° 3' 4"
P.A.: 10

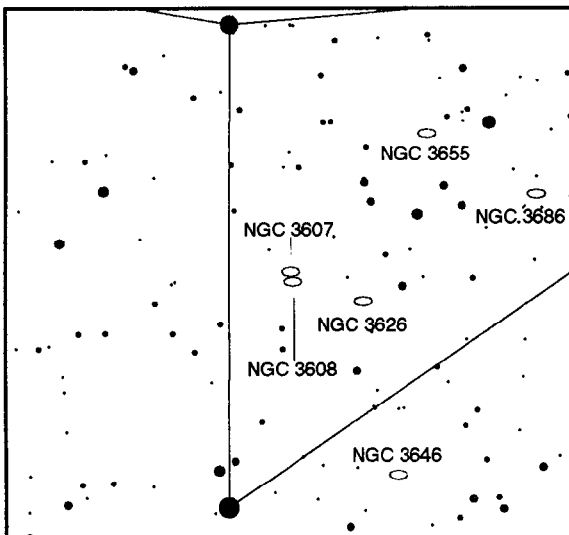
NGC 3607
57

very bright, large, round, very much brighter middle
brightest in group, paired with NGC 3608 at 6.2' North

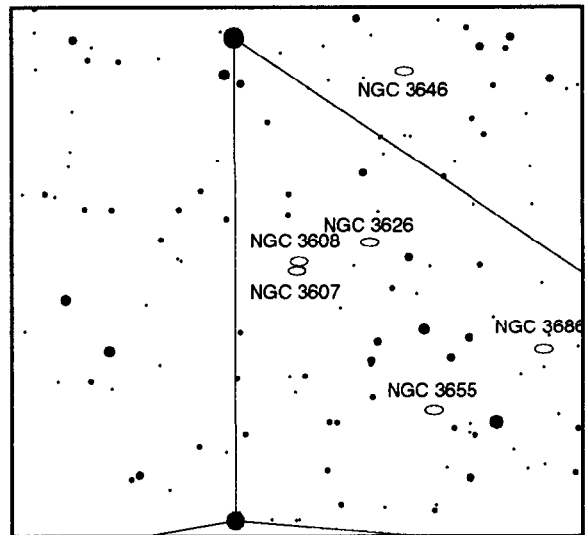


Notes: _____

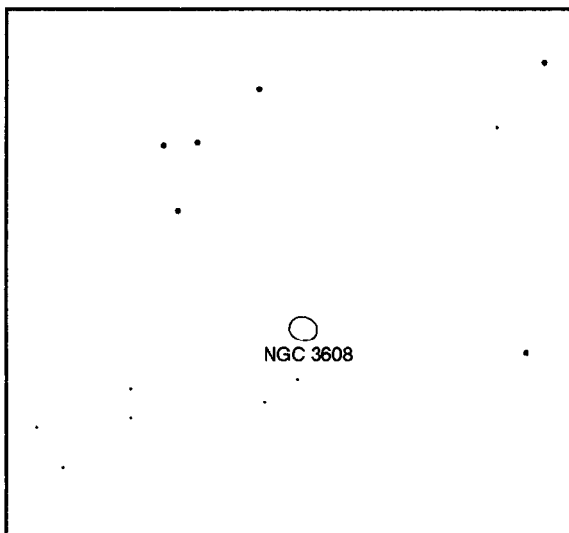
30 degree field, North up



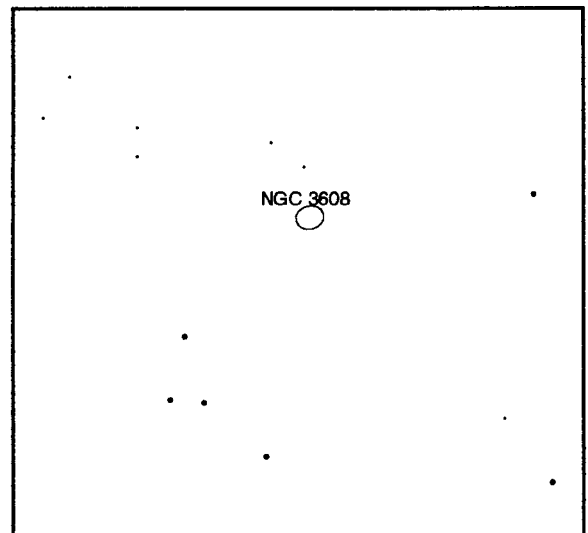
6 degree field, North down



6 degree field, North up, Mirrored



1 degree field, North down



1 degree field, North up, Mirrored

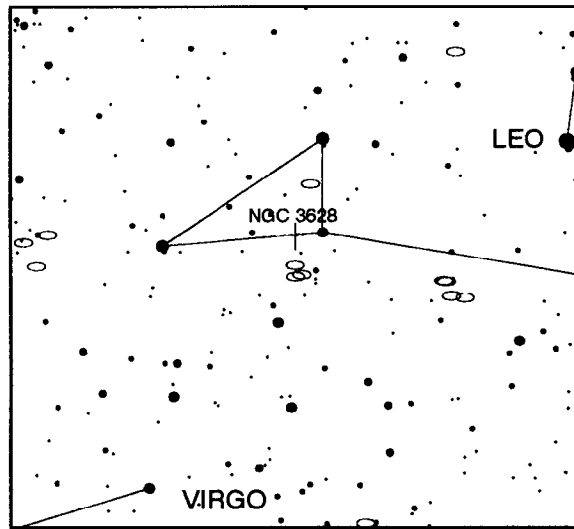
LEO MAG:11.5 Galaxy
16'30" x 4'18" CLASS: Sb

11h20m18s x 13°35'55"

NGC 3628
58

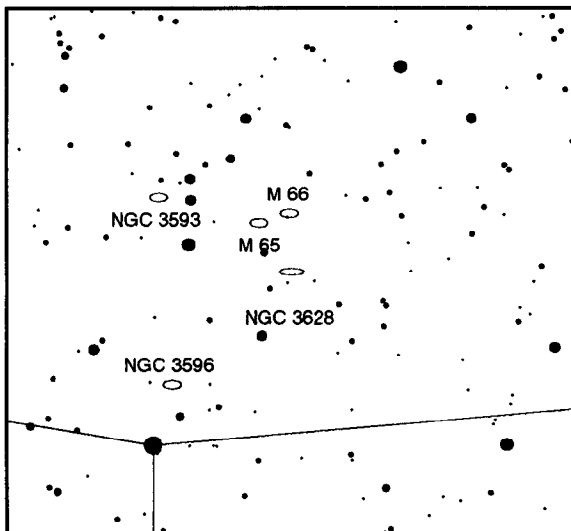
pretty bright, very large, very much elongated

Leo group, disturbed, radio source, equatorial dark lane, same field as M65 & M66

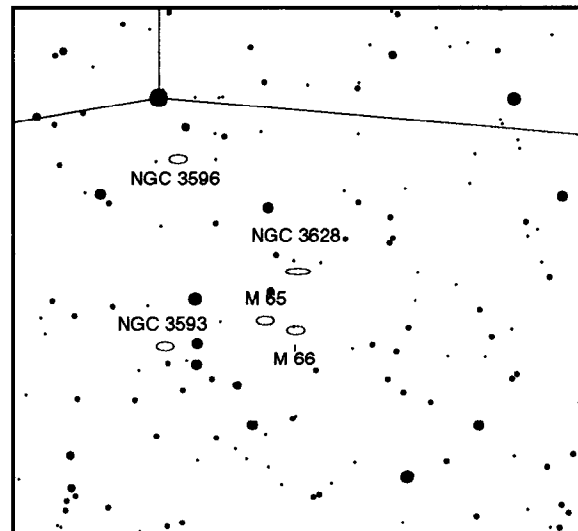


30 degree field, North up

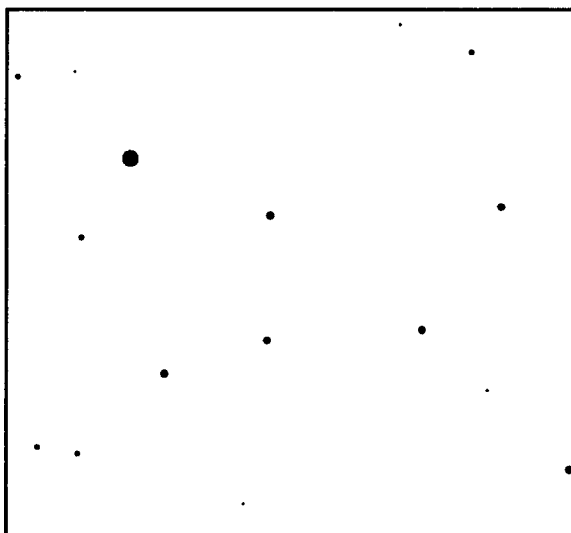
Notes: _____



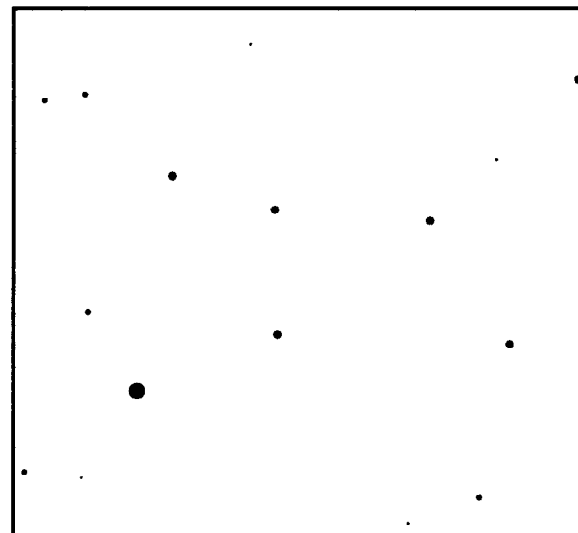
6 degree field, North down



6 degree field, North up, Mirrored



1 degree field, North down



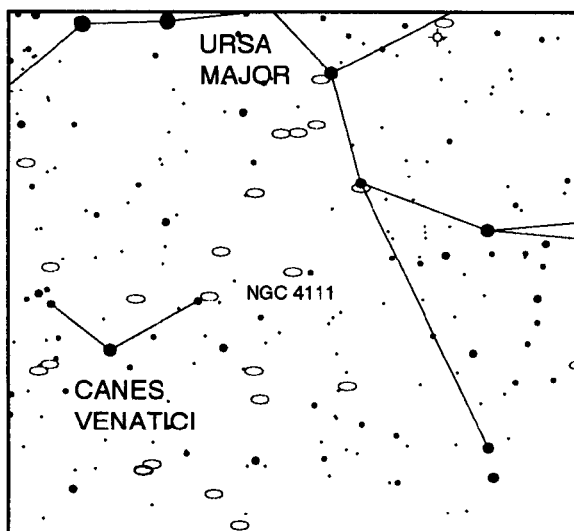
1 degree field, North up, Mirrored

CVN MAG:11.4 Galaxy
4'18" x 1'48" CLASS: E7

12h 7m 6s x 43° 5' 3"
PA (dgr):150

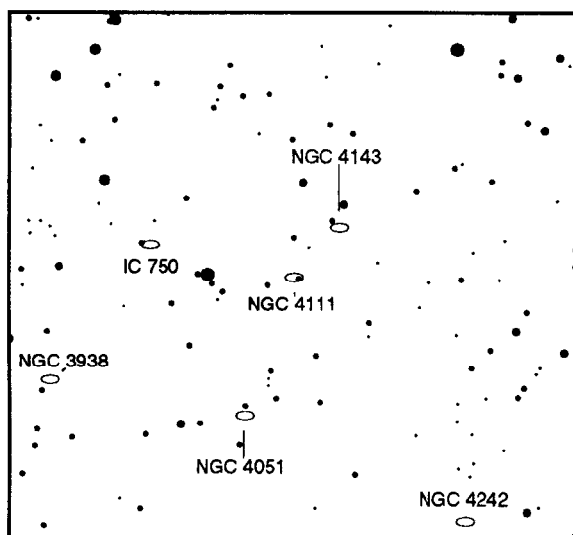
NGC 4111
59

very bright, pretty small, much elongated, very suddenly very bright nucleus
nucleus cut by dark lane, lens shaped edge on spiral

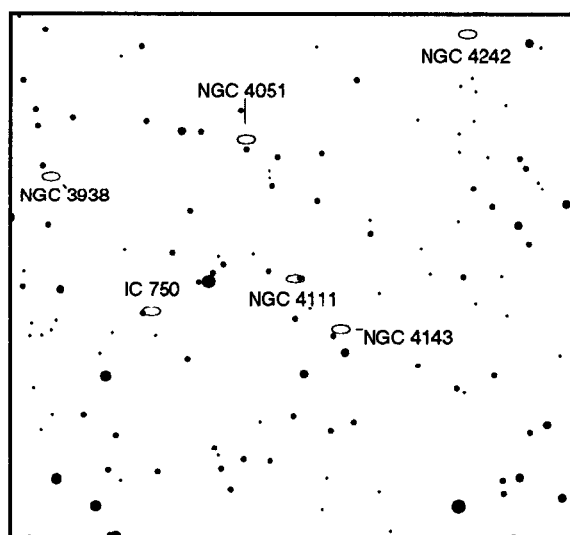


Notes: _____

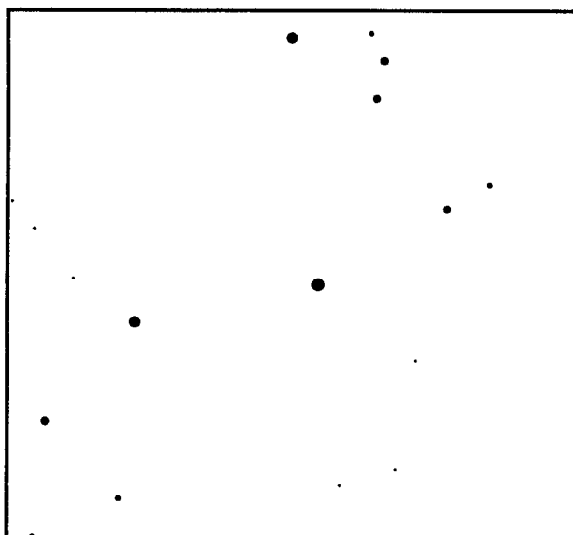
30 degree field, North up



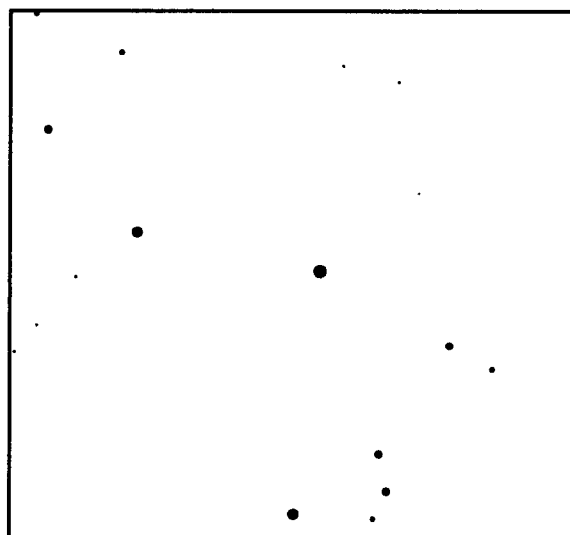
6 degree field, North down



6 degree field, North up, Mirrored



1 degree field, North down



1 degree field, North up, Mirrored

CVN MAG:10.3 Galaxy

12h15m43s x 36°19'58"

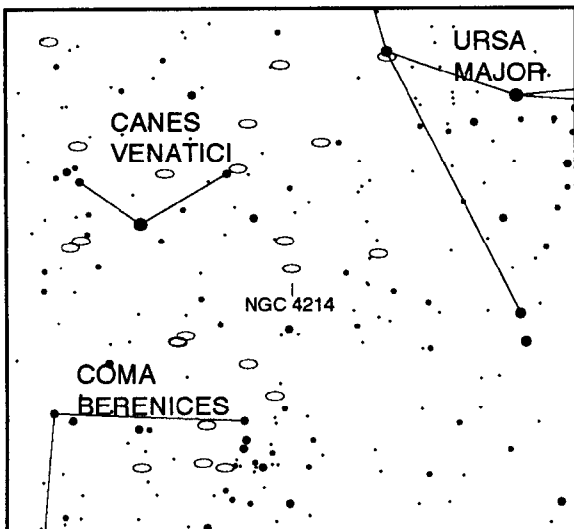
NGC 4214

11' 0" x 9' 0" CLASS:Ir

60

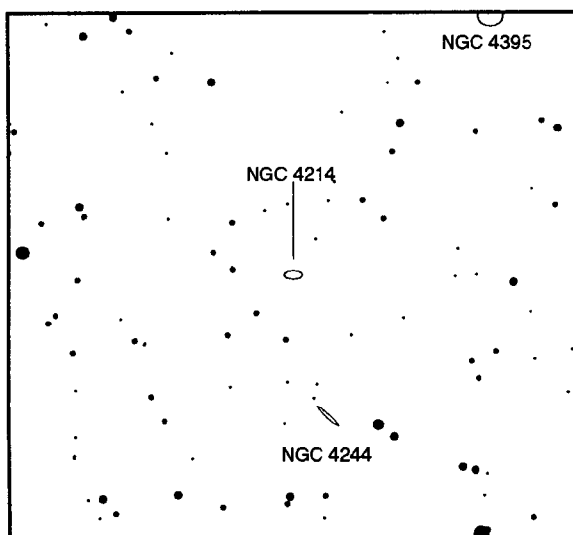
considerably bright, considerably large, elongated

large irregular galaxy

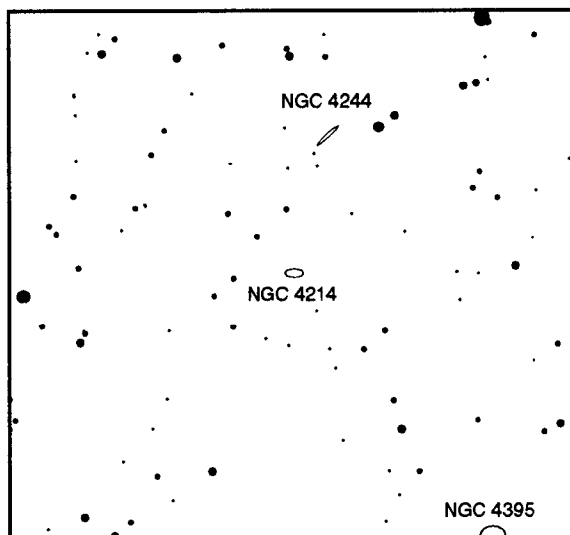


Notes: _____

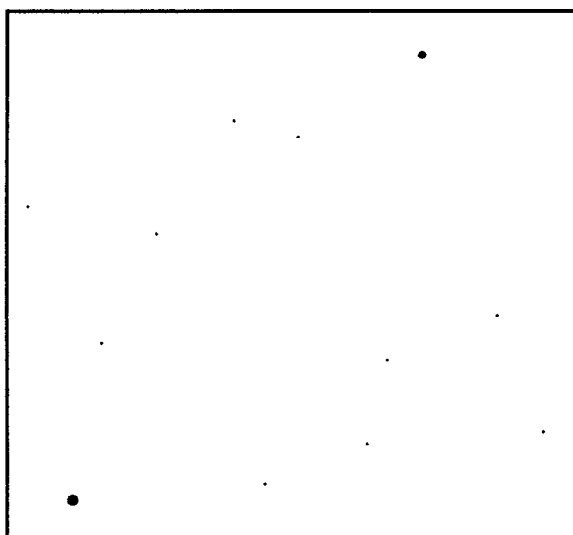
30 degree field, North up



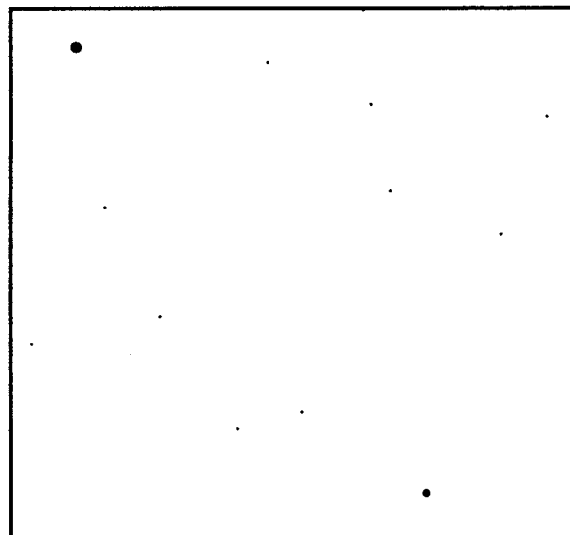
6 degree field, North down



6 degree field, North up, Mirrored

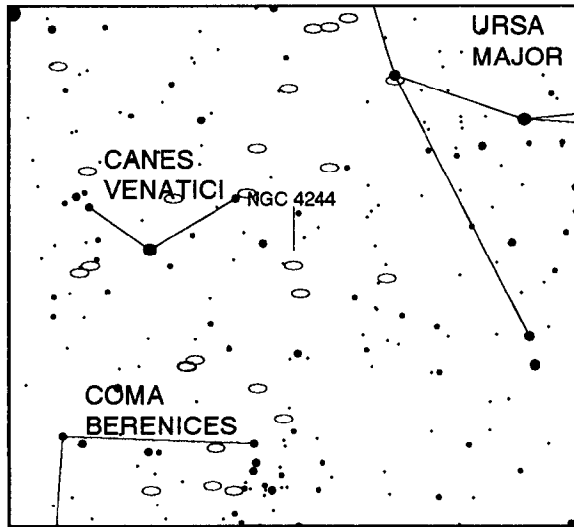


1 degree field, North down



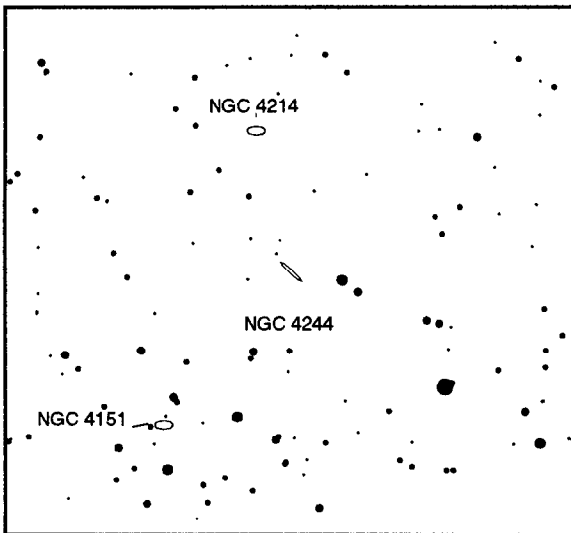
1 degree field, North up, Mirrored

CVN MAG:10.8 Galaxy 12h17m31s x 37°48'58" NGC 4244
 19'30" x 2'18" CLASS: Sb PA (dgr): 48 61
 pretty bright, very large, extremely elongated
 narrow streak, edge-on spiral, radio source, either stellar nucleus or superimposed *

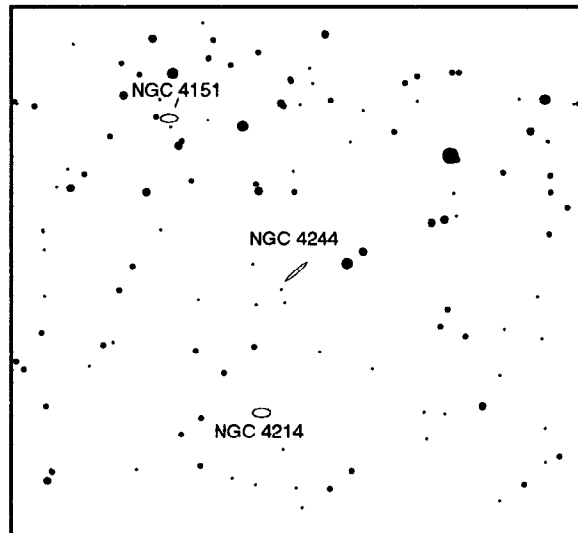


Notes: _____

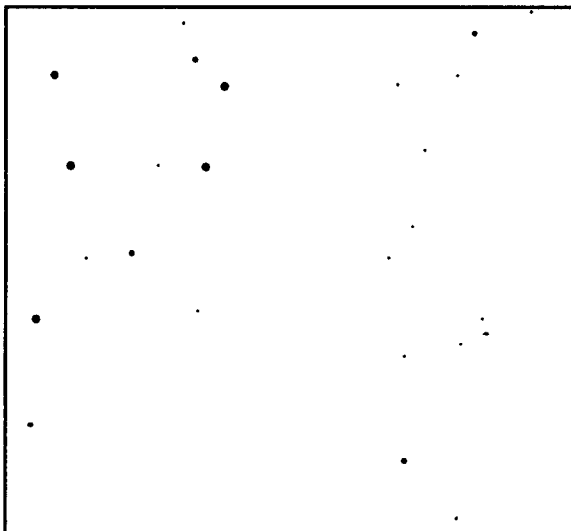
30 degree field, North up



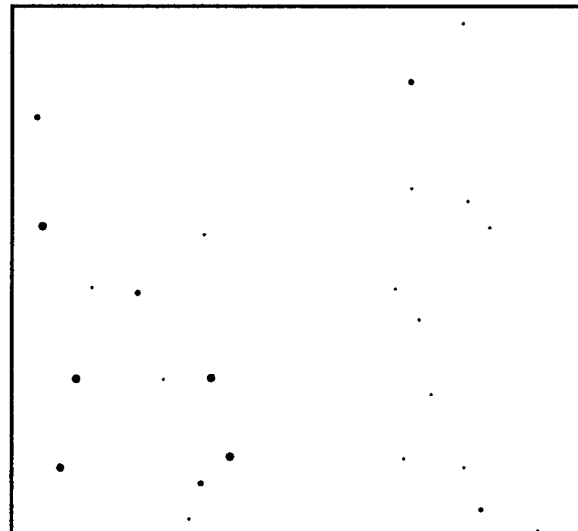
6 degree field, North down



6 degree field, North up, Mirrored



1 degree field, North down



1 degree field, North up, Mirrored

CVN MAG:10.0 Galaxy

12h28m12s x 44° 6' 2"

NGC 4449

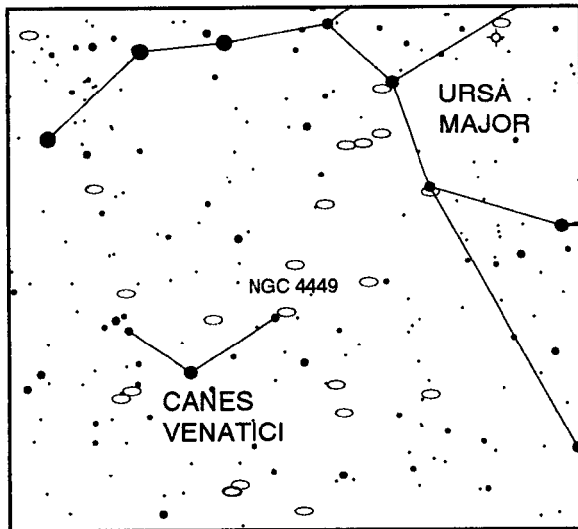
6' 0" x 5'30" CLASS:lr PA (dgr): 45

62

very bright, considerably large, much elongated, double or bifid, well resolved, stars

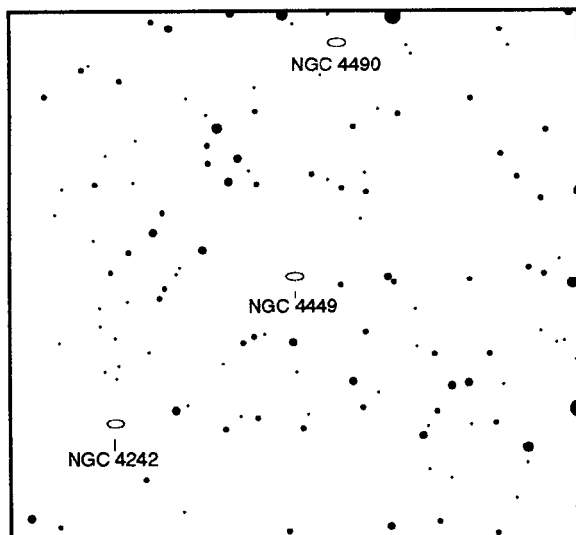
faint, bright center with nucleus or star

radio source, not quite spindle shaped, blunter, N end seems brighter

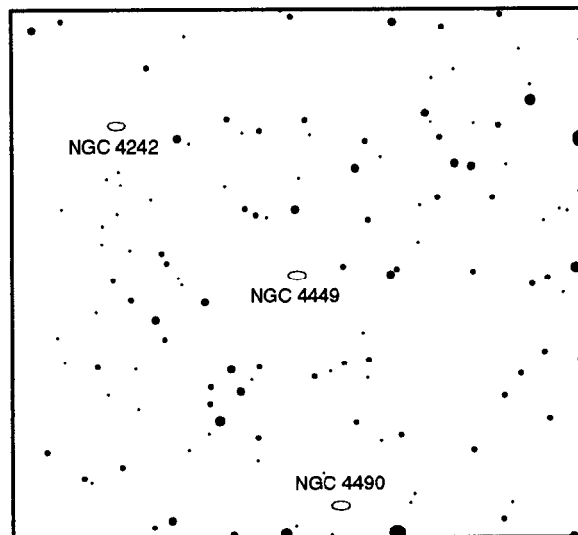


30 degree field, North up

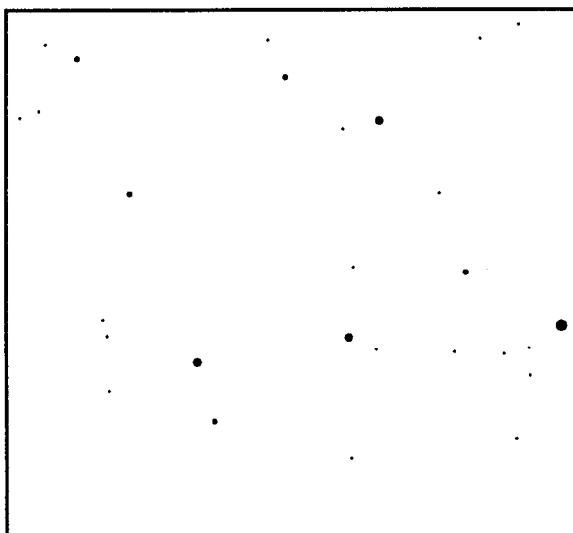
Notes: _____



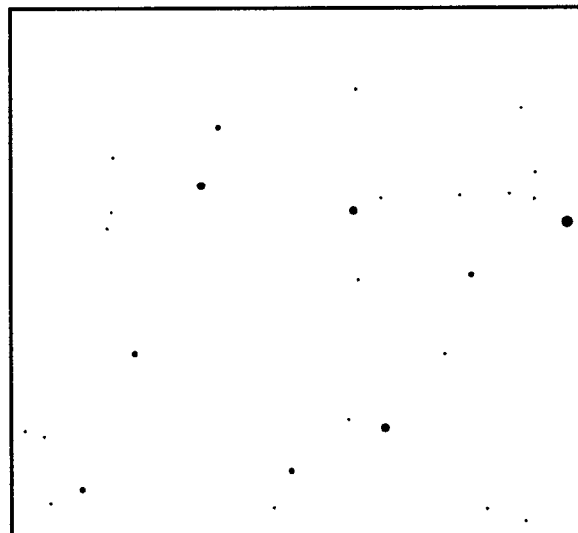
6 degree field, North down



6 degree field, North up, Mirrored



1 degree field, North down



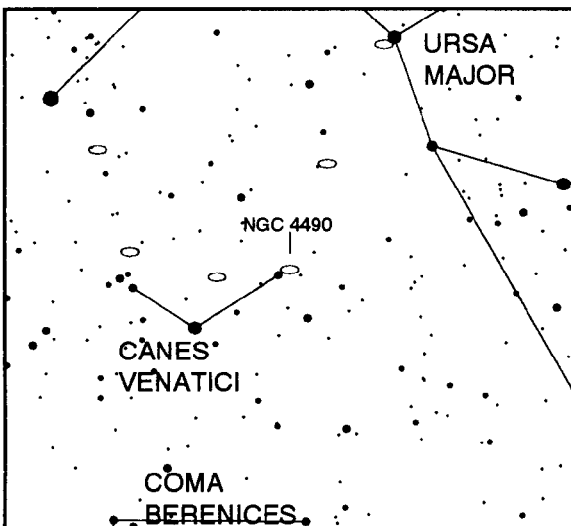
1 degree field, North up, Mirrored

CVN MAG:10.1 Galaxy
7' 0" x 4' 30" CLASS: Sc

12h30m37s x 41°39' 2"

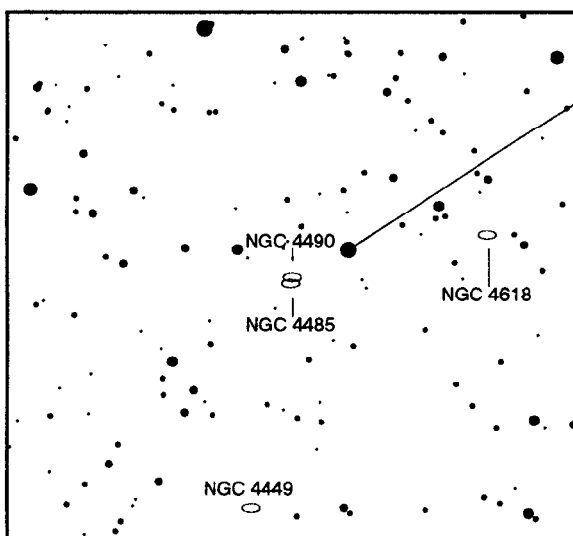
NGC 4490
63

very bright, very large, much elongated, mottled
Paired with NGC 4485, 3.5'N, Cocoon galaxy, pear shaped

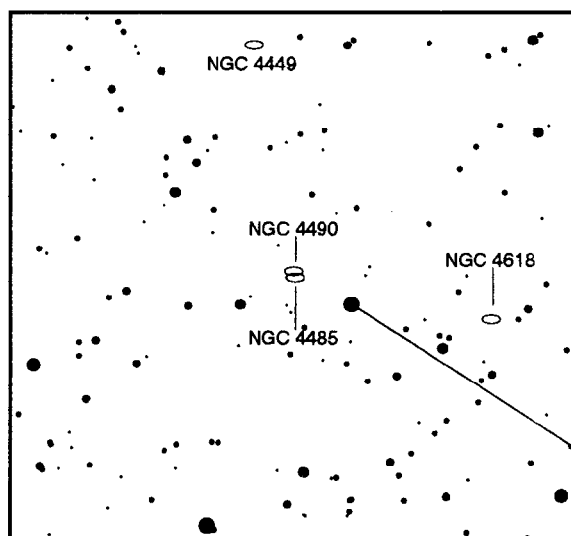


30 degree field, North up

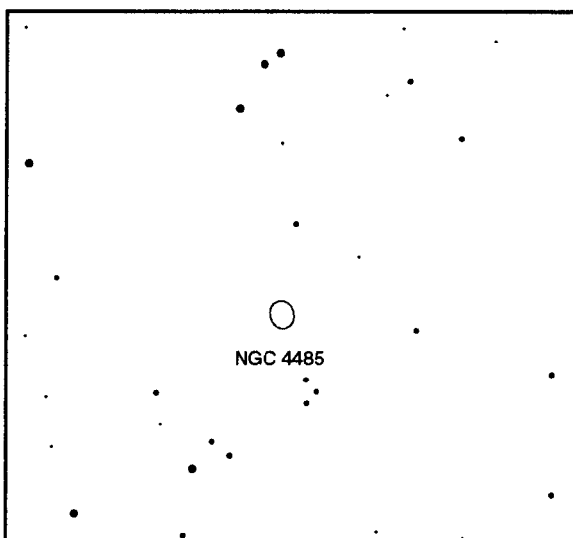
Notes: _____



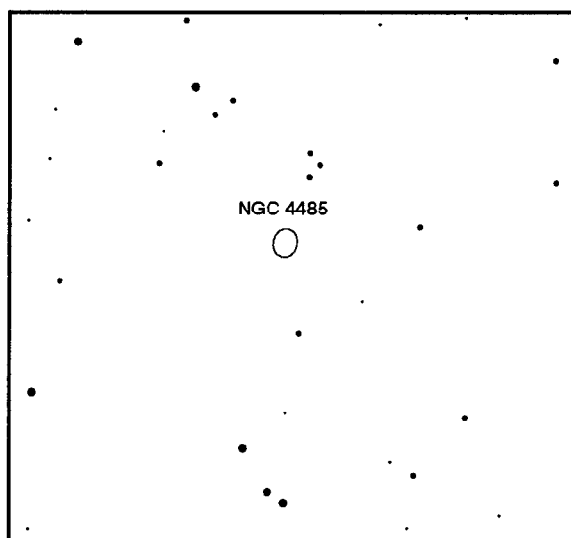
6 degree field, North down



6 degree field, North up, Mirrored



1 degree field, North down



1 degree field, North up, Mirrored

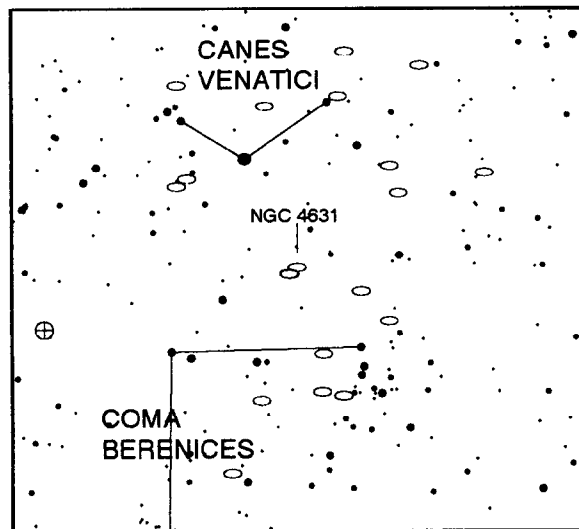
CVN MAG: 9.8 Galaxy 12h42m 5s x 32°33' 3"

NGC 4631

17' 0" x 4' 30" CLASS: Sc? PA (dgr): 86

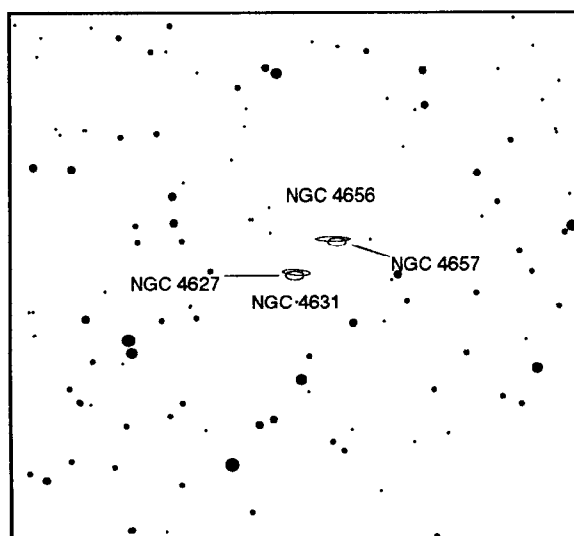
64

very bright, very large, extremely elongated, bright middle nucleus
edge on spiral, NGC 4627 is satellite galaxy, seen as small fuzzball just off center of
4631. Huge amounts of dust on edge.

