A COMPREHENSIVE FIELD GUIDE TO THE NGC

VOLUME 1: AUTUMN/WINTER (ANDROMEDA-ERIDANUS)

BHAVESH JIVAN-KALA PAREKH

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VOLUME 2: AUTUMN/WINTER (FORNAX-VOLANS)

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VOLUME 3: SPRING/SUMMER (ANTILA-INDUS)

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VOLUME 4: SPRING/SUMMER (LEO-VULPECULA)

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Front Cover images:

Vol 1: NGC 772/ARP 78

NGC 772, a spiral galaxy, has much in common with our home galaxy, the Milky Way. Each boasts a few satellite galaxies, small galaxies that closely orbit and are gravitationally bound to their parent galaxies. One of NGC 772's spiral arms has been distorted and disrupted by one of these satellites (NGC 770 — not visible in the image here), leaving it elongated and asymmetrical.

However, the two are also different in a few key ways. For one, NGC 772 is both a peculiar and an unbarred spiral galaxy; respectively, this means that it is somewhat odd in size, shape or composition, and that it lacks a central feature known as a bar, which we see in many galaxies throughout the cosmos — including the Milky Way. These bars are built of gas and stars, and are thought to funnel and transport material through the galactic core, possibly fueling and igniting various processes such as star formation.

CREDITS: Image: ESA/Hubble & NASA, A. Seth et al. Text: ESA (European Space Agency)

Vol 2: NGC 7317-18-19-20 Stephen's Quintet

Three of the galaxies in this famous grouping, Stephan's Quintet, are distorted from their gravitational interactions with one another. One member of the group, NGC 7320 (upper right) is actually seven times closer to Earth than the rest.

CREDITS: NASA , ESA , and the Hubble SM4 ERO Team

Vol 3: NGC 4038-39/ARP 244 Antennae Galaxies

A beautiful composite image of two colliding galaxies, the Antennae galaxies, located about 62 million light-years from Earth. The Antennae galaxies take their name from the long antenna-like "arms," seen in wide-angle views of the system. These features were produced by tidal forces generated in the collision, which began more than 100 million years ago and is still occurring.

The collision has triggered the formation of millions of stars in clouds of dust and gas in the galaxies. The most massive of these young stars have already sped through their evolution in a few million years and exploded as supernovas.

Many of the fainter objects in the optical image are clusters containing thousands of stars.

This is a composite image from the Chandra X-ray Observatory (blue), the Hubble Space Telescope (gold and brown), and the Spitzer Space Telescope (red).

CREDITS: NASA , ESA , SAO, CXC, JPL-Caltech, and STScI ; Acknowledgment: J. DePasquale (Harvard-Smithsonian CfA), and B. Whitmore (STScI)

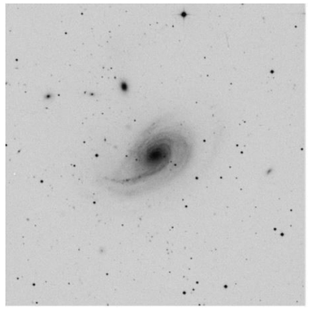
Vol 4: NGC 5679/ARP 274 Galaxy Triplet

A system of three galaxies that appear to be partially overlapping in the image, although they may be at somewhat different distances. The spiral shapes of two of these galaxies appear mostly intact.

The third galaxy (to the far left) is more compact, but shows evidence of star formation. Two of the three galaxies are forming new stars at a high rate. This is evident in the bright blue knots of star formation that are strung along the arms of the galaxy on the right and along the small galaxy on the left.

The largest component is located in the middle of the three. It appears as a spiral galaxy, which may be barred. The entire system resides at about 400 million light-years away from Earth in the constellation Virgo. A pair of foreground stars inside our own Milky Way are at far right.

CREDITS: NASA, ESA, M. Livio and the Hubble Heritage Team (STScI /AURA)



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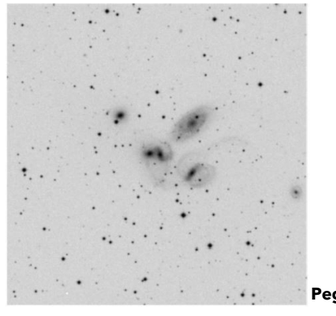

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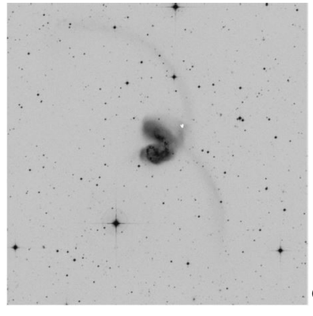
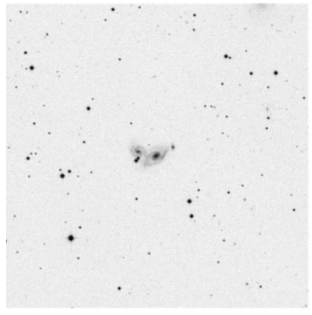


Corvus, page 94



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A Comprehensive Field Guide To The NGC

Volume 1: Autumn/Winter Constellations (Andromeda-Eridanus)

Bhavesh Jivan-Kala Parekh

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Introduction

It was Spring of 2018. My observing buddy Dave Kasnick showed me an illustrated booklet of NGC objects. It was ok to use for reference. However, the images were too small, the resolution was not so good, and the book was just not easy to use. We thought there must be a better tool we can use as a field guide for observing deep sky objects. I started the search for a reliable and comprehensive source to obtain those images and print them for our use. I came up empty. That failure to find a ready-to-use manual was the beginning of this book.

Over next six months I scoured through many web sites maintained by amateur and professional astronomers, academic institutions, and government/non-government organizations. I found images and metadata that seemed to fit our requirements. Next, I started collaborating with Dave and our other observing buddy, Steve Weiler. We brainstormed various ways and formats in which this vast amount of data that can be organized and presented in a simple, concise, and easy-to-use format. They had decades of observing experience on me, and I relied on their experience to guide me through this process. With their help, as well as that of many others, and many late nights spent staring at my computer screen, this field guide is now ready for general distribution.

Acknowledgements

This book is a compilation of knowledge, experience, images and data from many sources.

In 2016, my wife Reena gave me a membership to our local club, Rose City Astronomers. I went to my first star party at Camp Hancock in central Oregon in September 2016. I have never looked back (or down) since then. I bought my first telescope in July 2017 (Obsession 15UC). The club, with its rich pool of talent of "old-timers", as well as a well-stocked telescope library (yes, a telescope library!!), has been an awesome resource for me - an extreme novice. There are too many club members who put up with my pestering and unending questions. They guided and educated me patiently and generously.

Here's a small list of all my mentors, educators, and friends at the club: Steve Weiler, Dave Kasnick, Will Forrest, Dawn Nilson, Vladimir Fedosov, Jeff Scheetz, Steve Dodge, Margaret McCrea; all the "Stubbies" (observing buddies at Stub Stewart State Park, Oregon): Jeff Hubbard, Mike Reitmajer, Mark Lowenthal, Alison Akbulut, Peter Thompson, Prem Kanakraj, Charles Fichter, Lee Tapper, Pradeep Sivakumar, and many others; guidance and advice from Jimi Lowry, Howard Banich, Judy and Chuck Dethloff, and Stefano Meschiari. A shout-out to my astronomy brothers in Mumabi, India: Ashirwad Tillu, and Anurag Shevade. If I have seen farther, deeper, it's truly by standing on the shoulders of these giants.

A special thanks to Steve Weiler for spending countless hours tweaking, hacking and super-engineering my telescope. Thank you to Wolfgang Steinicke for a treasure trove of information on his web site.

Sources

Southern Hemisphere Images: Australian Astronomical Observatory, the UK Schmidt Telescope, and the Royal Observatory Edinburgh (stdatu.stsci.edu/dss/copyright.html). Northern Hemisphere Images: Courtesy of Caltech. Revised NGCIC data file: Wolfgang Steinicke. Select Images (not found in above sources): NGC/IC Project. Constellation Map: Dominic Ford (www.InTheSky.org). SkyZones: Dave Kasnick

Methodology

I started with the Revised NGC/IC (RNGCIC) data file from Wolfgang Steinicke's web site (http://www.klima-luft.de/steinicke/ngcic/ngcic_e.htm). The file contained a complete list of and metadata on NGC and IC objects (total 13,957 entries). This current edition includes select 7,047 NGC objects. Please refer to the Reference Table 1 for objects which are included in this publication. Also refer to Table 11 for a list of NGC Entries for objects that were mis-identified and/or have multiple entries. Some metadata are missing (especially, distances for the Milky Way objects) or there was not a good source (at this time) for them. I learned that it is an on-going process to come up with firm, and widely agreeable data. It's a work-in-progress. If you believe you have more accurate/current data, please contact me at the email listed below.

The four volumes are divided by Observing Seasons (Autumn/Winter and Spring/Summer) so that it's necessary to carry only two volumes to the field most of the time.

Clear Skies!

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REFERENCES

Table 1: RNGCIC Data Summary

Catalog	Object	Number of Entries in RNGCIC *	Number of Objects	Objects Included in this Edition
NGC	Galaxy	6488	6022	6018
NGC	Galactic Neb; SN Remnant	147	149	147
NGC	Planetary Neb	94	94	94
NGC	Open Cluster	676	673	673
NGC	Globular Cluster	115	115	115
NGC	Part of Galaxy	31	29	None
NGC	Duplicate Entry **	339	263	None
NGC	IC objects	24		None
NGC	Star	407	405	None
NGC	unknown	90	90	None
NGC	**Total**	**8411 ***	**7840**	**7047**

***** *Total number of NGC entries exceeds 7840 because an object may have multiple entries in the RNGCIC ** See Table 11 for detailed list of duplicate entries.*

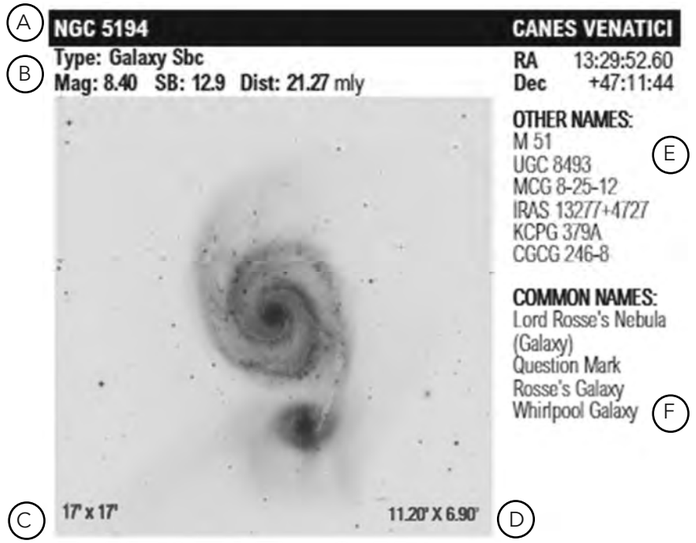
Table 2: Object Classifications

Star	
*	Star
*2	Double Star
*Grp	Star Group
Cluster	
OCL	Open Cluster
GCL	Globular Cluster
Nebula	
DN	Dark
EN	Emission
RN	Reflection
PN	Planetary
SNR	Supernova Remnant

Table 3: de Vaucouleurs's Classification Of Galaxies

classes	families	varieties	stages	type
ellipticals				**E**
			elliptical (0–7)	**E0**
			intermediate	**E0-1**
			late elliptical	**E+**
lenticulars				**S0**
	ordinary			**SA0**
	barred			**SB0**
	mixed			**SAB0**
		inner ring		**S(r)0**
		S-shaped		**S(s)0**
		mixed		**S(rs)0**
			early	**S0−**
			intermediate	**S0°**
			late	**S0+**
spirals	ordinary			**SA**
	barred			**SB**
	mixed			**SAB**
		inner ring		**S(r)**
		S-shaped		**S(s)**
		mixed		**S(rs)**
			0/a	**S0/a**
			a	**Sa**
			ab	**Sab**
			b	**Sb**
			bc	**Sbc**
			c	**Sc**
			cd	**Scd**
			d	**Sd**
			dm	**Sdm**
			m	**Sm**
irregulars	ordinary			**IA**
	barred			**IB**
	mixed			**IAB**
		S-shaped		**I(s)**
			Magellanic	**Im**
			non-Magellanic	**I0**
peculiars				**P**
peculiarities (all types)			peculiarity	**P**
			uncertain	**:**
			doubtful	**?**
			spindle	**sp**
			outer ring	**(R)**
			pseudo outer ring	**(R′)**

Table 4: Image Display Key



A	NGC Number	
B	**Object Information**	
	Type	*Type of Object* ***(see Tables 3 and 5)***
	Mag	*Visual Magnitude*
	SB	*Surface Brightness (mag/arcm²)*
	Dist	*Distance (Redshift derived)*
C	Field Of View	
D	Object Size	
E	Ref In Other Catalogs	
F	Common Names	

Image Orientation: As seen in Dobsonian telescopes, North Down, South Up, West Left, East Right

Table 5: OCL Classification

	Concentration
I	Strong
II	Moderately Strong
III	Moderately Weak
IV	Weak
	Range of Brightness
1	Small Range
2	Medium Range
3	Large Range
	Richness
p	Poor (<50 stars)
m	Medium (50-100)
r	Rich (>100)
	Nebulosity
n	In or Surrounded by

Table 6: Object Counts By Constellations

Constellation	Gal	GC	OCL	SNR	PN
Andromeda	138		3		1
Antlia	46				
Apus	6	1			
Aquarius	117	3			2
Aquila	11	2	4		10
Ara	5	3	6	1	1
Aries	75				
Auriga	2		16	2	1
Boötes	243	1			
Caelum	15				
Camelopardalis	36		2		1
Cancer	106		4		
Canes Venatici	195	1			
Canis Major	19		13	4	
Canis Minor	13		1		
Capricornus	22	1			
Carina	13	1	13	10	2
Cassiopeia	4		28	3	
Centaurus	107	2	19	1	3
Cepheus	6		14	4	4
Cetus	371				1
Chamaeleon	3				1
Circinus			4		1
Columba	13	1	1		
Coma Berenices	266	3			
Corona Australis	1	1		3	
Corona Borealis	35				
Corvus	31				1
Crater	79				
Crux			8		
Cygnus	9		24	9	9
Delphinus	15	2			2
Dorado	36	5	199	48	
Draco	266				2
Equuleus	3				
Eridanus	295				1
Fornax	59	1			1
Gemini	40		9		2
Grus	47				
Hercules	187	3			2
Horologium	22	1			
Hydra	201	2	1		2
Hydrus	5	1	3	1	
Indus	42				
Lacerta	20		4		
Leo	348				
Leo Minor	58				
Lepus	29	1			
Libra	55	1			
Lupus	6	3	5		3
Lynx	92	1	1		
Lyra	23	1	1		2
Mensa	4	3	63	2	
Microscopium	11				
Monoceros	2		32	14	1
Musca		2	2		2
Norma		1	11	2	
Octans	7				
Ophiuchus	11	21	2		3
Orion	23		11	17	1
Pavo	45	1			
Pegasus	277	1	1		1
Perseus	57		18	4	1
Phoenix	39				
Pictor	18				
Pisces	261				
Piscis Austrinus	36				
Puppis	12	1	33	1	3
Pyxis	8		3		1
Reticulum	11				
Sagitta		1			2
Sagittarius	12	21	17	6	11
Scorpius	1	10	22	2	4
Sculptor	60	1			
Scutum		1	9		
Serpens	68	3	3		
Sextans	55				
Taurus	23		7	4	1
Telescopium	27	1			
Triangulum	64				
Triangulum Australe	3		1		2
Tucana	26	3	27	5	
Ursa Major	366		1		1
Ursa Minor	33				
Vela	9	1	18	2	3
Virgo	602	1			
Volans	8		1		
Vulpecula	3		8	2	2
Total	**6018**	**115**	**673**	**147**	**94**