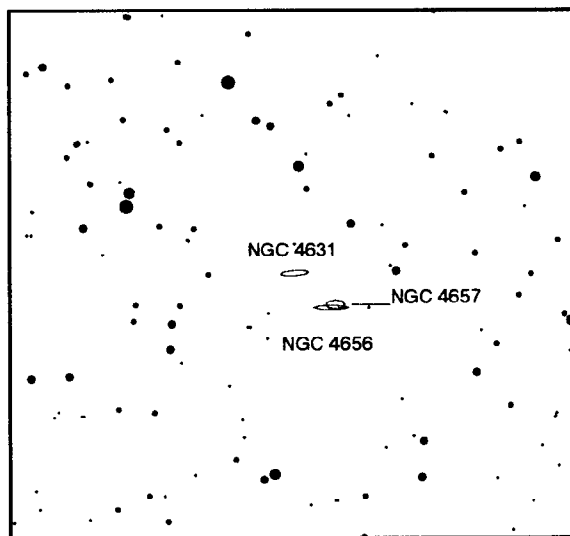


Notes: _____

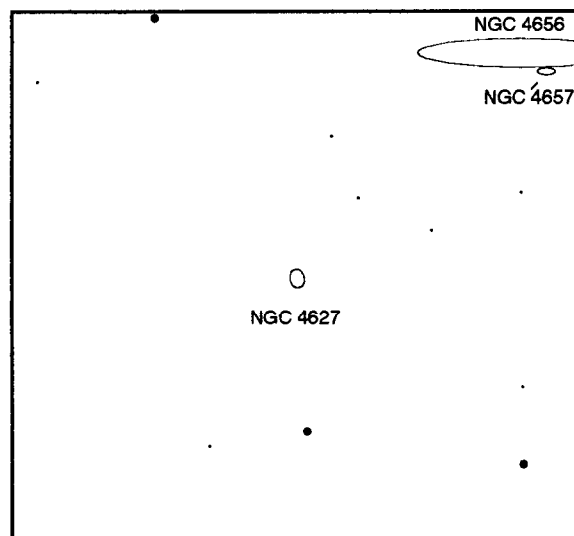
30 degree field, North up



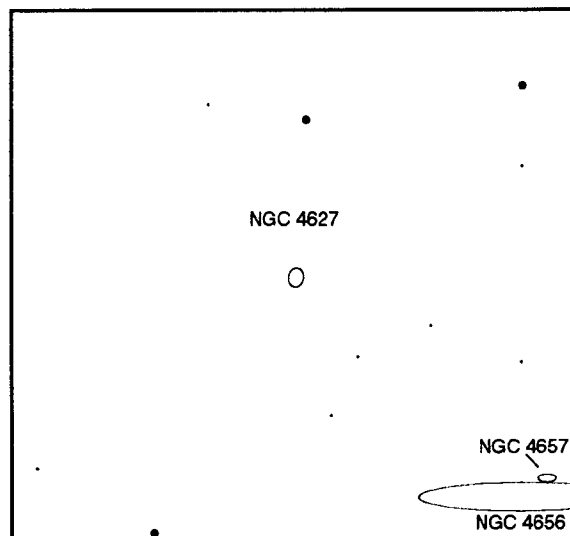
6 degree field, North down



6 degree field, North up, Mirrored



1 degree field, North down

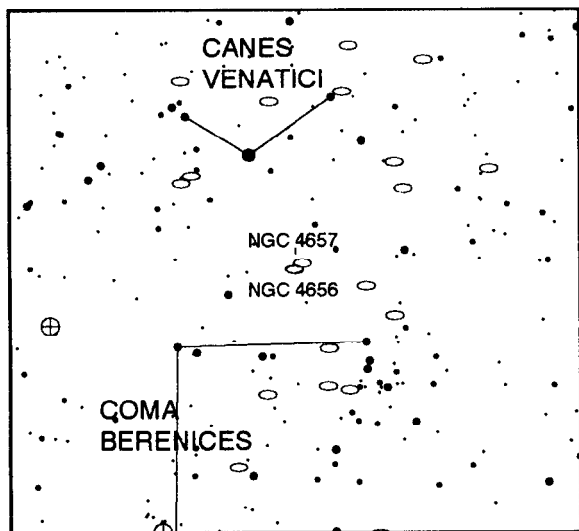


1 degree field, North up, Mirrored

CVN MAG:10.6 Galaxy
 22' 0" x 3' 0" CLASS: I/pec
 pretty bright, large, very much elongated
 hooked and brighter at one end

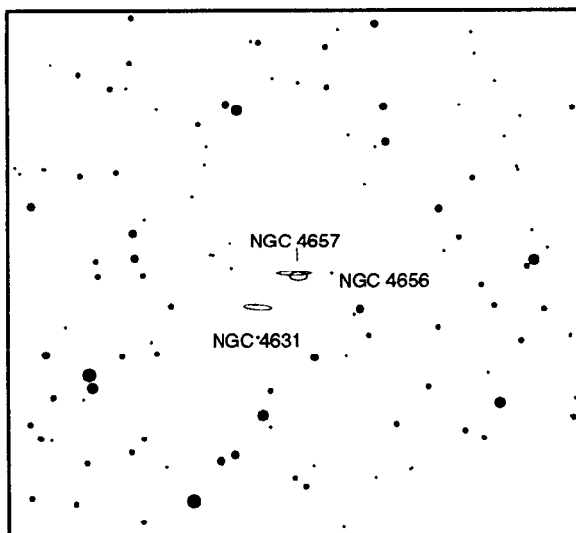
12h43m53s x 32°10'58"

NGC 4656 + 4657
 65

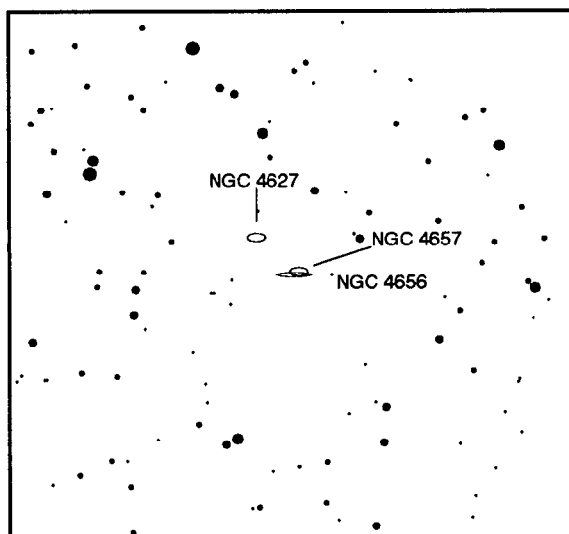


30 degree field, North up

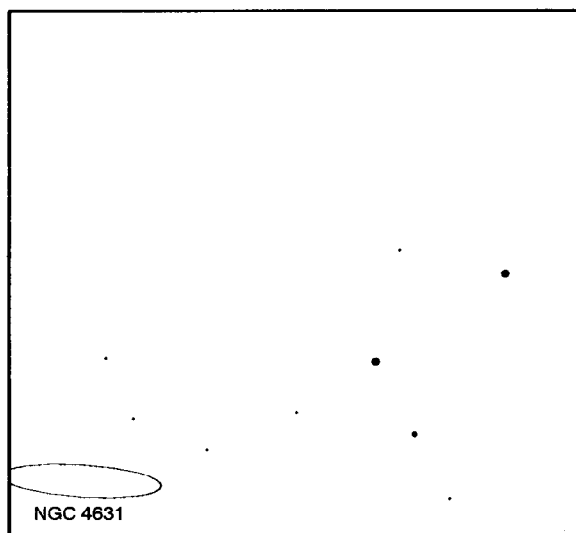
Notes: _____



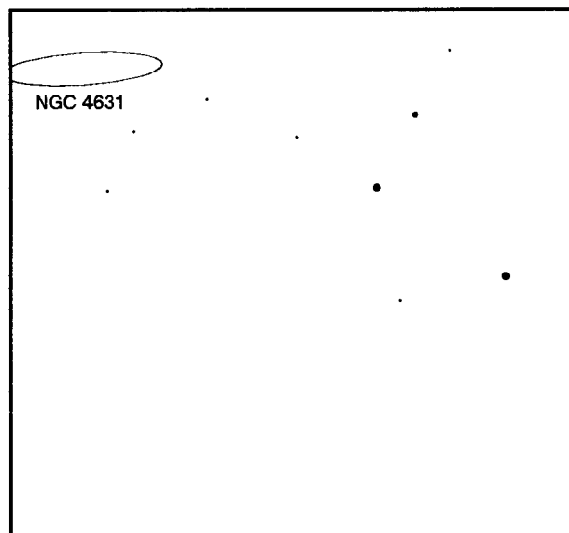
6 degree field, North down



6 degree field, North up, Mirrored

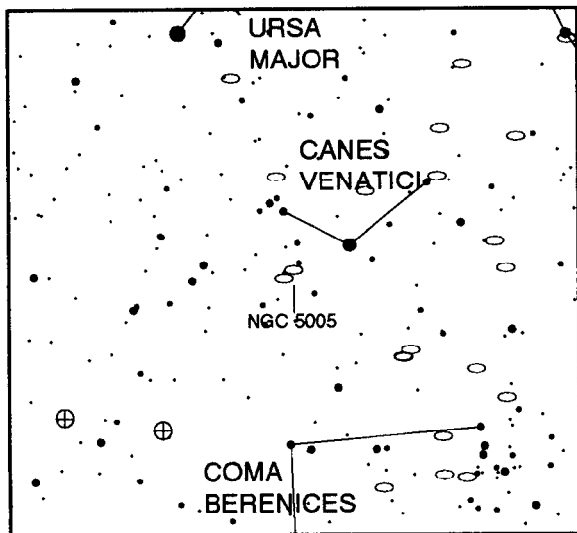


1 degree field, North down



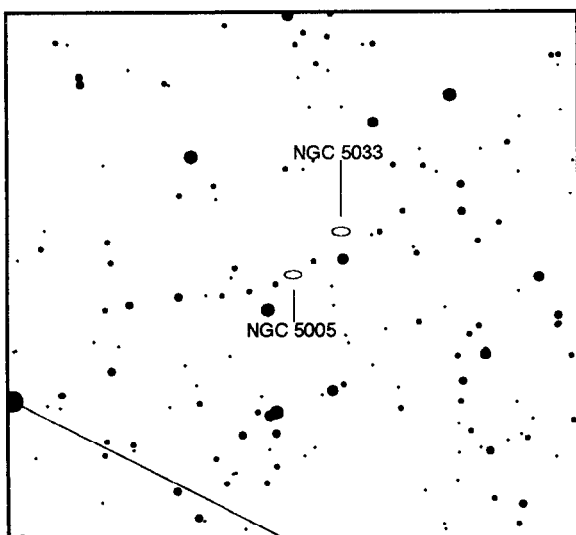
1 degree field, North up, Mirrored

CVN MAG:10.6 Galaxy 13h10m60s x 37° 2'59" NGC 5005
 6'18" x 3'0" CLASS:Sb- II PA (dgr): 65 66
 very bright, very large, very much elongated, very suddenly brighter middle nucleus
 several knotty arms with dark lanes

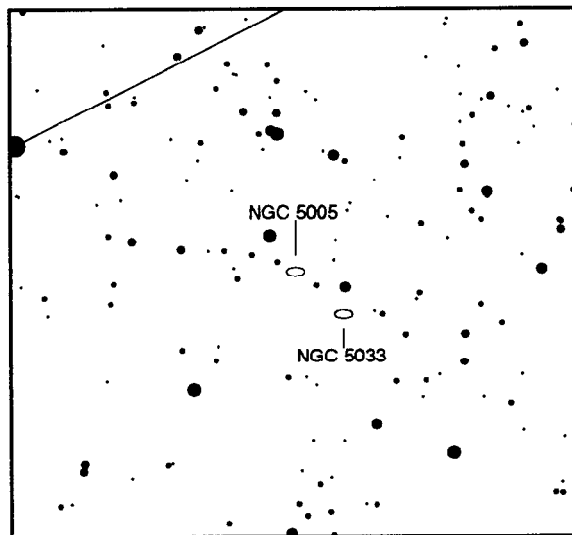


30 degree field, North up

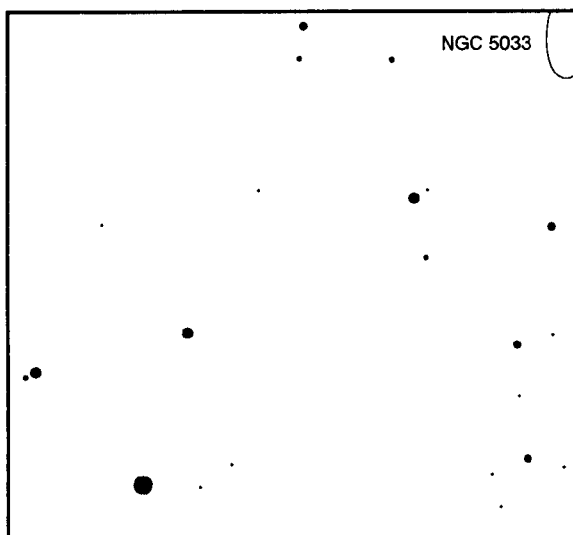
Notes: _____



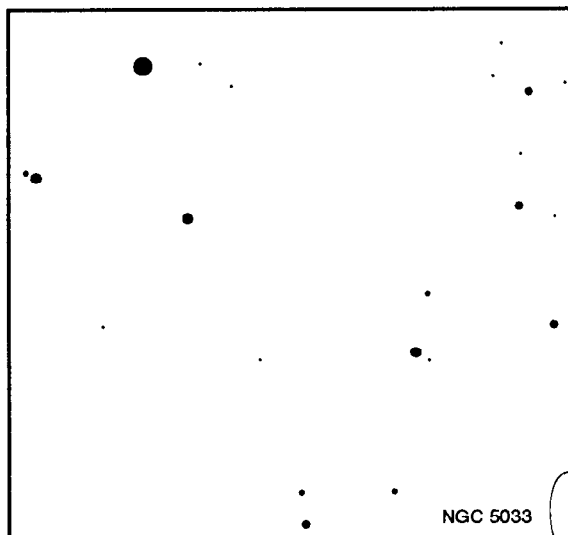
6 degree field, North down



6 degree field, North up, Mirrored



1 degree field, North down



1 degree field, North up, Mirrored

CVN MAG:10.9 Galaxy 13h13m30s x 36°35'58"

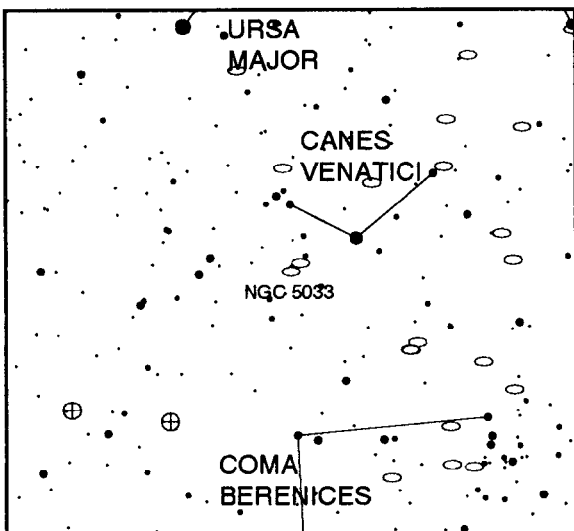
NGC 5033

12'30" x 6'30" CLASS:Sb PA (dgr):170

67

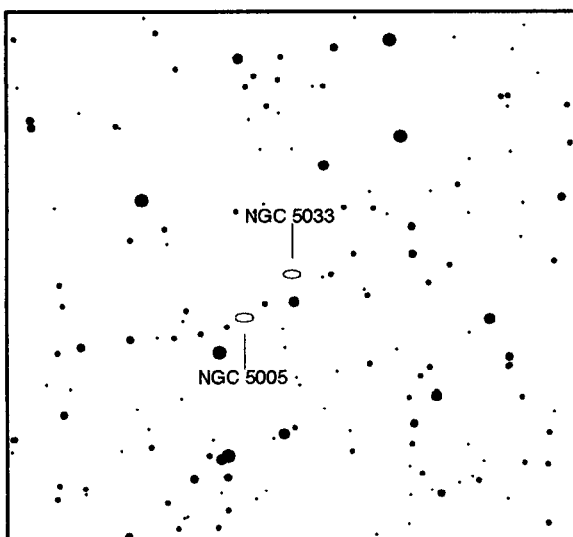
very bright, pretty large, elongated, very bright nucleus

Paired with NGC 5005, bright nucleus in bright bulge with spiral pattern of dark lanes

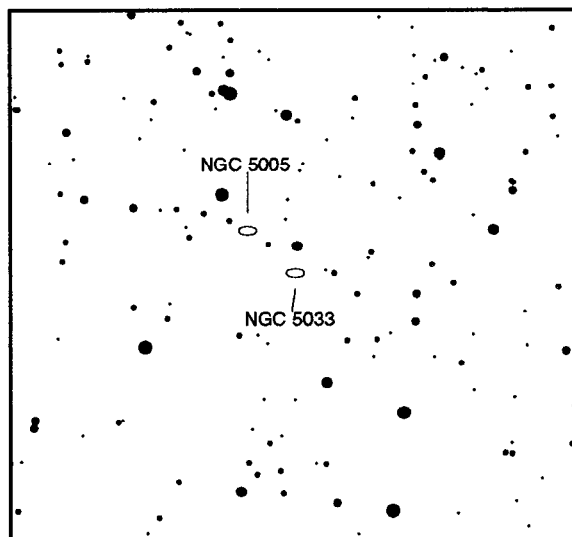


30 degree field, North up

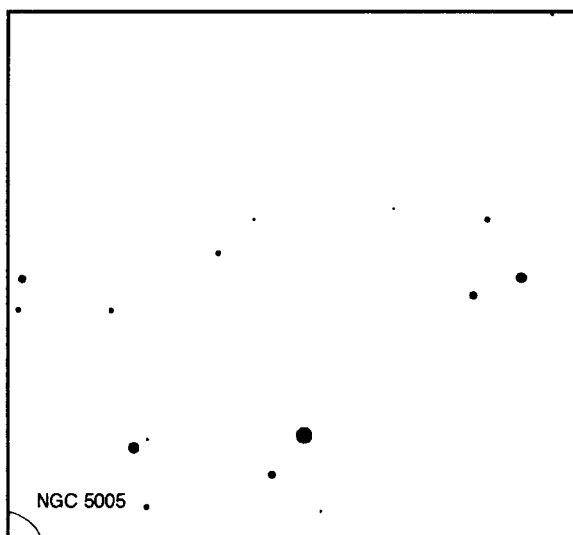
Notes: _____



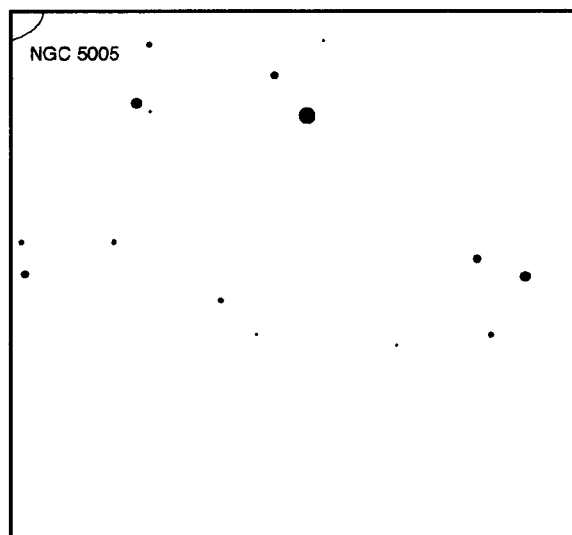
6 degree field, North down



6 degree field, North up, Mirrored



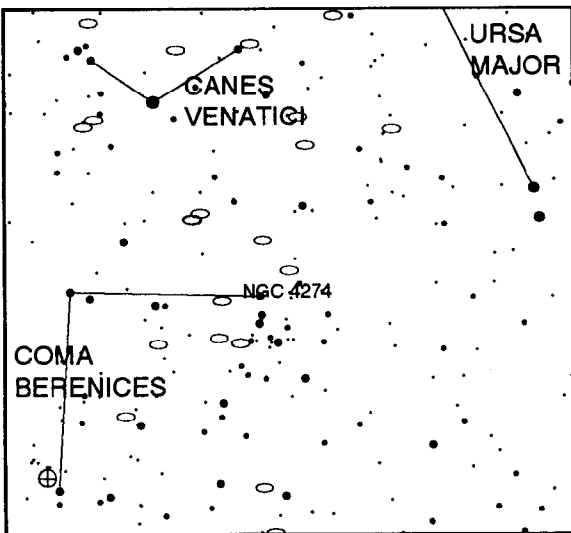
1 degree field, North down



1 degree field, North up, Mirrored

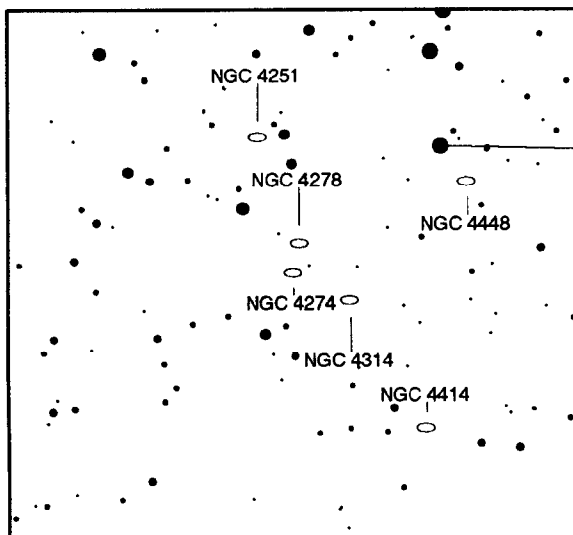
COM MAG:11.1 Galaxy 12h19m53s x 29°37' 2"
 7'18" x 3'42" CLASS: SBa PA (dgr):104
 very bright, very large, elongated, much brighter middle nucleus
 Saturn-like inner ring with faint outer halo

NGC 4274
 68

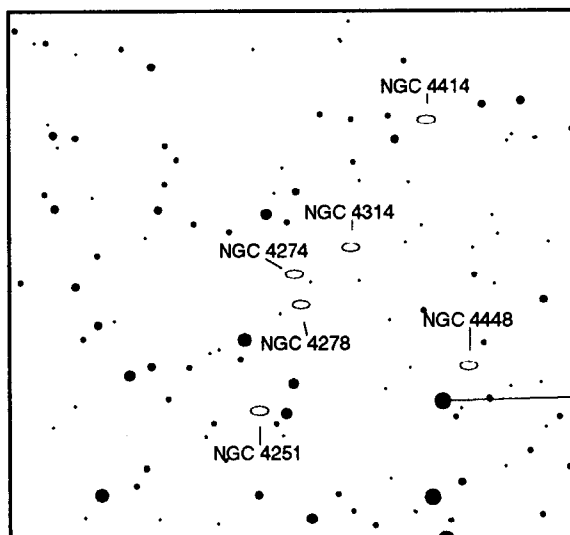


Notes: _____

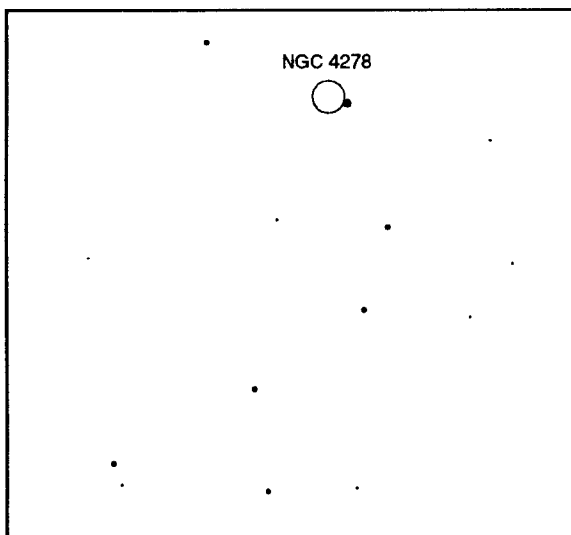
30 degree field, North up



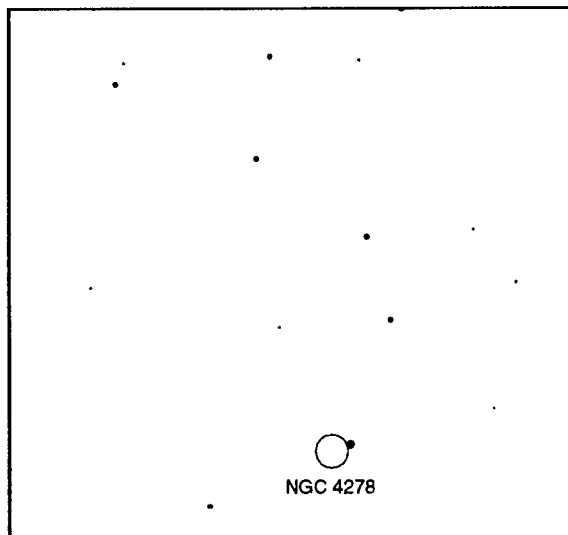
6 degree field, North down



6 degree field, North up, Mirrored



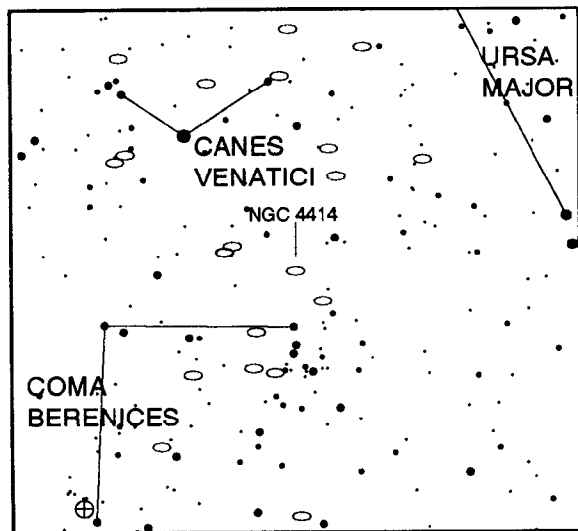
1 degree field, North down



1 degree field, North up, Mirrored

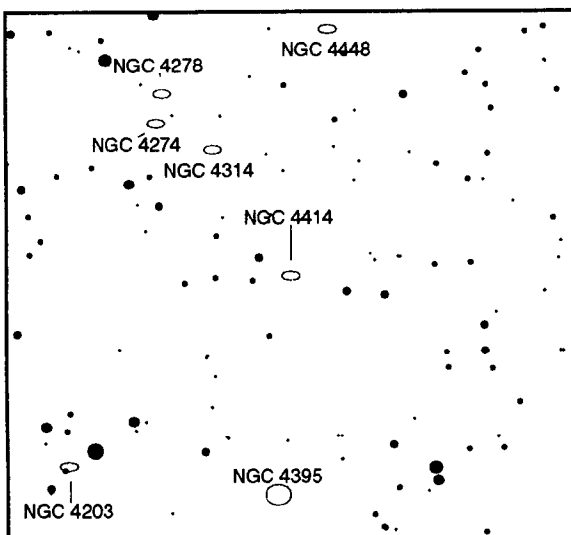
COM MAG:10.9 Galaxy 12h26m23s x 31°13'56"
 5'48" x 3'12" CLASS: Sc PA (dgr):155
 very bright, large, elongated, very suddenly much brighter middle
 diffuse nucleus

NGC 4414
 69

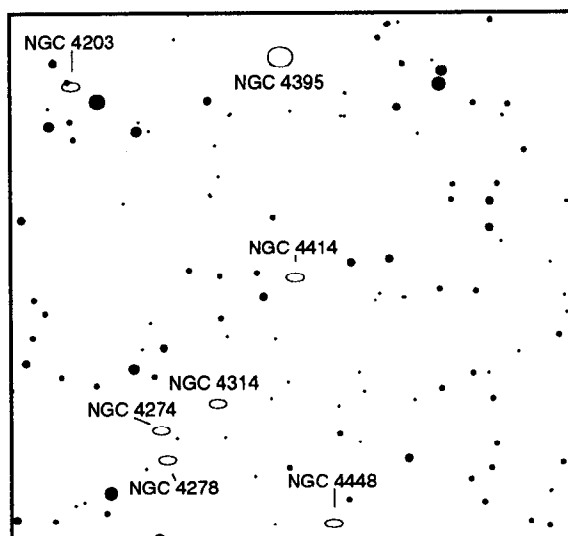


Notes: _____

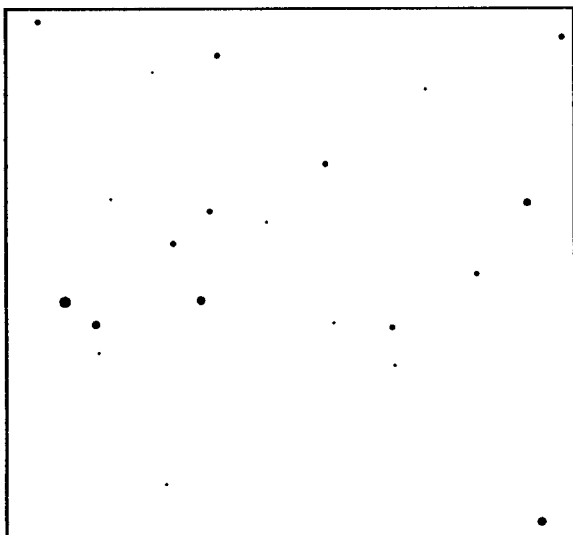
30 degree field, North up



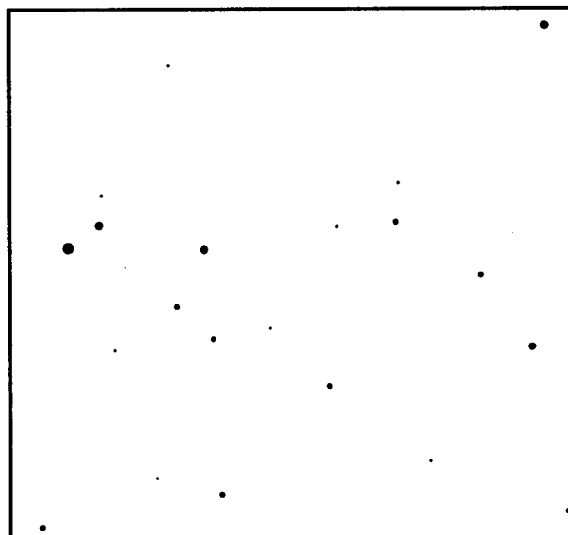
6 degree field, North down



6 degree field, North up, Mirrored



1 degree field, North down



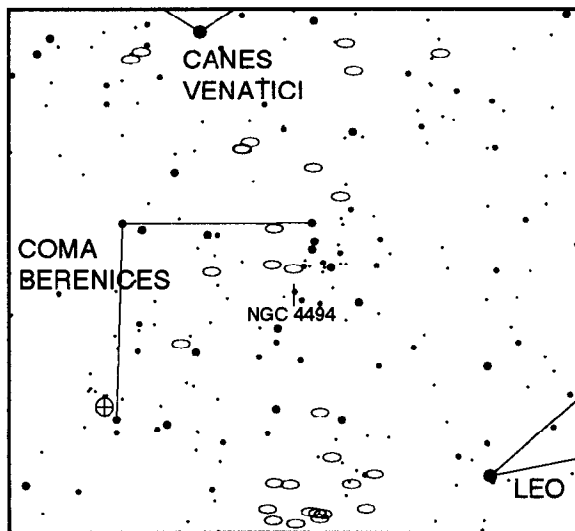
1 degree field, North up, Mirrored

COM MAG:10.7 Galaxy
5'30" x 4'18" CLASS: E1

12h31m19s x 25°46'59"

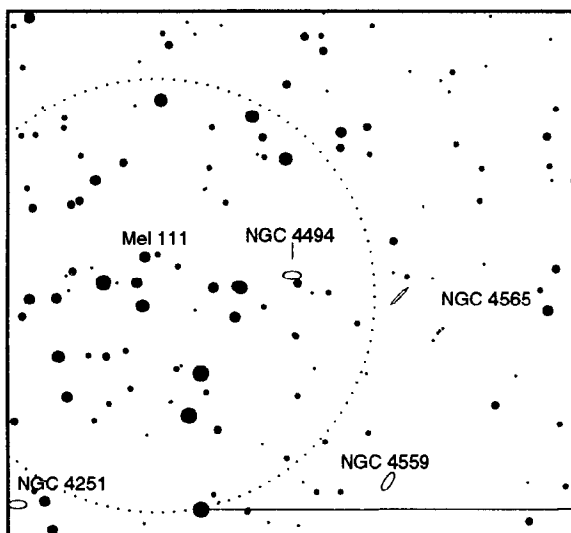
NGC 4494
70

very bright, pretty large, round, very suddenly much brighter middle nucleus
moderately bright nucleus with outer nebulosity

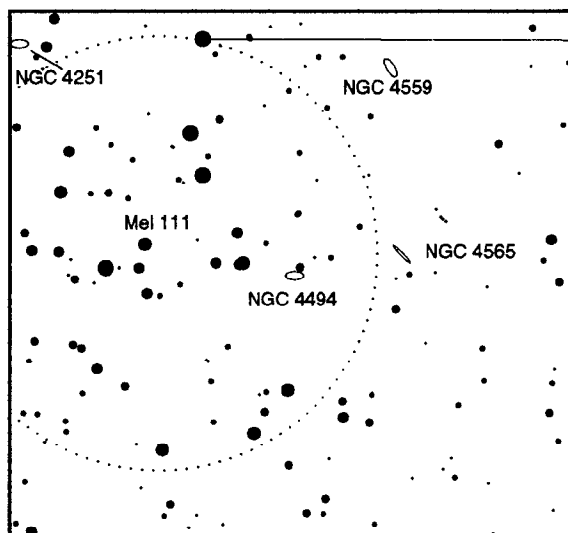


Notes: _____

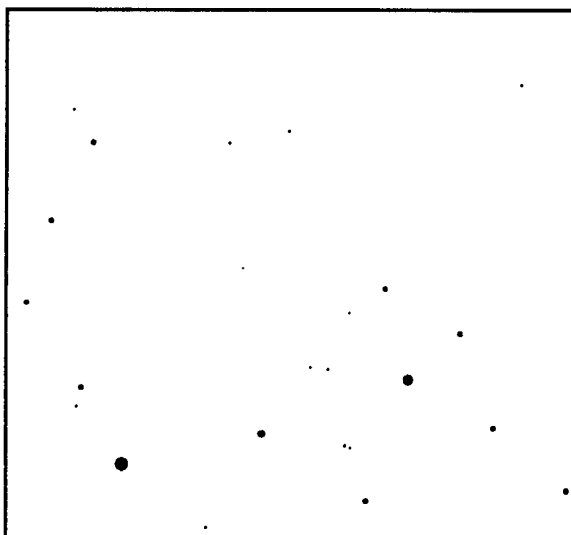
30 degree field, North up



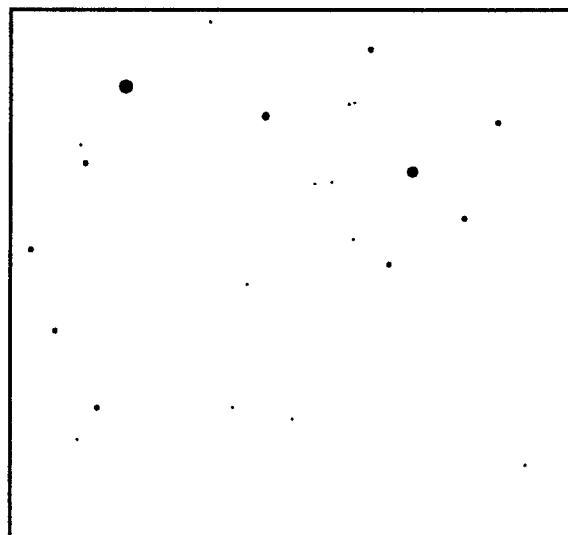
6 degree field, North down



6 degree field, North up, Mirrored



1 degree field, North down



1 degree field, North up, Mirrored

COM MAG:10.7 Galaxy

12h35m53s x 27°57'60"

NGC 4559

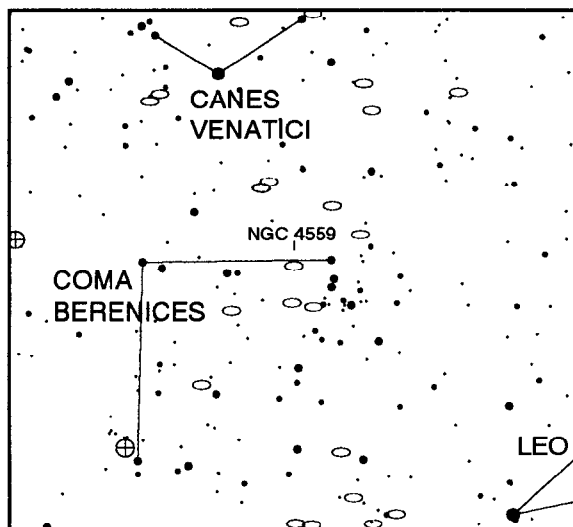
13' 0" x 5' 12" CLASS: Sc

PA (dgr):150

71

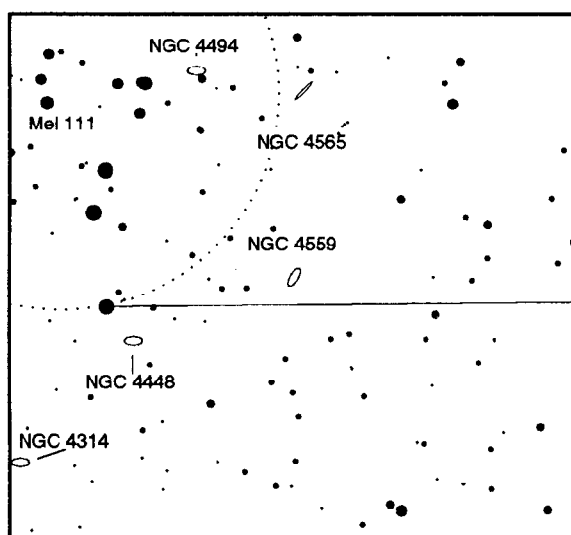
very bright, very large, much elongated, gradually brighter middle

multi-arm spiral, coarse structure, large scope may show mottled condensation within halo, SN 1941a

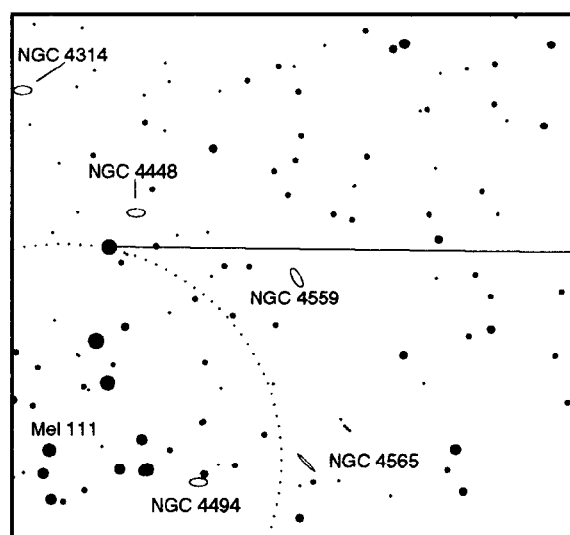


30 degree field, North up

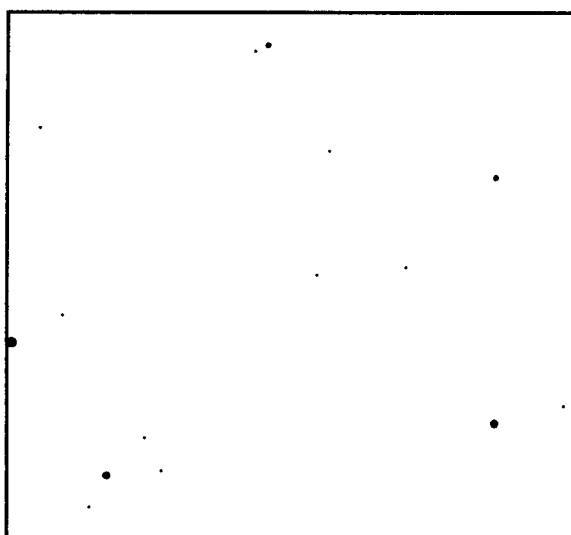
Notes: _____



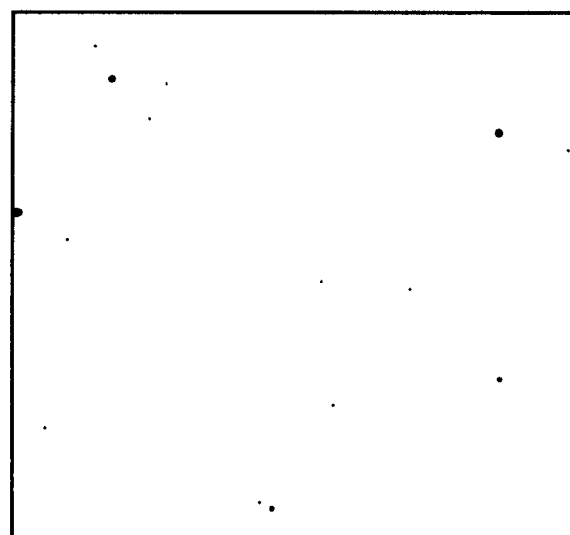
6 degree field, North down



6 degree field, North up, Mirrored

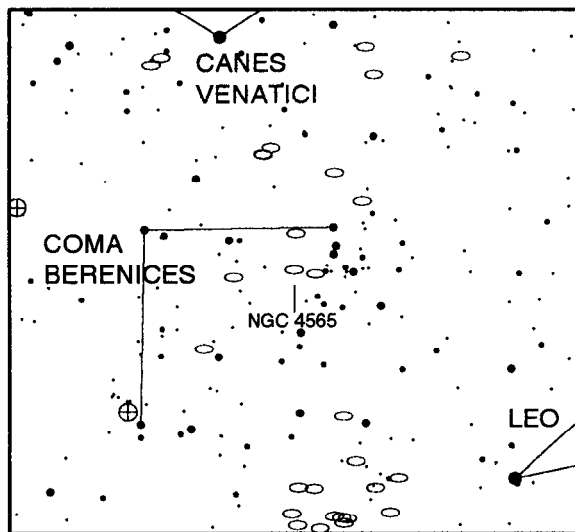


1 degree field, North down



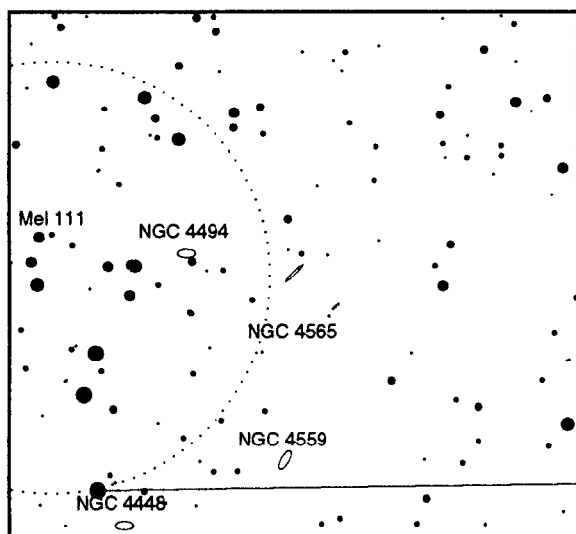
1 degree field, North up, Mirrored

COM MAG:10.3 Galaxy 12h36m19s x 25°59'60" NGC 4565
 16'30" x 2'54" CLASS:Sb PA (dgr):136 72
 very remarkable object, bright, extremely large, extremely elongated, much brighter
 middle nucleus
 classic edge-on galaxy, probably one of the best examples

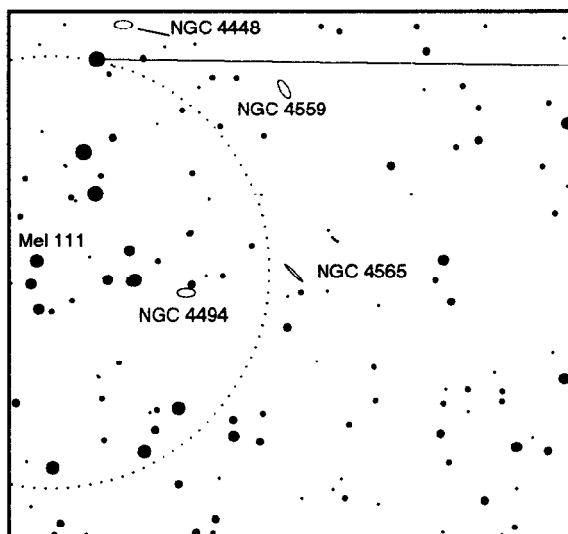


30 degree field, North up

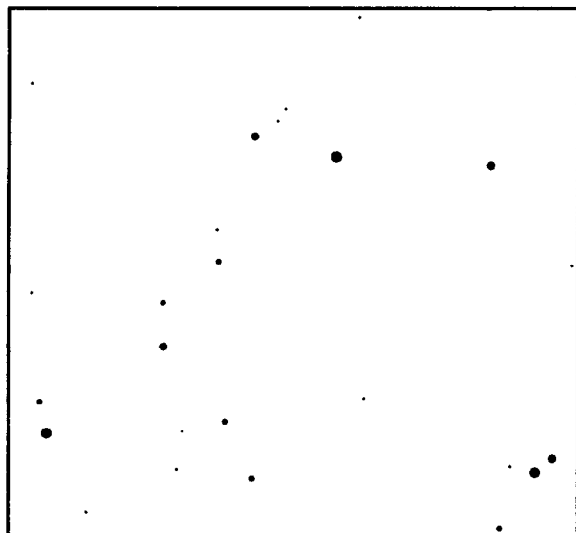
Notes: _____



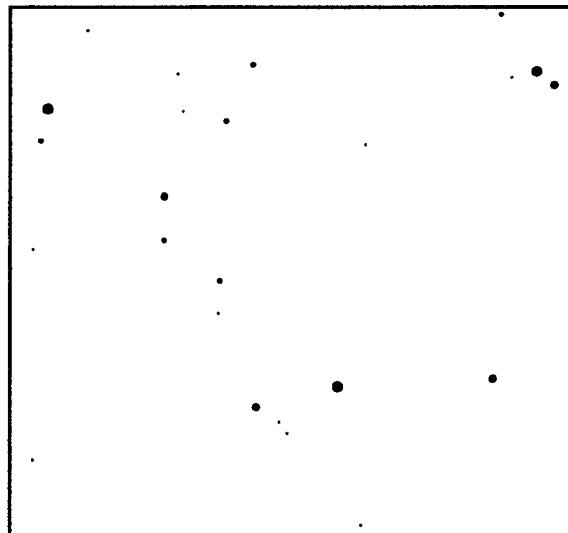
6 degree field, North down



6 degree field, North up, Mirrored



1 degree field, North down



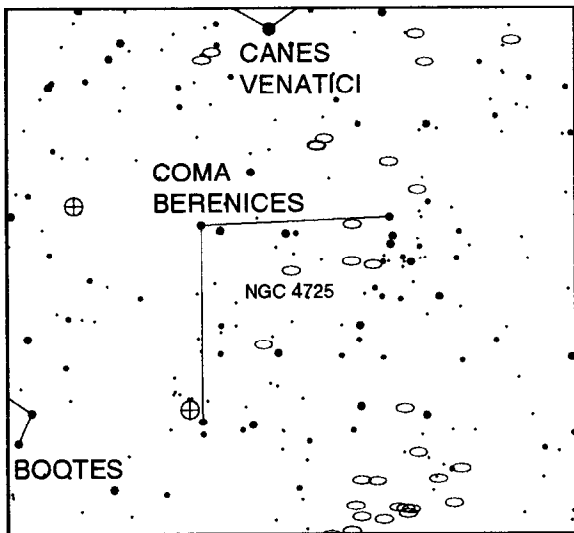
1 degree field, North up, Mirrored

COM MAG:10.2 Galaxy
12' 0" x 9' 0" CLASS: SBb

12h50m23s x 25°32'58"
PA (dgr): 35

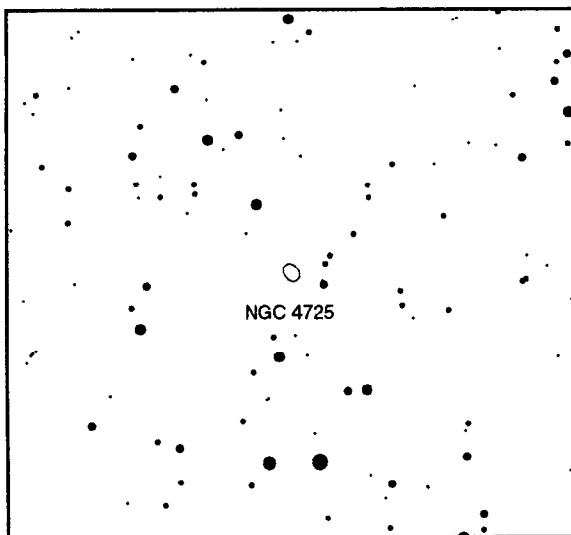
NGC 4725
73

very bright, very large, elongated, very suddenly very much brighter middle, extremely bright nucleus
one arm forms an incomplete pseudo outer ring

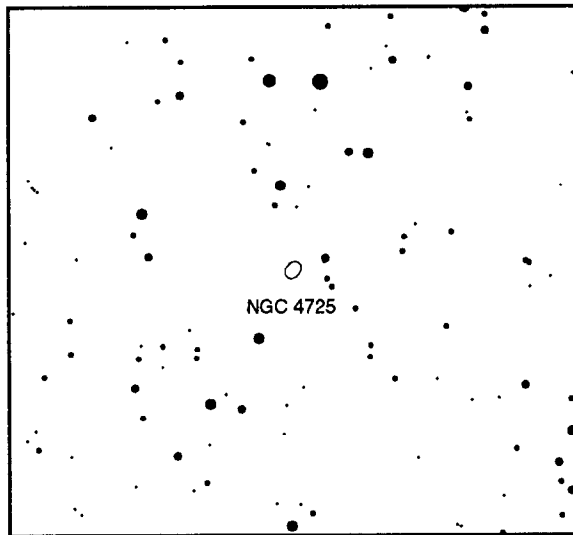


Notes: _____

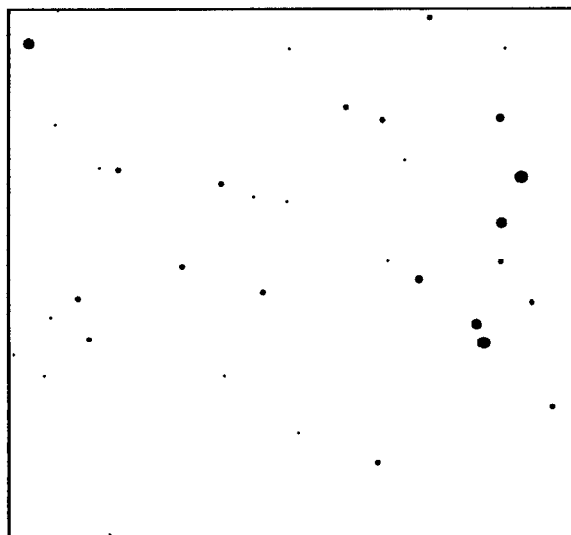
30 degree field, North up



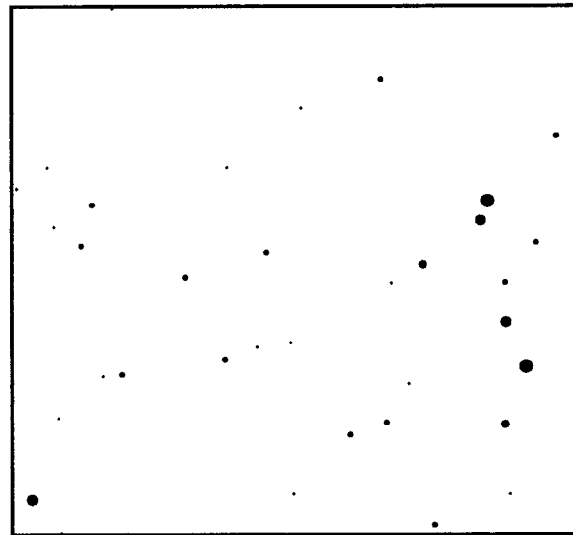
6 degree field, North down



6 degree field, North up, Mirrored



1 degree field, North down



1 degree field, North up, Mirrored

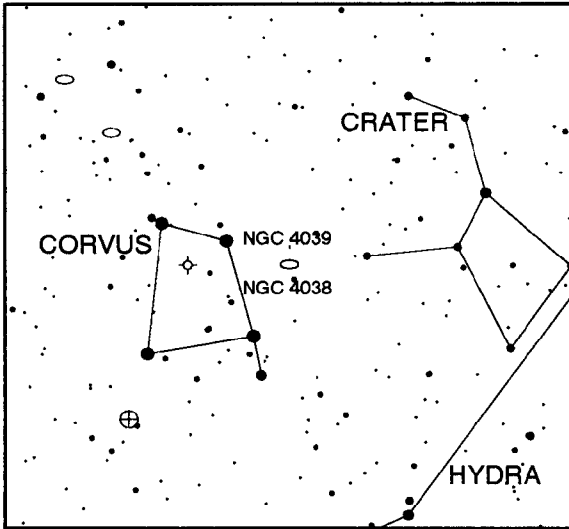
CRV MAG:10.7/13.0 Galaxy
3'36" x 2'48" CLASS:Sp/Sp

12h 1m55s x -18° 51'1"

NGC 4038/9
74

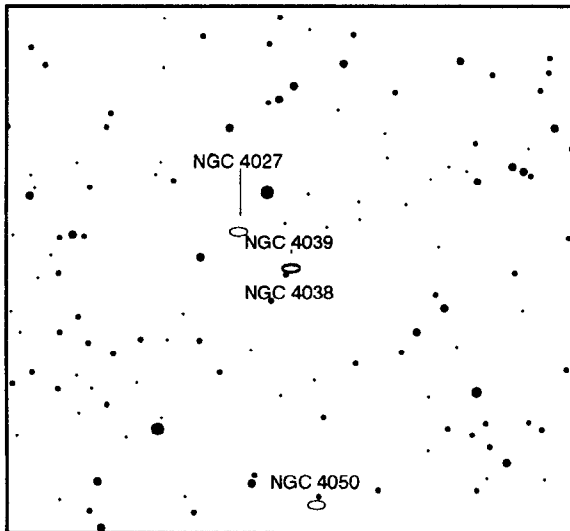
pretty bright, considerably large, round, very gradually brighter middle/ pretty faint, pretty large

Antennae, Rattail or Ringtail Galaxy, two objects in a common envelope with two tails, radio source

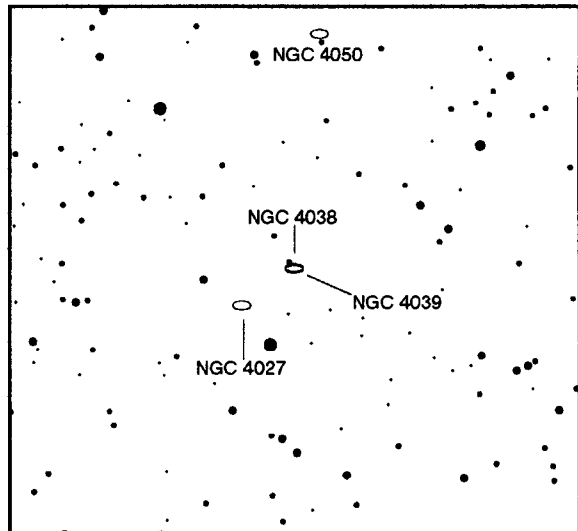


30 degree field, North up

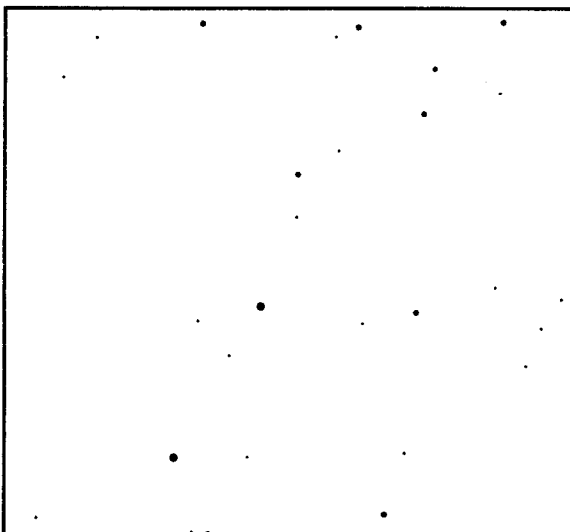
Notes: _____



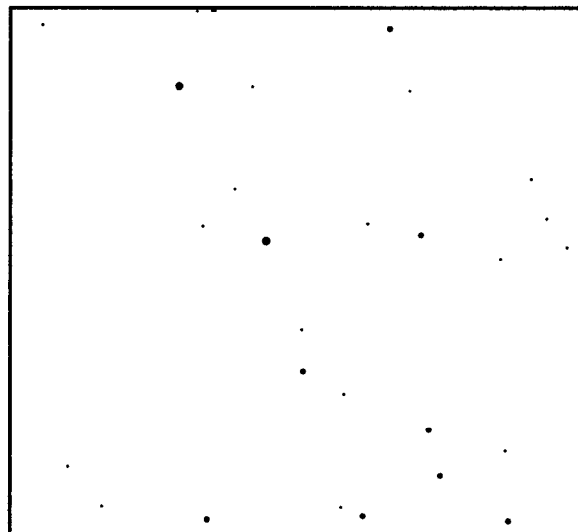
6 degree field, North down



6 degree field, North up, Mirrored



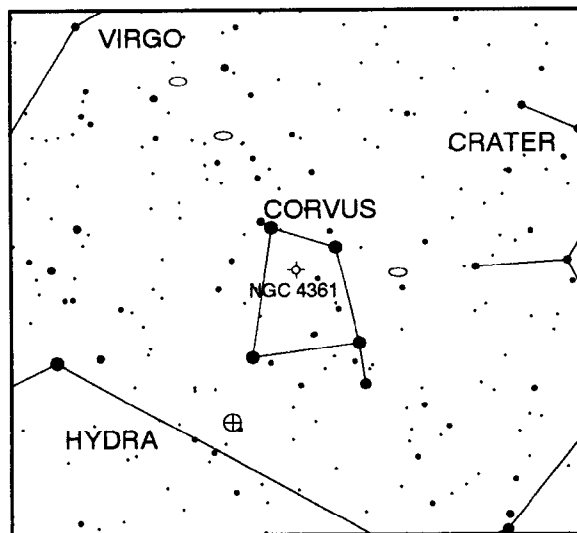
1 degree field, North down



1 degree field, North up, Mirrored

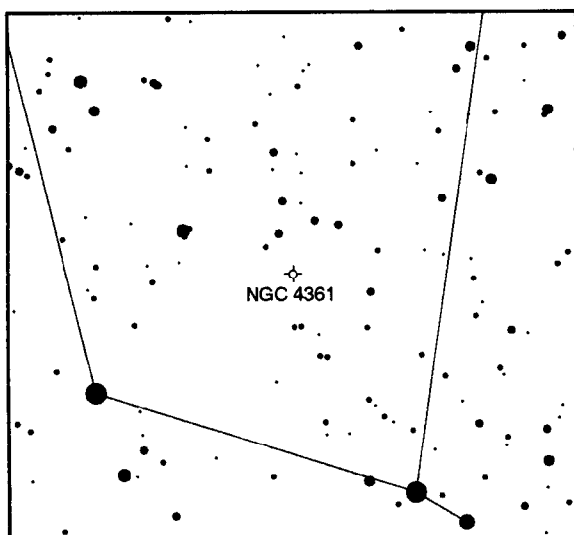
CRV MAG:10.3 Planetary Nebula 12h24m30s x -18°48' 3"
PK294+43.1 1'20" x 1'20" CLASS:3a(2)
large, pretty faint, round disk
13 mag central *

NGC 4361
75

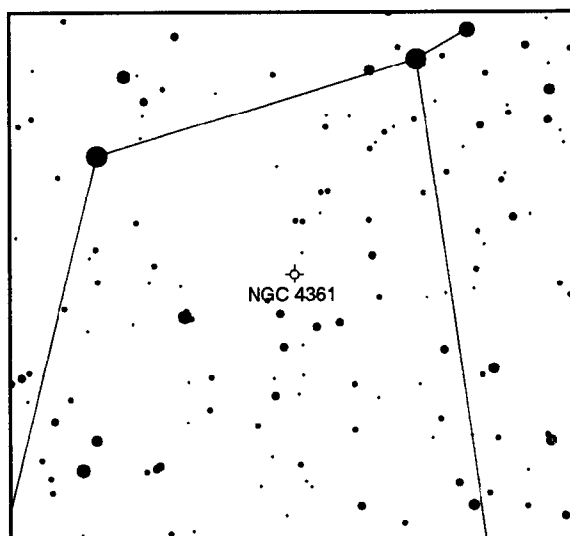


Notes: _____

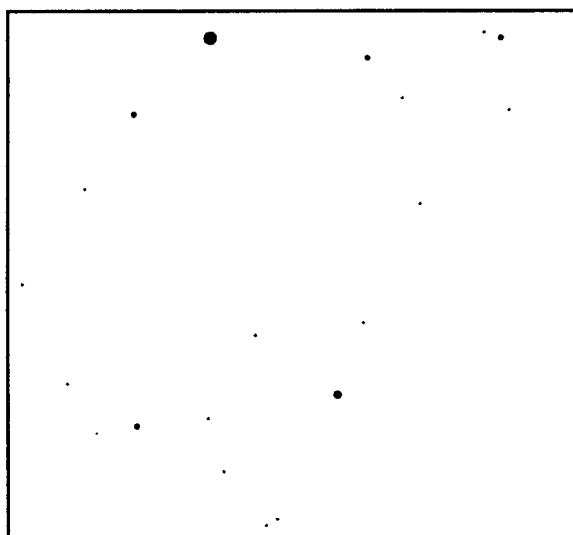
30 degree field, North up



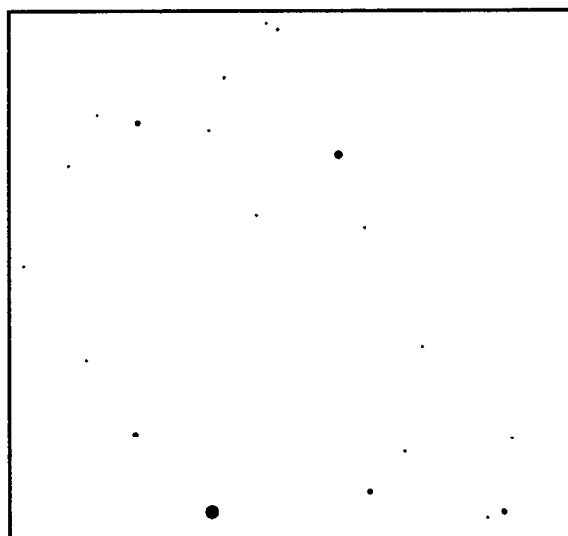
6 degree field, North down



6 degree field, North up, Mirrored



1 degree field, North down



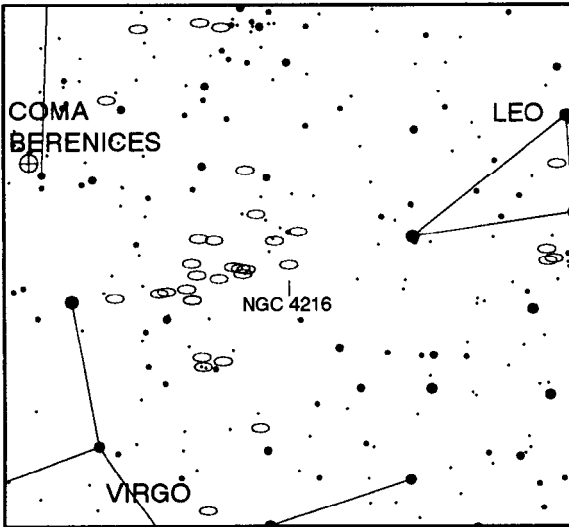
1 degree field, North up, Mirrored

VIR MAG:11.2 Galaxy
9'30" x 2'42" CLASS:Sb

12h15m53s x 13° 9' 4"
PA (dgr): 19

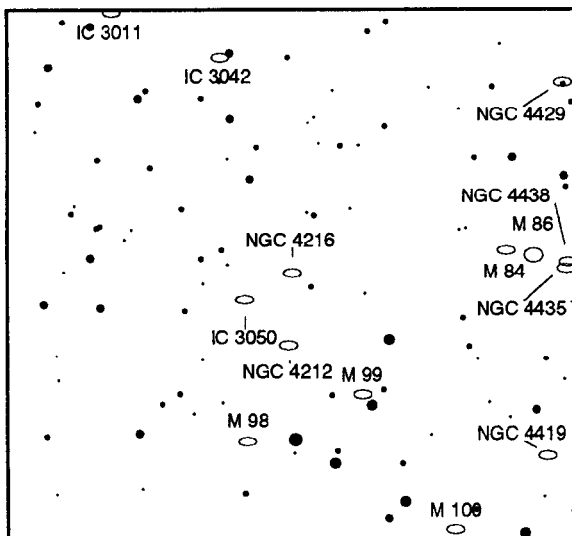
NGC 4216
76

very bright, very large, very much elongated, suddenly brighter nucleus
long streak, fine nearly edge-on spiral, two others in field.

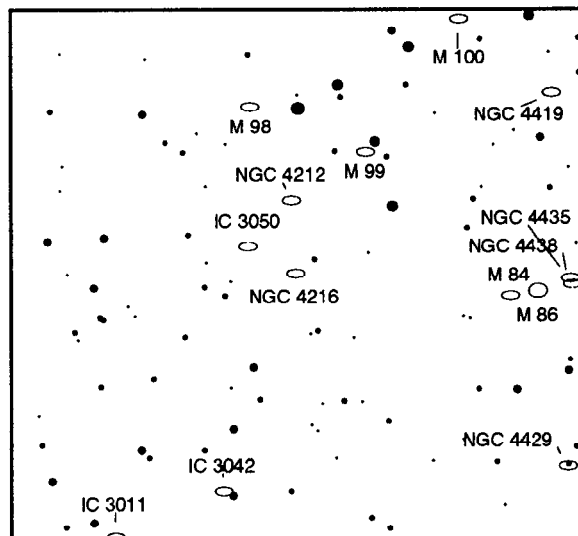


30 degree field, North up

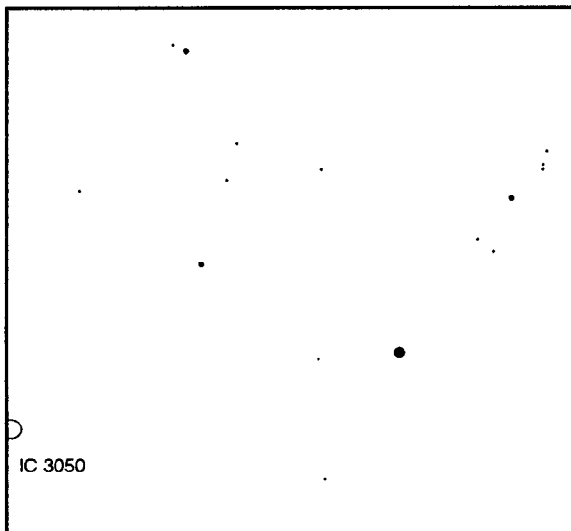
Notes: _____



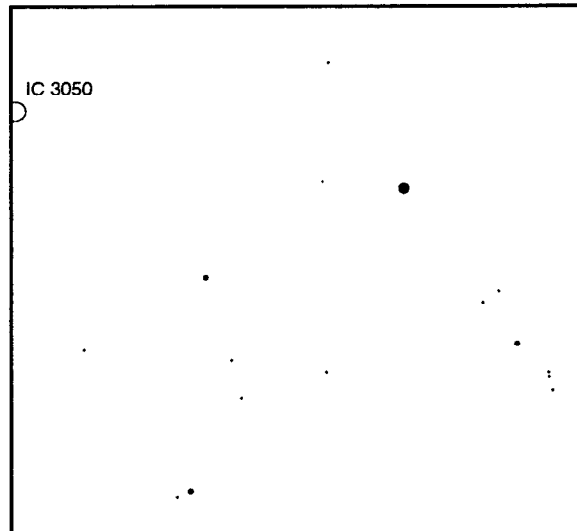
6 degree field, North down



6 degree field, North up, Mirrored



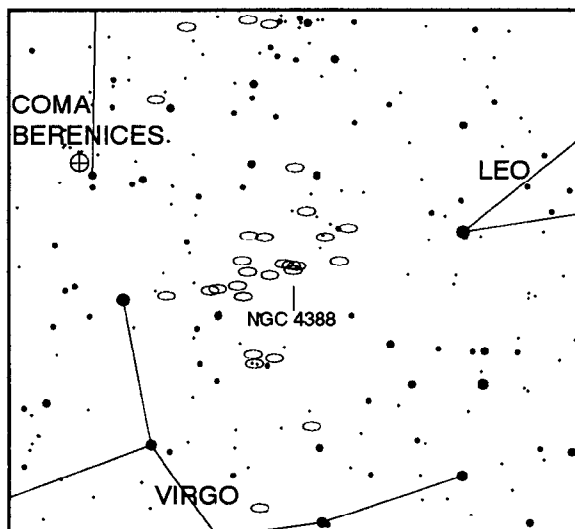
1 degree field, North down



1 degree field, North up, Mirrored

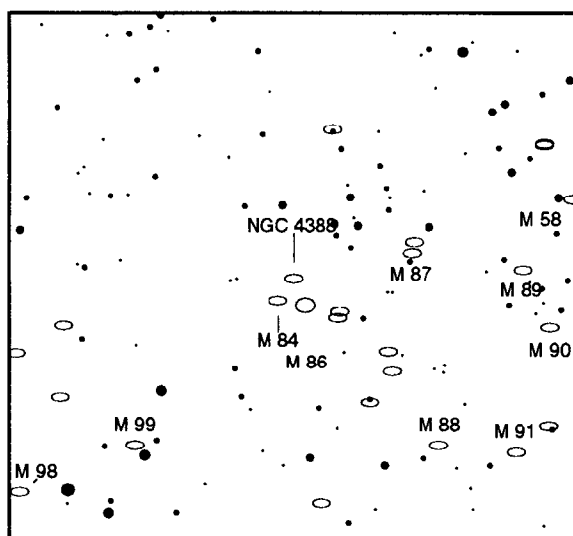
VIR MAG:12.2 Galaxy 12h25m49s x 12°40' 3"
 6'12" x 2'42" CLASS:SBc PA (dgr): 92
 very faint, very much elongated, bright middle
 edge on lens shape, 16' SE from M 84 & M86 in Markarians chain

NGC 4388
 77

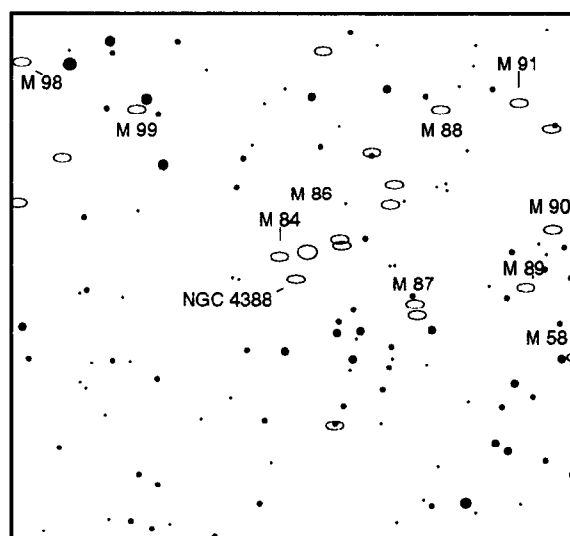


30 degree field, North up

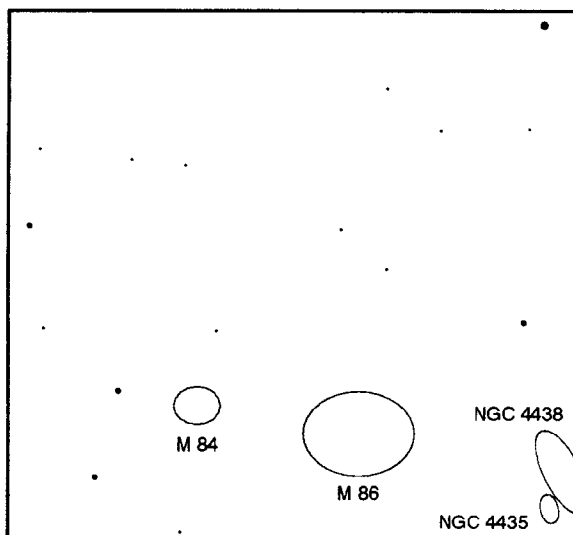
Notes: _____



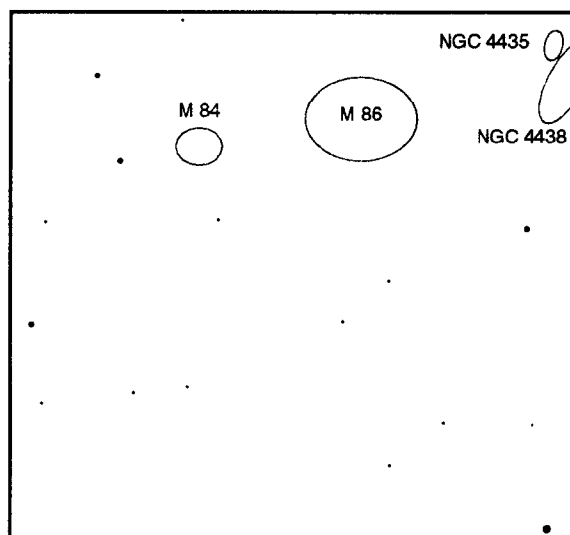
6 degree field, North down



6 degree field, North up, Mirrored



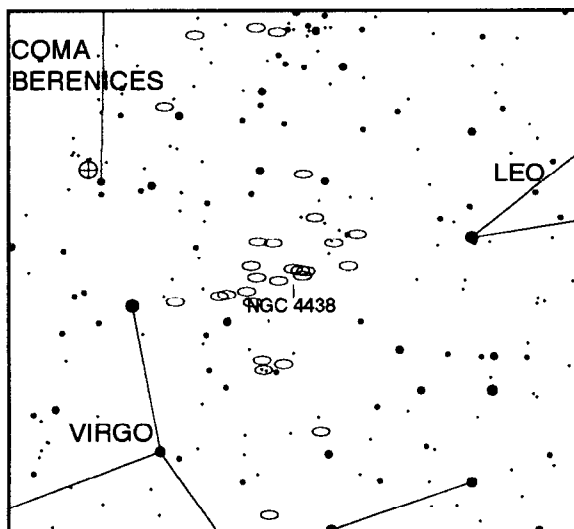
1 degree field, North down



1 degree field, North up, Mirrored

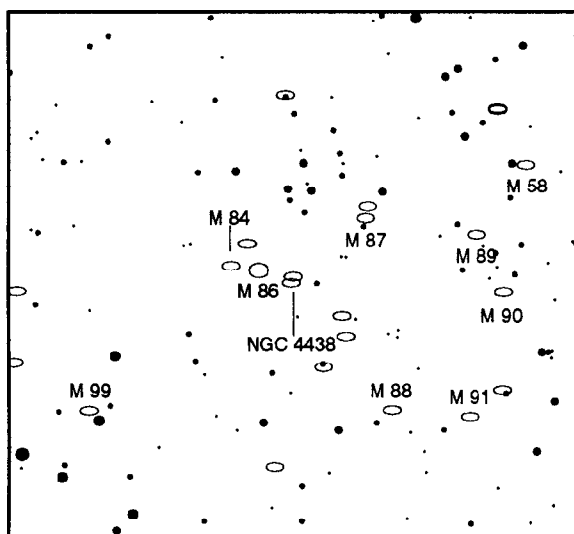
VIR MAG:12.0 Galaxy 12h27m48s x 13° 0'59"
 10'42" x 4'54" CLASS:Sap PA (dgr): 27
 bright, considerably large, very little elongated
 Markarian's chain, NGC 4435 4.4' S, long extending angular filaments