REFERENCES

Table 7: Constellations Summary

Abbr	Nominative	Nominative Pronunciation	Genitive	Genitive Pronunciation	Objects	Area **	C *	Abbr	Nominative	Nominative Pronunciation	Genitive	Genitive Pronunciation	Objects	Area **	C *
And	Andromeda	an-DRAH-mih-duh	Andromedae	an-DRAH-mih-dee	**142**	722.28		**Lac**	Lacerta	luh-SER-tuh	Lacertae	luh-SER-tee	**24**	200.69	
Ant	Antlia	ANT-lee-uh	Antliae	ANT-lee-ee	**46**	238.9		**Leo**	Leo	LEE-oh	Leonis	lee-OH-niss	**348**	946.96	
Aps	Apus	APE-us, APP-us	Apodis	APP-oh-diss	**7**	206.33		**LMi**	Leo Minor	LEE-oh MY-ner	Leonis Minoris	lee-OH-niss mih-NOR-iss	**58**	231.96	
Aqr	Aquarius	uh-QUAIR-ee-us	Aquarii	uh-QUAIR-ee-eye	**122**	979.85		**Lep**	Lepus	LEEP-us	Leporis	LEP-or-iss	**30**	290.29	
Aql	Aquila	uh-QUILL-uh	Aquilae	uh-QUILL-ee	**27**	652.47		**Lib**	Libra	LEE-bruh	Librae	LEE-bree, LYE-bree	**56**	538.05	
Ara	Ara	AIR-uh, AR-uh	Arae	AIR-ee, AR-ee	**16**	237.06	*	**Lup**	Lupus	LOOP-us	Lupi	LOOP-eye	**17**	333.68	
Ari	Aries	AIR-eez, AIR-ee-yeez	Arietis	uh-RYE-ih-tiss	**75**	441.4		**Lyn**	Lynx	LINKS	Lyncis	LIN-siss	**94**	545.39	*
Aur	Auriga	aw-RYE-guh	Aurigae	aw-RYE-ghee	**21**	657.44	*	**Lyr**	Lyra	LYE-ruh	Lyrae	LYE-ree	**27**	286.48	
Boo	Boötes	bo-OH-teez	Boötis	bo-OH-tiss	**244**	906.83		**Men**	Mensa	MEN-suh	Mensae	MEN-see	**72**	153.48	
Cae	Caelum	SEE-lum	Caeli	SEE-lye	**15**	124.87		**Mic**	Microscopium	my-cruh-SCOPE-ee-um	Microscopii	my-cruh-SCOPE-ee-eye	**11**	209.51	
Cam	Camelopardalis	cuh-MEL-oh-PAR-duh-liss	Camelopardalis	cuh-MEL-oh-PAR-duh-liss	**39**	756.83		**Mon**	Monoceros	muh-NAH-ser-us	Monocerotis	muh-NAH-ser-OH-tiss	**49**	481.57	
Cnc	Cancer	CAN-ser	Cancri	CANG-cry	**110**	505.87		**Mus**	Musca	MUSS-cuh	Muscae	MUSS-see, MUSS-kee	**6**	138.36	*
CVn	Canes Venatici	CAN-eez ve-NAT-iss-eye	Canum Venaticorum	CAN-um ve-nat-ih-COR-um	**14**	465.19		**Nor**	Norma	NOR-muh	Normae	NOR-mee	**14**	165.29	
CMa	Canis Major	CAN-iss MAY-jer	Canis Majoris	CAN-iss muh-JOR-iss	**196**	380.12		**Oct**	Octans	OCK-tanz	Octantis	ock-TAN-tiss	**7**	291.05	*
CMi	Canis Minor	CAN-iss MY-ner	Canis Minoris	CAN-iss mih-NOR-iss	**36**	183.37		**Oph**	Ophiuchus	OAF-ee-YOO-kus	Ophiuchi	OAF-ee-YOO-kye	**37**	948.34	
Cap	Capricornus	CAP-rih-CORN-us	Capricorni	CAP-rih-CORN-eye	**23**	413.95		**Ori**	Orion	oh-RYE-un	Orionis	or-eye-OH-niss	**52**	594.12	
Car	Carina	cuh-REE-nuh	Carinae	cuh-REE-nee	**39**	494.18	*	**Pav**	Pavo	PAY-vo	Pavonis	puh-VOE-niss	**46**	377.67	*
Cas	Cassiopeia	CASS-ee-uh-PEE-uh	Cassiopeiae	CASS-ee-uh-PEE-ye	**35**	598.41	*	**Peg**	Pegasus	PEG-us-us	Pegasi	PEG-us-eye	**280**	1120.79	
Cen	Centaurus	sen-TOR-us	Centauri	sen-TOR-eye	**132**	1060.42	*	**Per**	Perseus	PER-see-us, PER-syoos	Persei	PER-see-eye	**80**	615	*
Cep	Cepheus	SEE-fee-us	Cephei	SEE-fee-eye	**28**	587.79	*	**Phe**	Phoenix	FEE-nix	Phoenicis	fuh-NICE-iss	**39**	469.32	*
Cet	Cetus	SEE-tus	Ceti	SEE-tie	**372**	1231.41		**Pic**	Pictor	PICK-ter	Pictoris	pick-TOR-iss	**18**	246.74	
Cha	Chamaeleon	cuh-MEAL-yun	Chamaeleontis	cuh-MEAL-ee-ON-tiss	**4**	131.59	*	**Psc**	Pisces	PICE-eez, PISS-eez	Piscis Austrini	PICE-iss aw-STRY-nye	**261**	889.42	
Cir	Circinus	SER-sin-us	Circini	SER-sin-eye	**5**	93.35	*	**PsA**	Piscis Austrinus	PICE-iss aw-STRY-nus	Piscium	PICE-ee-um	**36**	245.38	
Col	Columba	cuh-LUM-buh	Columbae	cuh-LUM-bee	**15**	270.18		**Pup**	Puppis	PUP-iss	Puppis	PUP-iss	**50**	673.43	*
Com	Coma Berenices	COE-muh BER-uh-NICE-eez	Comae Berenices	COE-mee BER-uh-NICE-eez	**269**	386.48		**Pyx**	Pyxis	PIX-iss	Pyxidis	PIX-ih-diss	**12**	220.83	
CrA	Corona Australis	cuh-ROE-nuh aw-STRAL-iss	Coronae Australis	cuh-ROE-nee aw-STRAL-iss	**5**	127.7		**Ret**	Reticulum	rih-TICK-yuh-lum	Reticulii	rih-TICK-yuh-lye	**11**	113.94	*
CrB	Corona Borealis	cuh-ROE-nuh bor-ee-AL-iss	Coronae Borealis	cuh-ROE-nee bor-ee-AL-iss	**35**	178.71		**Sge**	Sagitta	suh-JIT-uh	Sagittae	suh-JIT-ee	**3**	79.93	
Crv	Corvus	COR-vus	Corvi	COR-vye	**32**	183.8		**Sgr**	Sagittarius	SAJ-ih-TARE-ee-us	Sagittarii	SAJ-ih-TARE-ee-eye	**67**	867.43	
Crt	Crater	CRAY-ter	Crateris	cruh-TEE-riss	**79**	282.4		**Sco**	Scorpius	SCOR-pee-us	Scorpii	SCOR-pee-eye	**39**	496.78	
Cru	Crux	CRUCKS	Crucis	CROO-siss	**8**	68.45	*	**Scl**	Sculptor	SCULP-ter	Sculptoris	sculp-TOR-iss	**61**	474.76	
Cyg	Cygnus	SIG-nus	Cygni	SIG-nye	**51**	803.98		**Sct**	Scutum	SCOOT-um	Scuti	SCOOT-eye	**10**	109.11	
Del	Delphinus	del-FINE-us, del-FIN-us	Delphini	del-FINE-eye, del-FIN-eye	**19**	188.55		**Ser**	Serpens	SER-punz	Serpentis	ser-PEN-tiss	**74**	636.93	
Dor	Dorado	duh-RAH-do	Doradus	duh-RAH-dus	**288**	179.17	*	**Sex**	Sextans	SEX-tunz	Sextantis	sex-TAN-tiss	**55**	313.52	
Dra	Draco	DRAY-co	Draconis	druh-CONE-iss	**268**	1082.95	*	**Tau**	Taurus	TOR-us	Tauri	TOR-eye	**35**	797.25	
Equ	Equuleus	eh-QUOO-lee-us	Equulei	eh-QUOO-lee-eye	**3**	71.64		**Tel**	Telescopium	tel-ih-SCOPE-ee-um	Telescopii	tel-ih-SCOPE-ee-eye	**28**	251.51	
Eri	Eridanus	ih-RID-un-us	Eridani	ih-RID-un-eye	**296**	1137.92	*	**Tri**	Triangulum	try-ANG-gyuh-lum	Trianguli	try-ANG-gyuh-lye	**64**	131.85	
For	Fornax	FOR-naks	Fornacis	for-NAY-siss	**61**	397.5		**TrA**	Triangulum Australe	try-ANG-gyuh-lum aw-STRAL-ee	Trianguli Australis	try-ANG-gyuh-lye aw-STRAL-iss	**6**	109.98	*
Gem	Gemini	JEM-uh-nye, JEM-uh-nee	Geminorum	JEM-uh-NOR-um	**51**	513.76		**Tuc**	Tucana	too-KAY-nuh	Tucanae	too-KAY-nee	**61**	294.56	*
Gru	Grus	GRUSS	Gruis	GROO-iss	**47**	365.51	*	**UMa**	Ursa Major	ER-suh MAY-jur	Ursae Majoris	ER-suh muh-JOR-iss	**368**	1279.66	*
Her	Hercules	HER-kyuh-leez	Herculis	HER-kyuh-liss	**192**	1225.15		**UMi**	Ursa Minor	ER-suh MY-ner	Ursae Minoris	ER-suh mih-NOR-iss	**33**	255.86	*
Hor	Horologium	hor-uh-LOE-jee-um	Horologii	hor-uh-LOE-jee-eye	**23**	248.89	*	**Vel**	Vela	VAY-luh	Velorum	vuh-LOR-um	**33**	499.65	*
Hya	Hydra	HIGH-druh	Hydrae	HIGH-dree	**206**	1302.84		**Vir**	Virgo	VER-go	Virginis	VER-jin-iss	**603**	1294.43	
Hyi	Hydrus	HIGH-drus	Hydri	HIGH-dry	**10**	243.04	*	**Vol**	Volans	VOH-lanz	Volantis	vo-LAN-tiss	**9**	141.35	
Ind	Indus	IN-dus	Indi	IN-dye	**42**	294.01	*	**Vul**	Vulpecula	vul-PECK-yuh-luh	Vulpeculae	vul-PECK-yuh-lee	**15**	268.17	

***** *Circumpolar* ** *Square Degrees*

REFERENCES

Table 8: Messier/NGC Cross Ref

M	NGC	M	NGC	M	NGC
1	1952	**47**	2478	**93**	2447
2	7089	**48**	2548	**94**	4736
3	5272	**49**	4472	**95**	3351
4	6121	**50**	2323	**96**	3368
5	5904	**51**	5194	**97**	3587
6	6405	**52**	7654	**98**	4192
7	6475	**53**	5024	**99**	4254
8	6523	**54**	6715	**100**	4321
9	6333	**55**	6809	**101**	5457
10	6254	**56**	6779	**102**	5866
11	6705	**57**	6720	**103**	581
12	6218	**58**	4579	**104**	4594
13	6205	**59**	4621	**105**	3379
14	6402	**60**	4649	**106**	4258
15	7078	**61**	4303	**107**	6171
16	6611	**62**	6266	**108**	3556
17	6618	**63**	5055	**109**	3992
18	6613	**64**	4826	**110**	205
19	6273	**65**	3623		
20	6514	**66**	3627		
21	6531	**67**	2682		
22	6656	**68**	4590		
23	6494	**69**	6637		
24	6603	**70**	6681		
25	n/a	**71**	6838		
26	6694	**72**	6981		
27	6853	**73**	6994		
28	6626	**74**	628		
29	6913	**75**	6864		
30	7099	**76**	650		
31	224	**76**	651		
32	221	**77**	1068		
33	598	**78**	2068		
34	1039	**79**	1904		
35	2168	**80**	6093		
36	1960	**81**	3031		
37	2099	**82**	3034		
38	1912	**83**	5236		
39	7092	**84**	4374		
40	n/a	**85**	4382		
41	2287	**86**	4406		
42	1976	**87**	4486		
43	1982	**88**	4501		
44	2632	**89**	4552		
45	n/a	**90**	4569		
46	2437	**91**	4548		
47	2422	**92**	6341		

Table 8A: Messier/NGC Cross Ref By Constellation

Constellation	M	NGC	Common Names
Andromeda	**31**	224	Andromeda Galaxy
	32	221	Satellite Galaxy of M31
	110	205	Satellite Galaxy of M31
Aquarius	**2**	7089	
	72	6981	
	73	6994	Four Star Asterism
Auriga	**36**	1960	Pinwheel Cluster
	37	2099	Auriga Salt-and-Pepper
	38	1912	
Cancer	**44**	2632	Beehive Cluster, Manger (Praesepe)
	67	2682	King Cobra
C. Venatici	**3**	5272	
	51	5194	Lord Rosse's Nebula(Galaxy), Question Mark, Whirlpool Galaxy
	63	5055	Sunflower galaxy
	94	4736	Croc's Eye Galaxy
	106	4258	
Canis Major	**41**	2287	
Capricornus	**30**	7099	
Cassiopeia	**52**	7654	Cassiopeia Salt-and-Pepper, October Salt-and-Pepper, The Scorpion
	103	581	
Cetus	**77**	1068	Cetus A
C. Berenices	**53**	5024	
	64	4826	Sleeping Beauty Galaxy, Black Eye Galaxy
	85	4382	
	88	4501	
	91	4548	
	98	4192	
	99	4254	Coma Pinwheel Galaxy, St.Katherine's Wheel, Virgo Cluster Pinwheel
	100	4321	The Mirror of M99
Cygnus	**29**	6913	Cooling Tower
	39	7092	
Draco	**102**	5866	Spindle Galaxy
Gemini	**35**	2168	
Hercules	**13**	6205	Hercules Globular Cluster
	92	6341	
Hydra	**48**	2548	
	68	4590	
	83	5236	Southern Pinwheel Galaxy
Leo	**65**	3623	Leo Triplet
	66	3627	Leo Triplet
	95	3351	
	96	3368	
	105	3379	
Lepus	**79**	1904	
Lyra	**56**	6779	
	57	6720	Ring Nebula
Monoceros	**50**	2323	Heart-Shaped Cluster
Ophiuchus	**9**	6333	
	10	6254	
	12	6218	Gumball Cluster
	14	6402	
	19	6273	
	62	6266	Flickering Globular
	107	6171	
Orion	**42**	1976	Orion A, Orion Nebula, Trapezium Cluster
	43	1982	De Mairan's Nebula (part of Eagle Nebula)
	78	2068	
Pegasus	**15**	7078	Great Pegasus Cluster
Perseus	**34**	1039	Spiral Cluster
	76	650	Apple Core, Barbell, Butterfly, Cork, Little Dumbbell Nebula
	76	651	
Pisces	**74**	628	The Phantom
Puppis	**46**	2437	
	47	2422	
	47	2478	
	93	2447	Butterfly Cluster
Sagitta	**71**	6838	
Sagittarius	**8**	6523	Hourglass Nebula Lagoon Nebula
	17	6618	Checkmark, Horseshoe, Lobster, Omega, Swan Nebula
	18	6613	Black Swan
	20	6514	Trifid Nebula
	21	6531	
	22	6656	Great Sagittarius Cluster
	23	6494	
	24	6603	Delle Caustiche, Milky Way Patch, Sagittarius Star Cloud
	25	N/A	
	28	6626	
Sagittarius	**54**	6715	
	55	6809	
	69	6637	
	70	6681	
	75	6864	
Scorpius	**4**	6121	
	6	6405	Butterfly Cluster
	7	6475	Ptolemy's Cluster
	80	6093	
Scutum	**11**	6705	July/Scutum Salt-and-Pepper, Wild Duck Cluster
	26	6694	
Serpens	**5**	5904	
	16	6611	Eagle Nebula
Taurus	**1**	1952	Crab Nebula, Taurus A
	45	N/A	Pleiades
Triangulum	**33**	598	Pinwheel, Triangulum Galaxy
Ursa Major	**40**	N/A	Winnecke 4, WNC4
	81	3031	Bode's Galaxies
	82	3034	Bode's Galaxies, Cigar Galaxy, Ursa Major A
	97	3587	Owl Nebula
	101	5457	Pinwheel Galaxy
	108	3556	
	109	3992	
Virgo	**49**	4472	
	58	4579	
	59	4621	
	60	4649	
	61	4303	Swelling Spiral
	84	4374	Markarian's Chain
	86	4406	Markarian's Chain
	87	4486	Smoking Gun, Virgo A
	89	4552	
	90	4569	
	104	4594	Sombrero Galaxy
Vulpecula	**27**	6853	Apple Core, Dumbbell Nebula Diablo, Double-Headed Shot

REFERENCES

Table 9: Herschel 400/NGC Cross Ref

H400	NGC	H400	NGC	H400	NGC	H400	NGC	H400	NGC	H400	NGC	H400	NGC	H400	NGC	H400	NGC
1	40	**48**	1444	**95**	2371	**142**	3169	**189**	3900	**236**	4414	**283**	4845	**330**	6369	**377**	7009
2	129	**49**	1501	**96**	2372	**143**	3184	**190**	3912	**237**	4419	**284**	4856	**331**	6401	**378**	7044
3	136	**50**	1502	**97**	2392	**144**	3190	**191**	3912	**238**	4429	**285**	4866	**332**	6426	**379**	7062
4	157	**51**	1513	**98**	2395	**145**	3193	**192**	3941	**239**	4435	**286**	4900	**333**	6440	**380**	7086
5	185	**52**	1528	**99**	2403	**146**	3198	**193**	3945	**240**	4438	**287**	4958	**334**	6445	**381**	7128
6	205	**53**	1535	**100**	2419	**147**	3226	**194**	3949	**241**	4442	**288**	4995	**335**	6451	**382**	7142
7	225	**54**	1545	**101**	2420	**148**	3227	**195**	3953	**242**	4448	**289**	5005	**336**	6514	**383**	7160
8	246	**55**	1647	**102**	2421	**149**	3242	**196**	3962	**243**	4449	**290**	5033	**337**	6517	**384**	7209
9	247	**56**	1664	**103**	2422	**150**	3245	**197**	3982	**244**	4450	**291**	5054	**338**	6520	**385**	7217
10	253	**57**	1788	**104**	2423	**151**	3277	**198**	3992	**245**	4459	**292**	5195	**339**	6522	**386**	7243
11	278	**58**	1817	**105**	2438	**152**	3294	**199**	3998	**246**	4473	**293**	5248	**340**	6528	**387**	7296
12	288	**59**	1857	**106**	2440	**153**	3310	**200**	4026	**247**	4477	**294**	5273	**341**	6540	**388**	7331
13	381	**60**	1907	**107**	2479	**154**	3344	**201**	4027	**248**	4478	**295**	5322	**342**	6543	**389**	7380
14	404	**61**	1931	**108**	2482	**155**	3377	**202**	4030	**249**	4485	**296**	5363	**343**	6544	**390**	7448
15	436	**62**	1961	**109**	2489	**156**	3379	**203**	4036	**250**	4490	**297**	5364	**344**	6553	**391**	7479
16	457	**63**	1964	**110**	2506	**157**	3384	**204**	4038	**251**	4494	**298**	5466	**345**	6568	**392**	7510
17	488	**64**	1980	**111**	2509	**158**	3395	**205**	4041	**252**	4526	**299**	5473	**346**	6569	**393**	7606
18	524	**65**	1999	**112**	2527	**159**	3412	**206**	4051	**253**	4527	**300**	5474	**347**	6583	**394**	7662
19	559	**66**	2022	**113**	2539	**160**	3414	**207**	4085	**254**	4535	**301**	5557	**348**	6624	**395**	7686
20	584	**67**	2024	**114**	2548	**161**	3432	**208**	4088	**255**	4536	**302**	5566	**349**	6629	**396**	7723
21	596	**68**	2126	**115**	2567	**162**	3486	**209**	4102	**256**	4546	**303**	5576	**350**	6633	**397**	7727
22	598	**69**	2129	**116**	2571	**163**	3489	**210**	4111	**257**	4548	**304**	5631	**351**	6638	**398**	7789
23	613	**70**	2158	**117**	2613	**164**	3504	**211**	4143	**258**	4550	**305**	5634	**352**	6642	**399**	7790
24	615	**71**	2169	**118**	2627	**165**	3521	**212**	4147	**259**	4559	**306**	5676	**353**	6645	**400**	7814
25	637	**72**	2185	**119**	2655	**166**	3556	**213**	4150	**260**	4565	**307**	5689	**354**	6664		
26	651	**73**	2186	**120**	2681	**167**	3593	**214**	4151	**261**	4570	**308**	5694	**355**	6712		
27	654	**74**	2194	**121**	2683	**168**	3607	**215**	4179	**262**	4594	**309**	5746	**356**	6755		
28	659	**75**	2204	**122**	2742	**169**	3608	**216**	4203	**263**	4596	**310**	5846	**357**	6756		
29	663	**76**	2215	**123**	2768	**170**	3610	**217**	4214	**264**	4618	**311**	5866	**358**	6781		
30	720	**77**	2232	**124**	2775	**171**	3613	**218**	4216	**265**	4631	**312**	5897	**359**	6802		
31	752	**78**	2244	**125**	2782	**172**	3619	**219**	4245	**266**	4636	**313**	5907	**360**	6818		
32	772	**79**	2251	**126**	2787	**173**	3621	**220**	4251	**267**	4643	**314**	5982	**361**	6823		
33	779	**80**	2264	**127**	2811	**174**	3626	**221**	4258	**268**	4654	**315**	6118	**362**	6826		
34	869	**81**	2266	**128**	2841	**175**	3628	**222**	4261	**269**	4656	**316**	6144	**363**	6830		
35	884	**82**	2281	**129**	2859	**176**	3631	**223**	4273	**270**	4660	**317**	6171	**364**	6834		
36	891	**83**	2286	**130**	2903	**177**	3640	**224**	4274	**271**	4665	**318**	6207	**365**	6866		
37	908	**84**	2301	**131**	2950	**178**	3655	**225**	4278	**272**	4666	**319**	6217	**366**	6882		
38	936	**85**	2304	**132**	2964	**179**	3665	**226**	4281	**273**	4689	**320**	6229	**367**	6885		
39	1022	**86**	2311	**133**	2974	**180**	3675	**227**	4293	**274**	4697	**321**	6235	**368**	6905		
40	1023	**87**	2324	**134**	2976	**181**	3686	**228**	4303	**275**	4698	**322**	6284	**369**	6910		
41	1027	**88**	2335	**135**	2985	**182**	3726	**229**	4314	**276**	4669	**323**	6287	**370**	6934		
42	1052	**89**	2343	**136**	3034	**183**	3729	**230**	4346	**277**	4725	**324**	6293	**371**	6939		
43	1055	**90**	2353	**137**	3077	**184**	3810	**231**	4350	**278**	4753	**325**	6304	**372**	6940		
44	1084	**91**	2354	**138**	3079	**185**	3813	**232**	4361	**279**	4754	**326**	6316	**373**	6946		
45	1245	**92**	2355	**139**	3115	**186**	3877	**233**	4365	**280**	4762	**327**	6342	**374**	7000		
46	1342	**93**	2360	**140**	3147	**187**	3893	**234**	4371	**281**	4781	**328**	6355	**375**	7006		
47	1407	**94**	2362	**141**	3166	**188**	3898	**235**	4394	**282**	4800	**329**	6356	**376**	7008		