NGC 4438
 78

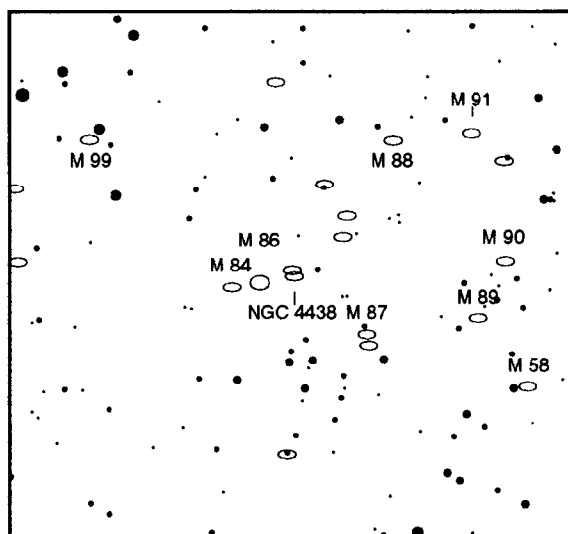


Notes: _____

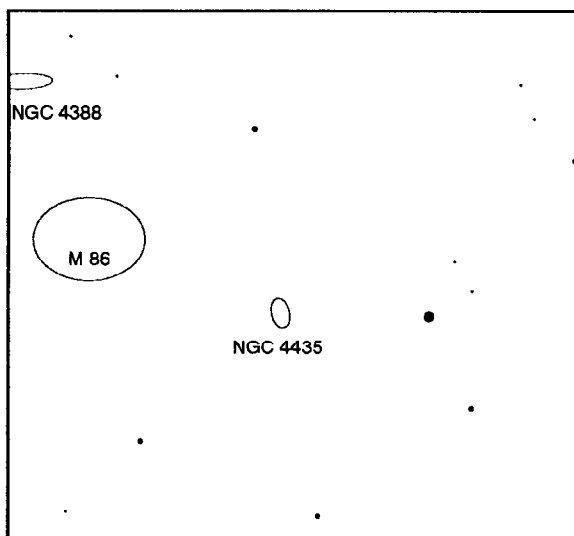
30 degree field, North up



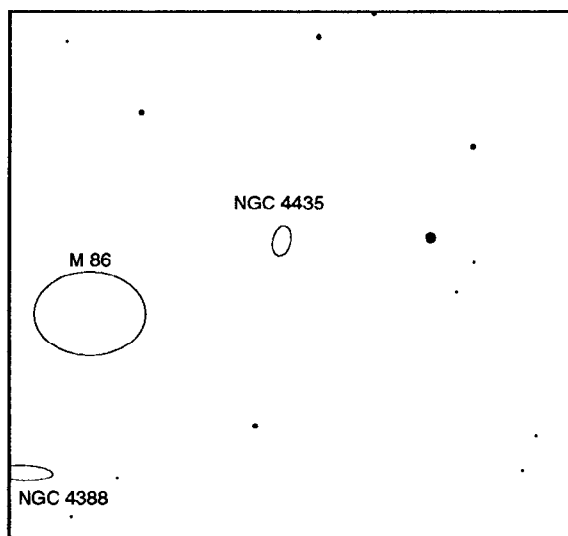
6 degree field, North down



6 degree field, North up, Mirrored



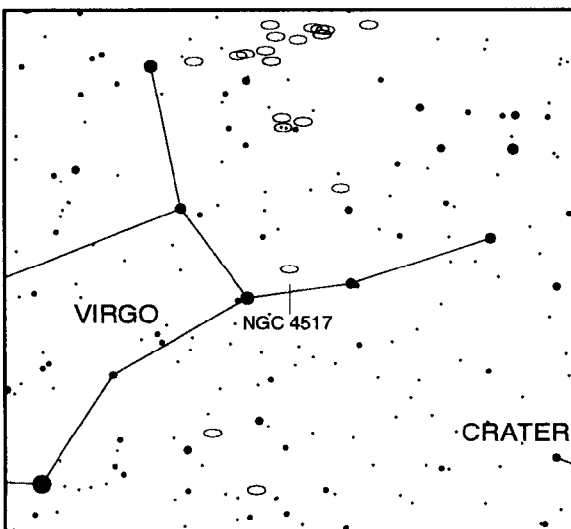
1 degree field, North down



1 degree field, North up, Mirrored

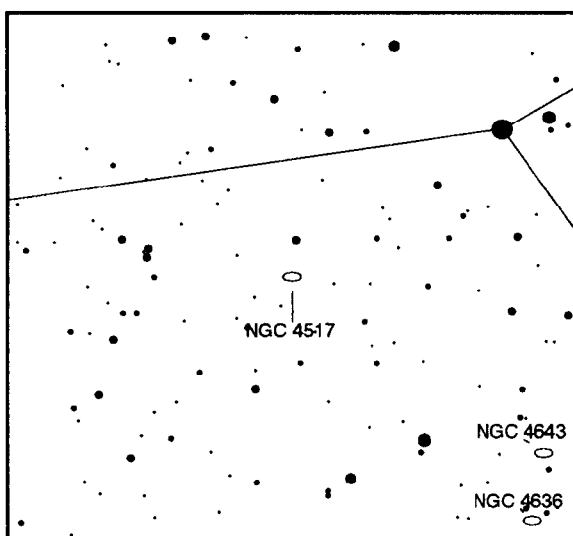
VIR MAG:12.4 Galaxy 12h32m48s x 0° 6'55"
 11'48" x 2'30" CLASS:Sc PA (dgr): 83
 considerably bright, very large, very much elongated
 long narrow streak with equatorial dust patches

NGC 4517
 79

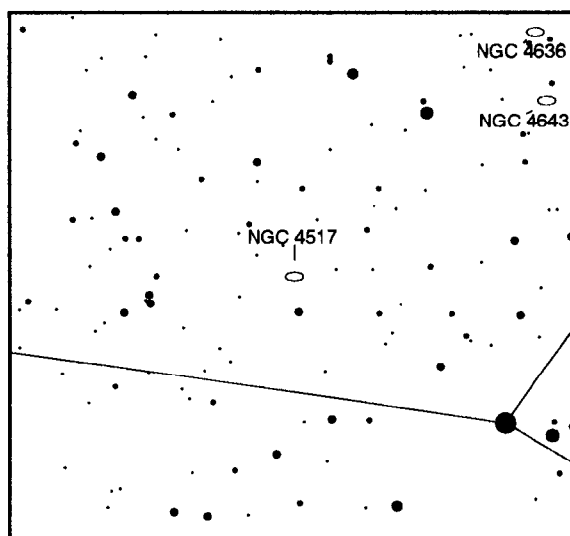


Notes: _____

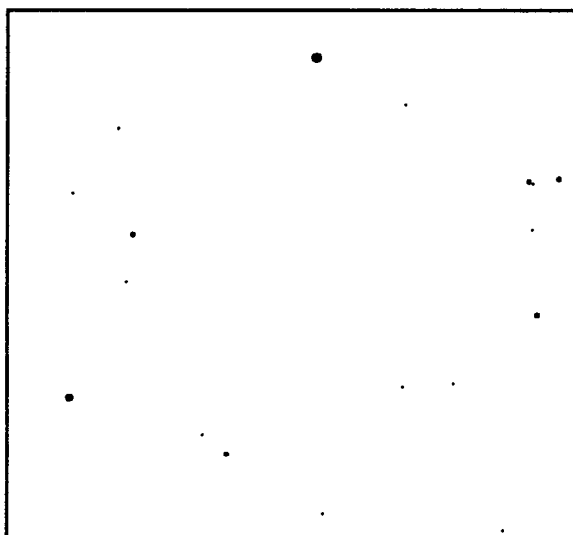
30 degree field, North up



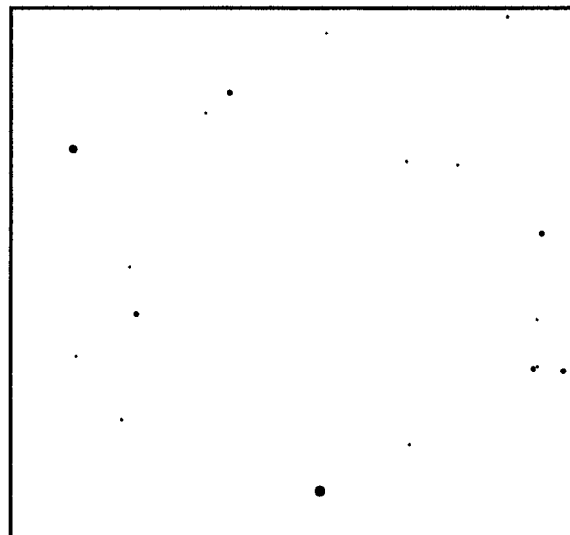
6 degree field, North down



6 degree field, North up, Mirrored



1 degree field, North down



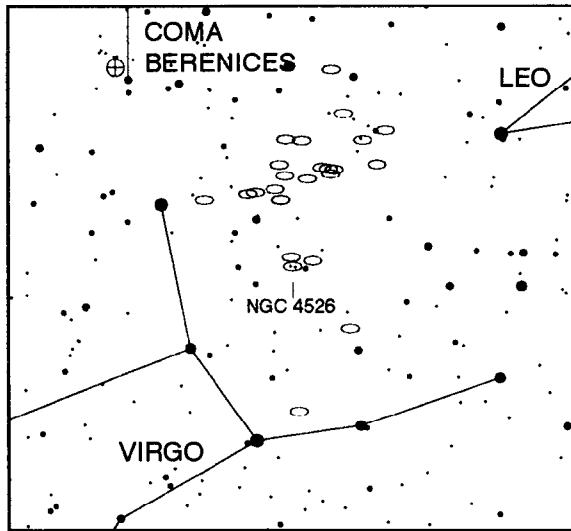
1 degree field, North up, Mirrored

VIR MAG:10.6 Galaxy
7' 0" x 3' 42" CLASS:E7

12h34m 5s x 7°42'55"
PA (dgr):113

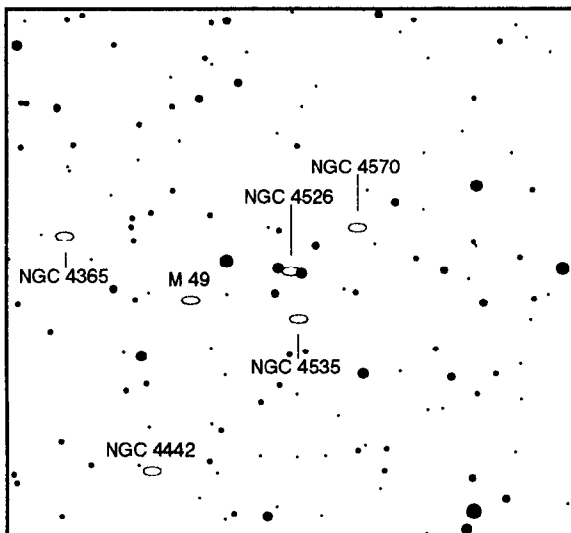
NGC 4526
80

very bright, very large, much elongated, pretty suddenly much brighter middle
lenticular, nearly edge-on, between two 7th mag stars, the Lost Galaxy

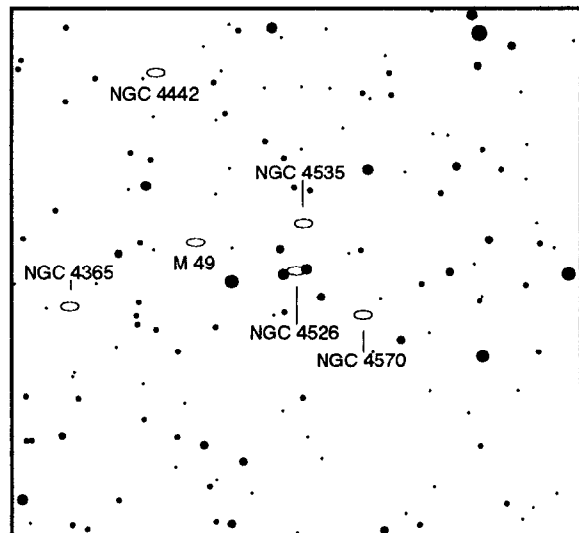


Notes: _____

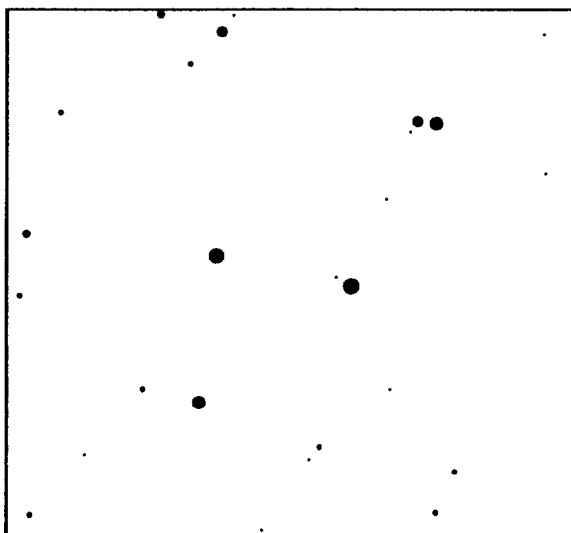
30 degree field, North up



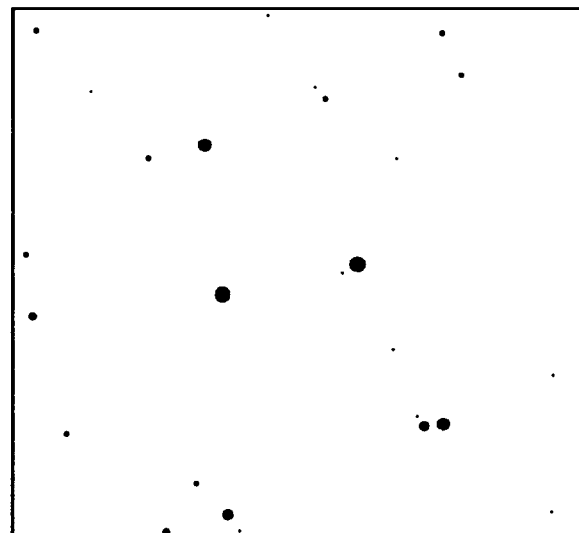
6 degree field, North down



6 degree field, North up, Mirrored



1 degree field, North down



1 degree field, North up, Mirrored

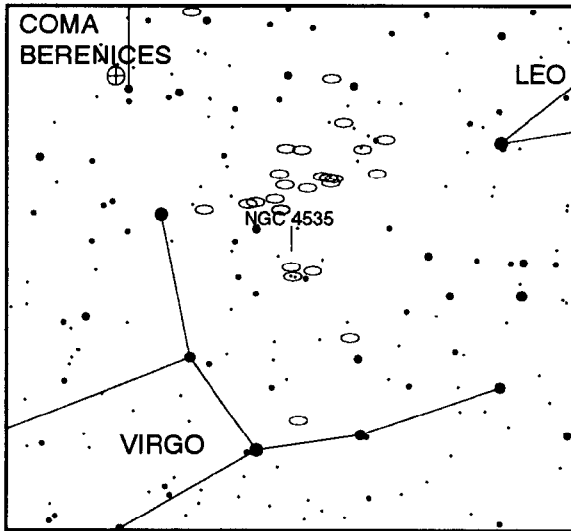
VIR MAG:11.1 Galaxy 12h34m23s x 8°13' 5"

NGC 4535

8'48" x 7' 0" CLASS:SBc PA (dgr): 0

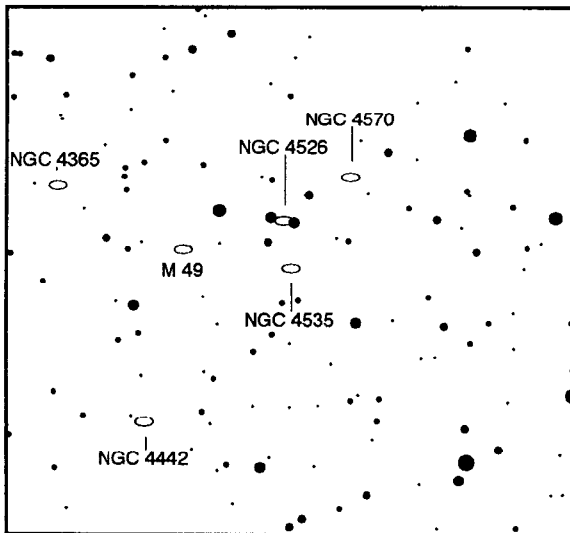
81

pretty faint, very large, round, very suddenly extremely bright nucleus or *
S-shaped spiral, face on, delicate arms, 45" N of NGC 4526

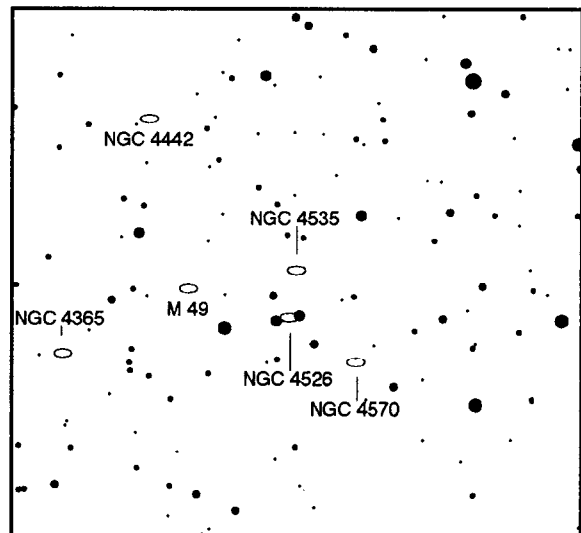


Notes: _____

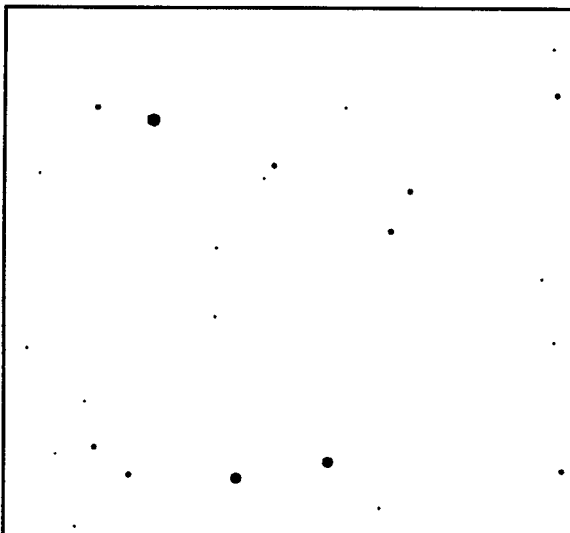
30 degree field, North up



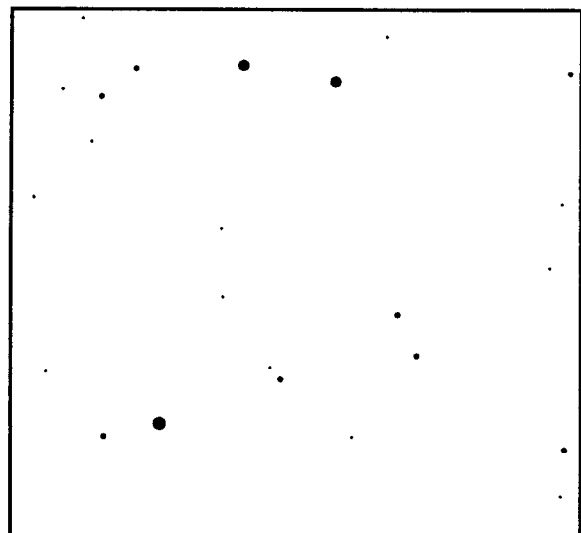
6 degree field, North down



6 degree field, North up, Mirrored



1 degree field, North down



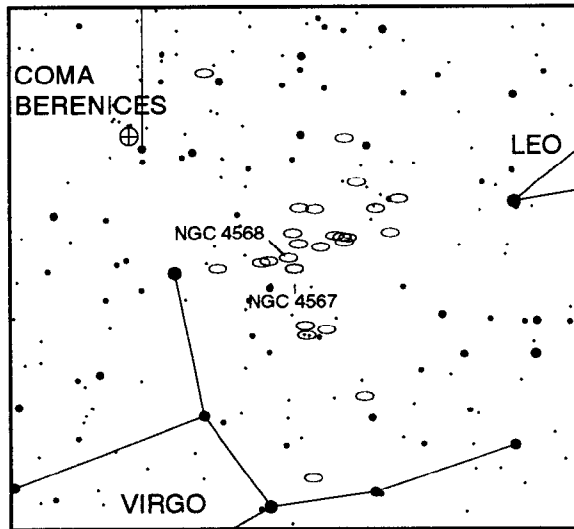
1 degree field, North up, Mirrored

VIR MAG:12.5 Galaxy
3' 0" x 3'30" CLASS:Sb/Sc

12h36m35s x 11°16' 1"

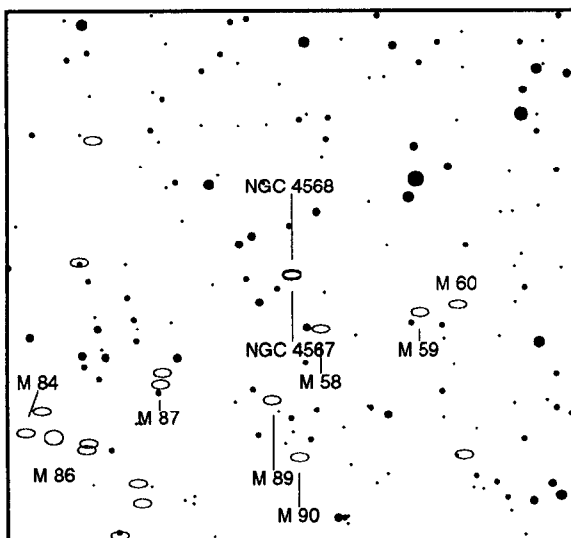
NGC 4567/8
82

very faint, pretty large, bright nucleus/ pretty faint, pretty large, much elongated
Siamese Twins, pair of physically connected galaxies

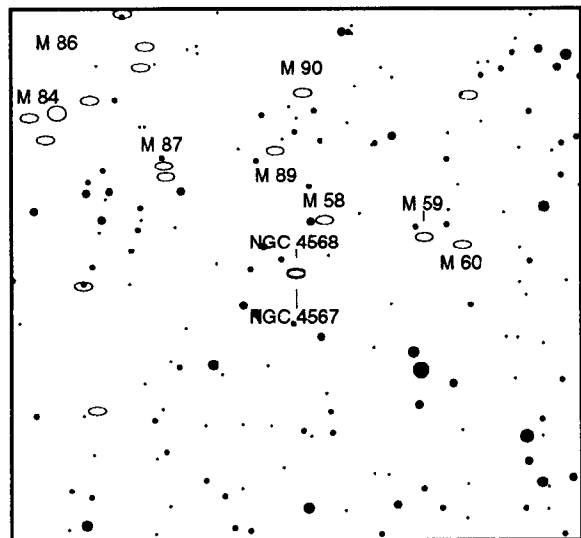


Notes: _____

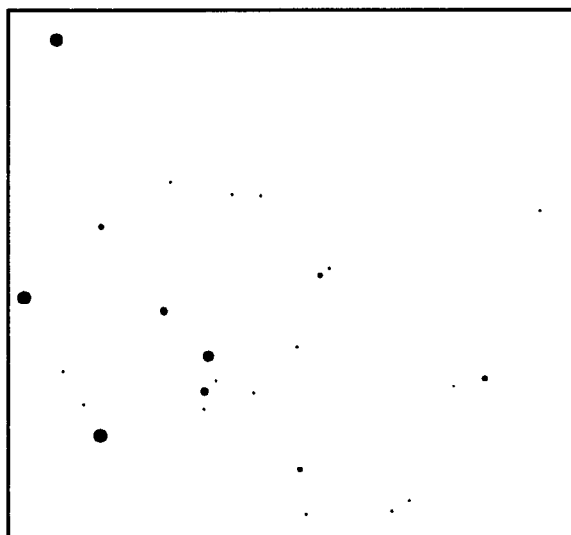
30 degree field, North up



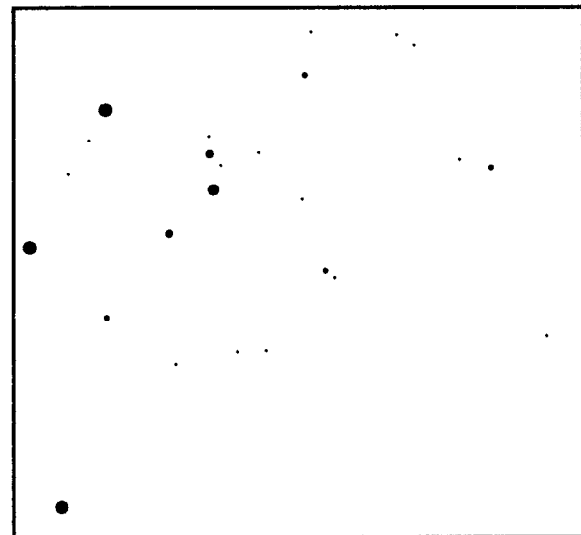
6 degree field, North down



6 degree field, North up, Mirrored



1 degree field, North down



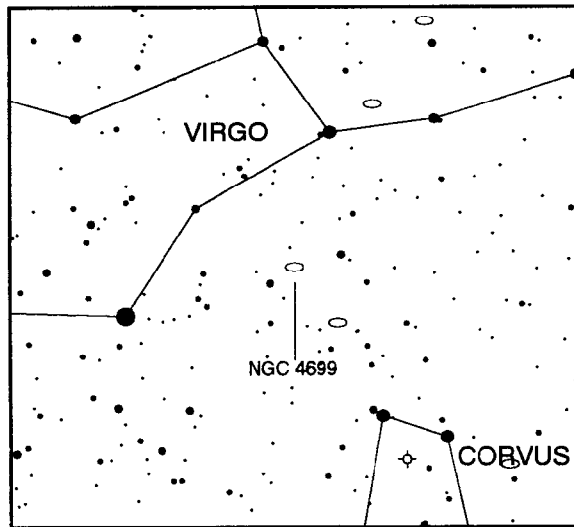
1 degree field, North up, Mirrored

VIR MAG:10.5 Galaxy
4'30" x 3'42" CLASS: Sa/Sb

12h49m 7s x - 8°39'57"

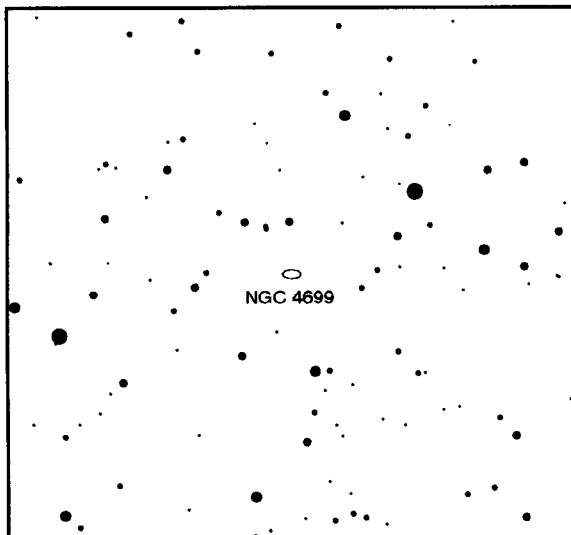
NGC 4699
83

very bright, large, round, very much brighter middle nucleus, not well resolved
small and bright, look for NGC 4697 3 dgr N

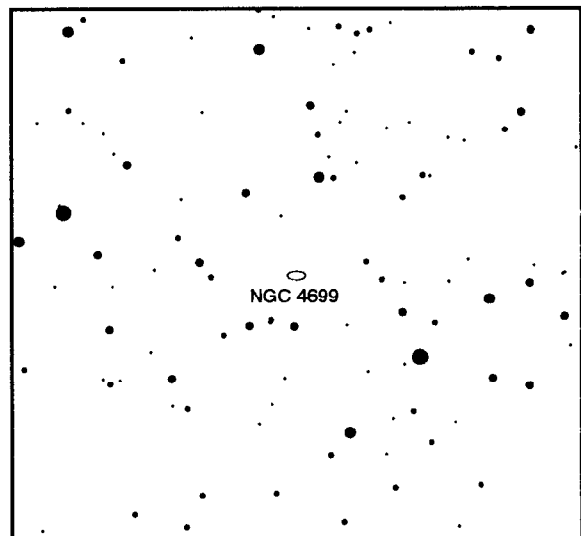


Notes: _____

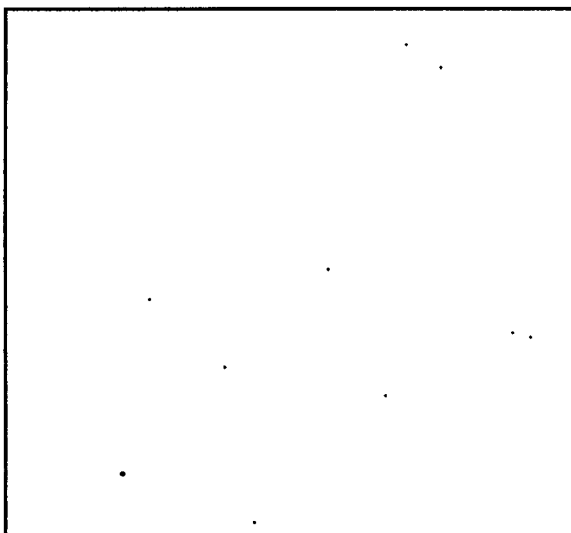
30 degree field, North up



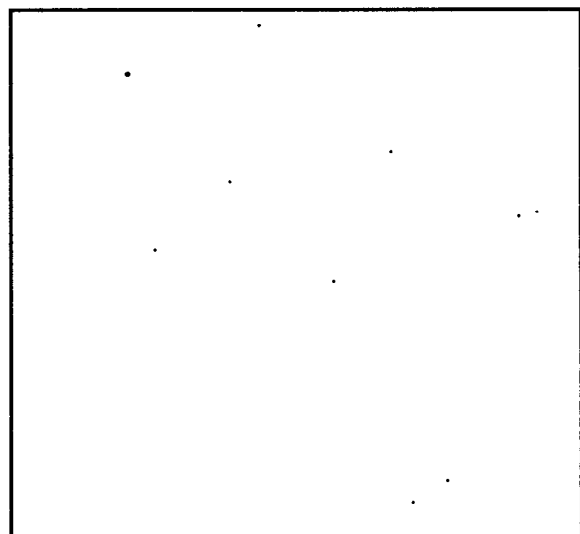
6 degree field, North down



6 degree field, North up, Mirrored



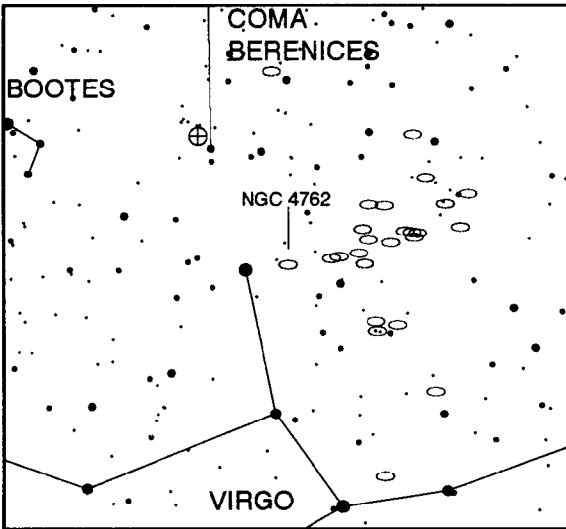
1 degree field, North down



1 degree field, North up, Mirrored

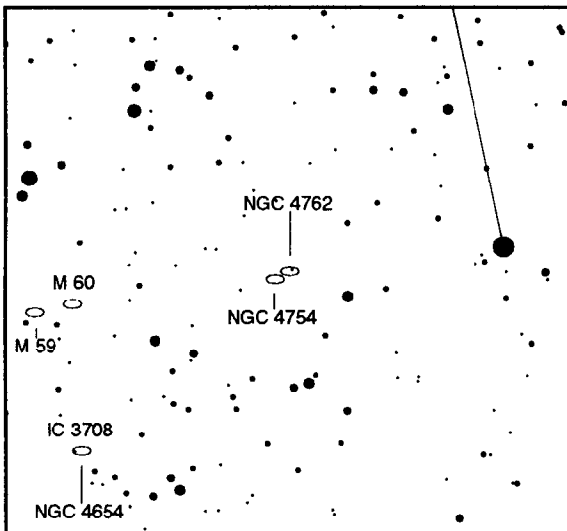
VIR MAG:11.1 Galaxy 12h53m 1s x 11°14' 2"
 9' 0" x 2' 0" CLASS:SO PA (dgr): 32
 pretty bright, very much elongated
 thick streak with extending tufts at ends

NGC 4762
 84

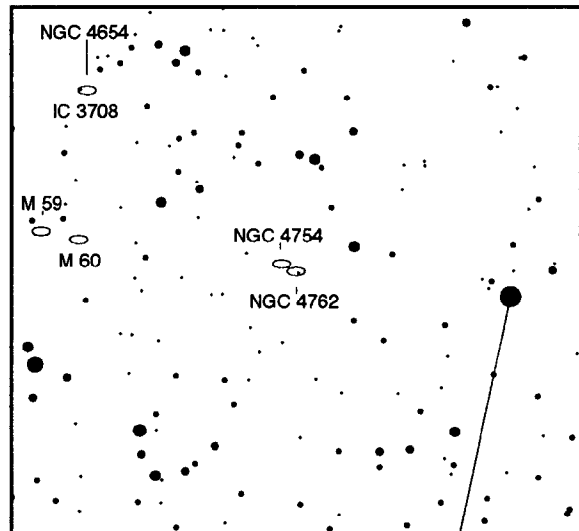


30 degree field, North up

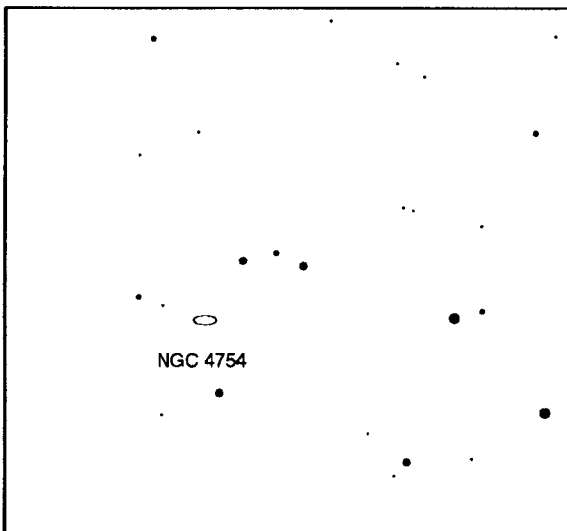
Notes: _____



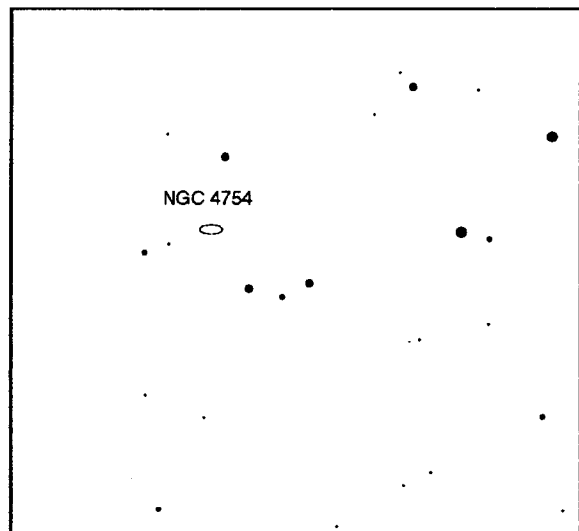
6 degree field, North down



6 degree field, North up, Mirrored



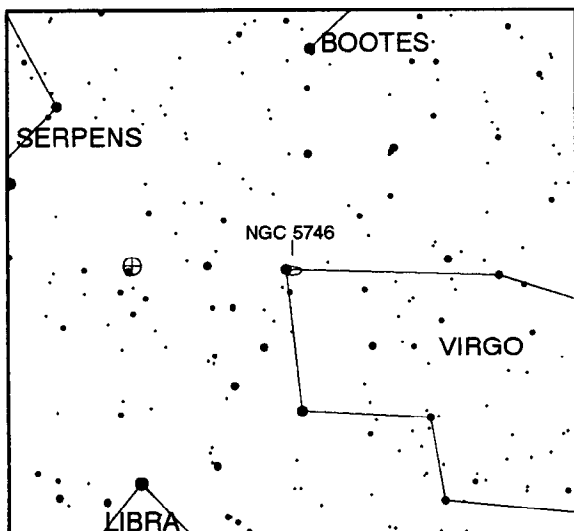
1 degree field, North down



1 degree field, North up, Mirrored

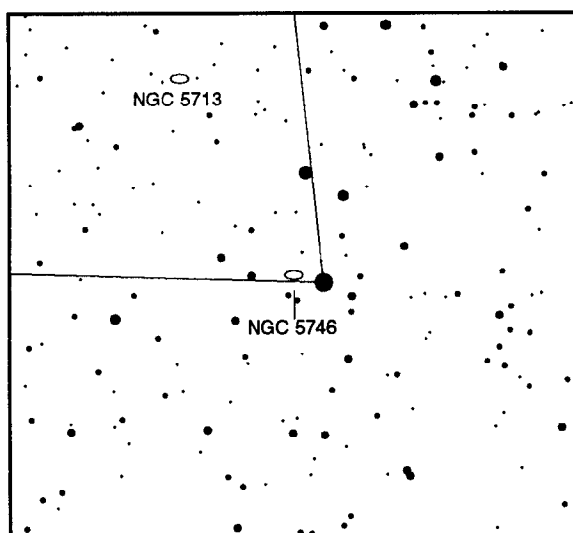
VIR MAG:12.3 Galaxy 14h44m60s x 1°48'56"
 7'24" x 1'6" CLASS:Sb PA (dgr):170
 bright, large, very much elongated, brighter middle, bright nucleus
 fine edge on spiral with equatorial dust band

NGC 5746
 85

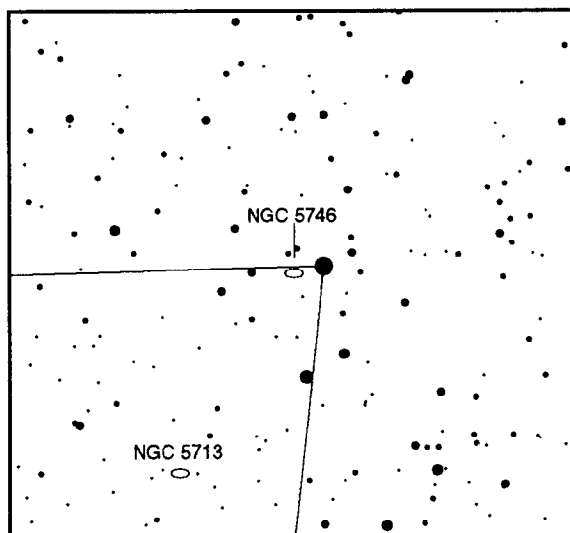


30 degree field, North up

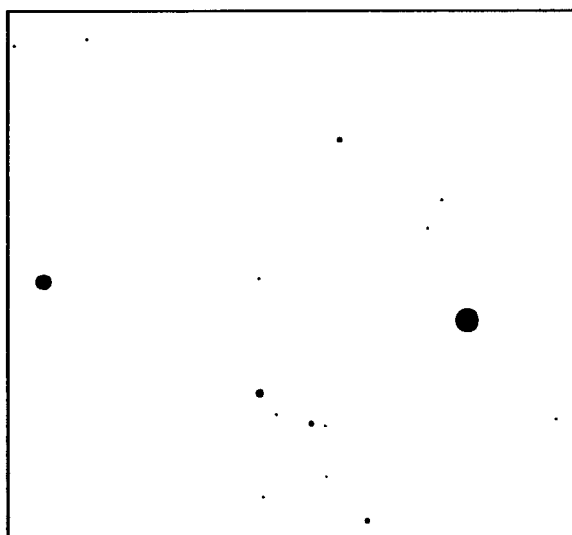
Notes: _____



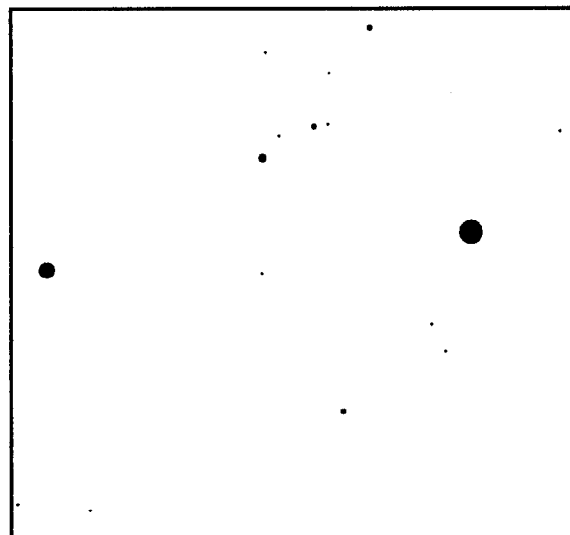
6 degree field, North down



6 degree field, North up, Mirrored



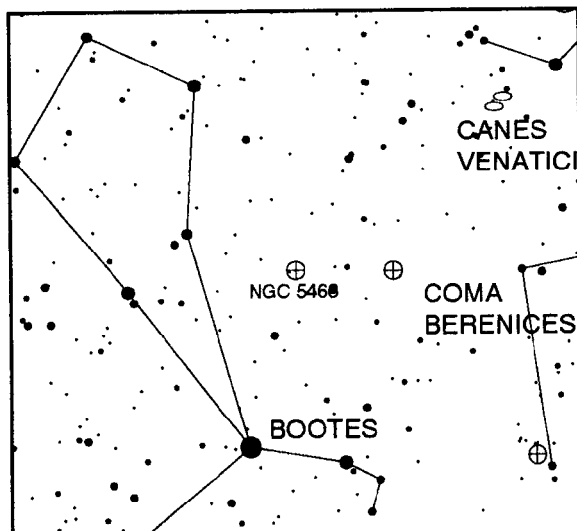
1 degree field, North down



1 degree field, North up, Mirrored

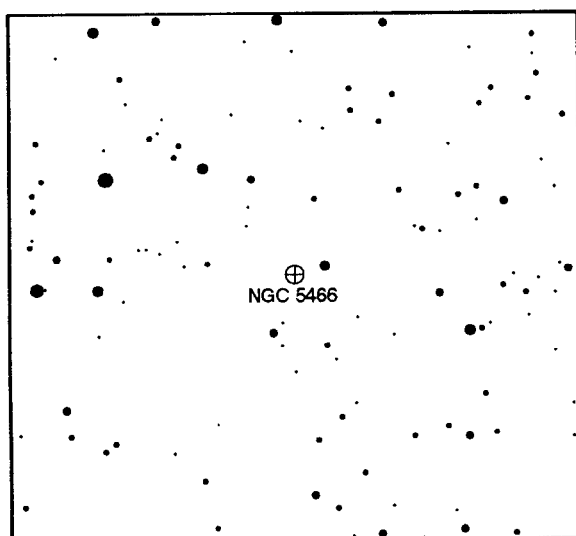
BOO MAG: 9.1 Globular Cluster 14h 5m29s x 28°31'57"
 11' 0" x 11' 0" CLASS:12
 large, very rich, very much condensed, stars mag 11...
 not well resolved

NGC 5466
 86

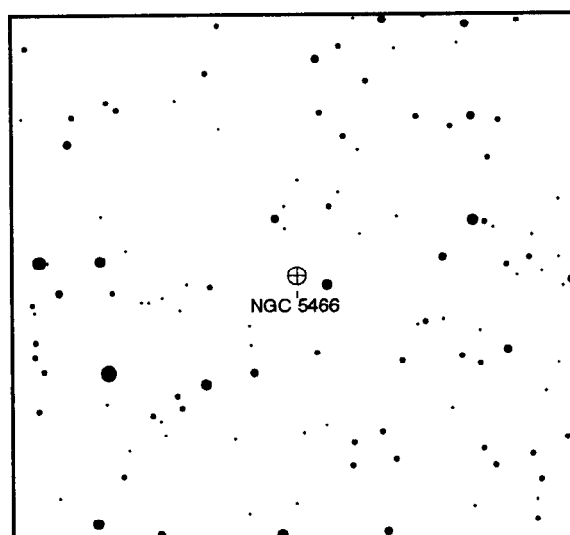


Notes: _____

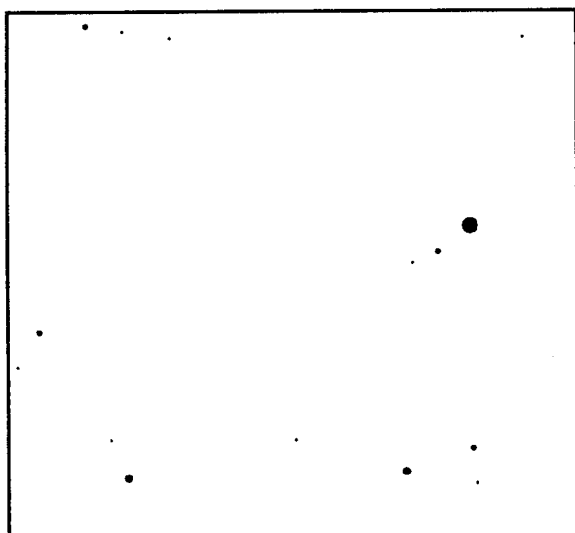
30 degree field, North up



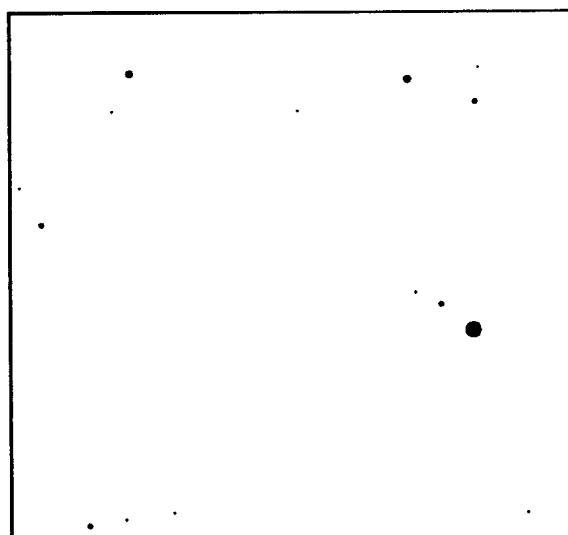
6 degree field, North down



6 degree field, North up, Mirrored

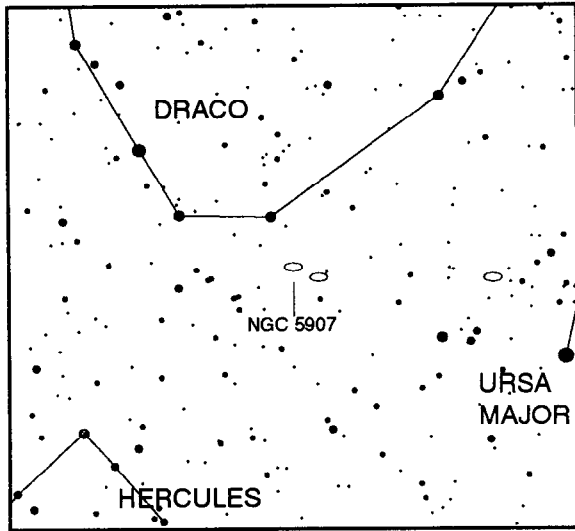


1 degree field, North down



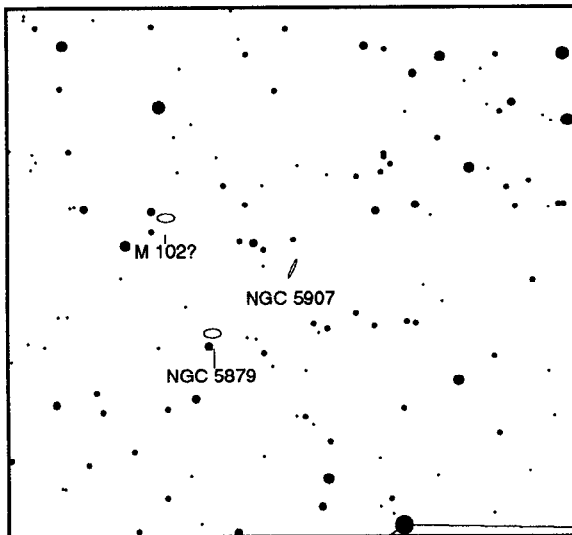
1 degree field, North up, Mirrored

DRA MAG:11.4 Galaxy 15h15m54s x 56°19' 3" NGC 5907
 13'48" x 2'48" CLASS:Sb+ PA (dgr):155 87
 considerably bright, very large, very much elongated, very gradually brighter middle
 nucleus
 easy edge-on with strong dark lane SN 1940a

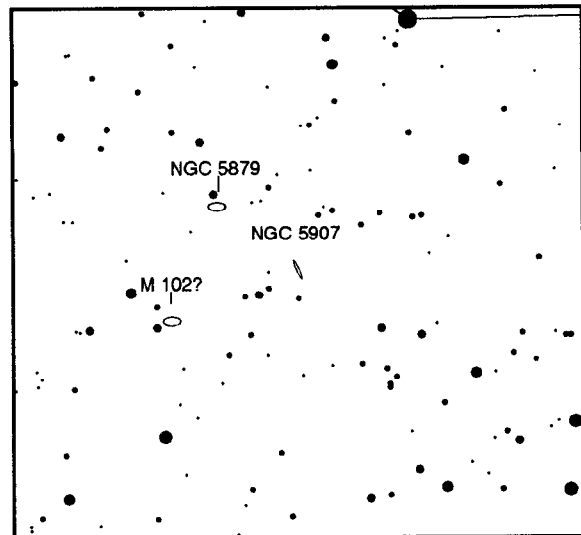


30 degree field, North up

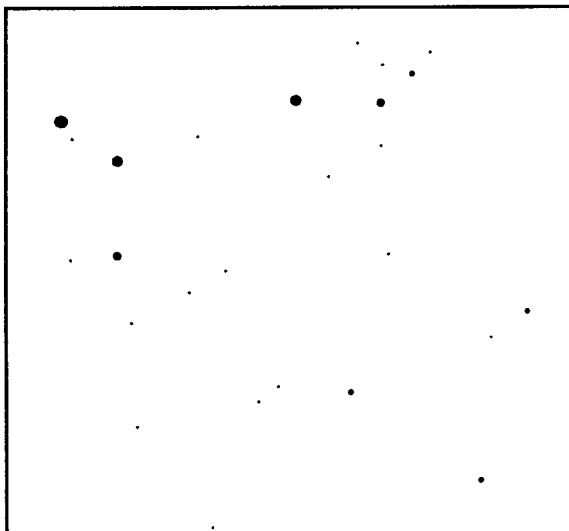
Notes: _____



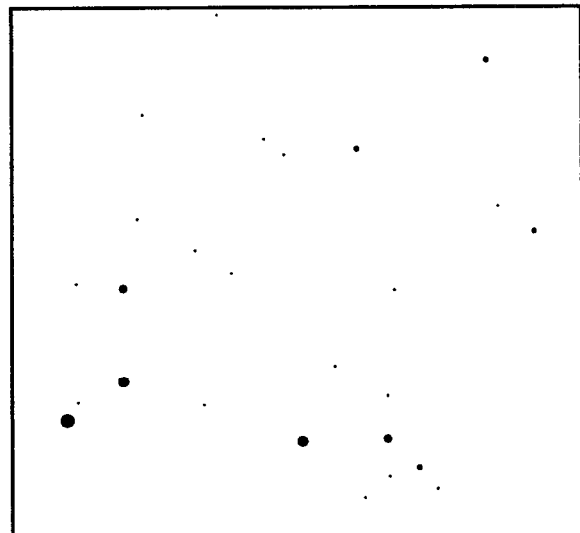
6 degree field, North down



6 degree field, North up, Mirrored



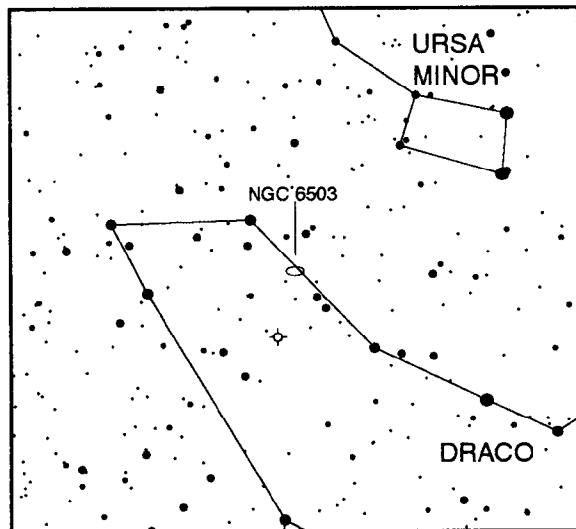
1 degree field, North down



1 degree field, North up, Mirrored

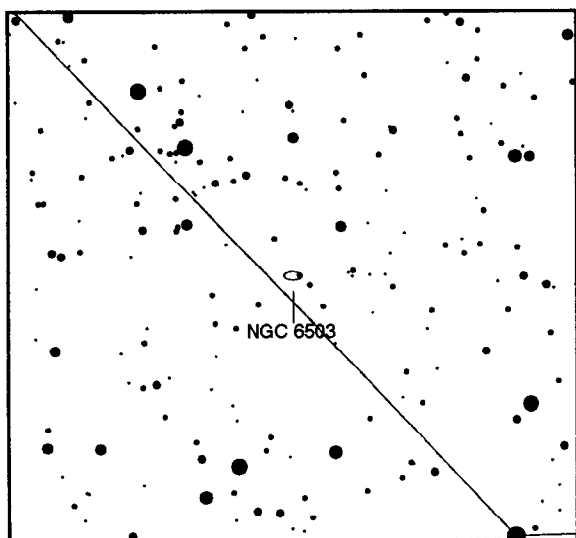
DRA MAG:11.5 Galaxy 17h49m24s x 70° 8'59"
 8' 0" x 3'36" CLASS:Sb PA (dgr):123
 pretty faint, large, much elongated
 high surface brightness object with well defined edges

NGC 6503
 88

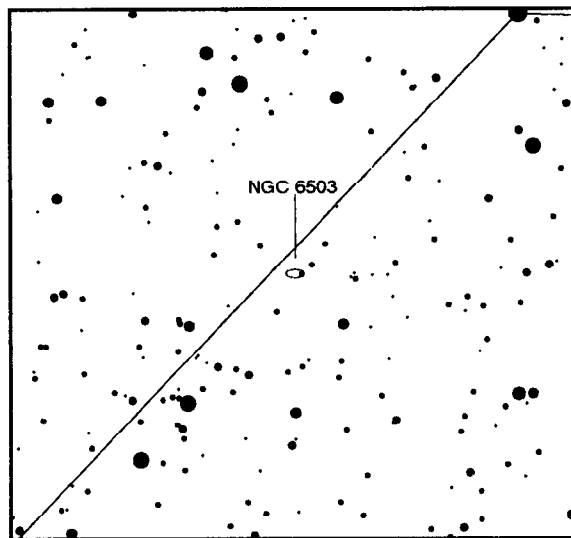


30 degree field, North up

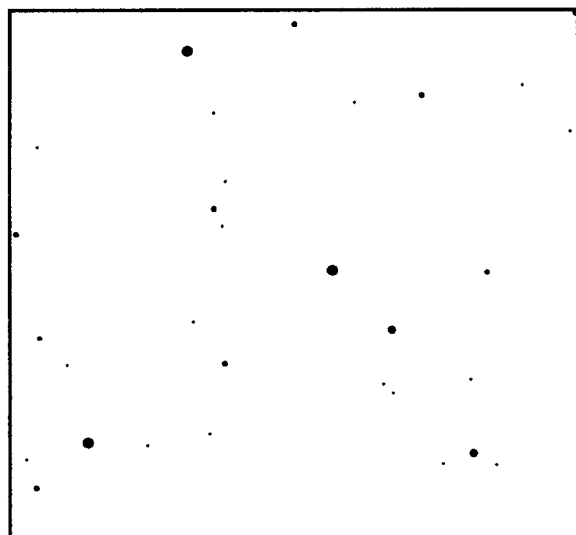
Notes: _____



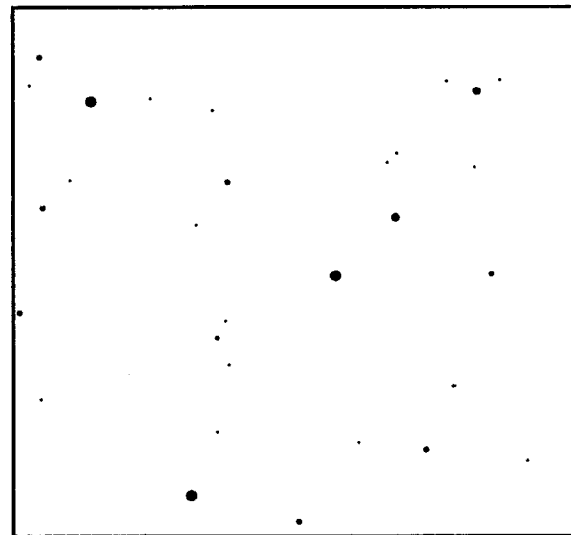
6 degree field, North down



6 degree field, North up, Mirrored



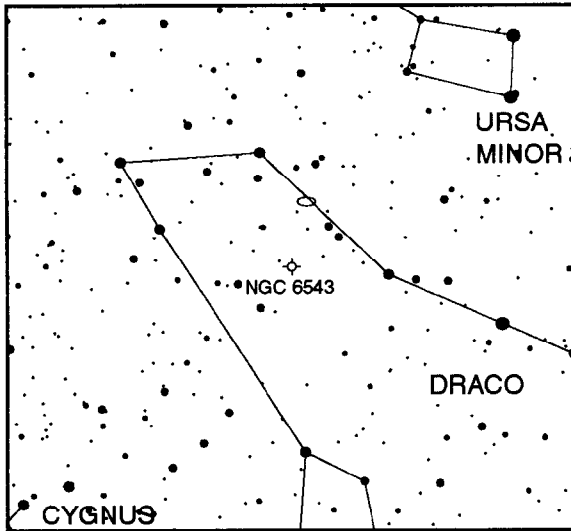
1 degree field, North down



1 degree field, North up, Mirrored

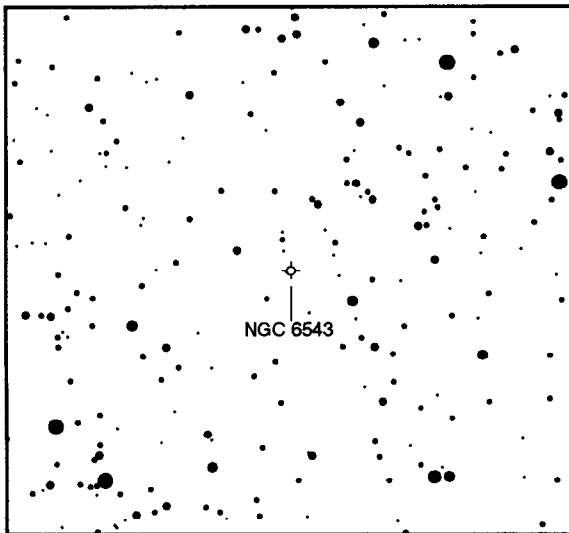
DRA MAG: 8.3 Planetary Nebula 17h58m35s x 66°38' 3"
PK96+29.1 0'22" x 0'16" CLASS:3a(2)
very bright, pretty small, suddenly brighter middle
Car's Eye Nebula, blueish disk with 10 mag central *

NGC 6543
89

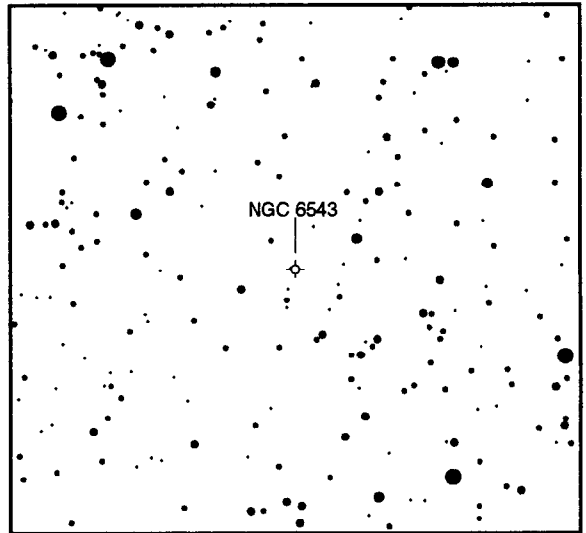


Notes: _____

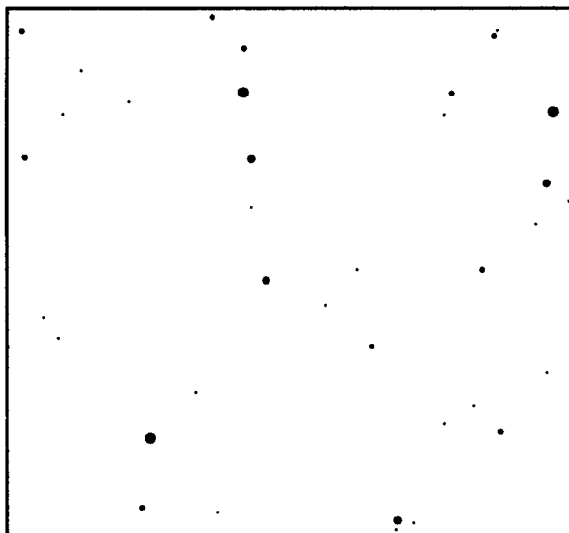
30 degree field, North up



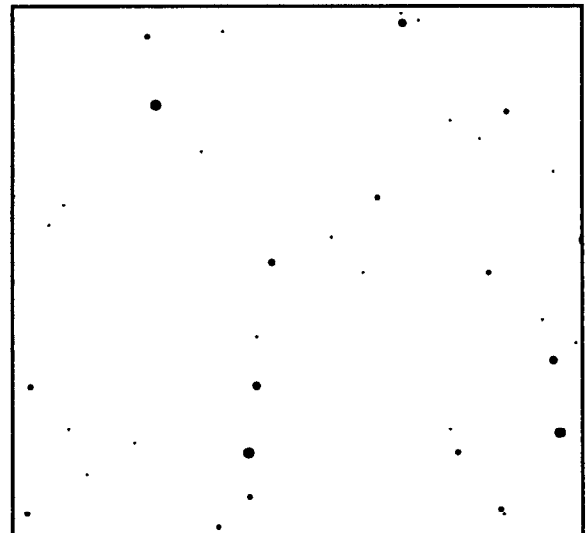
6 degree field, North down



6 degree field, North up, Mirrored



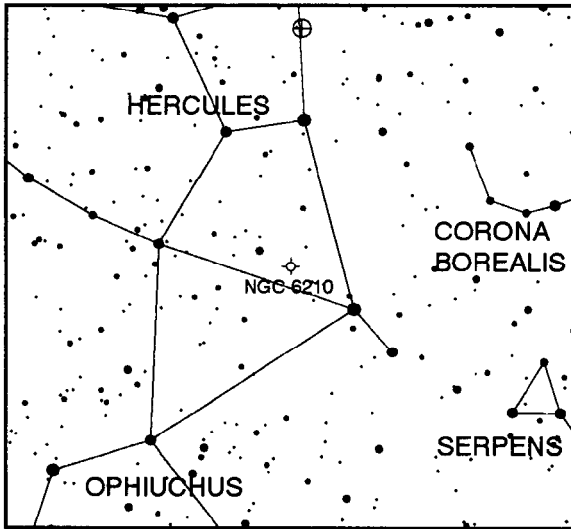
1 degree field, North down



1 degree field, North up, Mirrored

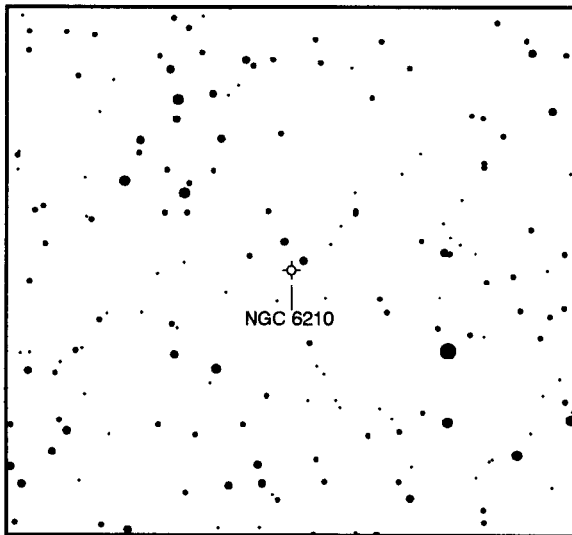
HER MAG: 9.7 Planetary Nebula 16h44m29s x 23°48'59"
 PK43+37.1 0'20" x 0'13" CLASS:2(3b)
 very bright, very small, round
 blueish disk with O6 central star mag 12.5

NGC 6210
 90

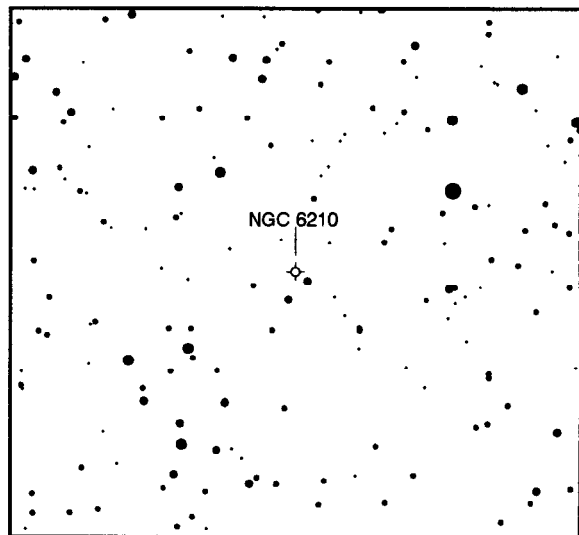


30 degree field, North up

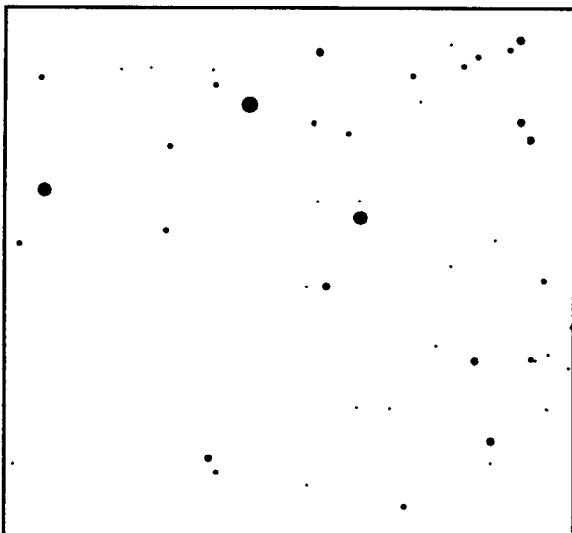
Notes: _____



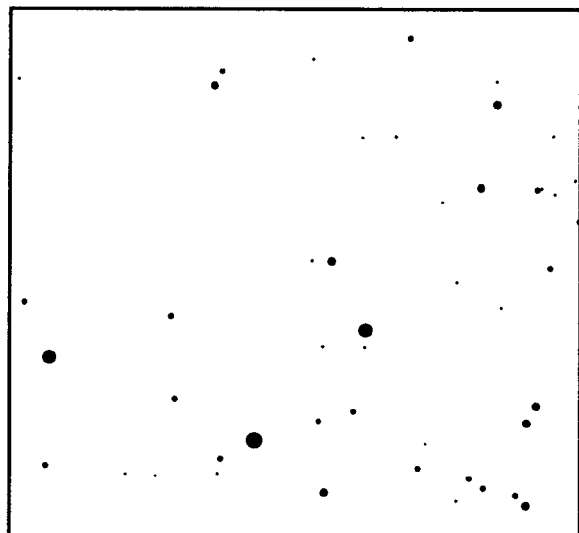
6 degree field, North down



6 degree field, North up, Mirrored



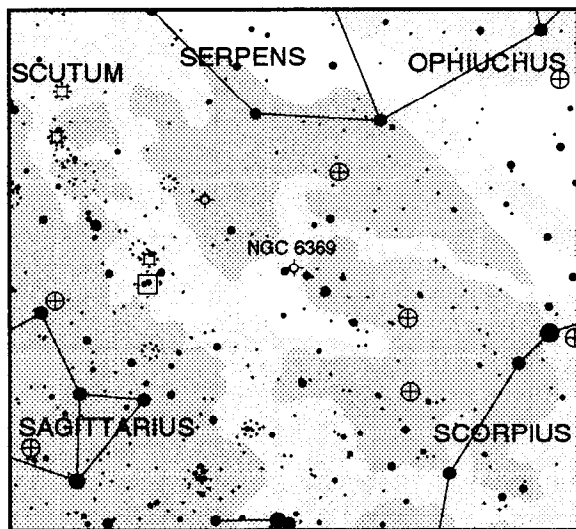
1 degree field, North down



1 degree field, North up, Mirrored

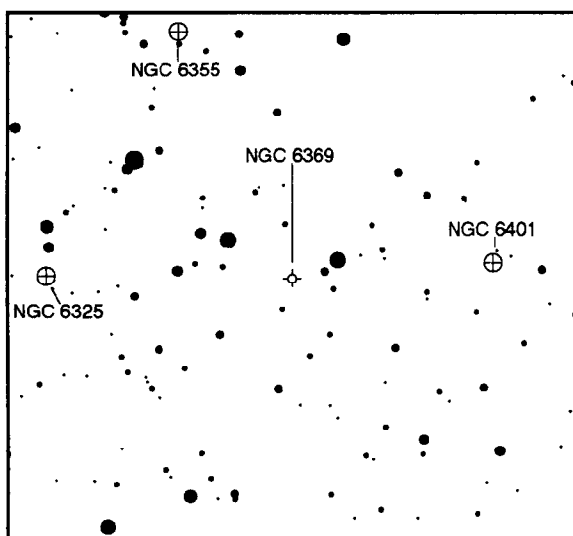
OPH MAG:11.0 Planetary Nebula 17h29m19s x -23°46'1"
 PK2+5.1,H IV II 1'30" x 0'29" CLASS:4(2)
 Annular, pretty bright, small, round
 Little Ghost Nebula, 16 mag central *