Table 9A: Herschel 400/NGC Cross Ref (Autumn/Winter)

Constellation	H400	NGC
Andromeda	6	205
	14	404
	31	752
	36	891
	394	7662
	395	7686
Aquarius	377	7009
	393	7606
	396	7723
	397	7727
Aries	32	772
Auriga	56	1664
	59	1857
	60	1907
	61	1931
	68	2126
	82	2281
Camelop.	49	1501
	50	1502
	62	1961
	99	2403
	119	2655
Canis Major	75	2204
	91	2354
	93	2360
	94	2362
Cassiopeia	2	129
	3	136
	5	185
	7	225
	11	278
	13	381
	15	436
	16	457
	19	559
	25	637
	27	654
	28	659
	29	663
	41	1027
	398	7789
	399	7790
Cepheus	1	40
	371	6939
	382	7142
	383	7160
Cepheus	389	7380
	392	7510
Cetus	4	157
	8	246
	9	247
	20	584
	21	596
	24	615
	30	720
	33	779
	37	908
	38	936
	39	1022
	42	1052
	43	1055
Eridanus	44	1084
	47	1407
	53	1535
Gemini	69	2129
	70	2158
	81	2266
	85	2304
	92	2355
	95	2371
	96	2372
	97	2392
	98	2395
	101	2420
Lacerta	384	7209
	386	7243
	387	7296
Lepus	63	1964
Monoceros	72	2185
	76	2215
	77	2232
	78	2244
	79	2251
	80	2264
	83	2286
	84	2301
	86	2311
	87	2324
	88	2335
	89	2343
	90	2353
	110	2506
Orion	57	1788
	64	1980
	65	1999
	66	2022
	67	2024
	71	2169
	73	2186
	74	2194
Pegasus	385	7217
	388	7331
	390	7448
	391	7479
	400	7814
Perseus	26	651
	34	869
	35	884
	40	1023
	45	1245
	46	1342
	48	1444
	51	1513
	52	1528
	54	1545
Pisces	17	488
	18	524
Puppis	102	2421
	103	2422
	104	2423
	105	2438
	106	2440
	107	2479
	108	2482
	109	2489
	111	2509
	112	2527
	113	2539
	115	2567
	116	2571
Sculptor	10	253
	12	288
	23	613
Taurus	55	1647
	58	1817
Triangulum	22	598

Table 9B: Herschel 400/NGC Cross Ref (Spring/Summer)

Constellation	H400	NGC
Aquila	356	6755
	357	6756
	358	6781
Boötes	293	5248
	298	5466
	301	5557
	306	5676
	307	5689
Cancer	124	2775
C. Venatici	210	4111
	211	4143
	214	4151
	217	4214
	221	4258
	230	4346
	243	4449
	249	4485
	250	4490
	264	4618
	265	4631
	269	4656
	282	4800
	289	5005
	290	5033
	292	5195
	294	5273
C. Berenices	212	4147
	213	4150
	216	4203
	219	4245
	220	4251
	224	4274
	225	4278
	227	4293
	229	4314
	231	4350
	235	4394
	236	4414
	237	4419
	242	4448
	244	4450
	245	4459
	246	4473
	247	4477
	251	4494
	257	4548
Corvus	201	4027
	204	4038
	232	4361
Crater	196	3962
Cygnus	362	6826
	364	6834
	365	6866
	369	6910
	373	6946
	374	7000
	376	7008
	378	7044
	379	7062
	380	7086
	381	7128
Delphinus	368	6905
	370	6934
	375	7006
Draco	140	3147
	290	5033
	292	5195
	294	5273
	311	5866
	313	5907
	314	5982
	342	6543
Hercules	318	6207
	320	6229
Hydra	114	2548
	127	2811
	149	3242
	173	3621
	308	5694
Leo	130	2903
	132	2964
	144	3190
	145	3193
	147	3226
	148	3227
	155	3377
	156	3379
	157	3384
	159	3412
	163	3489
	165	3521
Leo	167	3593
	168	3607
	169	3608
	174	3626
	175	3628
	177	3640
	178	3655
	181	3686
	184	3810
	189	3900
	190	3912
	191	3912
Leo Minor	129	2859
	150	3245
	151	3277
	152	3294
	154	3344
	158	3395
	160	3414
	161	3432
	162	3486
	164	3504
Libra	312	5897
Lynx	100	2419
	121	2683
	125	2782
Ophiuchus	317	6171
	321	6235
	322	6284
	323	6287
	324	6293
	325	6304
	326	6316
	327	6342
	328	6355
	329	6356
	330	6369
	331	6401
	332	6426
	337	6517
	350	6633
Pyxis	117	2613
	118	2627
Sagittarius	333	6440
	334	6445
	336	6514
Sagittarius	338	6520
	339	6522
	340	6528
	341	6540
	343	6544
	344	6553
	345	6568
	346	6569
	347	6583
	348	6624
	349	6629
	351	6638
	352	6642
	353	6645
	360	6818
Scorpius	316	6144
	335	6451
Scutum	354	6664
	355	6712
Serpens	315	6118
Sextans	133	2974
	139	3115
	141	3166
	142	3169
Ursa Major	120	2681
	122	2742
	123	2768
	126	2787
	128	2841
	131	2950
	134	2976
	135	2985
	136	3034
	137	3077
	138	3079
	143	3184
	146	3198
	153	3310
	166	3556
	170	3610
	171	3613
	172	3619
	176	3631
	179	3665
	180	3675
	182	3726
Ursa Major	183	3729
	185	3813
	186	3877
	187	3893
	188	3898
	192	3941
	193	3945
	194	3949
	195	3953
	197	3982
	198	3992
	199	3998
	200	4026
	203	4036
	205	4041
	206	4051
	207	4085
	208	4088
	209	4102
	276	4669
	295	5322
	299	5473
	300	5474
	304	5631
	319	6217
Virgo	202	4030
	215	4179
	218	4216
	222	4261
	223	4273
	226	4281
	228	4303
	233	4365
	234	4371
	238	4429
	239	4435
	240	4438
	241	4442
	248	4478
	252	4526
	253	4527
	254	4535
	255	4536
	256	4546
	258	4550
	261	4570
Virgo	262	4594
	263	4596
	266	4636
	267	4643
	268	4654
	270	4660
	271	4665
	272	4666
	274	4697
	275	4698
	278	4753
	279	4754
	280	4762
	281	4781
	283	4845
	284	4856
	285	4866
	286	4900
	287	4958
	288	4995
	291	5054
	296	5363
	297	5364
	302	5566
	303	5576
	305	5634
	309	5746
	310	5846
Vulpecula	359	6802
	361	6823
	363	6830
	366	6882
	367	6885
	372	6940

REFERENCES

Table 10: ARP/NGC Cross Ref

Arp	NGC	Arp	NGC	Arp	NGC	Arp	NGC	Arp	NGC	Arp	NGC
1	2857	**92**	7603	**150**	7609	**227**	474	**287**	2735	**331**	384
8	497	**93**	7284	**152**	4486	**229**	507	**288**	5221	**331**	385
9	2523	**93**	7285	**153**	5128	**229**	508	**288**	5222	**332**	1228
12	2608	**94**	3226	**154**	1316	**232**	2911	**289**	3981	**332**	1230
13	7448	**94**	3227	**155**	3656	**234**	3738	**293**	6285	**333**	1024
14	7314	**99**	7547	**157**	520	**235**	14	**293**	6286	**335**	3509
15	7393	**99**	7549	**158**	523	**239**	5278	**294**	3788	**336**	2685
16	3627	**99**	7550	**158**	537	**239**	5279	**297**	5754		
18	4088	**104**	5216	**159**	4747	**240**	5258	**297**	5755		
19	145	**104**	5218	**162**	3414	**242**	4676	**298**	7469		
22	4027	**106**	4211	**163**	4670	**243**	2623	**304**	1241		
24	3445	**111**	5421	**164**	455	**244**	4038	**304**	1242		
27	3631	**112**	7805	**165**	2418	**244**	4039	**305**	4016		
28	7678	**112**	7806	**166**	750	**245**	2992	**305**	4017		
29	6946	**113**	67	**167**	2672	**245**	2993	**307**	2872		
30	6365	**113**	68	**167**	2673	**246**	7837	**307**	2874		
34	4615	**113**	69	**168**	221	**246**	7838	**308**	547		
37	1068	**113**	70	**169**	7236	**254**	5917	**309**	942		
38	6412	**113**	71	**169**	7237	**259**	1741	**309**	943		
39	1347	**113**	72	**170**	7578	**263**	3239	**313**	3995		
41	1232	**114**	2300	**171**	5718	**264**	3104	**315**	2830		
42	5829	**116**	4649	**174**	3068	**266**	4861	**315**	2831		
49	5665	**118**	1141	**176**	4933	**269**	4485	**315**	2832		
53	3290	**118**	1142	**178**	5613	**269**	4490	**316**	3187		
59	341	**118**	1143	**178**	5614	**270**	3395	**316**	3190		
65	90	**118**	1144	**178**	5615	**270**	3396	**316**	3193		
65	93	**120**	4435	**181**	3215	**271**	5426	**317**	3628		
68	7757	**120**	4438	**182**	7674	**271**	5427	**318**	833		
69	5579	**122**	6040	**184**	1961	**272**	6050	**318**	835		
71	6045	**123**	1888	**185**	6217	**274**	5679	**318**	838		
72	5994	**123**	1889	**186**	1614	**275**	2881	**318**	839		
75	702	**124**	6361	**189**	4651	**276**	935	**318**	848		
76	4569	**127**	191	**192**	3303	**277**	4809	**319**	7317		
77	1097	**133**	541	**199**	5544	**277**	4810	**319**	7318		
78	770	**134**	4472	**200**	1134	**278**	7253	**319**	7320		
78	772	**135**	1023	**202**	2719	**279**	1253	**320**	3745		
79	5490	**136**	5820	**205**	3448	**280**	3769	**320**	3746		
81	6622	**137**	2914	**206**	3432	**281**	4627	**320**	3748		
82	2536	**138**	4015	**210**	1569	**281**	4631	**320**	3750		
83	3799	**140**	274	**214**	3718	**282**	169	**320**	3753		
83	3800	**140**	275	**215**	2782	**283**	2799	**320**	3754		
85	5195	**142**	2936	**216**	7682	**284**	7715	**323**	7783		
86	7752	**142**	2937	**222**	7727	**285**	2854	**327**	1875		
87	3808	**143**	2444	**223**	7585	**285**	2856	**331**	375		
89	2648	**143**	2445	**225**	2655	**286**	5560	**331**	380		
91	5953	**144**	7828	**226**	7252	**286**	5566	**331**	382		
91	5954	**144**	7829	**227**	470	**286**	5569	**331**	383		

Table 10A: ARP/NGC Cross Ref (Autumn/Winter)

Const.	ARP	NGC	Const.	ARP	NGC	Const.	ARP	NGC
Andromeda	**65**	90	**Cetus**	**308**	547	**Pisces**	**68**	7757
	65	93		**309**	942		**92**	7603
	113	67		**309**	943		**157**	520
	113	68		**318**	833		**164**	455
	113	69		**318**	835		**216**	7682
	113	70		**318**	838		**227**	470
	113	71		**318**	839		**227**	474
	113	72		**318**	848		**229**	507
	158	523	**Eridanus**	**39**	1347		**229**	508
	158	537		**41**	1232		**246**	7837
	168	221		**186**	1614		**246**	7838
	282	169		**259**	1741		**284**	7715
Aquarius	**15**	7393		**279**	1253		**323**	7783
	93	7284		**304**	1241		**331**	375
	93	7285		**304**	1242		**331**	380
	222	7727		**332**	1228		**331**	382
	223	7585		**332**	1230		**331**	383
	226	7252	**Fornax**	**77**	1097		**331**	384
Aries	**78**	770		**154**	1316		**331**	385
	78	772	**Gemini**	**165**	2418	**Piscis Austr.**	**14**	7314
	200	1134	**Lepus**	**123**	1888	**Triangulum**	**166**	750
	276	935		**123**	1889			
	333	1024	**Orion**	**327**	1875			
Camelop.	**9**	2523	**Pegasus**	**13**	7448			
	184	1961		**28**	7678			
	210	1569		**86**	7752			
	225	2655		**99**	7547			
Cepheus	**114**	2300		**99**	7549			
Cetus	**8**	497		**99**	7550			
	19	145		**112**	7805			
	37	1068		**112**	7806			
	59	341		**150**	7609			
	75	702		**169**	7236			
	118	1141		**169**	7237			
	118	1142		**170**	7578			
	118	1143		**182**	7674			
	118	1144		**235**	14			
	127	191		**278**	7253			
	133	541		**298**	7469			
	140	274		**319**	7317			
	140	275		**319**	7318			
	144	7828		**319**	7320			
	144	7829	**Perseus**	**135**	1023			

Table 10B: ARP/NGC Cross Ref (Spring/Summer)

Const.	ARP	NGC	Const.	ARP	NGC	Const.	ARP	NGC	Const.	ARP	NGC
Boötes	**42**	5829	**Draco**	**30**	6365	**Leo Minor**	**162**	3414	**Virgo**	**76**	4569
	49	5665		**38**	6412		**206**	3432		**116**	4649
	69	5579		**81**	6622		**264**	3104		**120**	4435
	79	5490		**124**	6361		**270**	3395		**120**	4438
	136	5820		**181**	3215		**270**	3396		**134**	4472
	178	5613		**293**	6285	**Libra**	**254**	5917		**152**	4486
	178	5614		**293**	6286	**Lynx**	**143**	2444		**171**	5718
	178	5615	**Hercules**	**71**	6045		**143**	2445		**176**	4933
	199	5544		**122**	6040		**202**	2719		**240**	5258
	297	5754		**272**	6050		**215**	2782		**271**	5426
	297	5755	**Hydra**	**53**	3290		**283**	2799		**271**	5427
Cancer	**12**	2608		**142**	2936		**315**	2830		**274**	5679
	82	2536		**142**	2937		**315**	2831		**277**	4809
	89	2648		**245**	2992		**315**	2832		**277**	4810
	167	2672		**245**	2993	**Serpens**	**72**	5994		**286**	5560
	167	2673		**275**	2881		**91**	5953		**286**	5566
	243	2623	**Leo**	**16**	3627		**91**	5954		**286**	5569
	287	2735		**83**	3799	**Ursa Major**	**1**	2857		**288**	5221
C. Venatici	**85**	5195		**83**	3800		**18**	4088		**288**	5222
	111	5421		**87**	3808		**24**	3445			
	266	4861		**94**	3226		**27**	3631			
	269	4485		**94**	3227		**104**	5216			
	269	4490		**137**	2914		**104**	5218			
	281	4627		**174**	3068		**155**	3656			
	281	4631		**192**	3303		**205**	3448			
Centaurus	**153**	5128		**232**	2911		**214**	3718			
C. Berenices	**34**	4615		**263**	3239		**234**	3738			
	106	4211		**307**	2872		**239**	5278			
	138	4015		**307**	2874		**239**	5279			
	159	4747		**316**	3187		**280**	3769			
	163	4670		**316**	3190		**285**	2854			
	189	4651		**316**	3193		**285**	2856			
	242	4676		**317**	3628		**294**	3788			
	305	4016		**320**	3745		**313**	3995			
	305	4017		**320**	3746		**336**	2685			
Corvus	**22**	4027		**320**	3748	**Ursa Minor**	**185**	6217			
	244	4038		**320**	3750						
	244	4039		**320**	3753						
Crater	**289**	3981		**320**	3754						
Cygnus	**29**	6946		**335**	3509						

REFERENCES

Table 11: Caldwell/NGC Objects Cross Ref

C	NGC	C	NGC	C	NGC
1	188	**38**	4565	**76**	6231
2	40	**39**	2392	**77**	5128
3	4236	**40**	3626	**78**	6541
4	7023	**41**	5248	**79**	3201
5	IC 342	**42**	7006	**80**	5139
6	6543	**43**	7814	**81**	6352
7	2403	**44**	7479	**82**	6193
8	559	**45**	5248	**83**	4945
9	Sh2-155	**46**	2261	**84**	5286
10	663	**47**	6934	**85**	(IC 2391)
11	7635	**48**	2775	**86**	6397
12	6946	**49**	2237	**87**	1261
13	457	**50**	2244	**88**	5823
14	869	**51**	IC 1613	**89**	6087
14	884	**52**	4697	**90**	2867
15	6826	**53**	3115	**91**	3532
16	7243	**54**	2506	**92**	3372
17	147	**55**	7009	**93**	6752
18	185	**56**	246	**94**	4755
19	(IC 5146)	**57**	6822	**95**	6025
20	7000	**58**	2360	**96**	2516
21	4449	**59**	3242	**97**	3766
22	7662	**60**	4038	**98**	4609
23	891	**61**	4039	**99**	-
24	1275	**62**	247	**100**	IC 2944
25	2419	**63**	7293	**101**	6744
26	4244	**64**	2362	**102**	IC 2602
27	6888	**65**	253	**103**	2070
28	752	**66**	5694	**104**	362
29	5005	**67**	1097	**105**	4833
30	7331	**68**	6729	**106**	104
31	(IC 405)	**69**	6302	**107**	6101
32	4631	**70**	300	**108**	4372
33	6992	**71**	2477	**109**	3195
34	6960	**72**	55		
35	4889	**73**	1851		
36	4559	**74**	3132		
37	6885	**75**	6124		