NGC 6369
 91

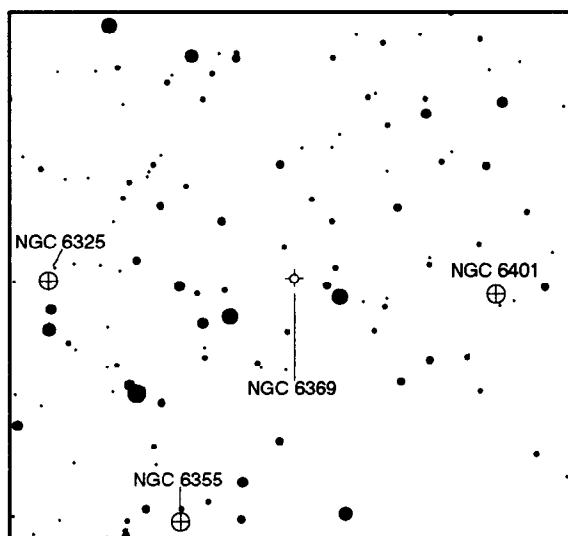


30 degree field, North up

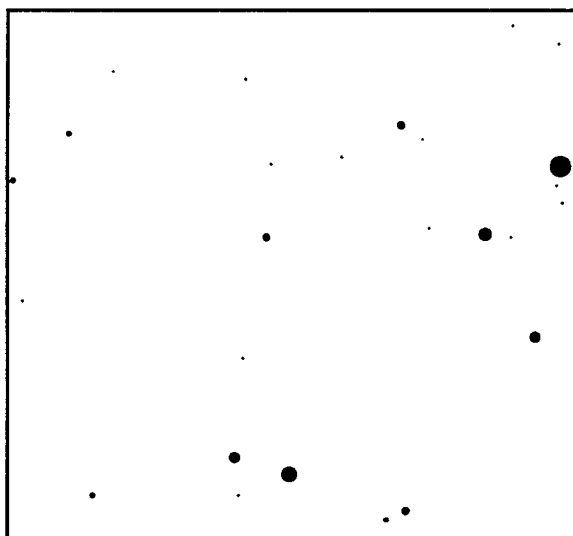
Notes: _____



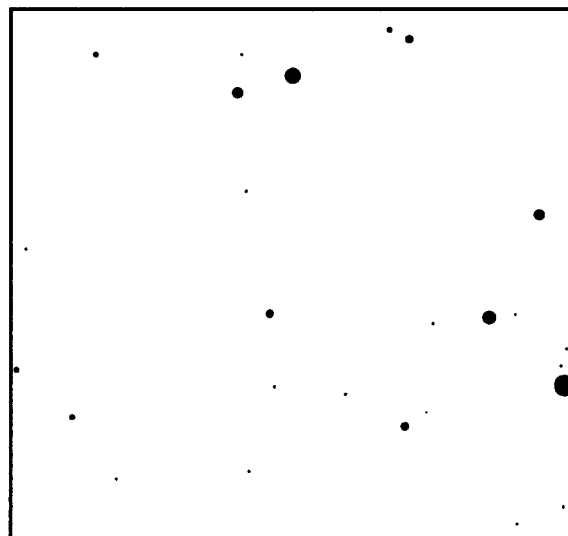
6 degree field, North down



6 degree field, North up, Mirrored



1 degree field, North down

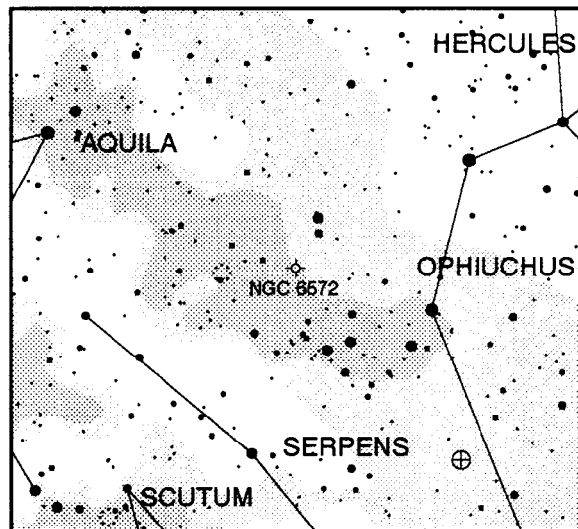


1 degree field, North up, Mirrored

OPH MAG: 9.0 Planetary Nebula 18h12m 7s x 6°51' 1"
PK34+11.1 0°15" x 0°12" CLASS:2a

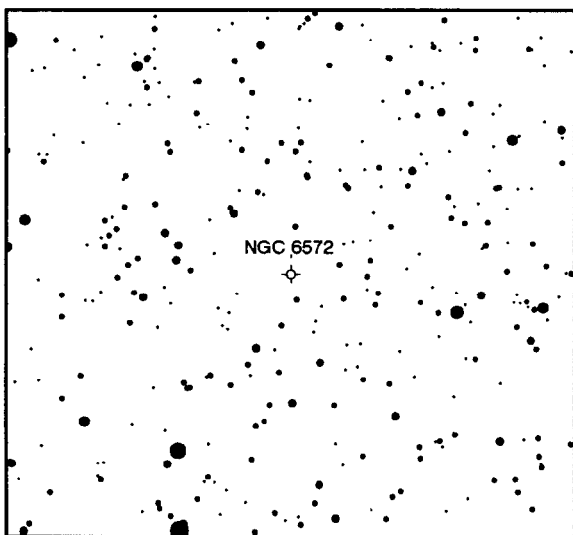
NGC 6572
92

very bright, very small, round
tiny, bright disk with a strong blue-green hue. O type 12 mag central *

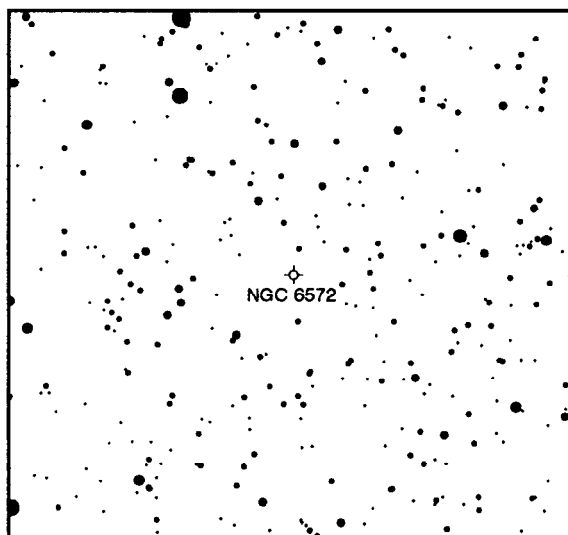


30 degree field, North up

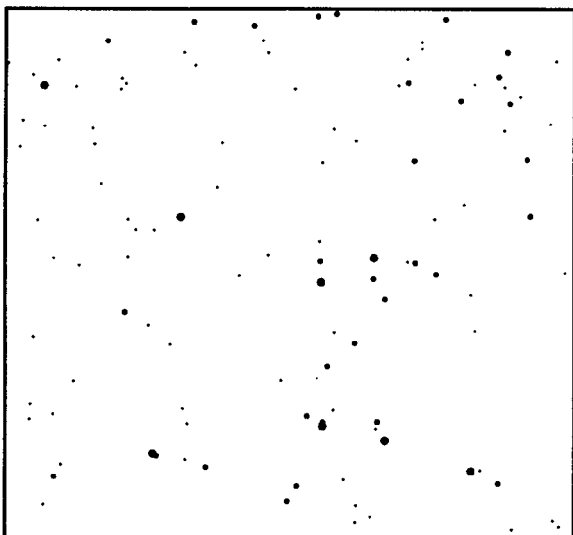
Notes: _____



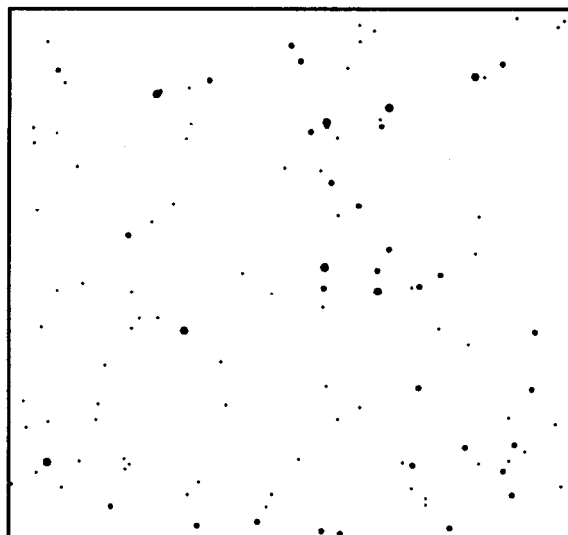
6 degree field, North down



6 degree field, North up, Mirrored



1 degree field, North down

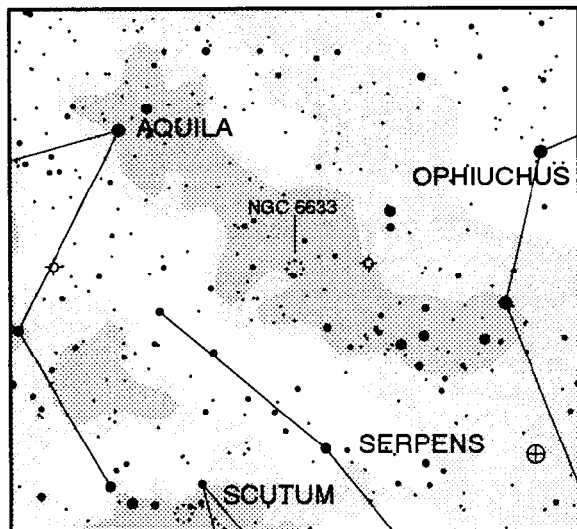


1 degree field, North up, Mirrored

OPH MAG: 4.6 Open Cluster
 27' 0" x 27' 0" CLASS: III 2 m
 # of stars: 30 brightest star: 7.57
 Bright, large, much elongated, little compressed
 excellent low power field

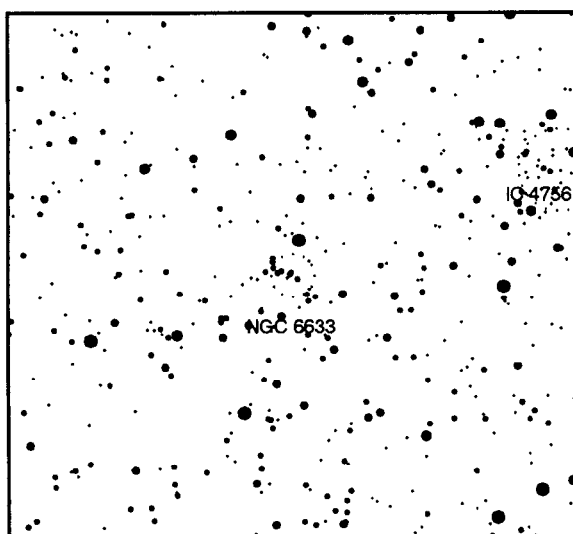
18h27m43s x 6°34' 2"

NGC 6633
 93

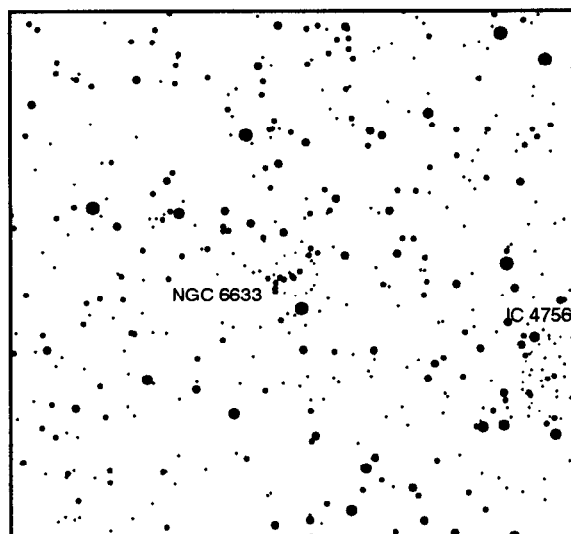


30 degree field, North up

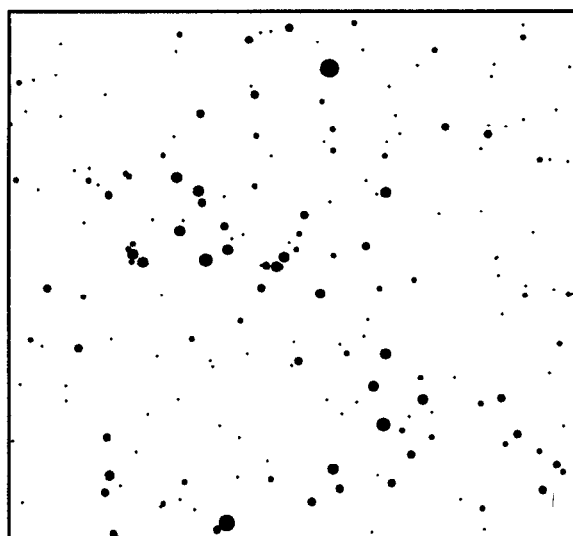
Notes: _____



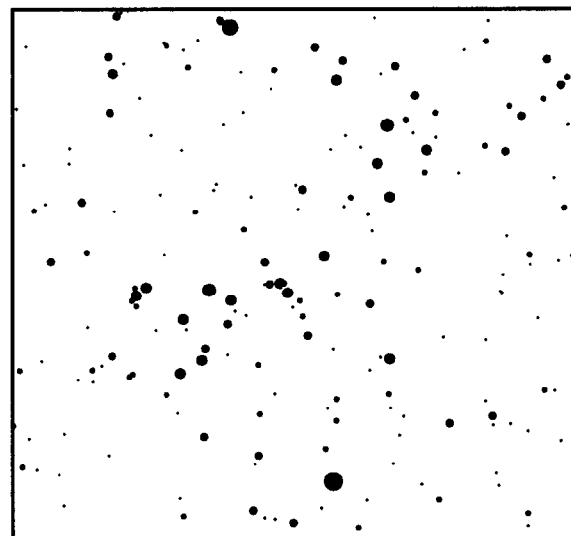
6 degree field, North down



6 degree field, North up, Mirrored



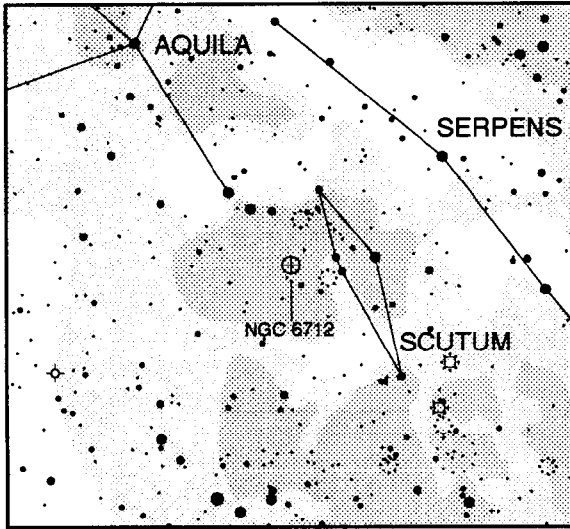
1 degree field, North down



1 degree field, North up, Mirrored

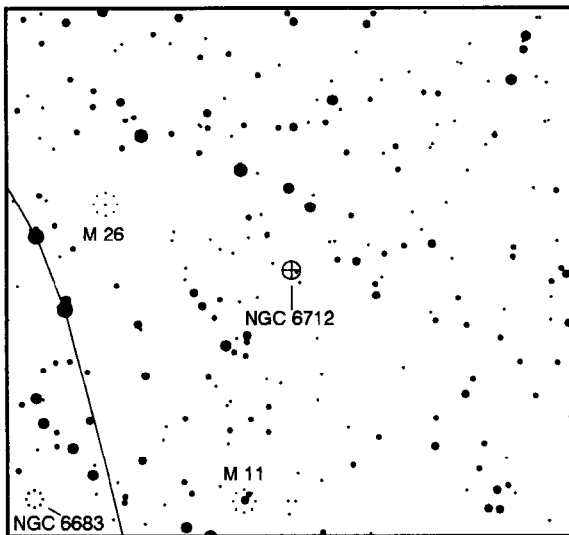
SCT MAG: 8.2 Globular Cluster 18h53m 7s x - 8°41'55"
 7'12" x 7'12" CLASS:9
 pretty bright, very large, irregular, well resolved
 * mag 15...

NGC 6712
 94

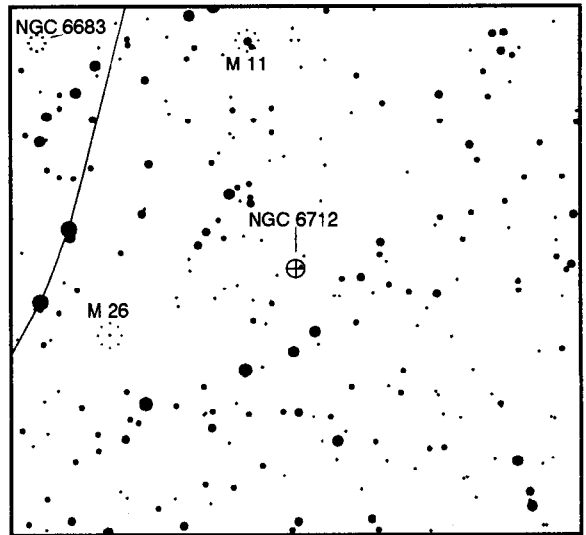


30 degree field, North up

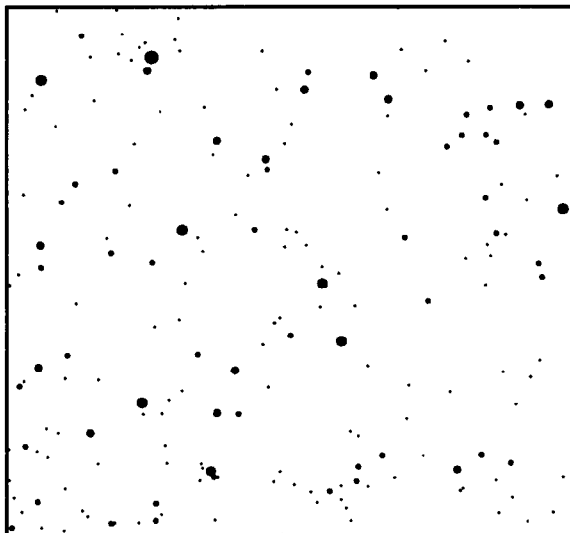
Notes: _____



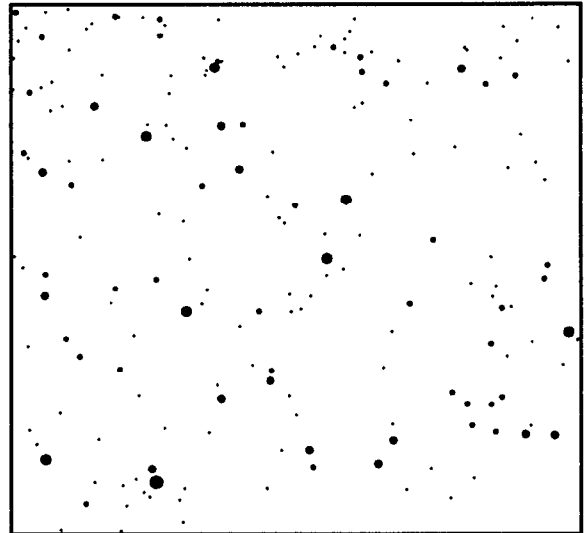
6 degree field, North down



6 degree field, North up, Mirrored



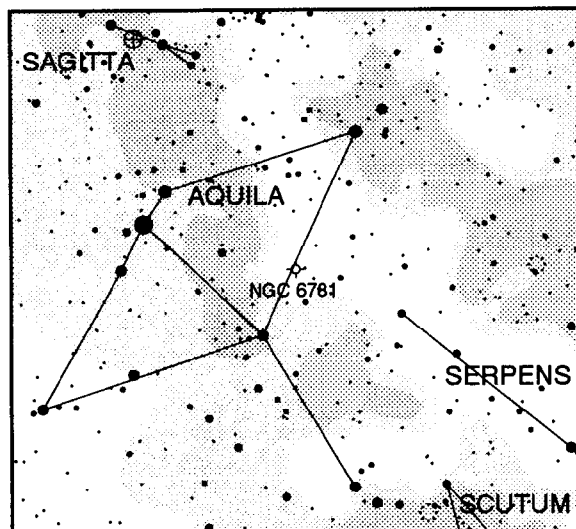
1 degree field, North down



1 degree field, North up, Mirrored

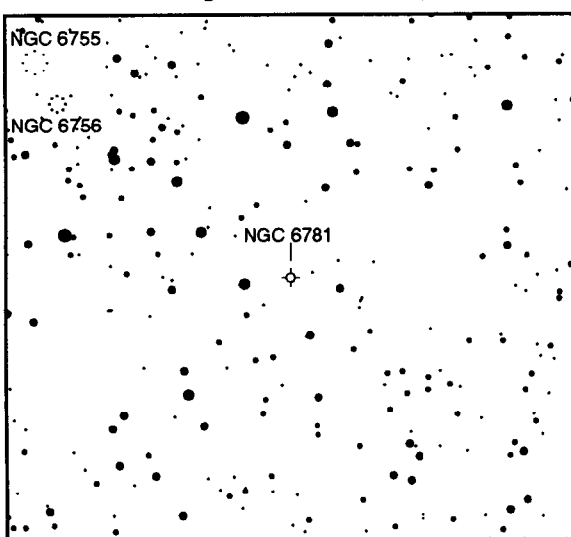
AQL MAG:11.8 Planetary Nebula 19h18m31s x 6°32' 4"
 PK41-2.1 2'51" x 2'49" CLASS:3b(3)
 faint, large, round, very suddenly brighter middle
 opposite dark lane from Altair

NGC 6781
 95

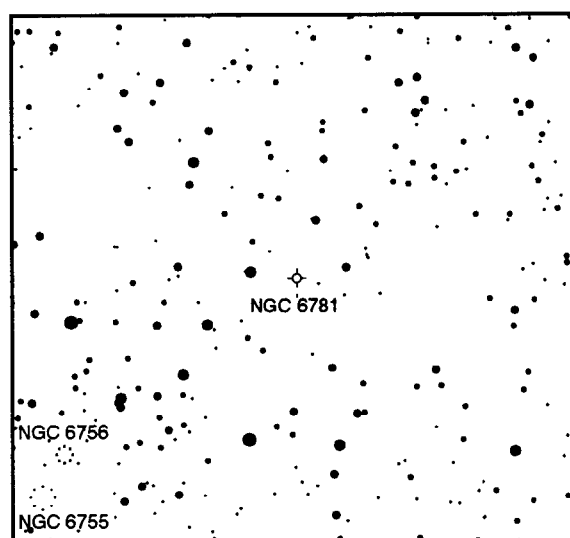


30 degree field, North up

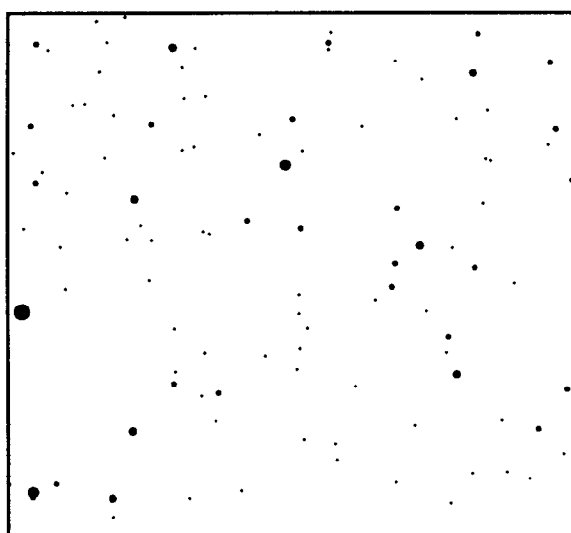
Notes: _____



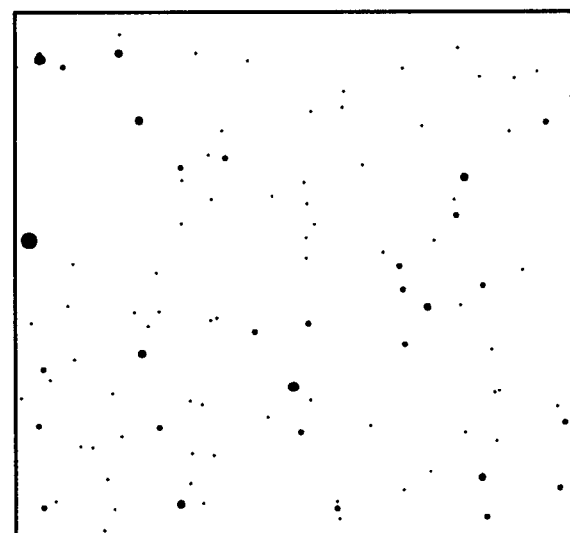
6 degree field, North down



6 degree field, North up, Mirrored



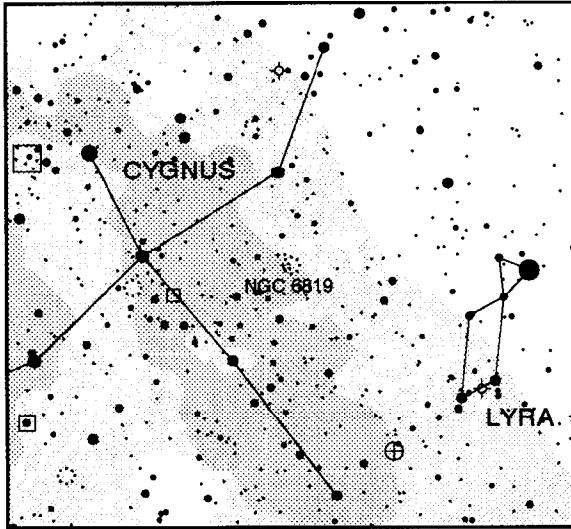
1 degree field, North down



1 degree field, North up, Mirrored

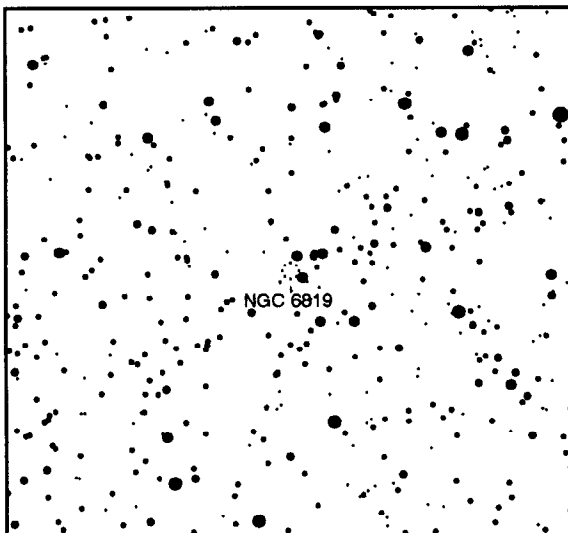
CYG MAG: 7.3 Open Cluster 19h41m17s x 40°11' 1"
 5' 0" x 5' 0" CLASS: I I r # of stars: 150 brightest star: 11.49
 very large, very rich
 150 stars mags 11-16

NGC 6819
 96

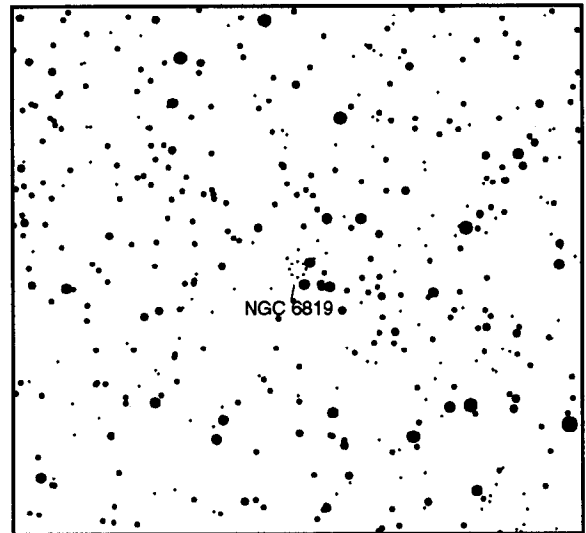


30 degree field, North up

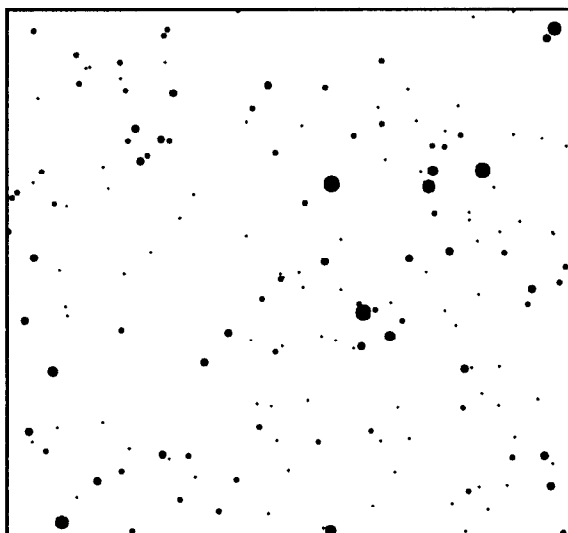
Notes: _____



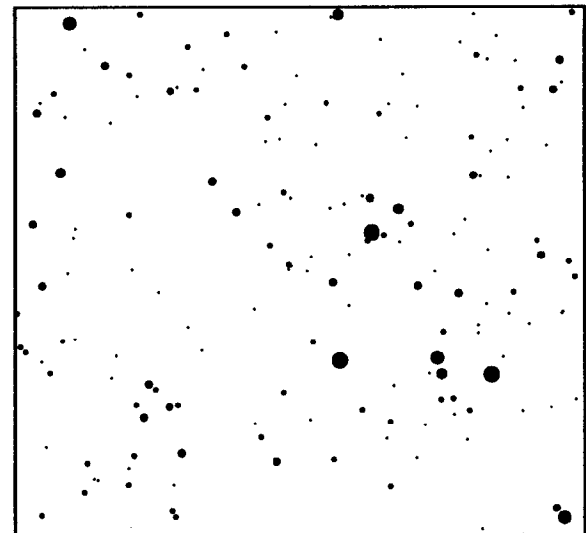
6 degree field, North down



6 degree field, North up, Mirrored



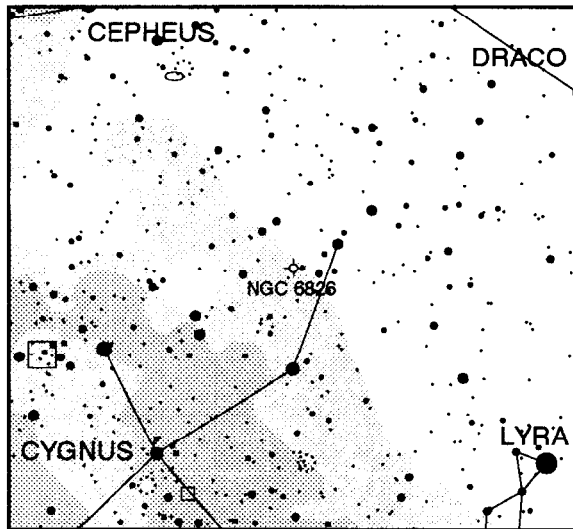
1 degree field, North down



1 degree field, North up, Mirrored

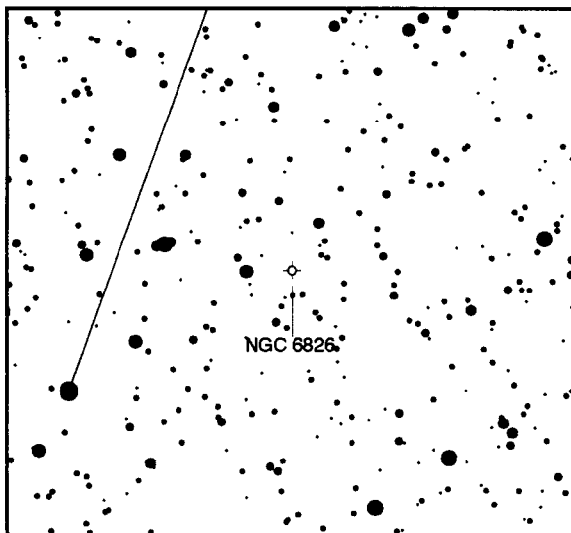
CYG MAG: 8.8 Planetary Nebula 19h44m48s x 50°31' 0"
 PK83+12.1 0'27" x 0'24" CLASS:3a(2)
 pretty bright, pretty large, round
 Blinking Planetary, 11 mag O central*

NGC 6826
 97

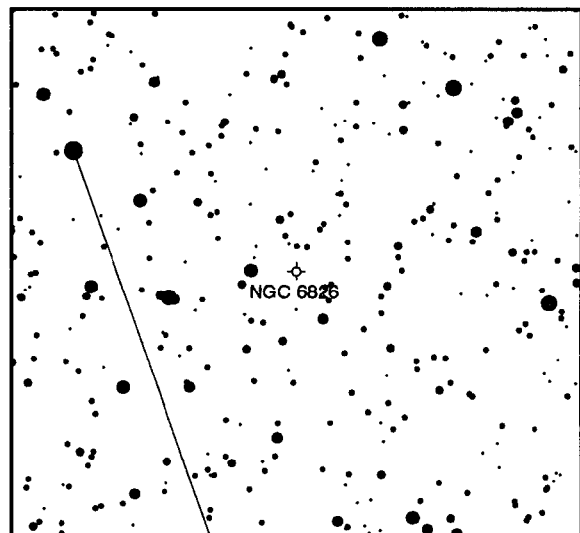


30 degree field, North up

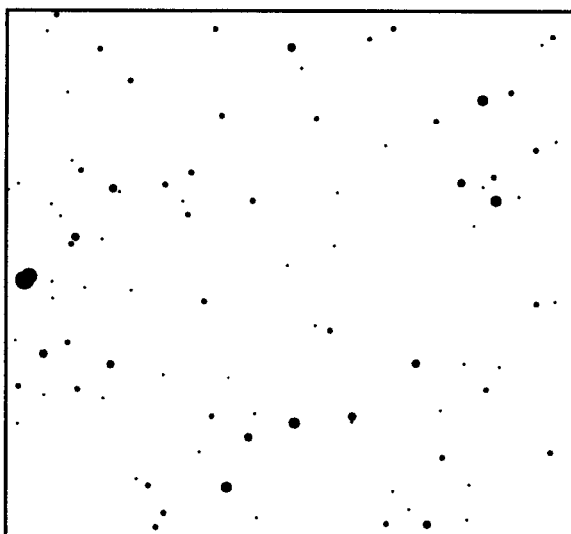
Notes: _____



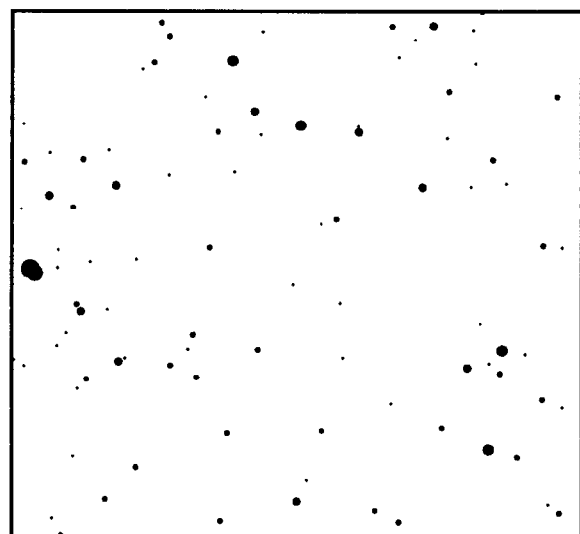
6 degree field, North down



6 degree field, North up, Mirrored



1 degree field, North down



1 degree field, North up, Mirrored

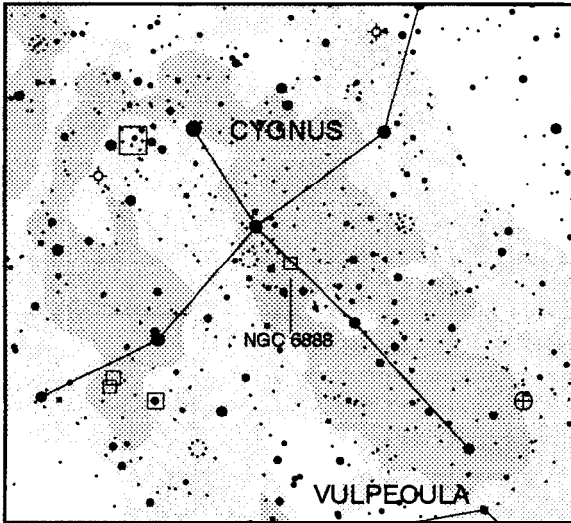
CYG MAG: --- Bright Nebula
20' 0" x 10' 0" CLASS: E

20h12m48s x 38°19'57"

NGC 6888
98

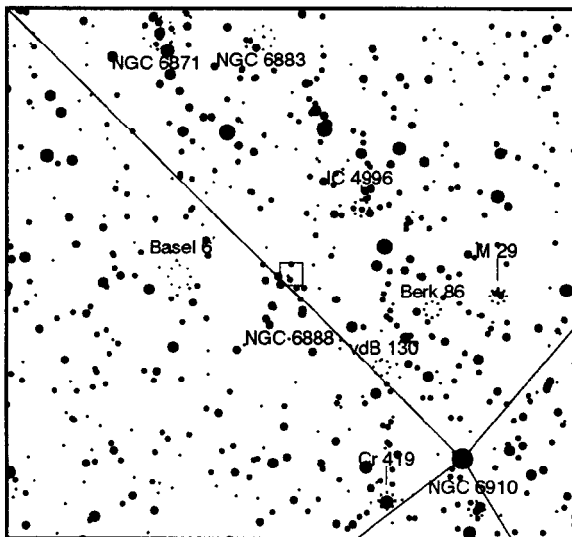
faint, very large, very much elongated

crescent shaped nebula with Wolf-Rayet * involved. Large scope and nebula filter

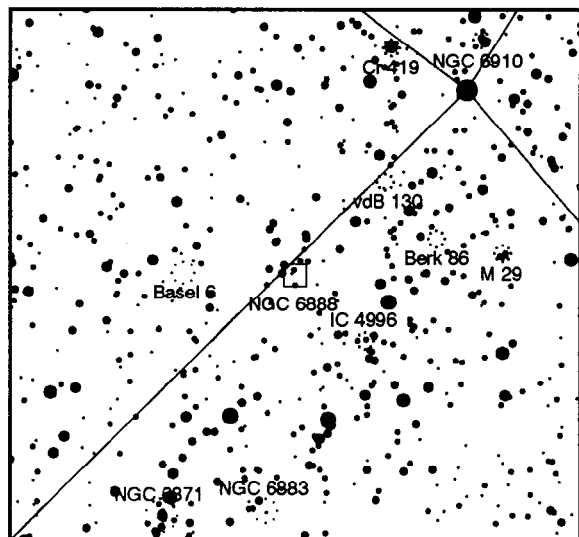


30 degree field, North up

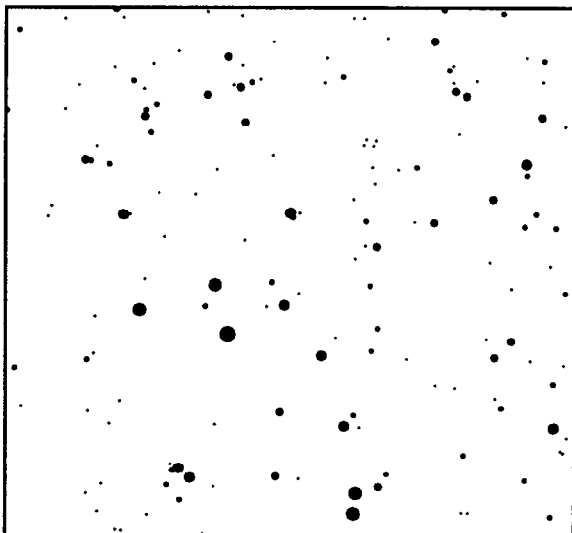
Notes: _____



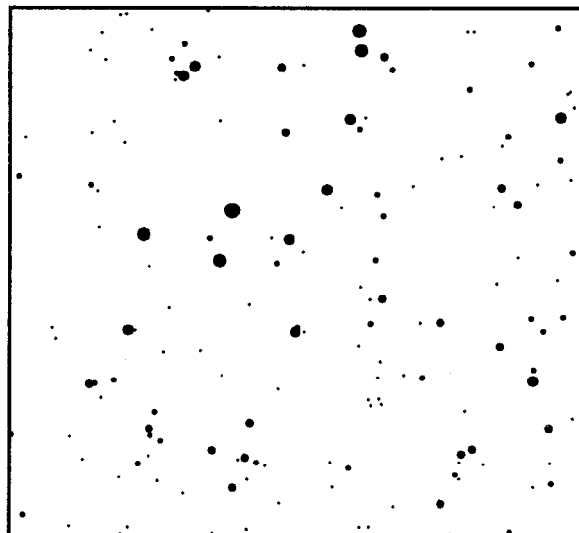
6 degree field, North down



6 degree field, North up, Mirrored



1 degree field, North down



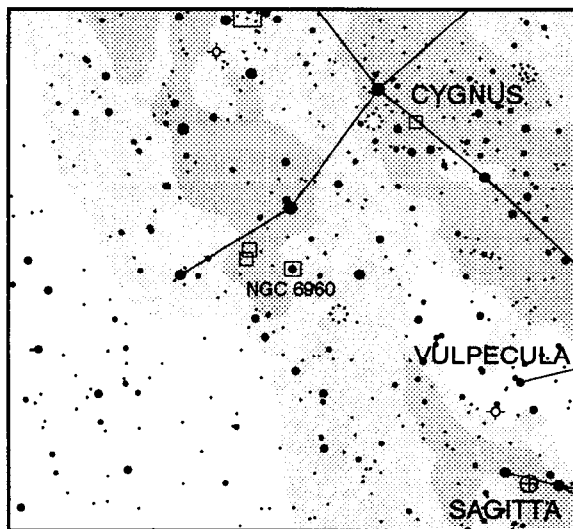
1 degree field, North up, Mirrored

CYG MAG: --- Bright Nebula
70' 0" x 6' 0" CLASS: E

20h45m35s x 30°42'57"

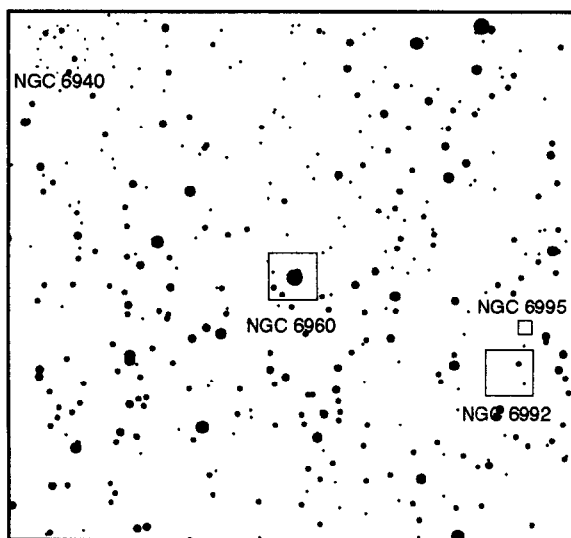
NGC 6960
99a

pretty bright, considerably large, extremely irregular figure
Kappa Cyg involved, Veil Nebula western part, Supernova Remnant

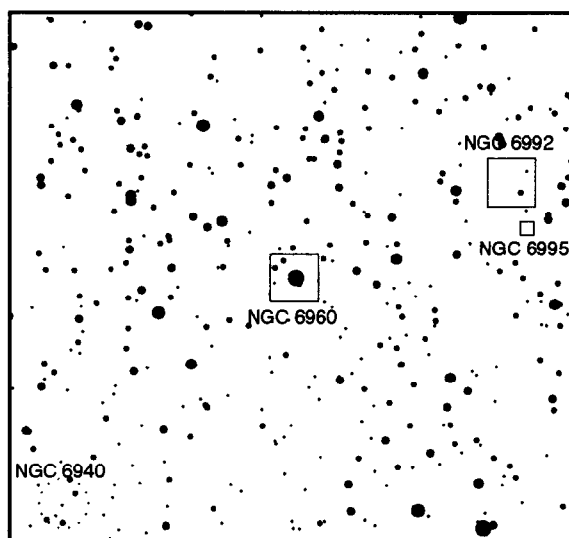


30 degree field, North up

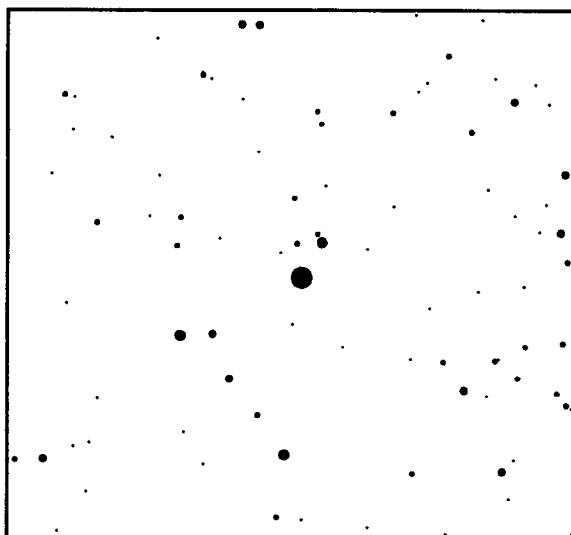
Notes: _____



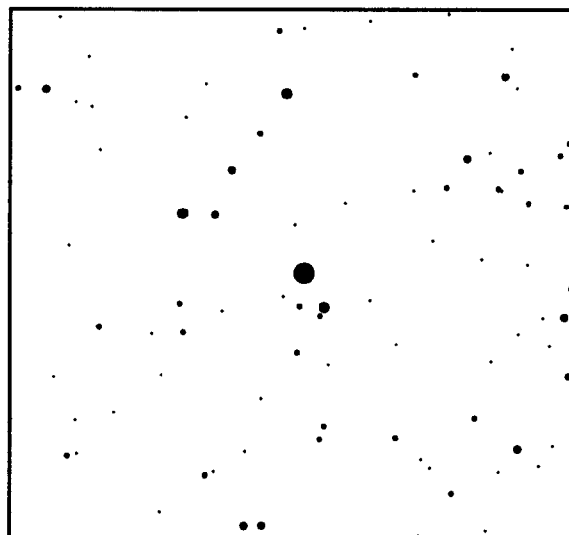
6 degree field, North down



6 degree field, North up, Mirrored



1 degree field, North down



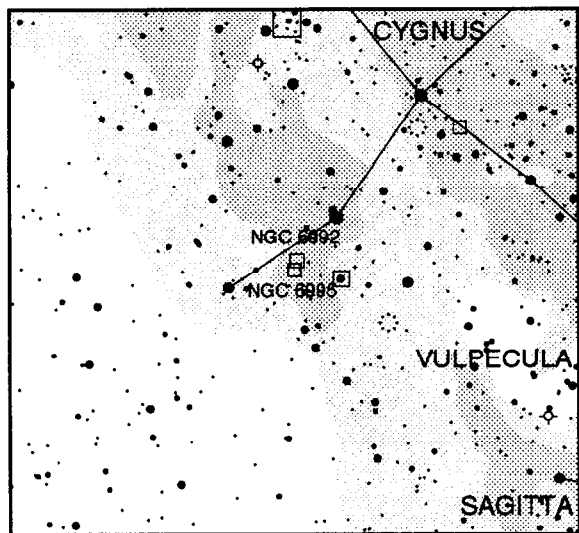
1 degree field, North up, Mirrored

CYG MAG: --- Bright Nebula
60' 0" x 8' 0" CLASS: E

20h56m18s x 31° 41'57"

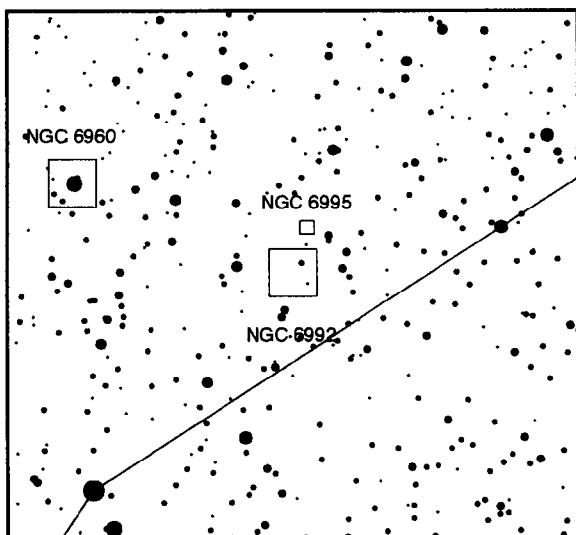
NGC 6992/5
99b

extremely faint, extremely large, extremely elongated, extremely irregular figure
veil nebula, eastern part

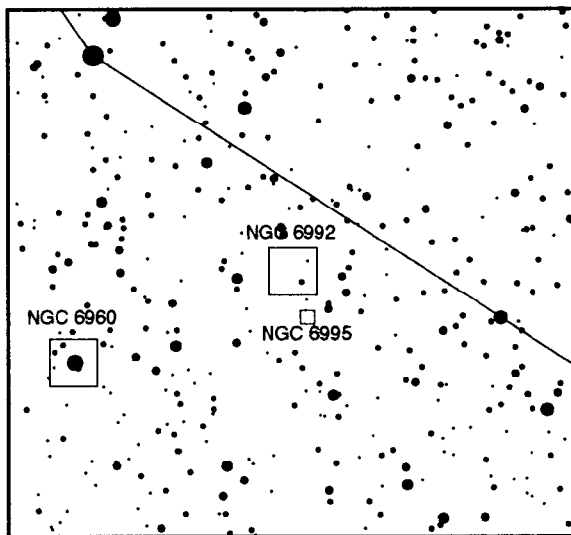


30 degree field, North up

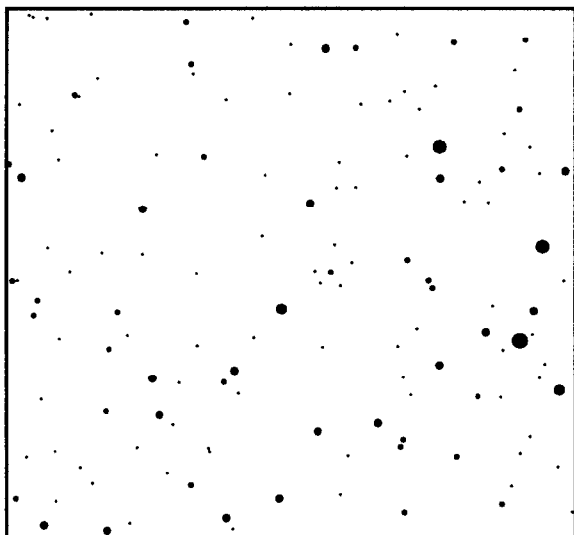
Notes: _____



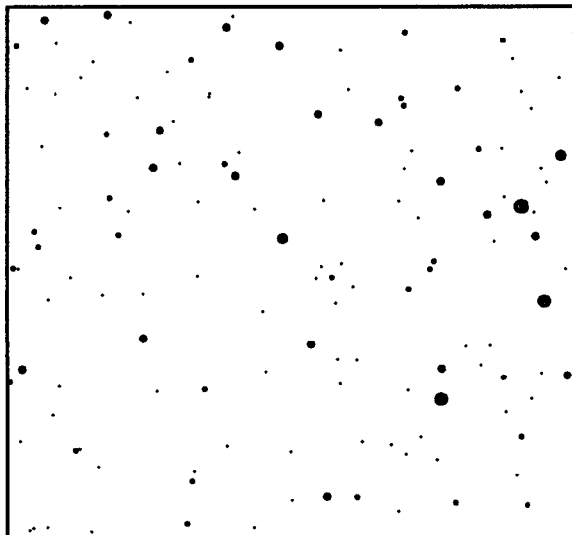
6 degree field, North down



6 degree field, North up, Mirrored



1 degree field, North down



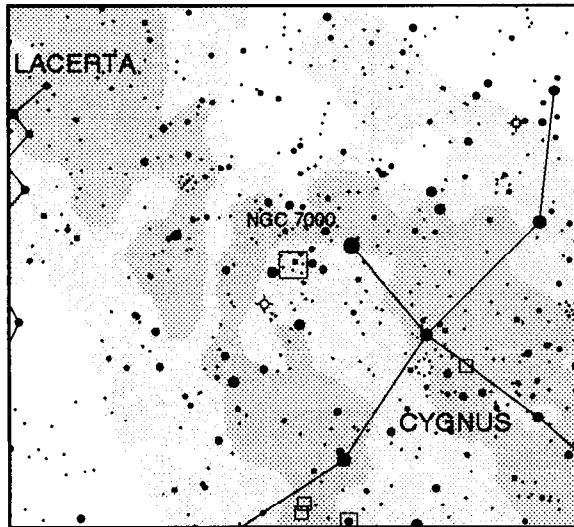
1 degree field, North up, Mirrored

CYG MAG: --- Bright Nebula
120' 0" x 100' 0" CLASS:E

20h58m48s x 44°20' 2"

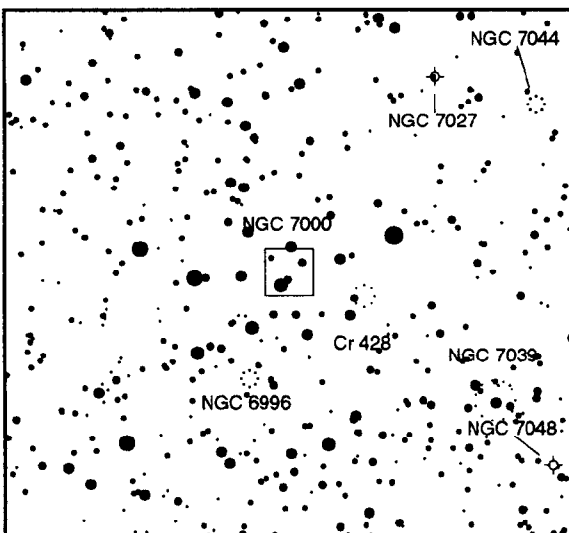
NGC 7000
100

faint, extremely extremely large, irregular
diffuse nebulosity North America nebula, open cluster NGC 6997 involved

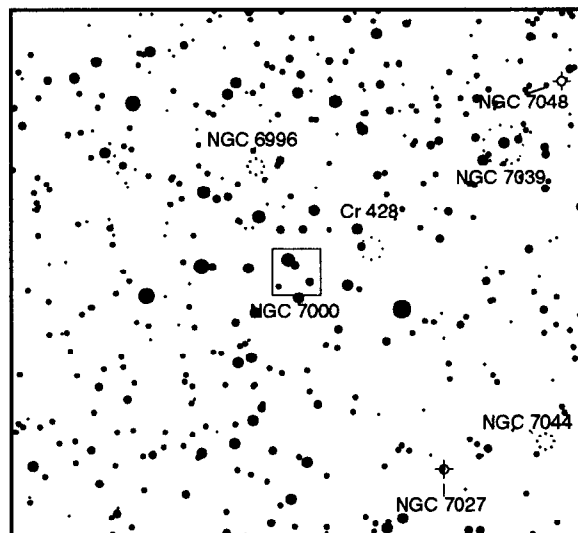


Notes: _____

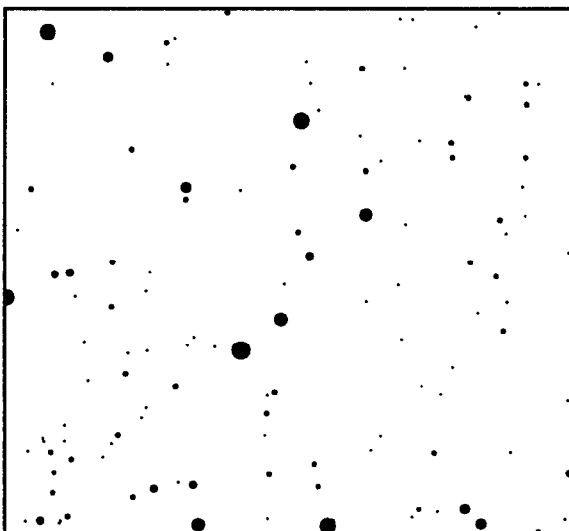
30 degree field, North up



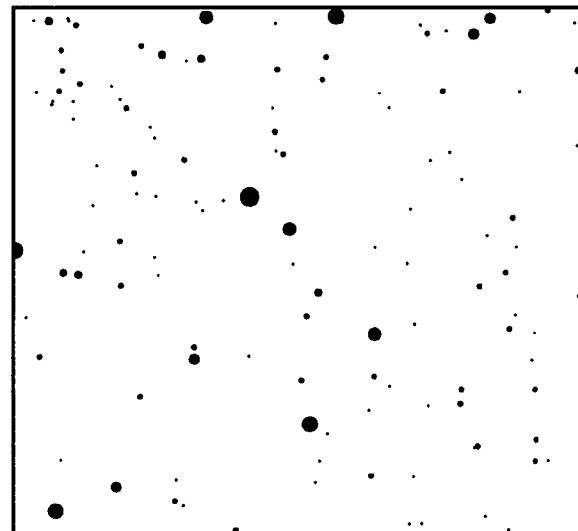
6 degree field, North down



6 degree field, North up, Mirrored



1 degree field, North down



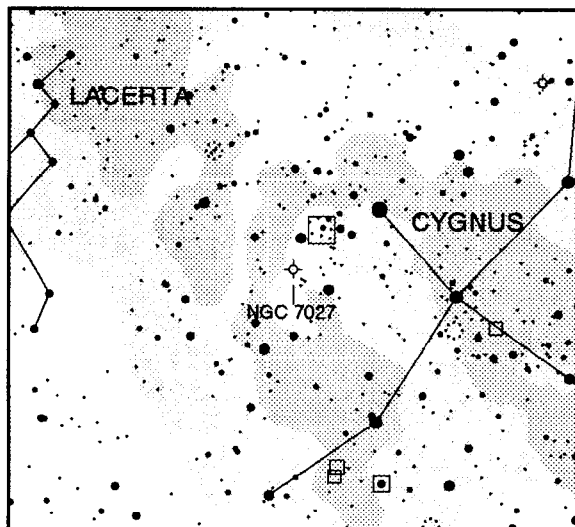
1 degree field, North up, Mirrored

CYG MAG: 9.6 Planetary Nebula 21h 7m 7s x 42°13'58"
PK84-3.1 0'18" x 0'11" CLASS:3a

NGC 7027
101

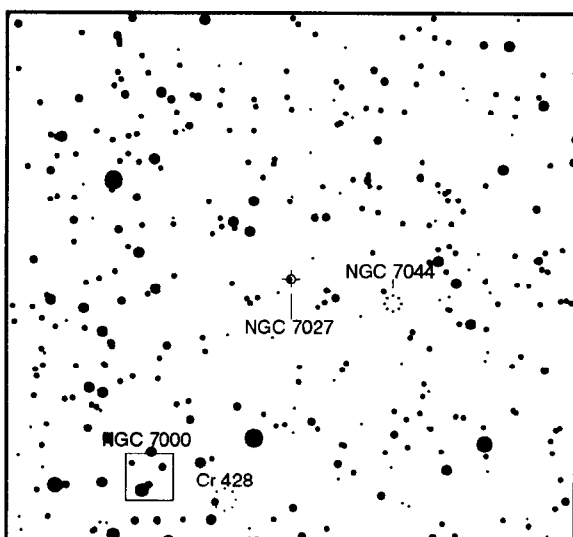
extremely bright, small

May be compact H II region, bizarre spectrum, has been classed as a star, a planetary nebula, may be an bizarre emission object. Look for a blue-green disk that is larger than the surrounding stars.

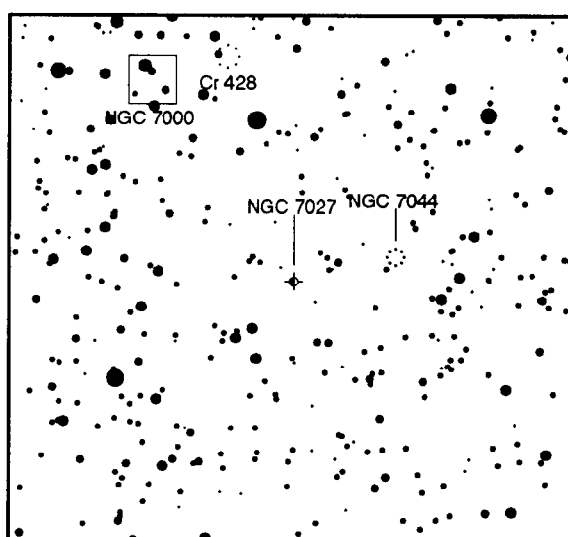


Notes: _____

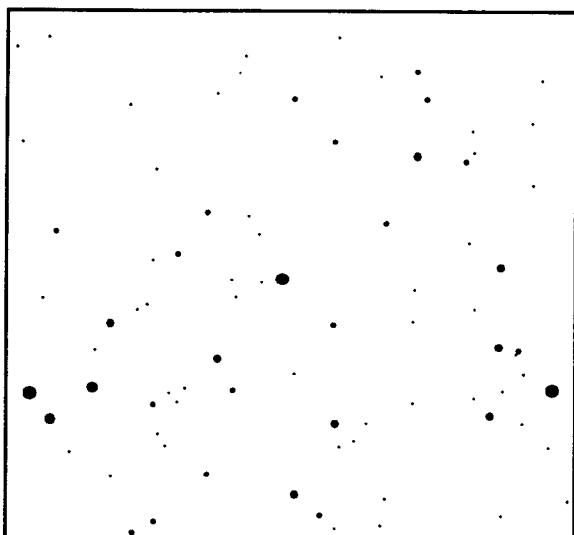
30 degree field, North up



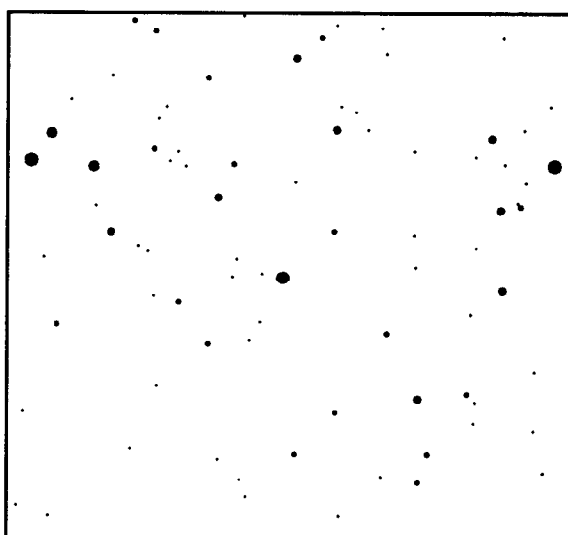
6 degree field, North down



6 degree field, North up, Mirrored



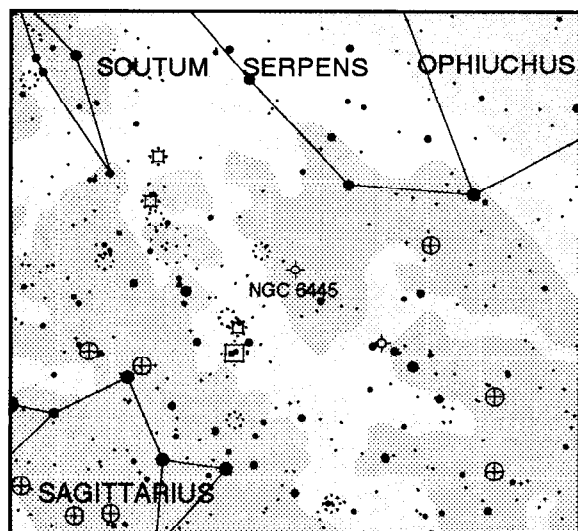
1 degree field, North down



1 degree field, North up, Mirrored

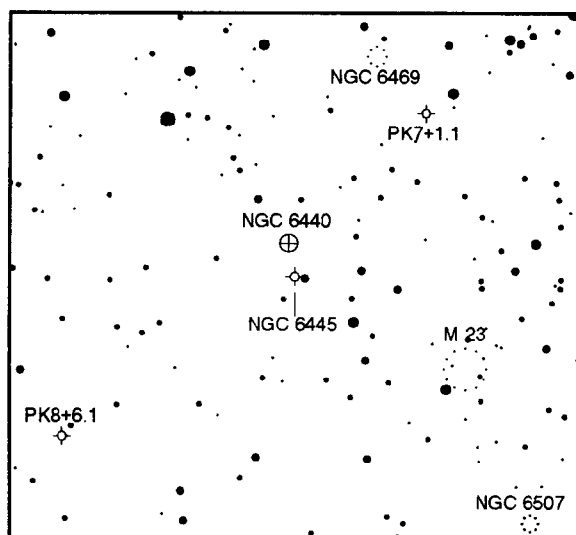
SGR MAG:13.0 Planetary Nebula 17h49m11s x -20° 1' 4"
 PK8+3.1, H II 586 1'35" x 1'30" CLASS:3b(3)
 pretty bright, pretty small, round, gradually brighter middle
 Little Gem

NGC 6445
 102

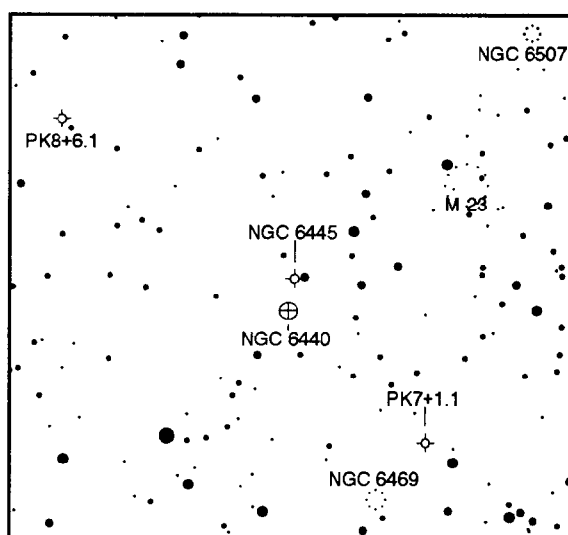


Notes: _____

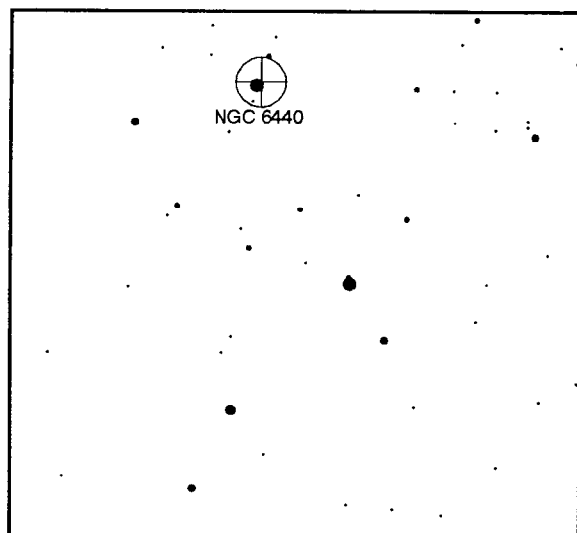
30 degree field, North up



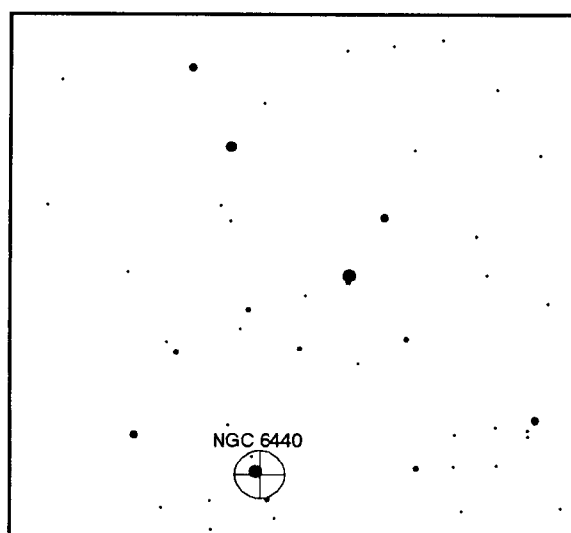
6 degree field, North down



6 degree field, North up, Mirrored



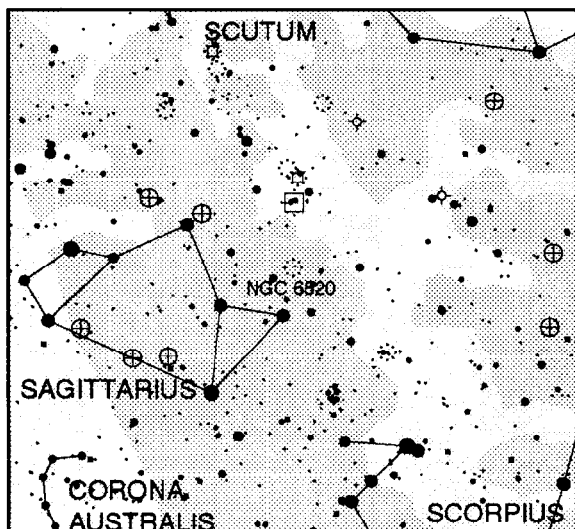
1 degree field, North down



1 degree field, North up, Mirrored

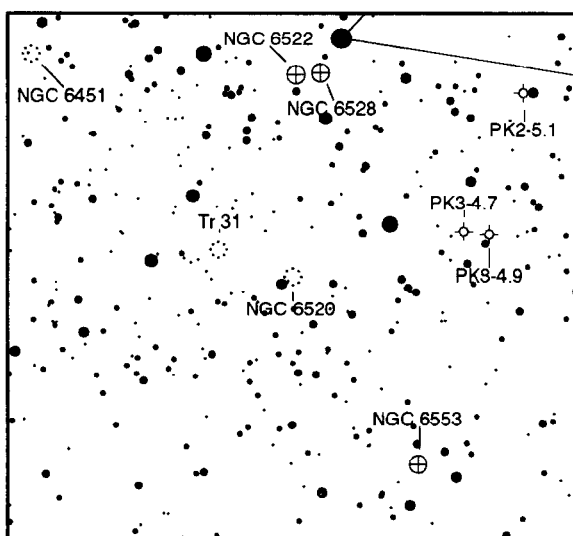
SGR MAG: 7.6 Open Cluster 18h 3m25s x -27°54' 2"
 6' 0" x 6' 0" CLASS: I 2 m n # of stars: 60 brightest star: 9.00
 pretty small, rich, little compressed, stars mag 9...13
 Dark nebula B86 on West edge

NGC 6520
 103

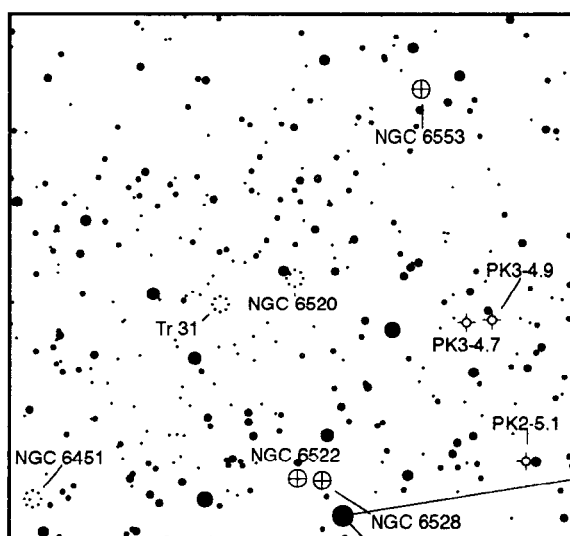


Notes: _____

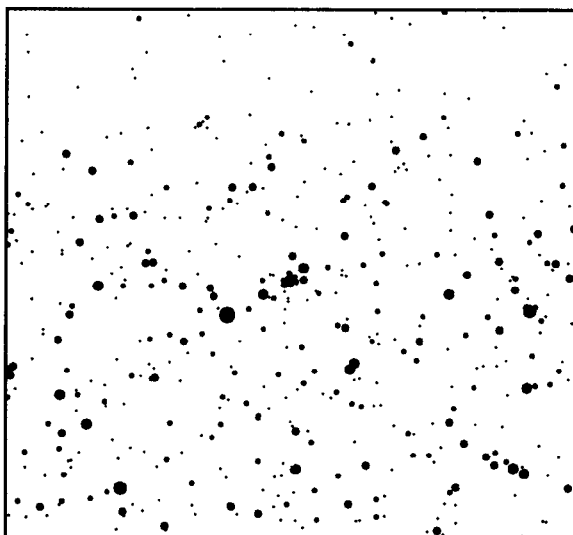
30 degree field, North up



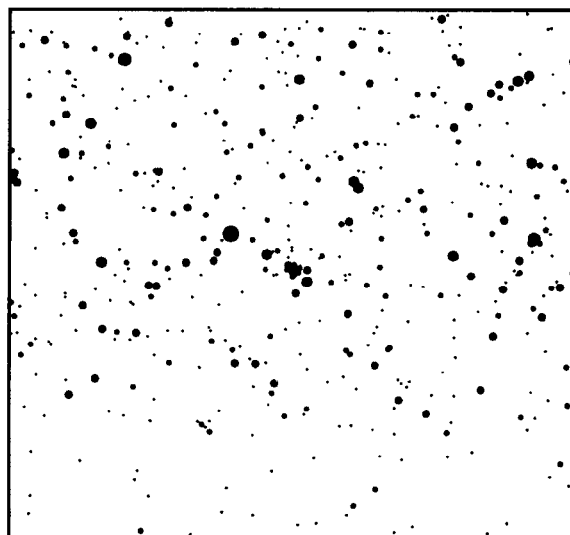
6 degree field, North down



6 degree field, North up, Mirrored



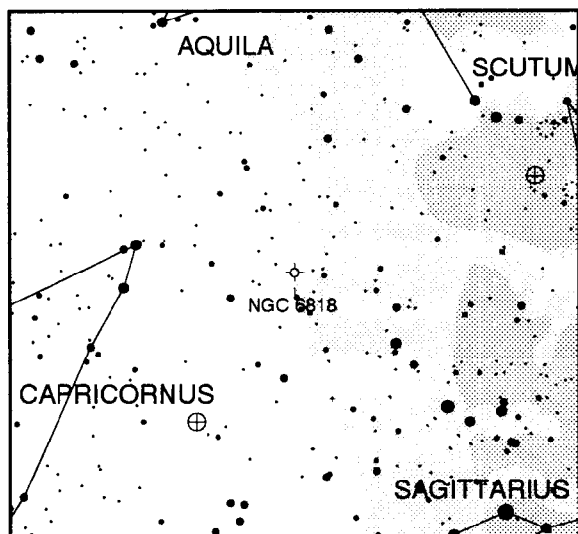
1 degree field, North down



1 degree field, North up, Mirrored

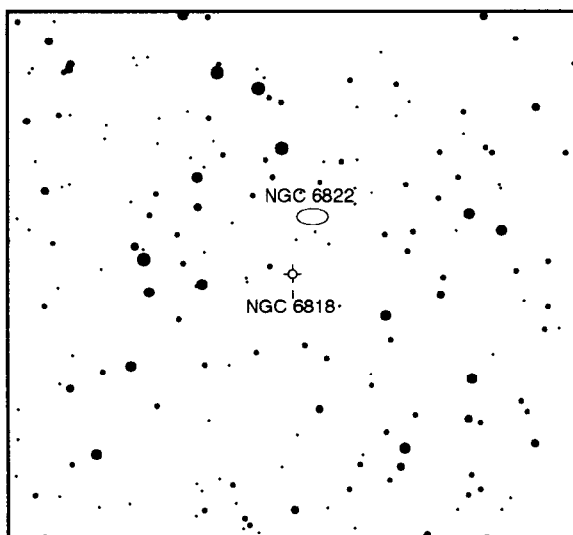
SGR MAG:10.0 Planetary Nebula 19h44m 1s x -14° 9' 3"
 PK25-17.1 0'22" x 0'15" CLASS:4
 bright, very small, round
 Little Gem Nebula, stellar with greenish disk with 15 mag central *