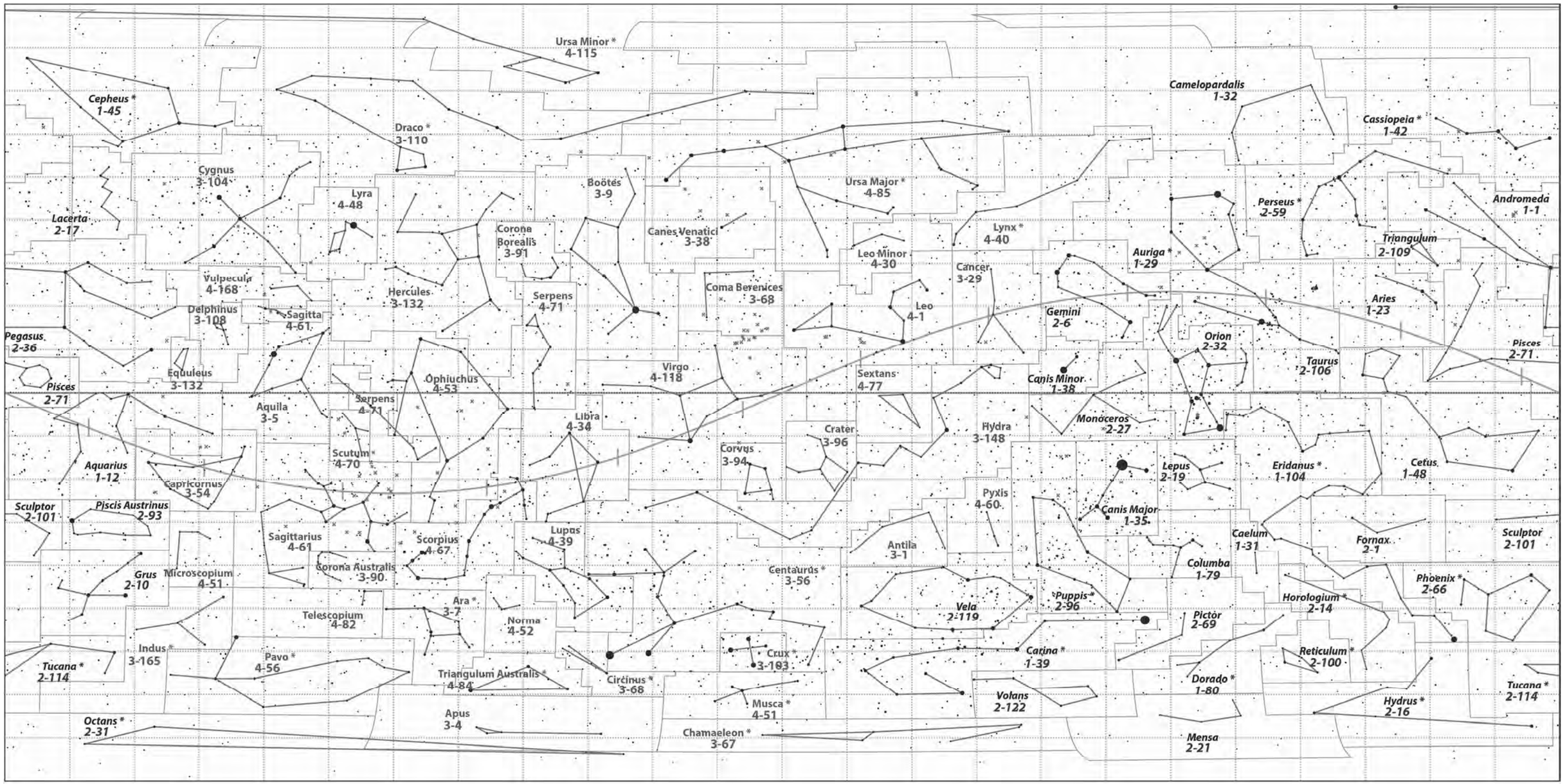
Table 11A: Caldwell/NGC Cross Ref (Autumn/Winter)

Constellation	C	NGC	Constellation	C	NGC
Andromeda	**22**	7662	**Monoceros**	**49**	2237
	23	891		**50**	2244
	28	752		**54**	2506
Aquarius	**55**	7009	**Pegasus**	**30**	7331
	63	7293		**43**	7814
Auriga	**31**	(IC 405)		**44**	7479
Camelopardalis	**5**	IC 342	**Perseus**	**14**	869
	7	2403		**14**	884
Canis Major	**58**	2360		**24**	1275
	64	2362	**Puppis**	**71**	2477
Carina	**90**	2867	**Sculptor**	**65**	253
	91	3532		**70**	300
	92	3372		**72**	55
	96	2516	**Taurus**	**41**	5248
	102	IC 2602	**Tucana**	**104**	362
Cassiopeia	**8**	559		**106**	104
	10	663	**Vela**	**74**	3132
	11	7635		**79**	3201
	13	457		**85**	(IC 2391)
	17	147			
	18	185			
Cepheus	**1**	188			
	2	40			
	4	7023			
	9	Sh2-155			
	12	6946			
Cetus	**51**	IC 1613			
	56	246			
	62	247			
Columba	**73**	1851			
Dorado	**103**	2070			
Fornax	**67**	1097			
Gemini	**39**	2392			
Horologium	**87**	1261			
Hydra	**59**	3242			
	66	5694			
Lacerta	**16**	7243			
Monoceros	**46**	2261			

Table 11B: Caldwell/NGC Cross Ref (Spring/Summer)

Constellation	C	NGC	Constellation	C	NGC
Apus	**107**	6101	**Leo**	**40**	3626
Ara	**81**	6352	**Lynx**	**25**	2419
	82	6193	**Musca**	**105**	4833
	86	6397		**108**	4372
Boötes	**45**	5248	**Norma**	**89**	6087
Cancer	**48**	2775	**Pavo**	**93**	6752
Canes Venatici	**21**	4449		**101**	6744
	26	4244	**Sagittarius**	**57**	6822
	29	5005	**Scorpius**	**69**	6302
	32	4631		**75**	6124
Centaurus	**77**	5128		**76**	6231
	80	5139	**Sextans**	**53**	3115
	83	4945	**Triangulum**	**95**	6025
	84	5286	**Virgo**	**52**	4697
	97	3766	**Vulpecula**	**37**	6885
	100	IC 2944			
Chamaeleon	**109**	3195			
Circinus	**88**	5823			
Coma Berenices	**35**	4889			
	36	4559			
	38	4565			
Corona Australis	**68**	6729			
	78	6541			
Corvus	**60**	4038			
	61	4039			
Crux	**94**	4755			
	98	4609			
	99	-			
Cygnus	**15**	6826			
	19	(IC 5146)			
	20	7000			
	27	6888			
	33	6992			
	34	6960			
Delphinus	**42**	7006			
	47	6934			
Draco	**3**	4236			
	6	6543			

REFERENCES **Constellation Map/Page Index**



***** *Circumpolar* *Legend:* ***Autumn/Winter*** **Spring/Summer** **3-110: volume 3, page 110**

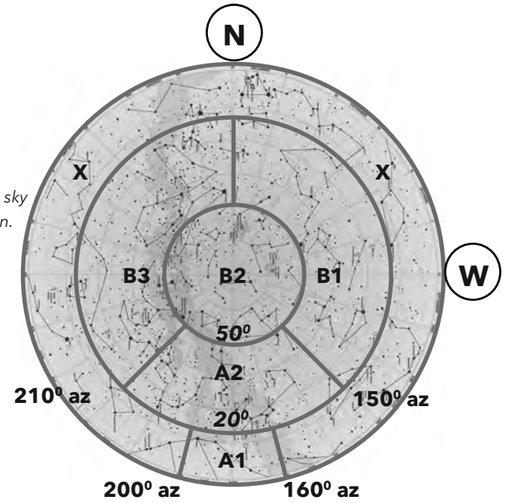
REFERENCES

Table 12: SkyZones© Planning Tool: Defined Zones To Prioritize Constellation Observation (45⁰ latitude North)

STEP	DESCRIPTION	EXAMPLE. April 20th, at 10pm (*2200* local time)
1	Select Observation Date Column	APRIL 15 (Date closest to observing date)
2	Select Obserbvation Time Row	10 PM (*22HR*)
3	Read Constellation List to the right	**ZONE A1:** Ant
		ZONE A2: Crv - Crt - Hya
		ZONE B1: CMi - Cep - Gem - Aur - Sex - Cnc
		ZONE B2: Lyn - Boo - Leo - Dra - UMi - Cam - Com - LMi - CVn - UMa
		ZONE B3: Her - Ser - Vir - CrB

ZONE	DESCRIPTION
A1	Southern Objects, briefly visible
A2	Southern Objects, available longer than A1
B1	Western Objects setting soon
B2	Mid-sky, Overhead Objects
B3	Rising Eastern Objects
X	Not ideal

Graphic representation of the entire night sky for the observer as seen from their location.



Observable Hours	JAN 1	JAN 15	FEB 1	FEB 15	MAR 1	MAR 15	APR 1	APR 15	MAY 1	MAY 15	JUN 1	JUN 15	JUL 1	JUL 15	AUG 1	AUG 15	SEP 1	SEP 15	OCT 1	OCT 15	NOV 1	NOV 15	DEC 1	DEC 15		A1	A2	B1	B2	B3
	0	23	22	21	20	.	.	.	.	.	.	.	.	.	.	.	.	.	.	5	4	3	2	1	>	Col - Pup	CMa - Lep - Mon - Ori - CMi	And - Ari - Tri - Cas - Cep	Tau - Per - Cnc - Cam - Gem - Lyn - Aur	CVn - Sex - Dra - Leo - UMi - UMa - LMi
	1	0	23	22	21	20	.	.	.	.	.	.	.	.	.	.	.	.	.	5	4	3	2	>	Pup - Pyx	CMa - Mon	Ari - Tri - Cas - Cep - Tau - Ori - Per	CMi - UMa - LMi - Cnc - Cam - Gem - Aur - Lyn	Com - Sex - CVn - Dra - Leo - UMi
	2	1	0	23	22	21	.	.	.	.	.	.	.	.	.	.	.	.	.	.	5	4	3	>	Ant - Pup - Pyx	Sex - CMi	Cas - Tau - Ori - Per - Cep - Mon	Leo - Gem - Aur - UMa - Cnc - Cam - LMi - Lyn	Hya - Crt - Boo - Com - Dra - CVn - UMi
	3	2	1	0	23	22	21	.	.	.	.	.	.	.	.	.	.	.	.	.	.	5	4	>	Ant - Pyx	Hya - Crt - Sex	Tau - Ori - Per - Cas - Mon - Cep - CMi	Gem - Aur - UMi - CVn - Leo - Cnc - Cam - Lyn - UMa - LMi	Vir - CrB - Boo - Dra - Com
	4	3	2	1	0	23	22	21	.	.	.	.	.	.	.	.	.	.	.	.	.	6	5	>	Ant	Crv - Crt - Hya - Sex	Cas - Mon - Cep - CMi - Gem - Aur	Dra - Cnc - UMi - Com - Leo - Lyn - Cam - CVn - LMi - UMa	Vir - CrB - Boo
	5	4	3	2	1	0	23	22	21	.	.	.	.	.	.	.	.	.	.	.	.	.	6	>	Ant	Crv - Crt - Hya	CMi - Cep - Gem - Aur - Sex - Cnc	Lyn - Boo - Leo - Dra - UMi - Cam - Com - LMi - CVn - UMa	Her - Ser - Vir - CrB
	6	5	4	3	2	1	0	23	22	.	.	.	.	.	.	.	.	.	.	.	.	.	.	>		Crv - Crt - Hya - Vir	Aur - Cep - Sex - Cnc - Lyn - Leo	Cam - CrB - UMi - LMi - Dra - Boo - Com - UMa - CVn	Lib - Lyr - Her - Ser
	.	6	5	4	3	2	1	0	23	22	.	.	.	.	.	.	.	.	.	.	.	.	.	>	Lup	Crv - Lib - Vir	Crt - Cnc - Sex - Hya - Lyn - Leo - Cam - LMi	UMi - CrB - UMa - Com - Dra - Boo - CVn	Cyg - Cep - Lyr - Her - Ser
	.	.	6	5	4	3	2	1	0	23	2#	.	.	.	.	.	.	.	.	.	.	.	.	>	Lup	Lib - Vir	Lyn - Leo - LMi - Cam	Ser - Her - UMa - UMi - Com - Dra - CVn - CrB - Boo	Vul - Ser - Sge - Cep - Oph - Cyg - Lyr
	.	.	.	6	5	4	3	2	1	0	23	22	.	.	.	.	.	.	.	.	.	.	.	>	Lup - Sco	Lib - Oph	LMi - Vir - Cam - UMa - Com	Lyr - UMi - Ser - CVn - Her - Dra - Boo - CrB	Del - Cas - Sct - Aql - Lac - Cep - Ser - Vul - Sge - Cyg
	.	.	.	.	6	5	4	3	2	1	0	23	22	.	.	.	.	.	.	.	.	.	.	>	Lup - Sco	Lib - Oph - Ser	Vir - Cam - Com - UMa - CVn	Cyg - UMi - Ser - Boo - Dra - Lyr - Her - CrB	Equ - Cas - Del - Sct - Cep - Lac - Aql - Vul - Sge
	.	.	.	.	.	.	5	4	3	2	1	0	23	22	.	.	.	.	.	.	.	.	.	>	CrA - Sgr - Sco	Sct - Oph - Ser	Lib - Com - Cam - UMa - CVn - Ser - UMi	Boo - Vul - Sge - Dra - Cyg - CrB - Her - Lyr	Peg - Cas - Equ - Cep - Del - Aql - Lac
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	18	.	.	.	.	.	.	.	.	.	.	.	.	.	.	3	2	1	0	23	22	21	20	>	Scl	Cet	Sge - Dra - Lyr - Aqr - Del - Equ - Vul - UMi - Cyg	Peg - Ari - Psc - Cep - Lac - Per - Tri - Cas - And	Lyn - Cam - Tau - Aur
	19	18	.	.	.	.	.	.	.	.	.	.	.	.	.	4	3	2	1	0	23	22	21	>	Scl - For	Cet	Vul - Dra - Cyg - Peg	Psc - Lac - Ari - Cep - Cas - Per - Tri - And	Gem - Ori - Lyn - UMi - Cam - Tau - Aur
	20	19	18	.	.	.	.	.	.	.	.	.	.	.	.	.	4	3	2	1	0	23	22	>	For - Eri	Cet	Dra - Cyg - Peg - Lac - Psc	Tau - Aur - Cep - Ari - And - Cas - Tri - Per	UMi - Gem - Ori - Lyn - Cam
	21	20	19	18	.	.	.	.	.	.	.	.	.	.	.	.	.	4	3	2	1	0	23	>	Cae - For - Eri	Lep	Peg - Cet - Lac - Psc	And - Tau - Cep - Ari - Cas - Aur - Tri - Per	Dra - UMa - Cnc - CMi - Mon - UMi - Gem - Ori - Cam - Lyn
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	23	22	21	20	19	.	.	.	.	.	.	.	.	.	.	.	.	.	5	4	3	2	1	>	Cae - Col - Pup	CMa - Lep - Mon	And - Ari - Tri - Cas	Cep - Ori - Tau - Cam - Per - Gem - Lyn - Aur	Leo - Dra - UMa - UMi - LMi - CMi - Cnc

REFERENCES

Table 13: Duplicate Entries In The NGC

NGC	Listed As	Const.	NGC	Listed As	Const.	NGC	Listed As	Const.
6	20	Andromeda	**1269**	1291	Eridanus	**2478**	2422	Puppis
21	29	Andromeda	**1307**	1304	Eridanus	**2520**	2527	Puppis
34	17	Cetus	**1318**	1317	Fornax	**2652**	2974	Sextans
58	47	Cetus	**1340**	1344	Fornax	**2727**	2708	Hydra
153	151	Cetus	**1367**	1371	Fornax	**2733**	2722	Hydra
175	171	Cetus	**1380**	1382	Fornax	**2789**	3167	Cancer
211	203	Pisces	**1437**	1436	Eridanus	**2816**	2820	Ursa Major
241	242	Tucana	**1442**	1440	Eridanus	**2869**	2863	Hydra
372	370	Pisces	**1442**	1458	Eridanus	**2959**	2961	Ursa Major
523	537	Andromeda	**1448**	1457	Horologium	**2999**	2972	Vela
563	539	Cetus	**1455**	1452	Eridanus	**3050**	2979	Sextans
580	577	Cetus	**1458**	1440	Eridanus	**3103**	3100	Antlia
674	697	Aries	**1458**	1442	Eridanus	**3110**	3122	Sextans
724	723	Cetus	**1464**	1471	Eridanus	**3110**	3518	Sextans
729	727	Fornax	**1516**	1524	Eridanus	**3144**	3174	Draco
757	731	Cetus	**1516**	1525	Eridanus	**3155**	3194	Draco
758	111	Cetus	**1524**	1516	Eridanus	**3183**	3218	Draco
763	755	Cetus	**1550**	1551	Taurus	**3191**	3192	Ursa Major
847	846	Andromeda	**1571**	1570	Caelum	**3235**	3234	Leo Minor
856	859	Cetus	**1575**	1577	Eridanus	**3286**	3284	Ursa Major
866	863	Cetus	**1608**	1593	Taurus	**3295**	3280	Hydra
866	885	Cetus	**1621**	1626	Eridanus	**3321**	3322	Hydra
875	867	Cetus	**1649**	1652	Dorado	**3329**	3397	Draco
885	863	Cetus	**1677**	1659	Eridanus	**3332**	3342	Leo
885	866	Cetus	**1689**	1667	Eridanus	**3371**	3384	Leo
952	940	Triangulum	**1794**	1781	Lepus	**3373**	3389	Leo
961	1051	Cetus	**1855**	1854	Dorado	**3388**	3425	Leo
994	993	Cetus	**1911**	1920	Dorado	**3402**	3411	Hydra
1002	983	Triangulum	**1991**	1974	Dorado	**3429**	3428	Leo
1006	1010	Cetus	**2226**	2225	Monoceros	**3460**	3457	Leo
1053	1040	Perseus	**2239**	2244	Monoceros	**3480**	3476	Leo
1122	1123	Perseus	**2299**	2302	Monoceros	**3502**	3479	Crater
1143	1141	Cetus	**2317**	2316	Monoceros	**3505**	3508	Crater
1144	1142	Cetus	**2356**	2355	Gemini	**3518**	3110	Sextans
1174	1186	Perseus	**2372**	2371	Gemini	**3518**	3122	Sextans
1205	1182	Eridanus	**2380**	2382	Canis Major	**3525**	3497	Crater
1226	832	Perseus	**2436**	2431	Lynx	**3525**	3528	Crater
1235	1233	Perseus	**2443**	2442	Volans	**3531**	3526	Leo