NGC 6818
 104

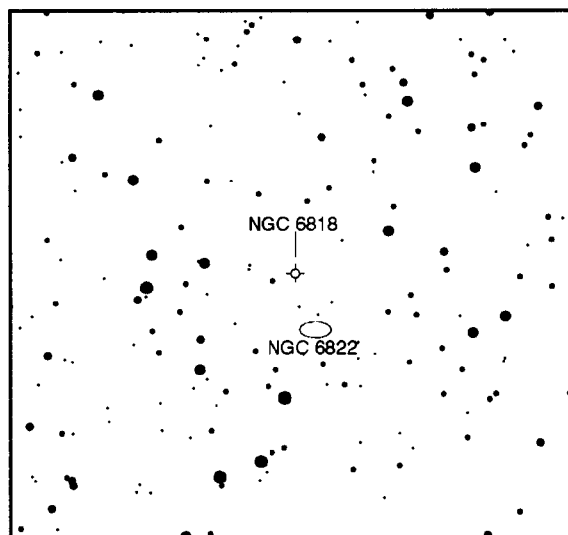


Notes: _____

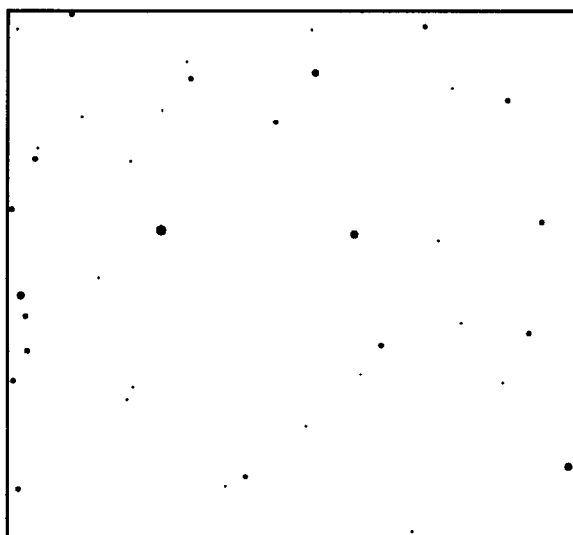
30 degree field, North up



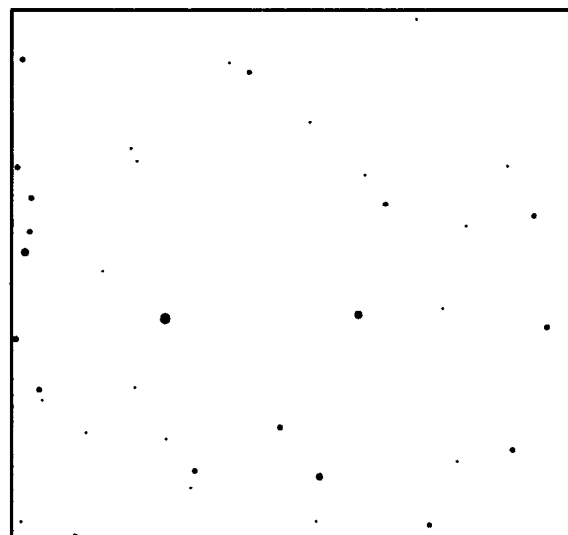
6 degree field, North down



6 degree field, North up, Mirrored



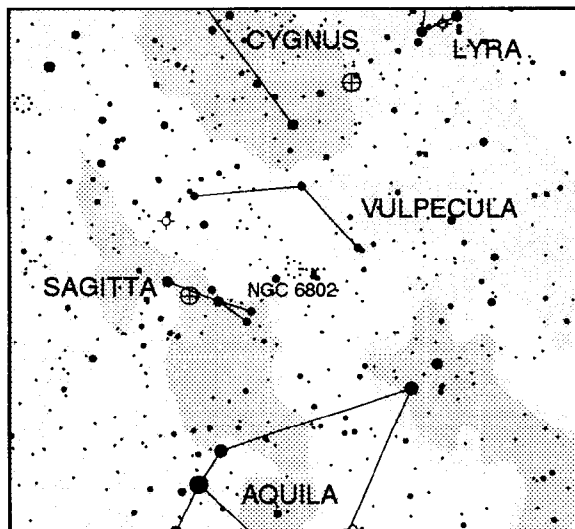
1 degree field, North down



1 degree field, North up, Mirrored

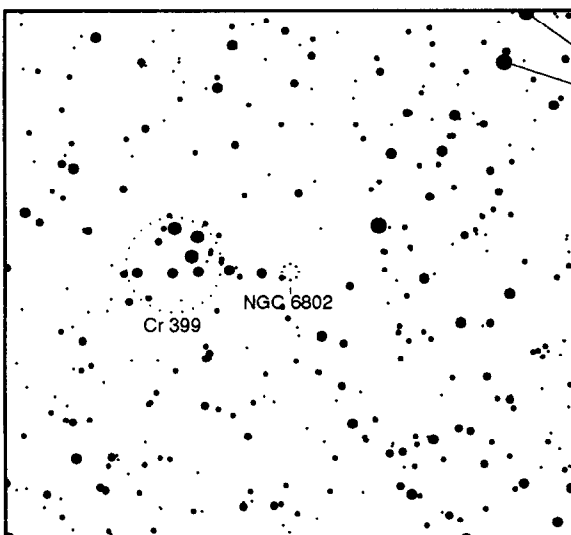
VUL MAG: 8.8 Open Cluster 19h30m36s x 20°16' 4"
 3'12" x 3'12" CLASS:III 1 m
 # of stars:50 brightest star:12.93
 Large, very compressed, elongated, stars mag 14...18
 Bar shaped elongated N-S

NGC 6802
 105

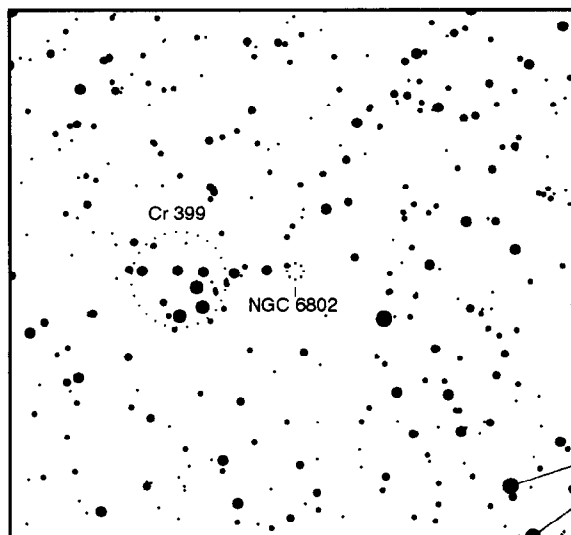


Notes: _____

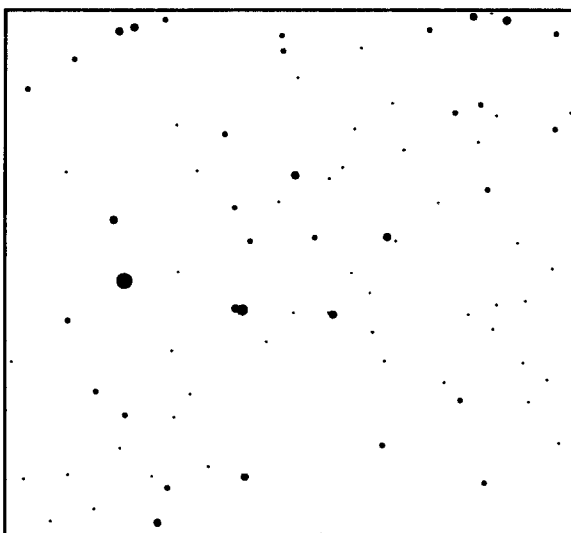
30 degree field, North up



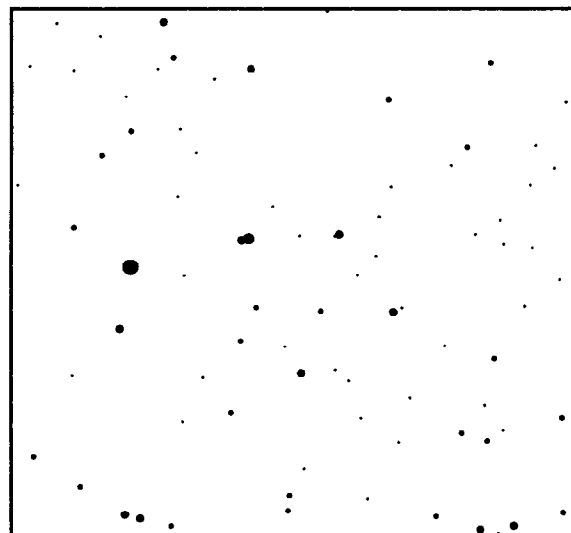
6 degree field, North down



6 degree field, North up, Mirrored



1 degree field, North down



1 degree field, North up, Mirrored

VUL MAG: 6.3 Open Cluster

20h34m36s x 28°17'56"

NGC 6940

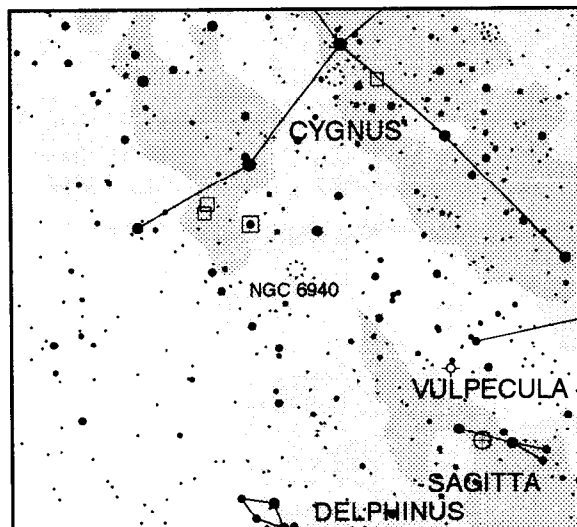
31' 0" x 31' 0" CLASS:III 2 m

106

of stars:60 brightest star:9.31

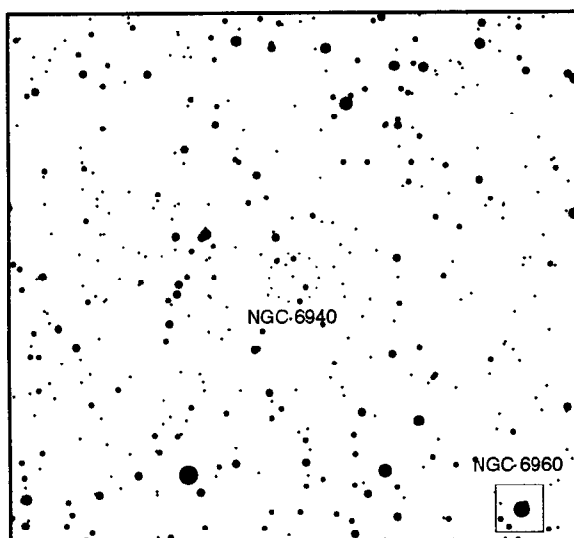
very bright, very large, very rich, considerably compressed, 100 * mags 9...

10th mag red star at center, densely populated in the South part

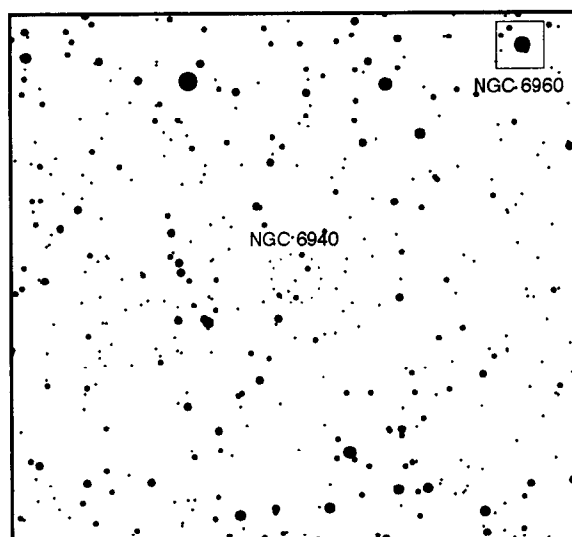


Notes: _____

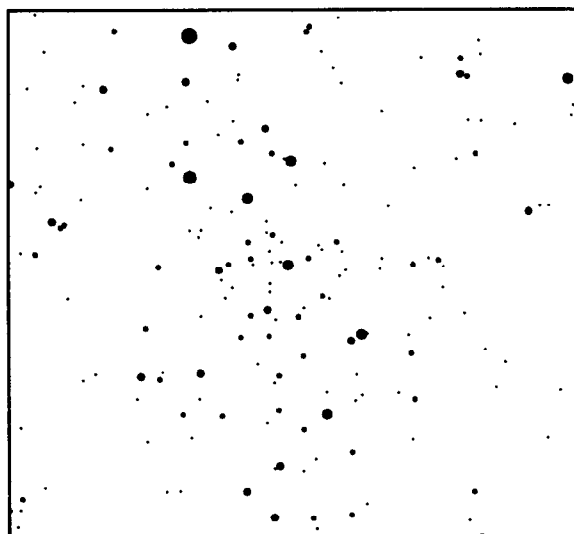
30 degree field, North up



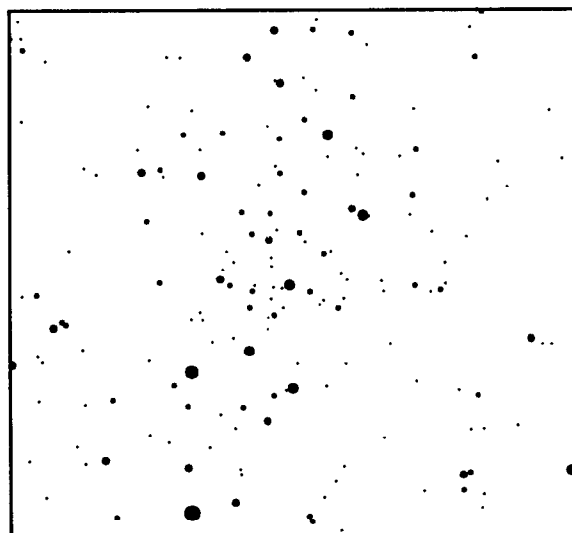
6 degree field, North down



6 degree field, North up, Mirrored



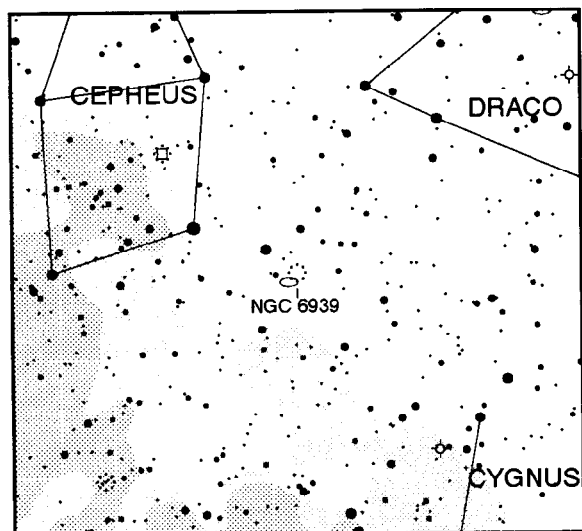
1 degree field, North down



1 degree field, North up, Mirrored

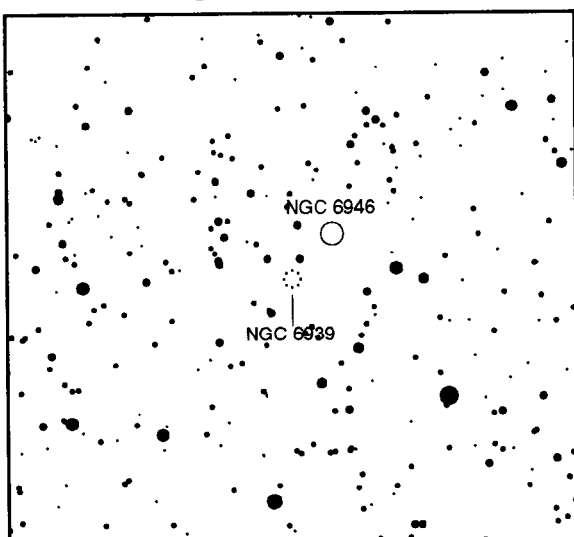
CEP MAG: 7.8 Open Cluster 20h31m23s x 60°37'58"
 8' 0" x 8' 0" CLASS: I m
 # of stars: 80 brightest star: 11.91
 pretty large, extremely rich, pretty compressed middle, * 11.16
 Galaxy NGC 6946 38' SE

NGC 6939
 107

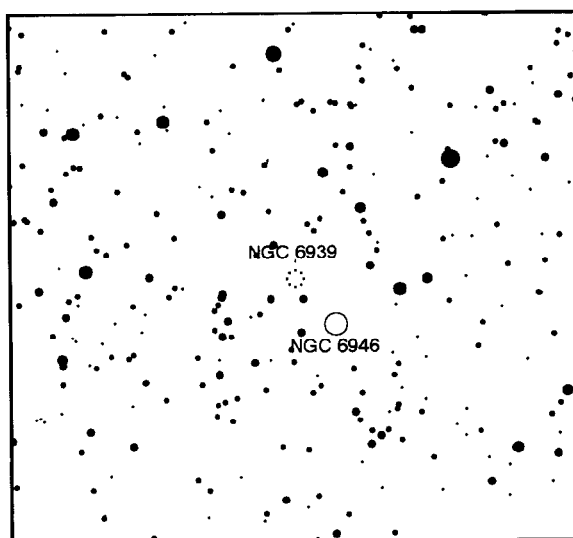


Notes: _____

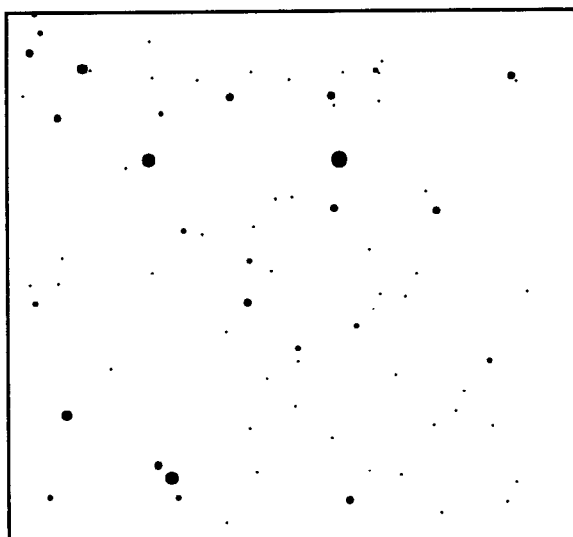
30 degree field, North up



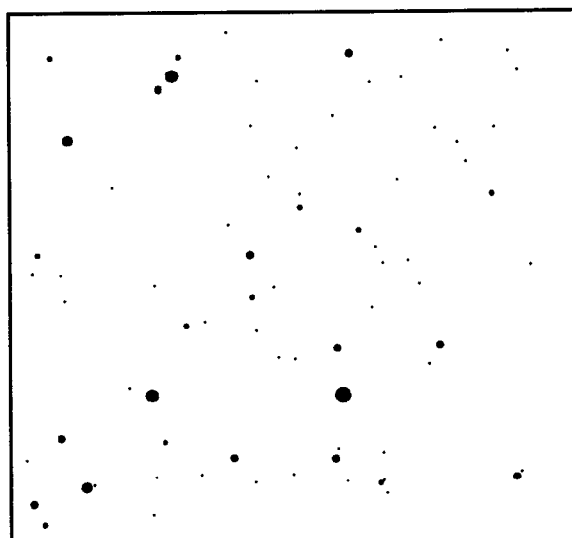
6 degree field, North down



6 degree field, North up, Mirrored



1 degree field, North down



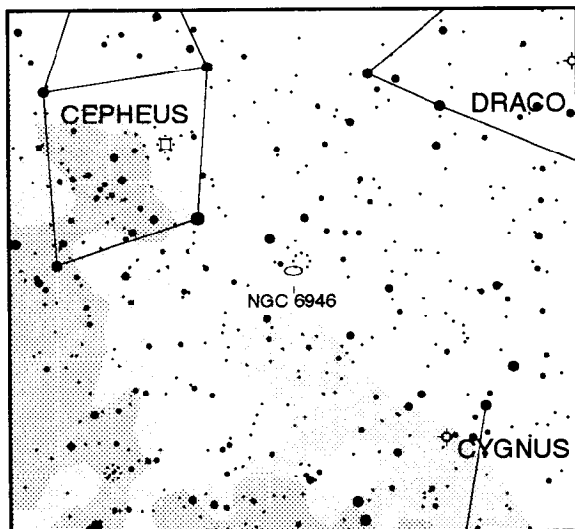
1 degree field, North up, Mirrored

CEP MAG:10.5 Galaxy
14' 0" x 14' 0" CLASS:Sc

20h34m49s x 60° 8'57"

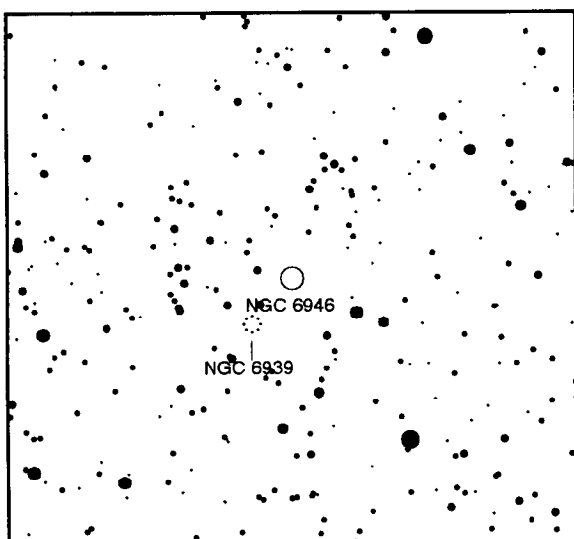
NGC 6946
108

very faint, very large, very suddenly much brighter middle, partially resolved
One of nearest spirals

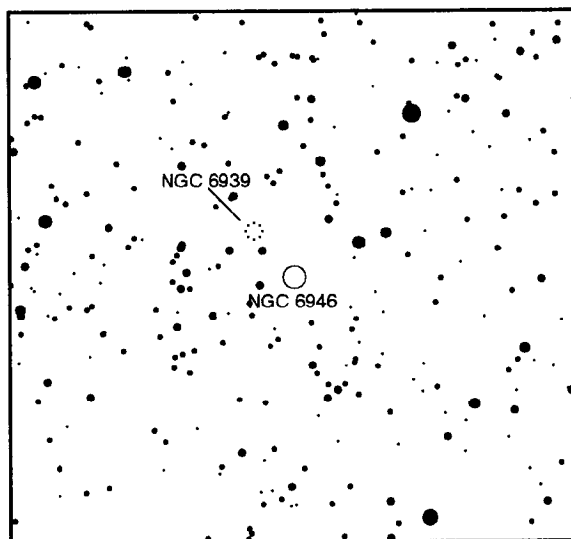


Notes: _____

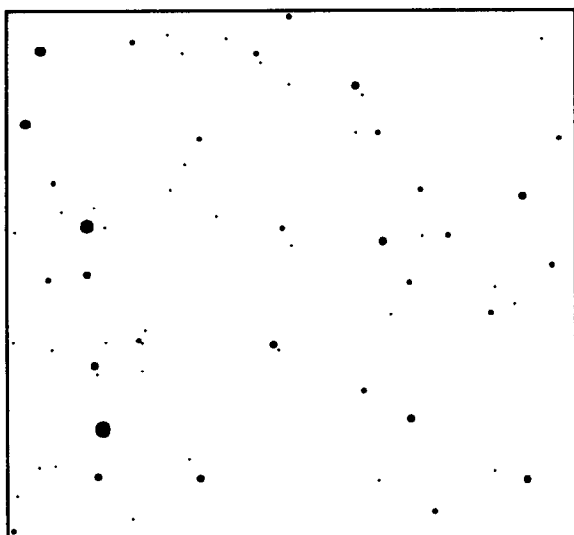
30 degree field, North up



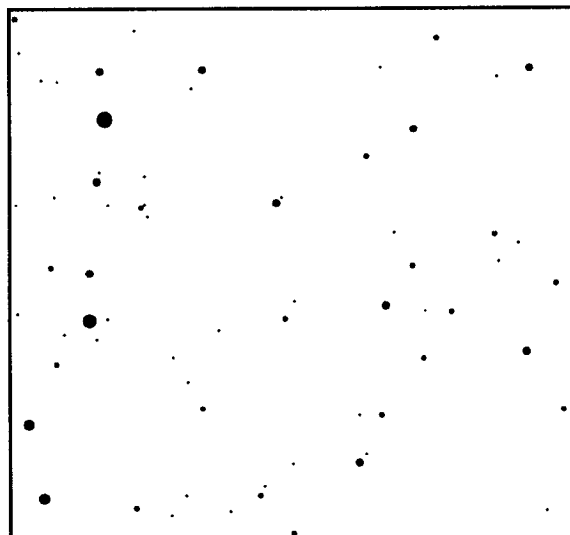
6 degree field, North down



6 degree field, North up, Mirrored



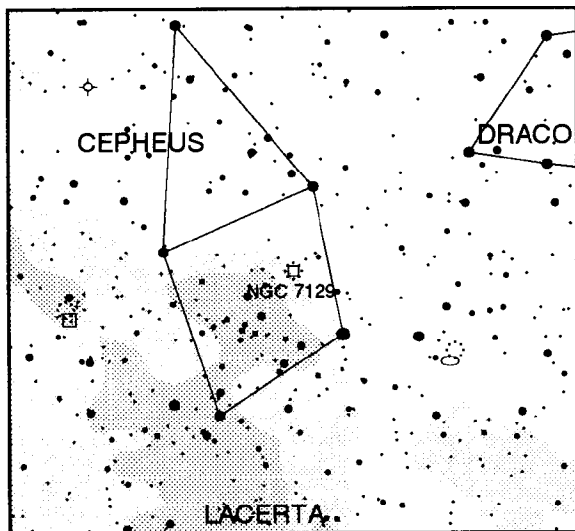
1 degree field, North down



1 degree field, North up, Mirrored

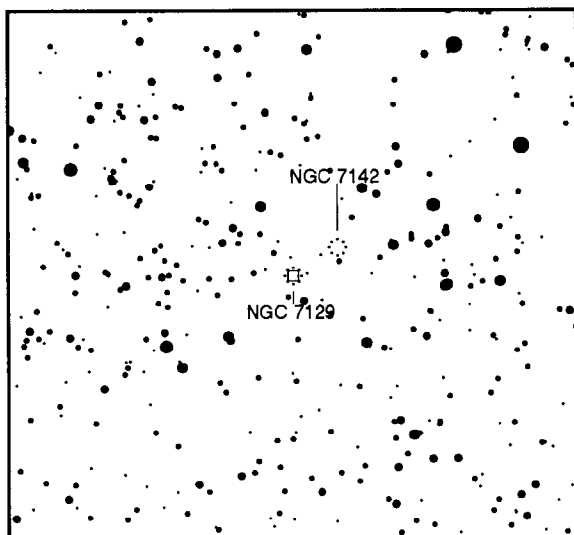
CEP MAG:11.5 Clstr w/Nebulosity 21h41m18s x 66° 6' 5"
 7' 0" x 7' 0" CLASS:n
 # of stars:10 brightest star:11.50
 considerably faint, pretty large
 Several faint stars involved

NGC 7129
 109

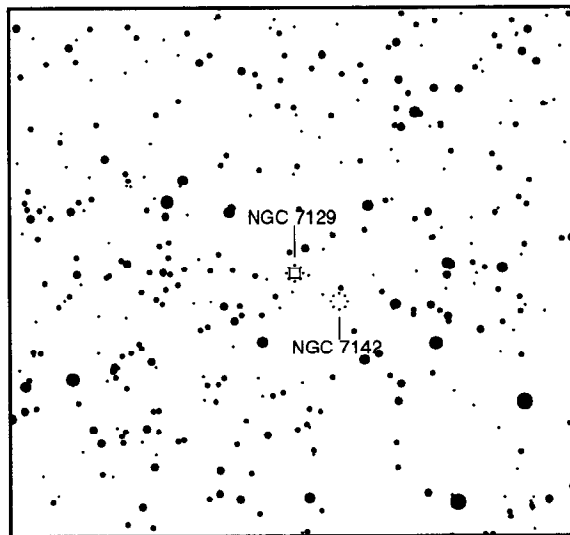


Notes: _____

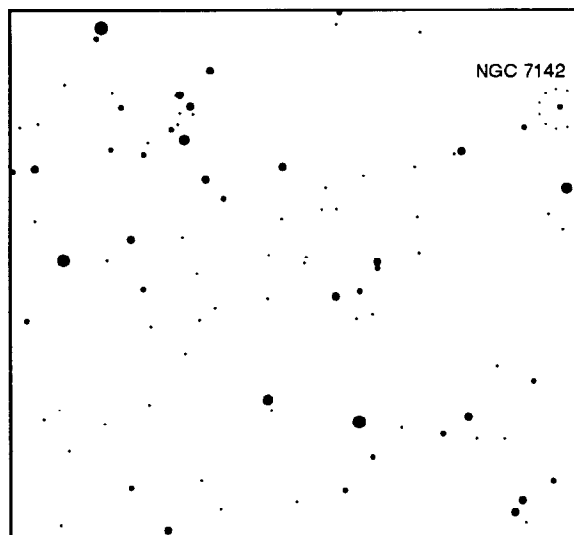
30 degree field, North up



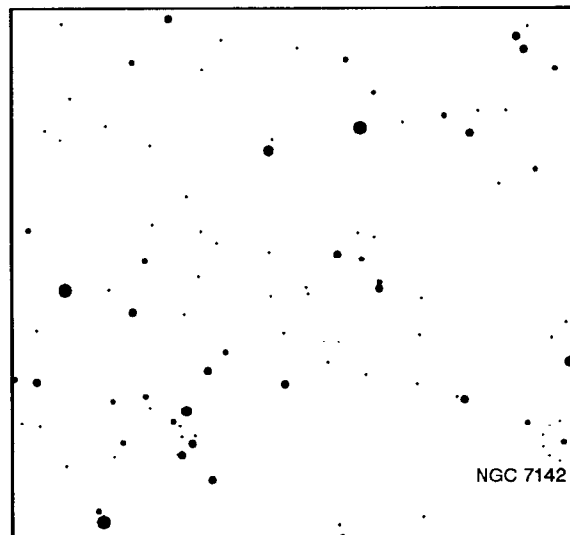
6 degree field, North down



6 degree field, North up, Mirrored



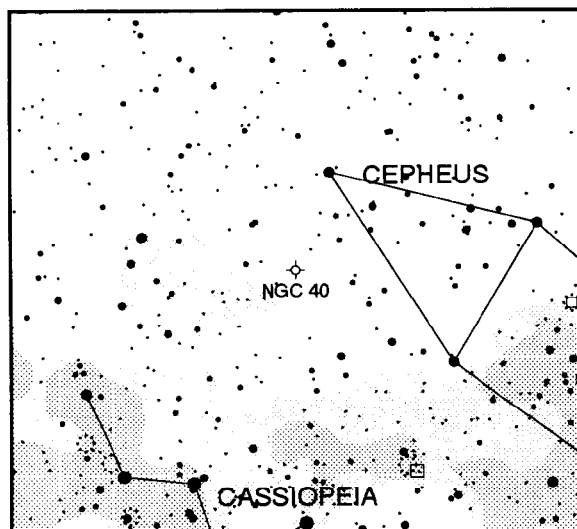
1 degree field, North down



1 degree field, North up, Mirrored

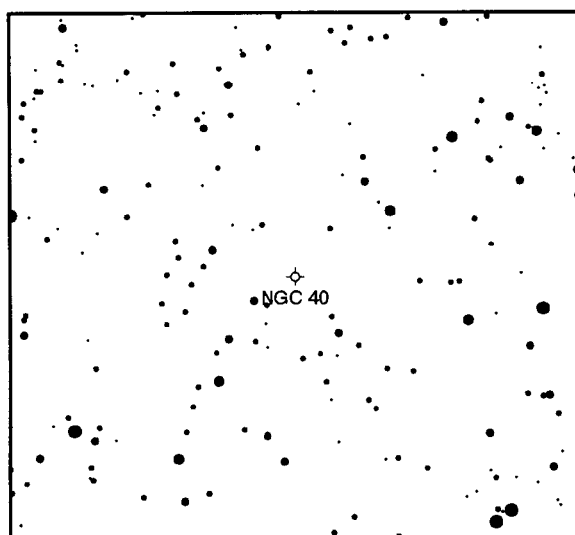
CEP MAG:10.7 Planetary Nebula 0h13m 0s x 72°32' 2"
 PK120+9.1 1' 0" x 1'40" CLASS:3b(3)
 faint, small, little elongated
 central * mag 11.5 type O

NGC 40
 110

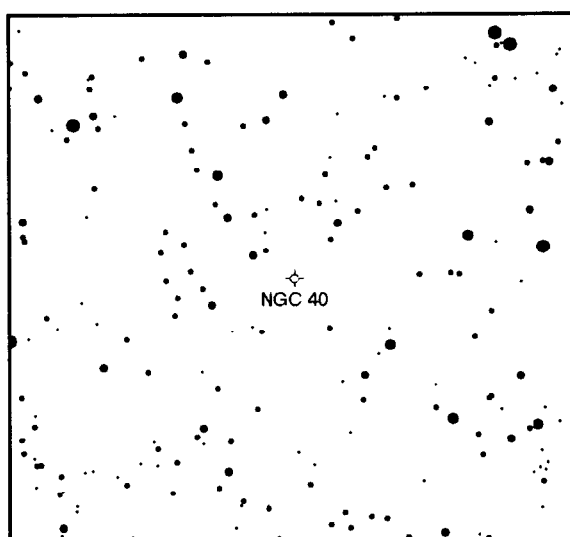


Notes: _____

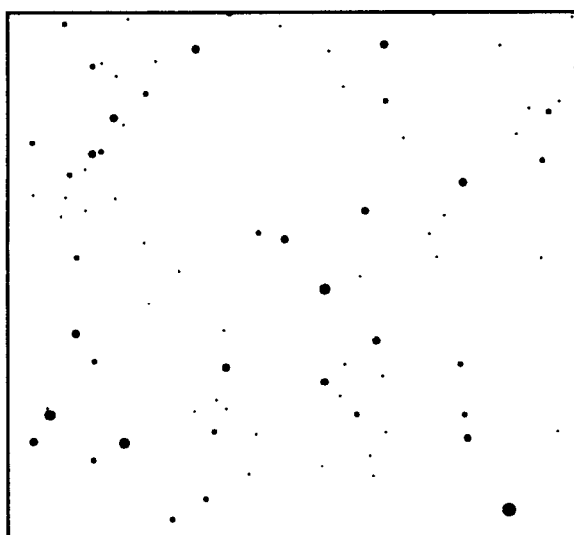
30 degree field, North up



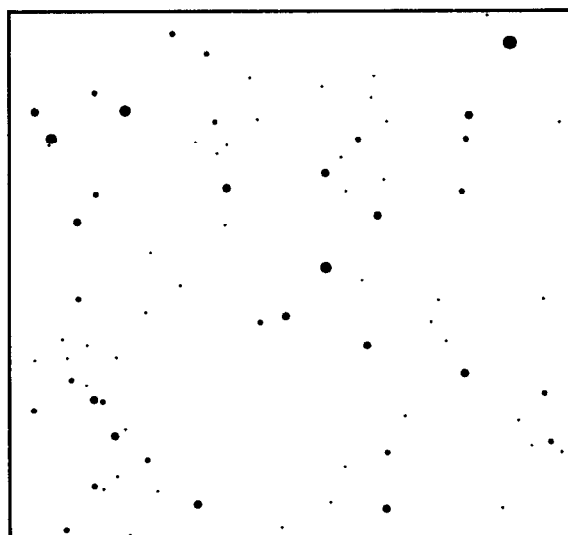
6 degree field, North down



6 degree field, North up, Mirrored



1 degree field, North down



1 degree field, North up, Mirrored

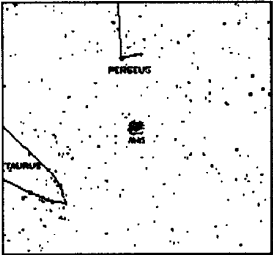
The system and how it works

At the top of the page, there is an area with basic data, NGC number, R.A., Declination, magnitude, size, type of object, and common name. A visual description is under the data strip, often with observing suggestions or points of interest.

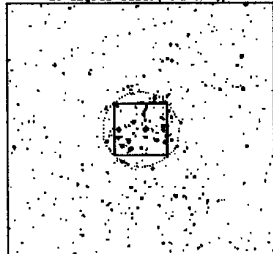
M	NGC	Con	RA	Dec	Mag	Size (mm)	Type	Distance	Common Name	
45	1432	Per	03 47.8	24 07	1.4	100.0	Oct	8.4 k	Galaxy	M 45

Planetary, Seven Sisters

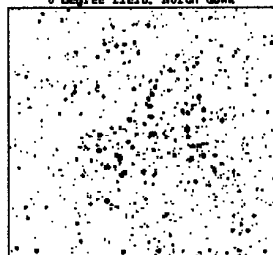
MOI—look for nebulae around M45, and other bright components.



30 degree field, North up

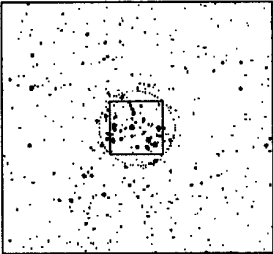


6 degree field, North down

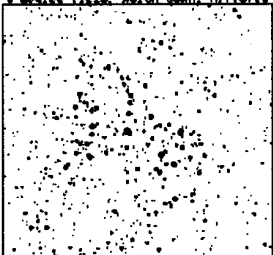


2 degree field, North down

Notes: _____



6 degree field, North down, Mirrored



2 degree field, North down, Mirrored

A thirty-degree finder chart plotted to the seventh magnitude for basic orientation. North is up.

A six-degree field, plotted to the tenth magnitude, for use with your finder. North is down.

A one degree field (or larger as appropriate), plotted to the twelfth magnitude, for sketching at the eyepiece. Useful for field identification when the object is not visible.

A note area is provided.

A six-degree field, mirror reversed for those who use a diagonal. North is up.

A one degree field, (or larger as appropriate), mirror reversed, for sketching.

Also included are lists of objects sorted by constellation, large scale finder charts with all the Finest NGC's plotted to help in planning a night's observing, a checklist, and a clear overlay to help in starhopping. The book is in three ring binder format so that individual sheets may be removed for a night's observing.