NGC	Listed As	Const.	NGC	Listed As	Const.	NGC	Listed As	Const.	NGC	Listed As	Const.	NGC	Listed As	Const.
3544	3571	Crater	**4140**	4077	Virgo	**4776**	4759	Virgo	**5868**	5865	Virgo	**6951**	6952	Cepheus
3548	3540	Ursa Major	**4147**	4153	C. Berenices	**4797**	4798	C. Berenices	**5870**	5826	Draco	**6975**	6976	Aquarius
3557	3533	Centaurus	**4154**	4149	Ursa Major	**4882**	4886	C. Berenices	**6028**	6046	Hercules	**7020**	7021	Pavo
3560	3559	Leo	**4167**	4163	C. Venatici	**4884**	4889	C. Berenices	**6039**	6042	Hercules	**7111**	7108	Aquarius
3575	3162	Leo	**4192**	4186	C. Berenices	**4952**	4962	C. Berenices	**6052**	6064	Hercules	**7112**	7113	Pegasus
3604	3611	Leo	**4212**	4208	C. Berenices	**4954**	4972	Draco	**6053**	6057	Hercules	**7141**	7140	Indus
3609	3612	Leo	**4228**	4214	C. Venatici	**4960**	4961	C. Berenices	**6127**	6125	Draco	**7235**	7234	Cepheus
3626	3632	Leo	**4243**	4240	Virgo	**4994**	4993	Hydra	**6127**	6128	Draco	**7254**	7256	Aquarius
3630	3645	Leo	**4265**	4263	Corvus	**5069**	5066	Virgo	**6128**	6125	Draco	**7260**	7257	Aquarius
3698	3695	Ursa Major	**4303**	4301	Virgo	**5070**	5072	Virgo	**6128**	6127	Draco	**7295**	7296	Lacerta
3712	3714	Ursa Major	**4325**	4368	Virgo	**5100**	5106	Virgo	**6176**	6170	Draco	**7334**	7322	Grus
3760	3301	Leo	**4338**	4310	C. Berenices	**5109**	5113	Ursa Major	**6191**	6189	Draco	**7472**	7482	Pisces
3804	3794	Ursa Major	**4345**	4319	Draco	**5110**	5111	Virgo	**6202**	6226	Draco	**7487**	7210	Pegasus
3822	3848	Virgo	**4354**	4351	Virgo	**5162**	5174	Virgo	**6222**	6259	Scorpius	**7568**	7574	Pegasus
3825	3852	Virgo	**4355**	4418	Virgo	**5219**	5244	Centaurus	**6298**	6297	Draco	**7571**	7597	Pegasus
3830	3826	Leo	**4357**	4381	C. Venatici	**5317**	5364	Virgo	**6363**	6138	Hercules	**7581**	7541	Pisces
3854	3865	Crater	**4364**	4358	Ursa Major	**5375**	5396	C. Venatici	**6374**	6383	Scorpius	**7605**	7583	Pisces
3856	3847	Ursa Major	**4407**	4413	Virgo	**5390**	5371	C. Venatici	**6431**	6427	Hercules	**7616**	7610	Pegasus
3858	3866	Crater	**4409**	4420	Virgo	**5438**	5446	Boötes	**6493**	6491	Draco	**7627**	7641	Pegasus
3899	3912	Leo	**4427**	4426	C. Berenices	**5450**	5447	Ursa Major	**6498**	6497	Draco	**7644**	7643	Pegasus
3917	3931	Ursa Major	**4437**	4517	Virgo	**5503**	5502	Ursa Major	**6510**	6511	Draco			
3924	3922	Ursa Major	**4443**	4461	Virgo	**5558**	5552	Virgo	**6533**	6526	Sagittarius			
3927	3713	Leo	**4496**	4505	Virgo	**5564**	5554	Virgo	**6550**	6549	Hercules			
3939	3890	Draco	**4512**	4521	Draco	**5578**	5575	Virgo	**6590**	6595	Sagittarius			
3966	3986	Ursa Major	**4537**	4542	C. Venatici	**5580**	5590	Boötes	**6599**	6600	Hercules			
3980	3977	Ursa Major	**4560**	4526	Virgo	**5588**	5589	Boötes	**6610**	6574	Hercules			
3984	3971	Ursa Major	**4565**	4562	C. Berenices	**5620**	5607	Ursa Minor	**6660**	6661	Hercules			
4005	4007	Leo	**4591**	4577	Virgo	**5632**	5691	Virgo	**6668**	6667	Draco			
4014	4028	C. Berenices	**4610**	4470	Virgo	**5648**	5649	Boötes	**6668**	6678	Draco			
4046	4045	Virgo	**4624**	4664	Virgo	**5650**	5652	Virgo	**6678**	6667	Draco			
4055	4061	C. Berenices	**4624**	4665	Virgo	**5651**	5713	Virgo	**6678**	6668	Draco			
4057	4065	C. Berenices	**4650**	4661	Centaurus	**5658**	5719	Virgo	**6690**	6689	Draco			
4059	4070	C. Berenices	**4665**	4624	Virgo	**5706**	5699	Boötes	**6748**	6751	Aquila			
4078	4107	Virgo	**4667**	4638	Virgo	**5709**	5703	Boötes	**6762**	6763	Draco			
4099	4098	C. Berenices	**4702**	4692	C. Berenices	**5783**	5785	Boötes	**6778**	6785	Aquila			
4113	4122	C. Berenices	**4740**	4727	Corvus	**5819**	5808	Ursa Minor	**6842**	6847	Vulpecula			
4124	4119	Virgo	**4759**	4776	Virgo	**5824**	5834	Lupus	**6882**	6885	Vulpecula			
4130	4129	Virgo	**4759**	4778	Virgo	**5841**	5848	Virgo	**6884**	6766	Cygnus			

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1597	1	124
1598	1	31
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1600	1	124
1601	1	124
1602	1	81
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1604	1	124
1605	2	66
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1607	1	124
1609	1	124
1611	1	124
1612	1	125
1613	1	125
1614	1	125
1615	2	108
1616	1	31
1617	1	81
1618	1	125
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1623	1	125
1624	2	66
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1630	1	125
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1633	2	108
1634	2	108
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1642	2	108
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1645	1	126
1646	1	126
1647	2	108
1648	1	126
1650	1	126
1651	2	21
1652	1	81
1653	1	127
1654	1	127
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1657	1	127
1658	1	31
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1663	2	32
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1673	2	21
1676	1	82
1678	2	32
1679	1	31
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1683	2	32
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1685	2	32
1686	1	127
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1691	2	33
1692	1	127
1693	1	82
1694	1	127
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1696	1	82
1697	1	82
1698	1	82
1699	1	128
1700	1	128
1701	1	32
1702	2	21
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1704	1	82
1705	2	69
1706	1	82
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1728	1	128
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1737	1	83
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1745	1	84
1747	1	84
1748	1	84
1749	1	84
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1752	1	128
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1755	1	84
1756	1	84
1758	2	108
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1777	2	22
1778	1	29
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1984	1	95
1985	1	30
1986	2	24
1987	2	24
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1990	2	34
1992	1	80
1993	2	20
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1995	1	95
1996	2	34
1997	1	95
1998	2	70
1999	2	34
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2003	1	95
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2013	1	30
2014	1	96
2015	1	96
2016	2	24
2018	2	24
2019	2	24
2020	1	96
2021	1	96
2022	2	34
2023	2	34
2024	2	35
2025	2	24
2026	2	109
2027	1	96
2028	2	24
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2030	1	96
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2154	1	102
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2162	1	102
2163	2	35
2164	1	102
2165	1	30
2166	1	102
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2173	2	27
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2177	1	103
2178	2	70
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2186	2	36
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2200	2	96
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2208	1	30
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2210	1	103
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2222	2	71
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2225	2	28
2227	1	36
2228	1	103
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2231	1	103
2232	2	28
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2238	2	28
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2241	1	104
2242	1	30
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2244	2	28
2245	2	28
2246	2	28
2247	2	28
2249	1	104
2250	2	28
2251	2	28
2252	2	29
2254	2	29
2255	1	80
2256	1	33
2257	1	104
2258	1	33
2259	2	29
2260	2	29
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2276	1	46
2280	1	36
2281	1	30
2282	2	29
2283	1	36
2286	2	29
2287	1	36
2288	2	6
2289	2	6
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2292	1	36
2293	1	37
2294	2	6
2295	1	37
2296	1	37
2297	2	71
2298	2	96
2300	1	46
2301	2	29
2302	2	30
2303	1	30
2304	2	7
2305	2	122
2306	2	30
2307	2	122
2308	4	41
2309	2	30
2310	2	96
2311	2	30
2313	2	30
2314	1	33
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2316	2	30
2318	1	37
2320	4	41
2321	4	41
2322	4	41
2323	2	30
2324	2	30
2325	1	37
2326	4	41
2327	1	37
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2329	4	41
2330	4	41
2331	2	7
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2333	2	7
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2340	4	41
2341	2	7
2342	2	7
2343	2	30
2344	4	42
2345	1	37
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2347	1	33
2348	2	122
2349	2	31
2350	1	38
2353	2	31
2354	1	37
2355	2	7
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2358	1	37
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2361	1	37
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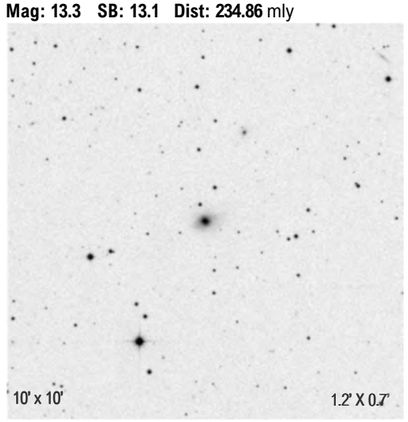
2366	1	33
2367	1	38
2368	2	31
2369	1	39
2370	2	7
2371	2	7
2373	2	7
2374	1	38
2375	2	8
2376	2	8

NGC 5 — ANDROMEDA

Type: Galaxy E4
Mag: 13.3 **SB:** 13.1 **Dist:** 234.86 mly

RA 0:7:48.80
Dec +35:21:46



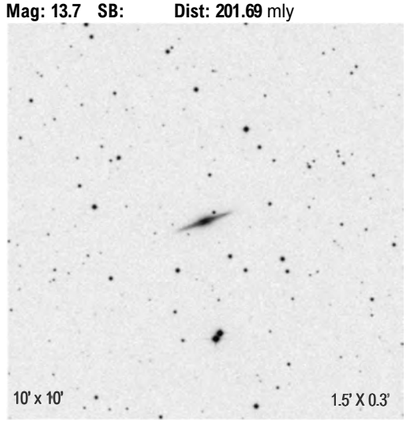
OTHER NAMES:
UGC 62
MCG 6-1-13
CGCG 517-17
CGCG 518-12
4ZW 7
NPM1G +35.0003

COMMON NAMES:

NGC 11 — ANDROMEDA

Type: Galaxy Sa
Mag: 13.7 **SB:** **Dist:** 201.69 mly

RA 0:8:42.30
Dec +37:26:53



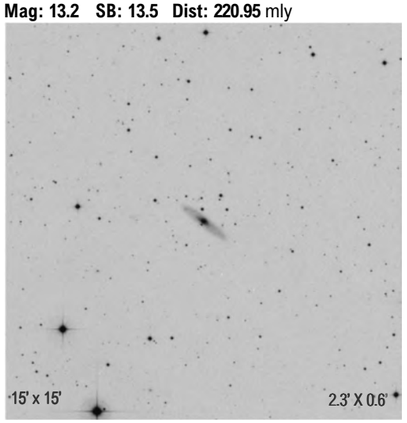
OTHER NAMES:
UGC 73
MCG 6-1-15
CGCG 517-20
CGCG 518-15
IRAS 00061+3710

COMMON NAMES:

NGC 13 — ANDROMEDA

Type: Galaxy Sab
Mag: 13.2 **SB:** 13.5 **Dist:** 220.95 mly

RA 0:8:47.70
Dec +33:25:59



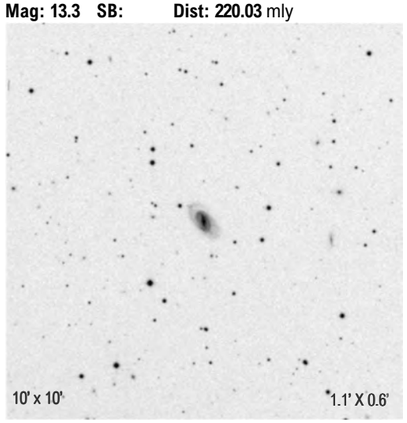
OTHER NAMES:
UGC 77
MCG 5-1-34
CGCG 498-81
CGCG 499-53

COMMON NAMES:

NGC 19 — ANDROMEDA

Type: Galaxy SBbc
Mag: 13.3 **SB:** **Dist:** 220.03 mly

RA 0:10:40.80
Dec +32:58:58



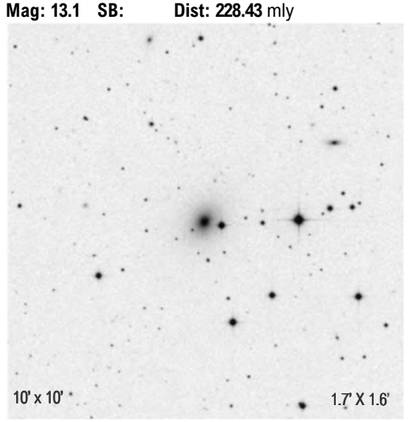
OTHER NAMES:
UGC 98
MCG 5-1-46
CGCG 499-65
KAZ 18
IRAS 00080+3242

COMMON NAMES:

NGC 20 — ANDROMEDA

Type: Galaxy E-S0
Mag: 13.1 **SB:** **Dist:** 228.43 mly

RA 0:9:32.60
Dec +33:18:32



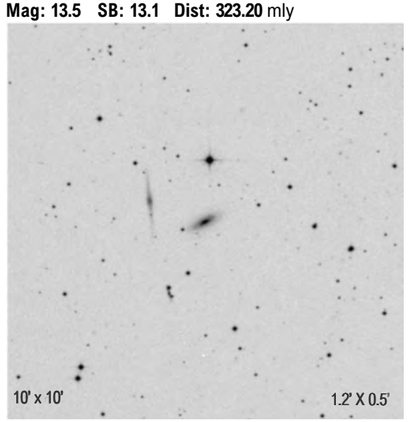
OTHER NAMES:
NGC 6
UGC 84
MCG 5-1-36
CGCG 498-82
CGCG 499-54

COMMON NAMES:

NGC 27 — ANDROMEDA

Type: Galaxy Sb
Mag: 13.5 **SB:** 13.1 **Dist:** 323.20 mly

RA 0:10:32.70
Dec +28:59:49



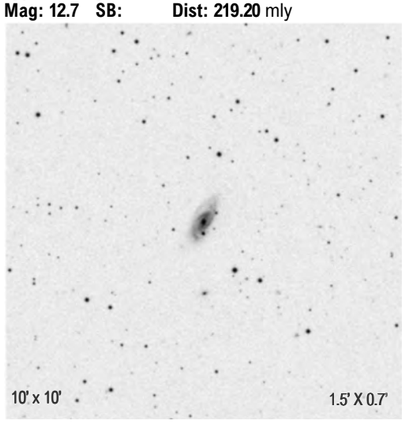
OTHER NAMES:
UGC 96
MCG 5-1-44
CGCG 499-63
KCPG 3B
IRAS 00079+2843

COMMON NAMES:

NGC 29 — ANDROMEDA

Type: Galaxy SBbc
Mag: 12.7 **SB:** **Dist:** 219.20 mly

RA 0:10:47.00
Dec +33:21:7



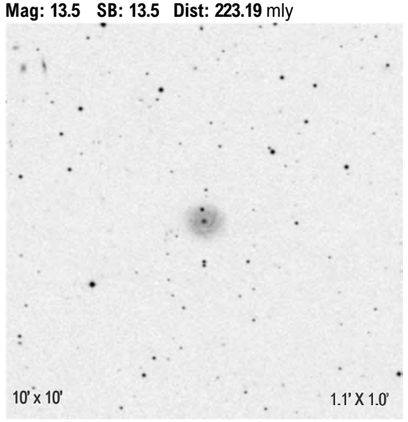
OTHER NAMES:
NGC 21
UGC 100
MCG 5-1-48
IRAS 00082+3304
CGCG 499-66
KAZ 19

COMMON NAMES:

NGC 39 — ANDROMEDA

Type: Galaxy Sc
Mag: 13.5 **SB:** 13.5 **Dist:** 223.19 mly

RA 0:12:18.80
Dec +31:3:39



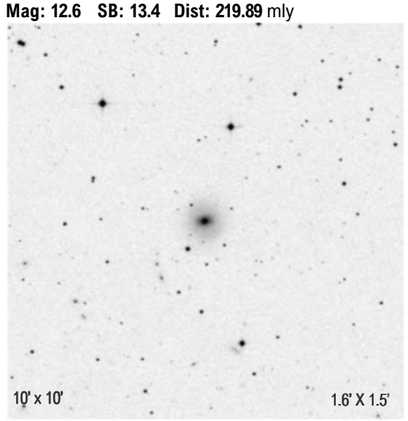
OTHER NAMES:
UGC 114
MCG 5-1-52
CGCG 499-76
IRAS 00096+3046

COMMON NAMES:

NGC 43 — ANDROMEDA

Type: Galaxy SB0
Mag: 12.6 **SB:** 13.4 **Dist:** 219.89 mly

RA 0:13:0.90
Dec +30:54:56



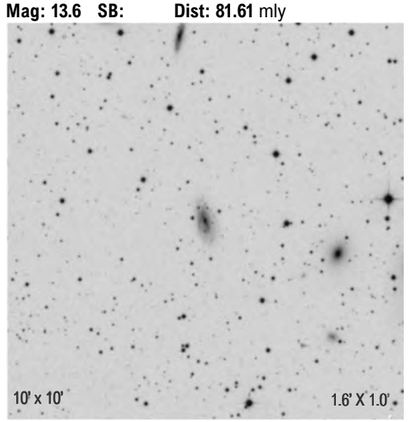
OTHER NAMES:
UGC 120
MCG 5-1-54
CGCG 499-79

COMMON NAMES:

NGC 48 — ANDROMEDA

Type: Galaxy SBbc
Mag: 13.6 **SB:** **Dist:** 81.61 mly

RA 0:14:2.10
Dec +48:14:6



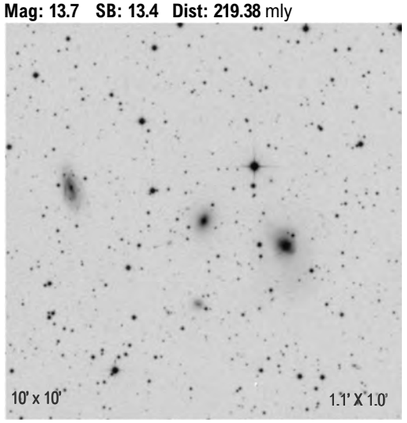
OTHER NAMES:
UGC 133
MCG 8-1-31
CGCG 549-27
IRAS 00113+4757

COMMON NAMES:

NGC 49 — ANDROMEDA

Type: Galaxy S0
Mag: 13.7 **SB:** 13.4 **Dist:** 219.38 mly

RA 0:14:22.40
Dec +48:14:50



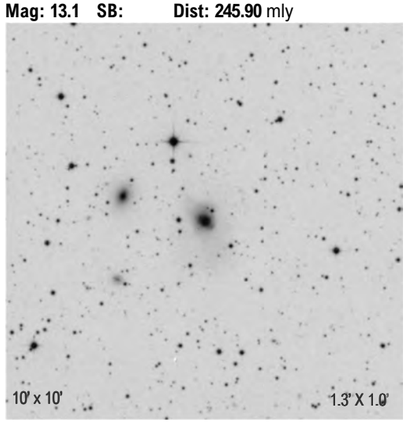
OTHER NAMES:
UGC 136
MCG 8-1-33
CGCG 549-29
NPM1G +47.0008

COMMON NAMES:

NGC 51 — ANDROMEDA

Type: Galaxy S0
Mag: 13.1 **SB:** **Dist:** 245.90 mly

RA 0:14:34.80
Dec +48:15:22



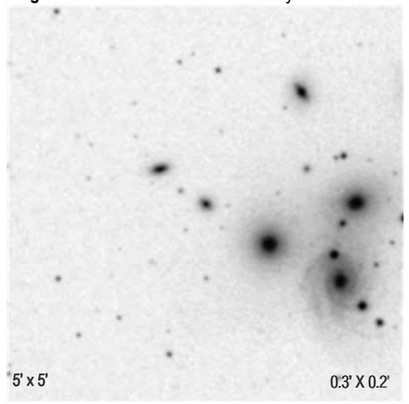
OTHER NAMES:
UGC 138
MCG 8-1-35
CGCG 549-31
NPM1G +47.0009

COMMON NAMES:

NGC 67 — ANDROMEDA

Type: Galaxy E3
Mag: 14.2 **SB:** 11.5 **Dist:** 305.32 mly

RA 0:18:14.90
Dec +30:3:48



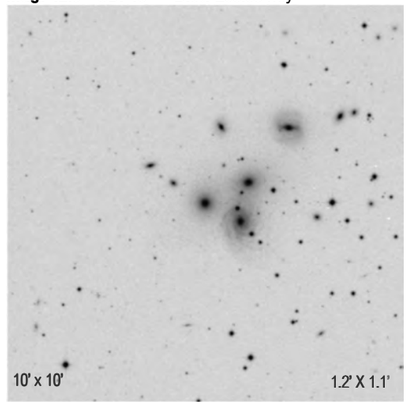
OTHER NAMES:
MCG 5-1-64
CGCG 499-104
ARAK 4
Arp 113
VV 166

COMMON NAMES:

NGC 68 — ANDROMEDA

Type: Galaxy E-S0
Mag: 12.9 **SB:** 13 **Dist:** 263.55 mly

RA 0:18:18.20
Dec +30:4:21



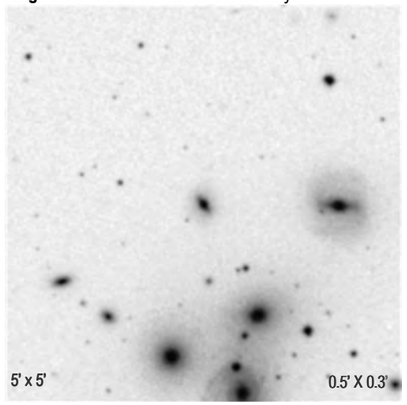
OTHER NAMES:
UGC 170
MCG 5-1-65
CGCG 499-106
Arp 113
VV 166
IRAS 00157+2947

COMMON NAMES:

NGC 69 — ANDROMEDA

Type: Galaxy E/SB0
Mag: 14.7 **SB:** 14.1 **Dist:** 307.01 mly

RA 0:18:20.40
Dec +30:2:26



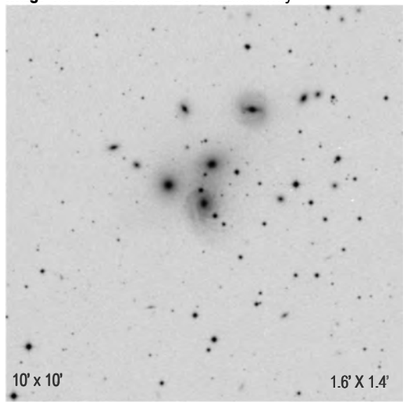
OTHER NAMES:
MCG 5-1-66
CGCG 499-105
ARAK 5
Arp 113
VV 166
NPM1G +29.0011

COMMON NAMES:

NGC 70 — ANDROMEDA

Type: Galaxy Sbc
Mag: 13.5 **SB:** 13.9 **Dist:** 329.36 mly

RA 0:18:22.40
Dec +30:4:44



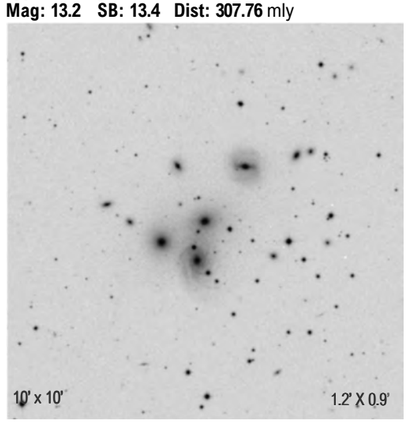
OTHER NAMES:
IC 1539
UGC 174
MCG 5-1-67
CGCG 499-108
Arp 113
VV 166

COMMON NAMES:

NGC 71 — ANDROMEDA

Type: Galaxy E-S0/P
Mag: 13.2 **SB:** 13.4 **Dist:** 307.76 mly

RA 0:18:23.50
Dec +30:3:47



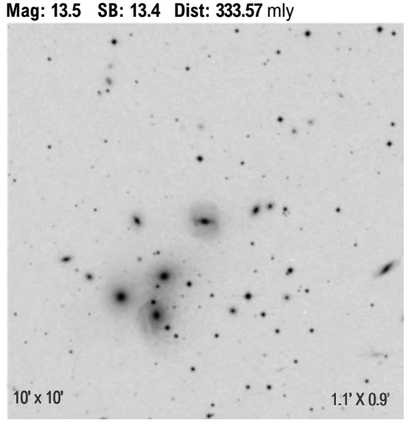
OTHER NAMES:
UGC 173
MCG 5-1-68
CGCG 499-107
Arp 113
VV 166

COMMON NAMES:

NGC 72 — ANDROMEDA

Type: Galaxy SBab
Mag: 13.5 **SB:** 13.4 **Dist:** 333.57 mly

RA 0:18:28.40
Dec +30:2:26



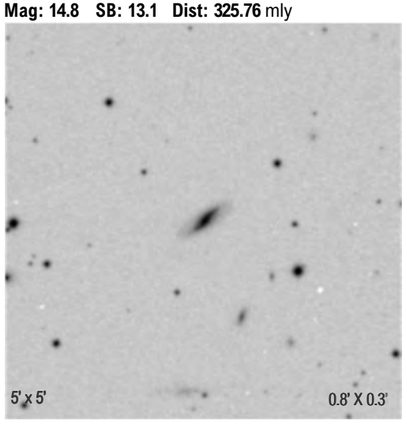
OTHER NAMES:
UGC 176
MCG 5-1-69
CGCG 499-109
Arp 113
VV 166

COMMON NAMES:

NGC 74 — ANDROMEDA

Type: Galaxy Sb
Mag: 14.8 **SB:** 13.1 **Dist:** 325.76 mly

RA 0:18:49.50
Dec +30:3:41



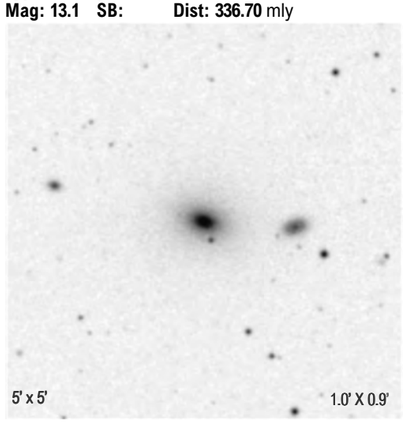
OTHER NAMES:
MCG 5-1-71

COMMON NAMES:

NGC 76 — ANDROMEDA

Type: Galaxy C
Mag: 13.1 **SB:** **Dist:** 336.70 mly

RA 0:19:37.70
Dec +29:56:3



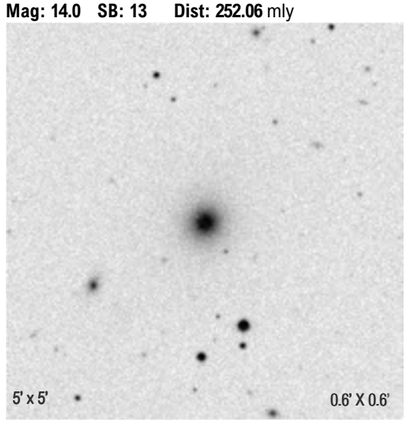
OTHER NAMES:
UGC 185
MCG 5-1-72
CGCG 499-111

COMMON NAMES:

NGC 79 — ANDROMEDA

Type: Galaxy E-S0
Mag: 14.0 **SB:** 13 **Dist:** 252.06 mly

RA 0:21:2.80
Dec +22:34:2



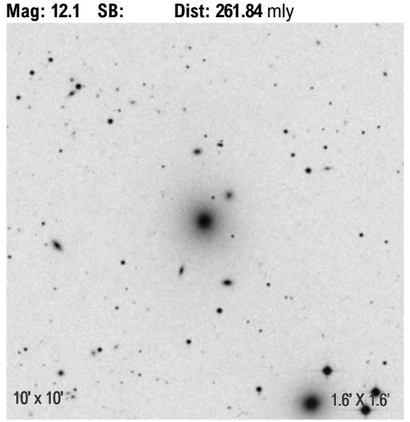
OTHER NAMES:
MCG 4-2-3
CGCG 479-3
NPM1G +22.0015

COMMON NAMES:

NGC 80 — ANDROMEDA

Type: Galaxy E-S0
Mag: 12.1 **SB:** **Dist:** 261.84 mly

RA 0:21:10.90
Dec +22:21:28



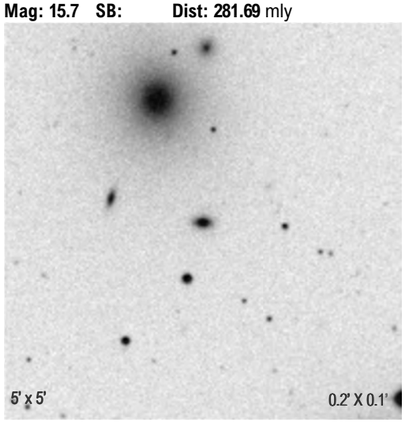
OTHER NAMES:
UGC 203
MCG 4-2-4
CGCG 479-6

COMMON NAMES:

NGC 81 — ANDROMEDA

Type: Galaxy S
Mag: 15.7 **SB:** **Dist:** 281.69 mly

RA 0:21:13.20
Dec +22:23:0



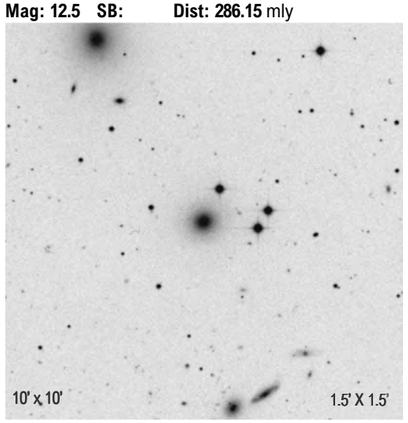
OTHER NAMES:
NPM1G +22.0016

COMMON NAMES:

NGC 83 — ANDROMEDA

Type: Galaxy E0
Mag: 12.5 **SB:** **Dist:** 286.15 mly

RA 0:21:22.60
Dec +22:26:3



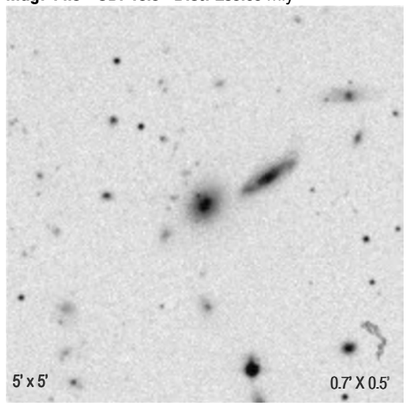
OTHER NAMES:
UGC 206
MCG 4-2-5
CGCG 479-8

COMMON NAMES:

NGC 85 — ANDROMEDA

Type: Galaxy S0
Mag: 14.8 **SB:** 13.5 **Dist:** 285.09 mly

RA 0:21:25.50
Dec +22:30:44



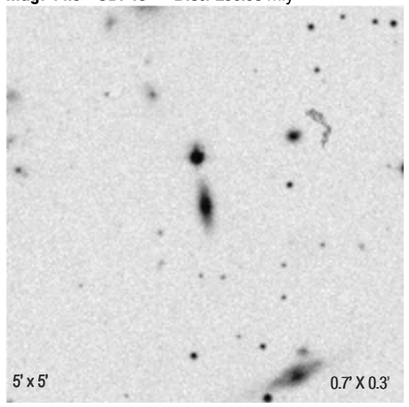
OTHER NAMES:
NGC 85A
MCG 4-2-7
CGCG 479-9
NPM1G +22.0017

COMMON NAMES:

NGC 86 — ANDROMEDA

Type: Galaxy S?
Mag: 14.8 **SB:** 13 **Dist:** 256.93 mly

RA 0:21:28.60
Dec +22:33:23



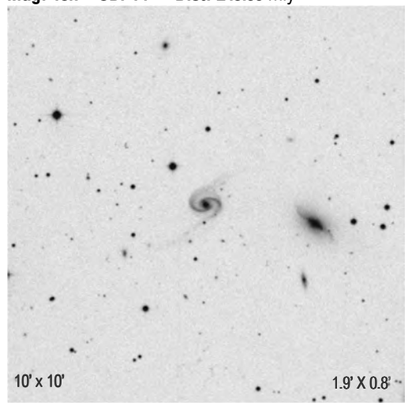
OTHER NAMES:
MCG 4-2-9
CGCG 479-11

COMMON NAMES:

NGC 90 — ANDROMEDA

Type: Galaxy SBc
Mag: 13.7 **SB:** 14 **Dist:** 245.99 mly

RA 0:21:51.60
Dec +22:24:2



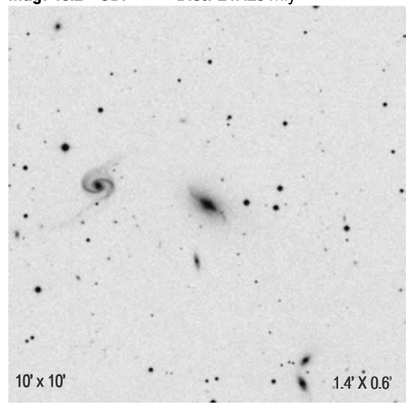
OTHER NAMES:
UGC 208
MCG 4-2-11
CGCG 479-13
Arp 65

COMMON NAMES:

NGC 93 — ANDROMEDA

Type: Galaxy Sb
Mag: 13.2 **SB:** **Dist:** 247.23 mly

RA 0:22:3.40
Dec +22:24:32



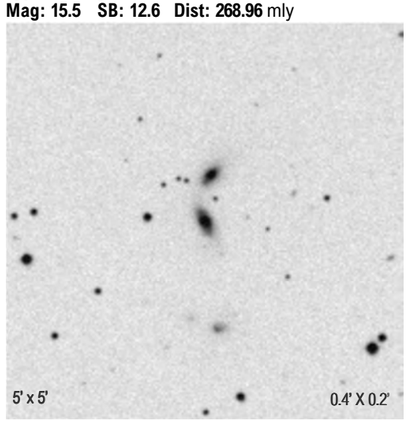
OTHER NAMES:
UGC 209
MCG 4-2-12
CGCG 479-15
Arp 65

COMMON NAMES:

NGC 94 — ANDROMEDA

Type: Galaxy S0
Mag: 15.5 **SB:** 12.6 **Dist:** 268.96 mly

RA 0:22:13.80
Dec +22:28:26



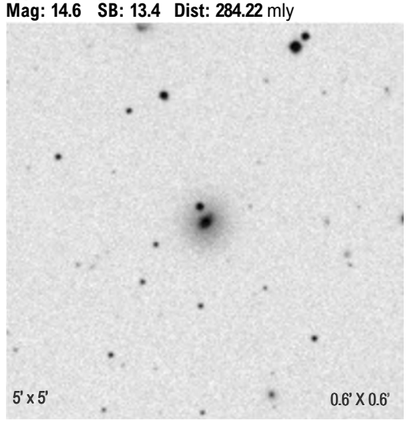
OTHER NAMES:
NPM1G +22.0020

COMMON NAMES:

NGC 96 — ANDROMEDA

Type: Galaxy S0
Mag: 14.6 **SB:** 13.4 **Dist:** 284.22 mly

RA 0:22:17.80
Dec +22:32:48



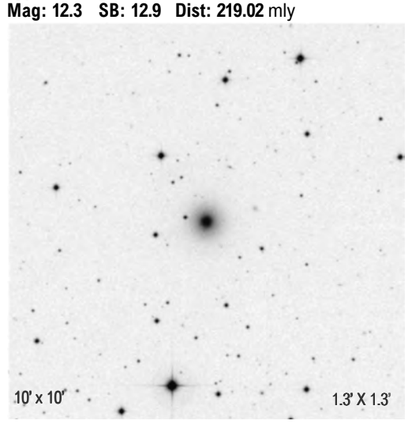
OTHER NAMES:
MCG 4-2-14

COMMON NAMES:

NGC 97 — ANDROMEDA

Type: Galaxy E0
Mag: 12.3 **SB:** 12.9 **Dist:** 219.02 mly

RA 0:22:30.00
Dec +29:44:44



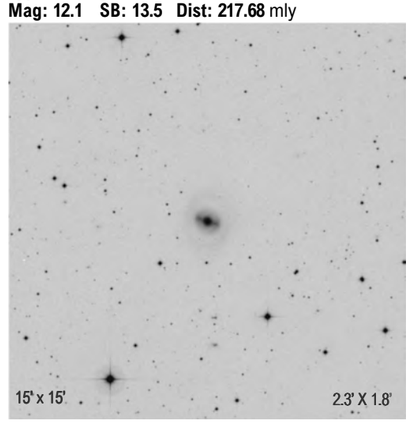
OTHER NAMES:
UGC 216
MCG 5-2-7
CGCG 500-9

COMMON NAMES:

NGC 108 — ANDROMEDA

Type: Galaxy SB0-a
Mag: 12.1 **SB:** 13.5 **Dist:** 217.68 mly

RA 0:25:59.70
Dec +29:12:43



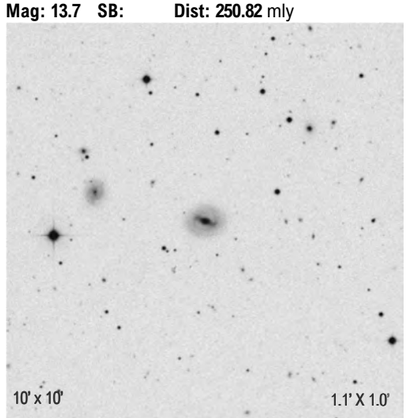
OTHER NAMES:
UGC 246
MCG 5-2-12
CGCG 500-20

COMMON NAMES:

NGC 109 — ANDROMEDA

Type: Galaxy SBa
Mag: 13.7 **SB:** **Dist:** 250.82 mly

RA 0:26:14.60
Dec +21:48:28



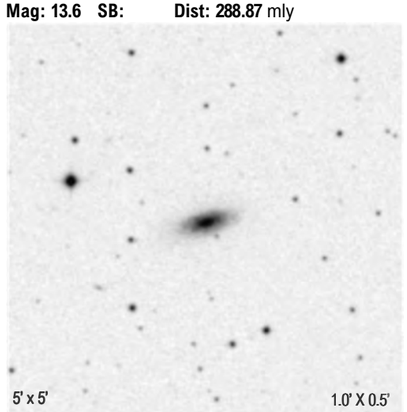
OTHER NAMES:
UGC 251
MCG 4-2-20
CGCG 479-31
KCPG 8B
NPM1G +21.0018

COMMON NAMES:

NGC 112 — ANDROMEDA

Type: Galaxy Sc
Mag: 13.6 **SB:** **Dist:** 288.87 mly

RA 0:26:48.80
Dec +31:42:10



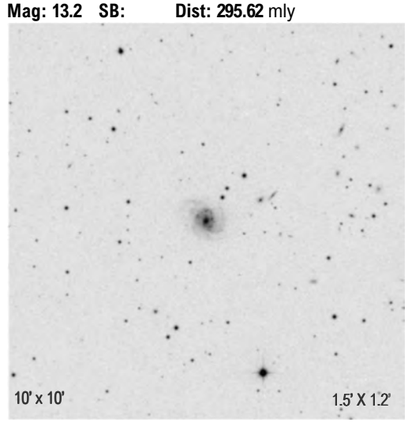
OTHER NAMES:
UGC 255
MCG 5-2-13
CGCG 500-21
KAZ 24
IRAS 00241+3125

COMMON NAMES:

NGC 140 — ANDROMEDA

Type: Galaxy Scd
Mag: 13.2 **SB:** **Dist:** 295.62 mly

RA 0:31:20.40
Dec +30:47:31



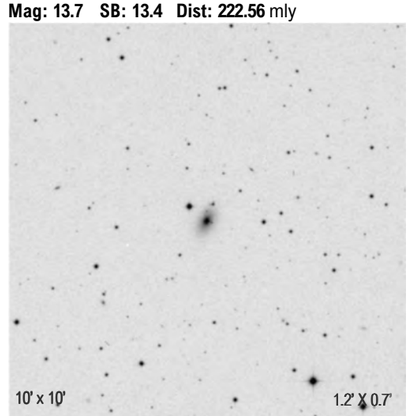
OTHER NAMES:
UGC 311
MCG 5-2-21
CGCG 500-38
IRAS 00287+3031

COMMON NAMES:

NGC 149 — ANDROMEDA

Type: Galaxy S0
Mag: 13.7 **SB:** 13.4 **Dist:** 222.56 mly

RA 0:33:50.20
Dec +30:43:25



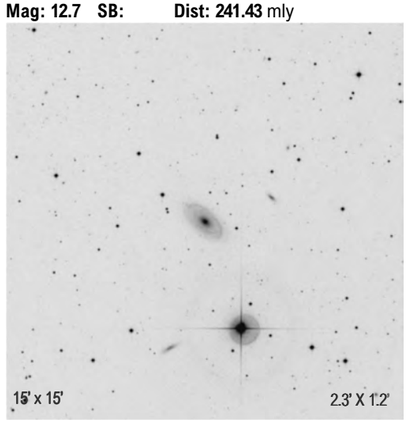
OTHER NAMES:
UGC 332
MCG 5-2-24
CGCG 500-44

COMMON NAMES:

NGC 160 — ANDROMEDA

Type: Galaxy S0-a
Mag: 12.7 **SB:** **Dist:** 241.43 mly

RA 0:36:4.10
Dec +23:57:29



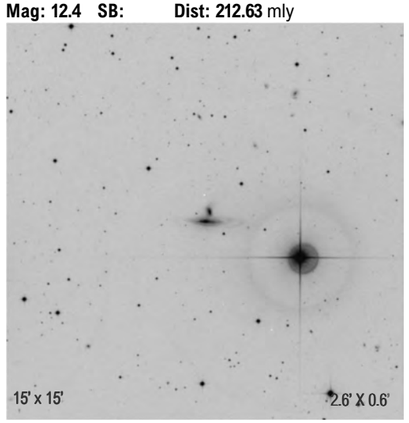
OTHER NAMES:
UGC 356
MCG 4-2-33
CGCG 479-43
near SAO 74134

COMMON NAMES:

NGC 169 — ANDROMEDA

Type: Galaxy Sb
Mag: 12.4 **SB:** **Dist:** 212.63 mly

RA 0:36:51.70
Dec +23:59:29



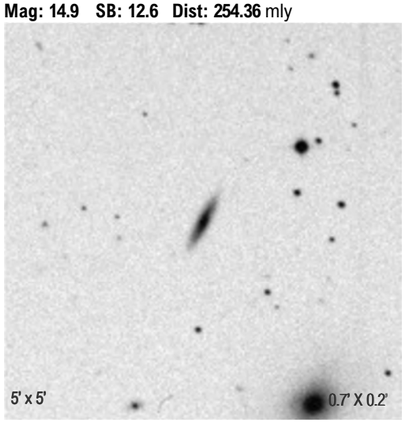
OTHER NAMES:
UGC 365
MCG 4-2-35
CGCG 479-44
IRAS 00342+2342
KCPG 13B
Arp 282

COMMON NAMES:

NGC 181 — ANDROMEDA

Type: Galaxy S?
Mag: 14.9 **SB:** 12.6 **Dist:** 254.36 mly

RA 0:38:23.30
Dec +29:28:24



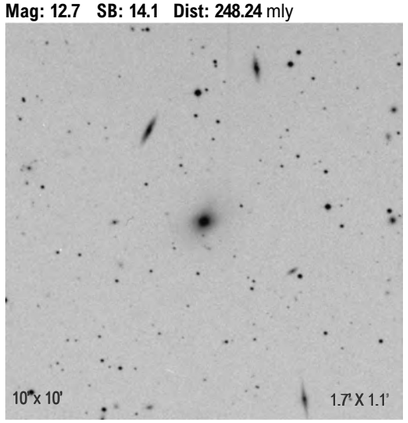
OTHER NAMES:
MCG 5-2-32
CGCG 500-55

COMMON NAMES:

NGC 183 — ANDROMEDA

Type: Galaxy E4
Mag: 12.7 **SB:** 14.1 **Dist:** 248.24 mly

RA 0:38:29.30
Dec +29:30:42



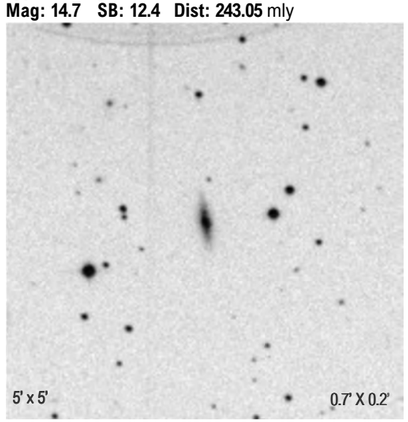
OTHER NAMES:
UGC 387
MCG 5-2-35
CGCG 500-57

COMMON NAMES:

NGC 184 — ANDROMEDA

Type: Galaxy S0
Mag: 14.7 **SB:** 12.4 **Dist:** 243.05 mly

RA 0:38:35.80
Dec +29:26:51



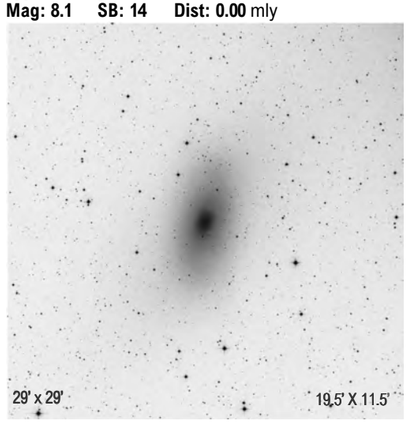
OTHER NAMES:
CGCG 500-59

COMMON NAMES:

NGC 205 — ANDROMEDA

Type: Galaxy E5
Mag: 8.1 **SB:** 14 **Dist:** 0.00 mly

RA 0:40:22.10
Dec +41:41:7



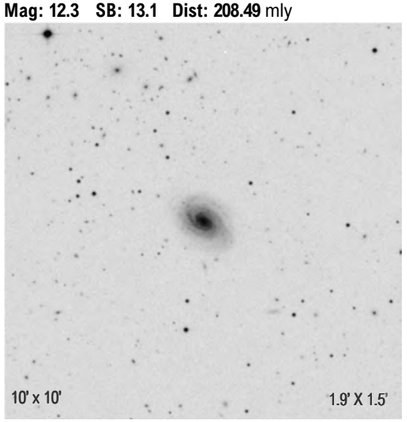
OTHER NAMES:
M 110
UGC 426
MCG 7-2-14
CGCG 535-14
IRAS 00376+4124

COMMON NAMES:
Satellite Galaxy of M31

NGC 214 — ANDROMEDA

Type: Galaxy SBc
Mag: 12.3 **SB:** 13.1 **Dist:** 208.49 mly

RA 0:41:28.00
Dec +25:29:58



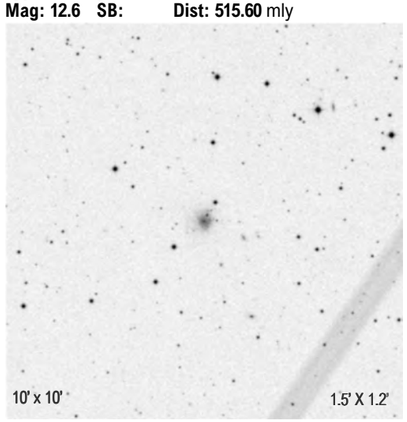
OTHER NAMES:
UGC 438
MCG 4-2-44
CGCG 479-59
IRAS 00387+2513

COMMON NAMES:

NGC 218 — ANDROMEDA

Type: Galaxy Sc
Mag: 12.6 **SB:** **Dist:** 515.60 mly

RA 0:46:32.00
Dec +36:19:32



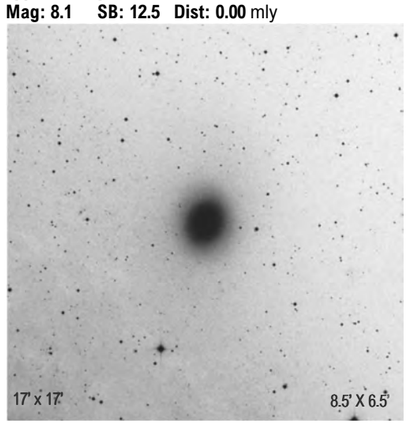
OTHER NAMES:
UGC 480
MCG 6-2-16
CGCG 519-21
VV 527
KCPG 16A
IRAS 00438+3603

COMMON NAMES:

NGC 221 — ANDROMEDA

Type: Galaxy E2
Mag: 8.1 **SB:** 12.5 **Dist:** 0.00 mly

RA 0:42:41.80
Dec +40:51:57



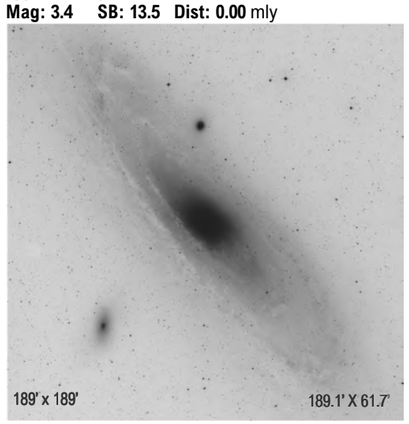
OTHER NAMES:
M 32
UGC 452
MCG 7-2-15
IRAS 00399+4035
ARAK 12
Arp 168

COMMON NAMES:
Satellite Galaxy of M31

NGC 224 — ANDROMEDA

Type: Galaxy Sb
Mag: 3.4 **SB:** 13.5 **Dist:** 0.00 mly

RA 0:42:44.30
Dec +41:16:8



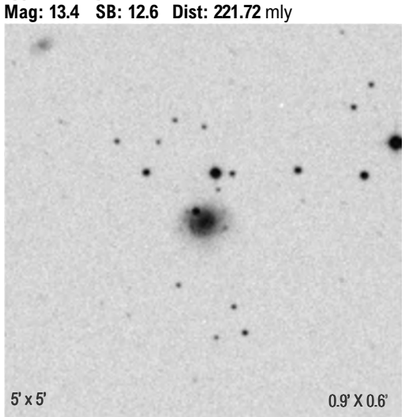
OTHER NAMES:
M 31
UGC 454
MCG 7-2-16
CGCG 535-17

COMMON NAMES:
Andromeda Galaxy

NGC 226 — ANDROMEDA

Type: Galaxy P
Mag: 13.4 **SB:** 12.6 **Dist:** 221.72 mly

RA 0:42:53.90
Dec +32:34:49



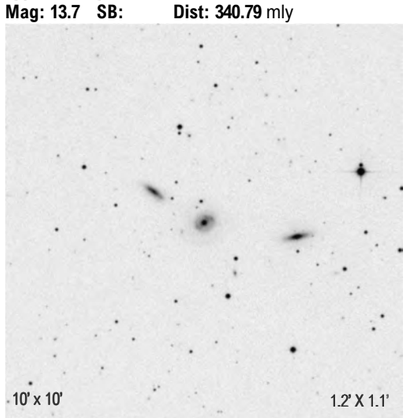
OTHER NAMES:
UGC 459
CGCG 500-76
IRAS 00402+3218

COMMON NAMES:

NGC 228 — ANDROMEDA

Type: Galaxy SBab
Mag: 13.7 **SB:** **Dist:** 340.79 mly

RA 0:42:54.50
Dec +23:30:12



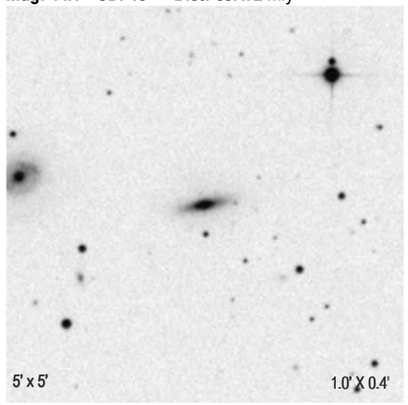
OTHER NAMES:
UGC 458
MCG 4-2-48
CGCG 479-62
IRAS 00401+2313

COMMON NAMES:

NGC 229 — ANDROMEDA

Type: Galaxy S?
Mag: 14.1 **SB:** 13 **Dist:** 337.72 mly

RA 0:43:4.70
Dec +23:30:34



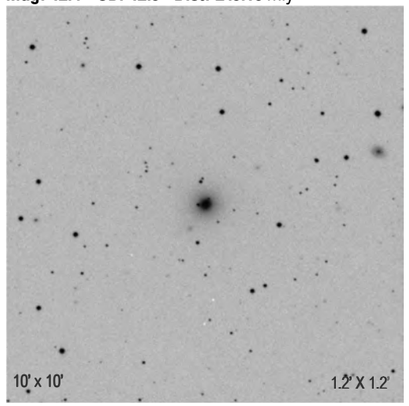
OTHER NAMES:
MCG 4-2-49
CGCG 479-64

COMMON NAMES:

NGC 233 — ANDROMEDA

Type: Galaxy E0
Mag: 12.4 **SB:** 12.9 **Dist:** 249.16 mly

RA 0:43:36.50
Dec +30:35:13



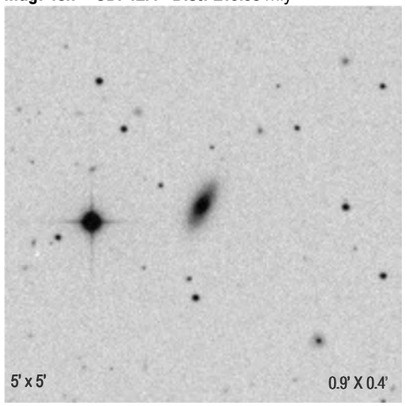
OTHER NAMES:
UGC 464
MCG 5-2-41
CGCG 500-78

COMMON NAMES:

NGC 243 — ANDROMEDA

Type: Galaxy S?
Mag: 13.7 **SB:** 12.4 **Dist:** 219.98 mly

RA 0:46:0.70
Dec +29:57:35



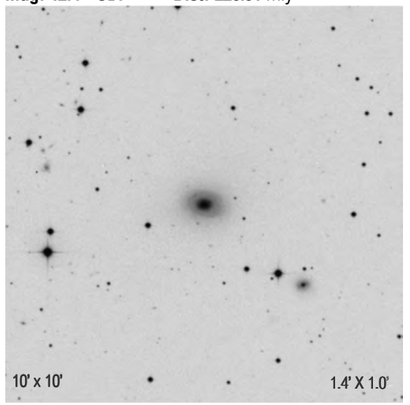
OTHER NAMES:
MCG 5-2-43
CGCG 500-82
CGCG 501-1

COMMON NAMES:

NGC 252 — ANDROMEDA

Type: Galaxy S0-a
Mag: 12.4 **SB:** **Dist:** 226.91 mly

RA 0:48:1.70
Dec +27:37:24



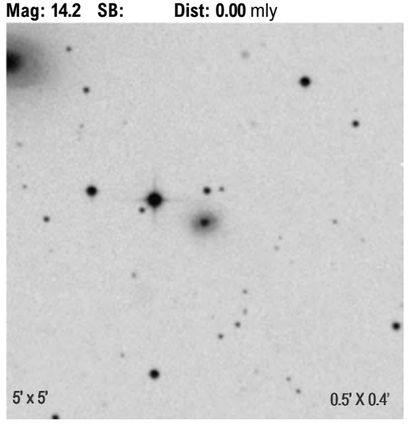
OTHER NAMES:
UGC 491
MCG 4-3-4
CGCG 480-7
IRAS 00453+2721

COMMON NAMES:

NGC 258 — ANDROMEDA

Type: Galaxy Sb
Mag: 14.2 **SB:** **Dist:** 0.00 mly

RA 0:48:12.80
Dec +27:39:28



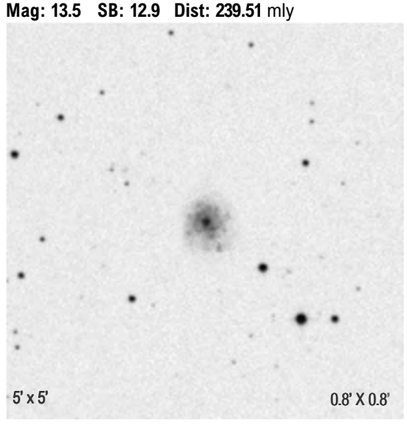
OTHER NAMES:
MCG 4-3-5
NPM1G +27.0034

COMMON NAMES:

NGC 260 — ANDROMEDA

Type: Galaxy Sc/P
Mag: 13.5 **SB:** 12.9 **Dist:** 239.51 mly

RA 0:48:34.90
Dec +27:41:31



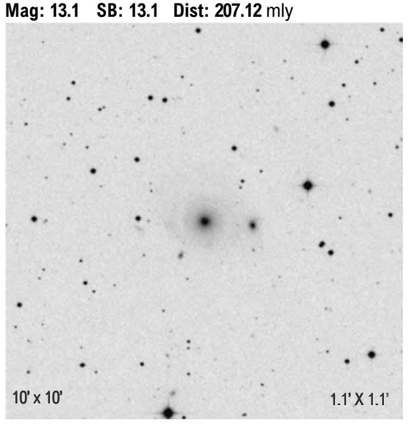
OTHER NAMES:
UGC 497
MCG 4-3-6
CGCG 480-9
IRAS 00458+2725

COMMON NAMES:

NGC 262 — ANDROMEDA

Type: Galaxy S0-a
Mag: 13.1 **SB:** 13.1 **Dist:** 207.12 mly

RA 0:48:47.10
Dec +31:57:27



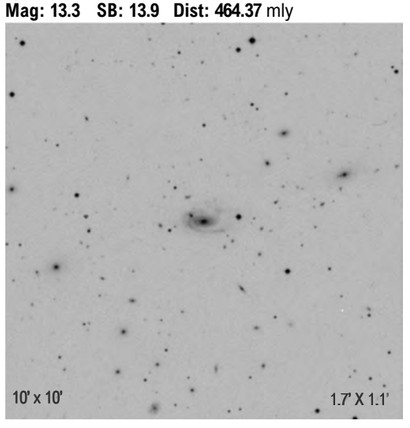
OTHER NAMES:
UGC 499
MCG 5-3-8
MK 348
IRAS 00461+3141
CGCG 501-20
NPM1G +31.0015

COMMON NAMES:

NGC 280 — ANDROMEDA

Type: Galaxy SB?
Mag: 13.3 **SB:** 13.9 **Dist:** 464.37 mly

RA 0:52:30.20
Dec +24:21:3



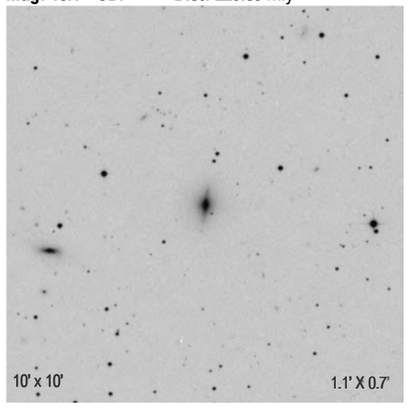
OTHER NAMES:
UGC 534
MCG 4-3-13
CGCG 480-17
IRAS 00498+2404

COMMON NAMES:

NGC 304 — ANDROMEDA

Type: Galaxy S/P
Mag: 13.1 **SB:** **Dist:** 229.35 mly

RA 0:56:6.00
Dec +24:7:38



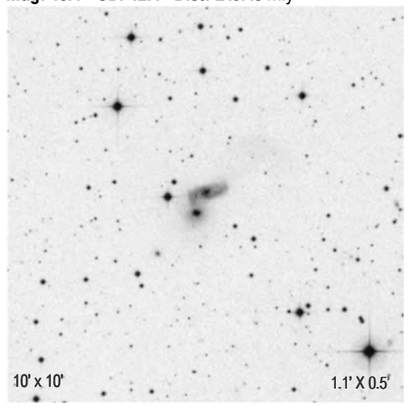
OTHER NAMES:
UGC 573
MCG 4-3-18
CGCG 480-23
PRC C-6

COMMON NAMES:

NGC 317 — ANDROMEDA

Type: Galaxy SBbc
Mag: 13.4 **SB:** 12.4 **Dist:** 249.48 mly

RA 0:57:40.50
Dec +43:47:31



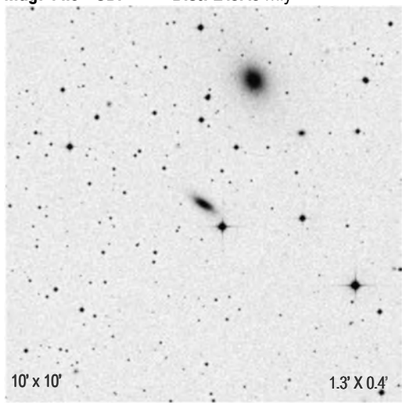
OTHER NAMES:
UGC 594
MCG 7-3-10
IRAS 00548+4331
KCPG 19B
5ZW 42
CGCG 536-13

COMMON NAMES:

NGC 389 — ANDROMEDA

Type: Galaxy S0-a
Mag: 14.0 **SB:** **Dist:** 245.49 mly

RA 1:8:29.80
Dec +39:41:42



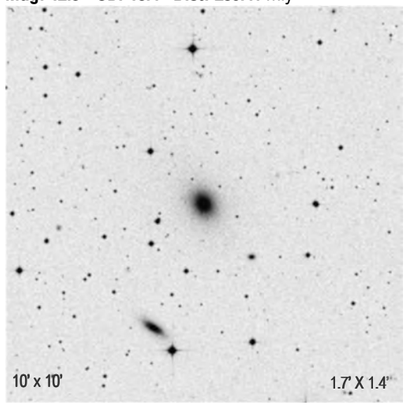
OTHER NAMES:
UGC 703
MCG 6-3-14
CGCG 520-17

COMMON NAMES:

NGC 393 — ANDROMEDA

Type: Galaxy E-S0
Mag: 12.5 **SB:** 13.4 **Dist:** 280.41 mly

RA 1:8:36.90
Dec +39:38:38



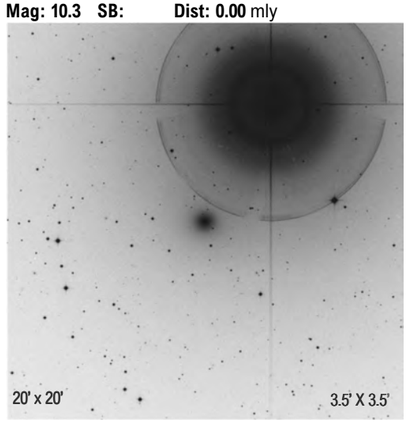
OTHER NAMES:
UGC 707
MCG 6-3-15
CGCG 520-18
5ZW 52

COMMON NAMES:

NGC 404 — ANDROMEDA

Type: Galaxy E-S0
Mag: 10.3 **SB:** **Dist:** 0.00 mly

RA 1:9:26.90
Dec +35:43:6



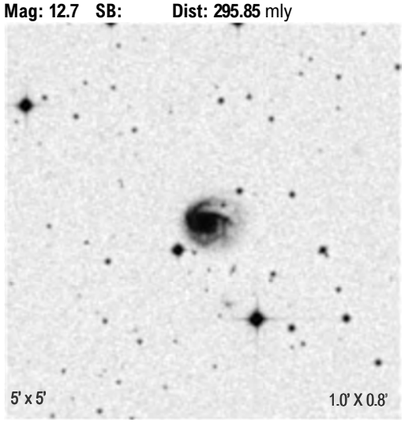
OTHER NAMES:
UGC 718
MCG 6-3-18
CGCG 520-20
IRAS 01066+3527

COMMON NAMES:
Mirach's Ghost

NGC 425 — ANDROMEDA

Type: Galaxy S?
Mag: 12.7 **SB:** **Dist:** 295.85 mly

RA 1:13:2.70
Dec +38:46:9



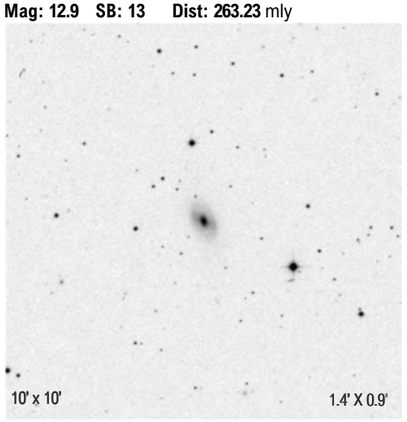
OTHER NAMES:
UGC 758
MCG 6-3-23
CGCG 520-26
IRAS 01102+3830

COMMON NAMES:

NGC 431 — ANDROMEDA

Type: Galaxy SB0
Mag: 12.9 **SB:** 13 **Dist:** 263.23 mly

RA 1:14:4.60
Dec +33:42:19



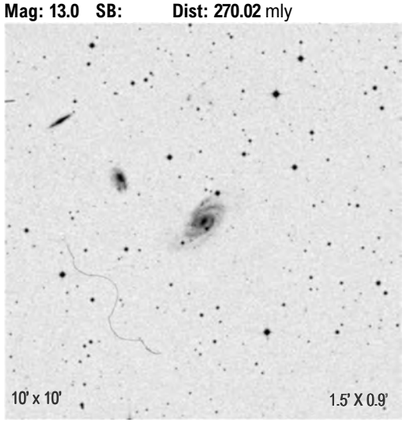
OTHER NAMES:
UGC 776
MCG 5-4-2
CGCG 502-8
CGCG 501-132

COMMON NAMES:

NGC 477 — ANDROMEDA

Type: Galaxy SBc
Mag: 13.0 **SB:** **Dist:** 270.02 mly

RA 1:21:20.30
Dec +40:29:19



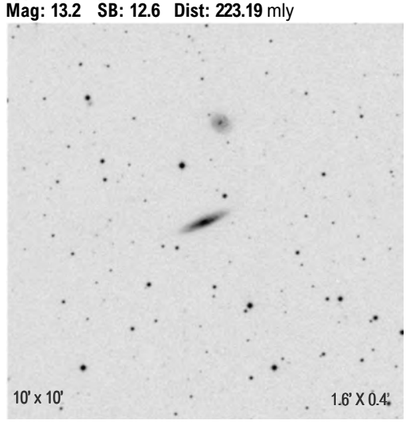
OTHER NAMES:
UGC 886
MCG 7-3-32
CGCG 536-32

COMMON NAMES:

NGC 512 — ANDROMEDA

Type: Galaxy Sab
Mag: 13.2 **SB:** 12.6 **Dist:** 223.19 mly

RA 1:23:59.80
Dec +33:54:26



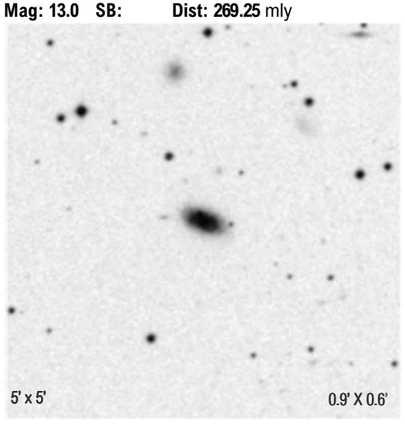
OTHER NAMES:
UGC 944
MCG 6-4-13
CGCG 521-18

COMMON NAMES:

NGC 513 — ANDROMEDA

Type: Galaxy Sc
Mag: 13.0 **SB:** **Dist:** 269.25 mly

RA 1:24:26.90
Dec +33:47:56



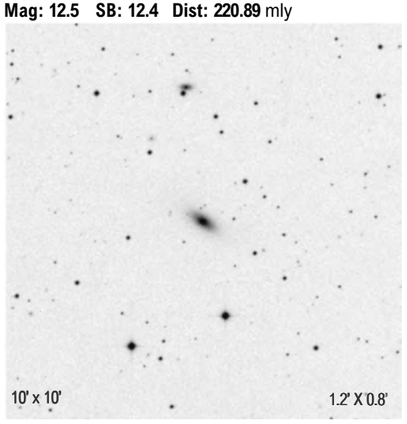
OTHER NAMES:
UGC 953
MCG 6-4-16
CGCG 521-20
ARAK 41
IRAS 01216+3332

COMMON NAMES:

NGC 528 — ANDROMEDA

Type: Galaxy S0
Mag: 12.5 **SB:** 12.4 **Dist:** 220.89 mly

RA 1:25:33.60
Dec +33:40:14



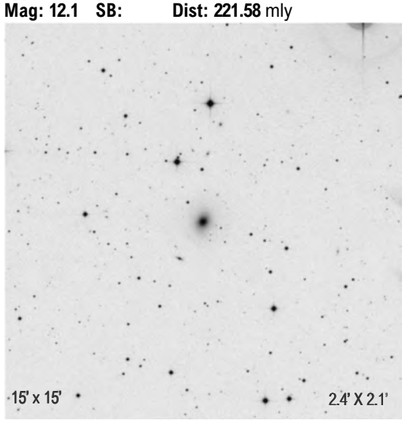
OTHER NAMES:
UGC 988
MCG 5-4-57
CGCG 502-83
IRAS 01226+3324

COMMON NAMES:

NGC 529 — ANDROMEDA

Type: Galaxy E-S0
Mag: 12.1 **SB:** **Dist:** 221.58 mly

RA 1:25:40.20
Dec +34:42:47



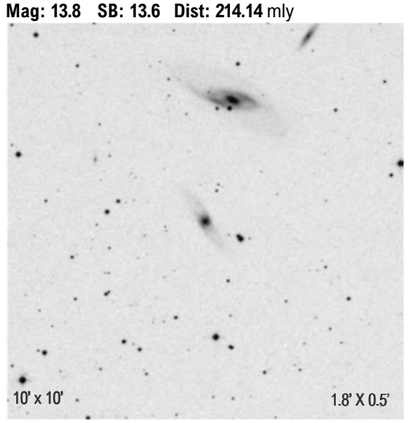
OTHER NAMES:
UGC 995
MCG 6-4-19
CGCG 521-23
HCG 10B

COMMON NAMES:

NGC 531 — ANDROMEDA

Type: Galaxy SB0-a
Mag: 13.8 **SB:** 13.6 **Dist:** 214.14 mly

RA 1:26:18.80
Dec +34:45:15



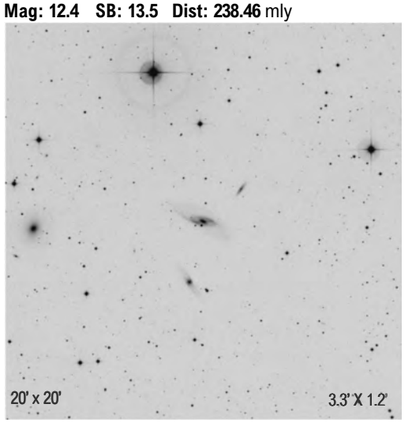
OTHER NAMES:
UGC 1012
MCG 6-4-20
CGCG 521-24
HCG 10C

COMMON NAMES:

NGC 536 — ANDROMEDA

Type: Galaxy SBb
Mag: 12.4 **SB:** 13.5 **Dist:** 238.46 mly

RA 1:26:21.60
Dec +34:42:12



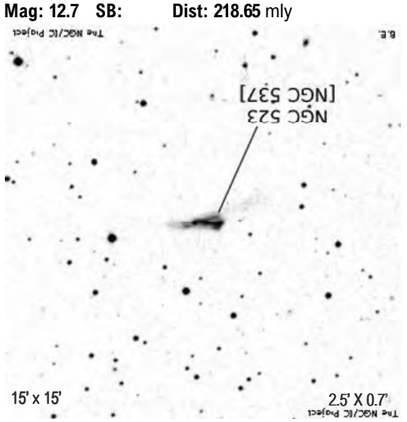
OTHER NAMES:
UGC 1013
MCG 6-4-21
CGCG 521-25
HCG 10A

COMMON NAMES:

NGC 537 — ANDROMEDA

Type: Galaxy Sbc/P
Mag: 12.7 **SB:** **Dist:** 218.65 mly

RA 1:25:20.70
Dec +34:1:31



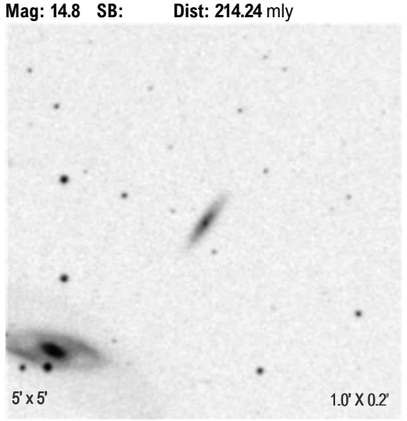
OTHER NAMES:
NGC 523
UGC 979
MCG 6-4-18
IRAS 01225+3345
Arp 158
VV 783

COMMON NAMES:

NGC 542 — ANDROMEDA

Type: Galaxy Sb
Mag: 14.8 **SB:** **Dist:** 214.24 mly

RA 1:26:30.90
Dec +34:40:34



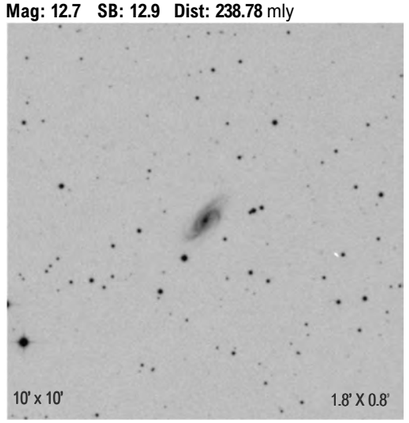
OTHER NAMES:
MCG 6-4-22
CGCG 521-26
HCG 10D

COMMON NAMES:

NGC 551 — ANDROMEDA

Type: Galaxy SBbc
Mag: 12.7 SB: 12.9 Dist: 238.78 mly

RA 1:27:40.60
Dec +37:10:59



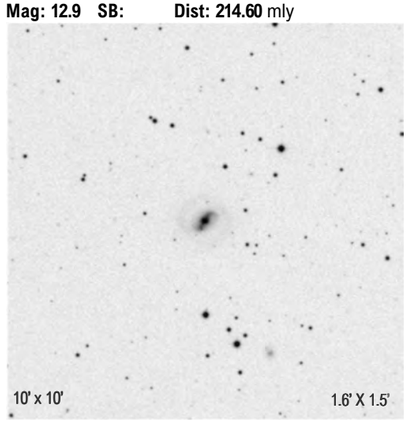
OTHER NAMES:
UGC 1034
MCG 6-4-27
CGCG 521-30
IRAS 01247+3655

COMMON NAMES:

NGC 561 — ANDROMEDA

Type: Galaxy SBa
Mag: 12.9 SB: Dist: 214.60 mly

RA 1:28:18.70
Dec +34:18:30



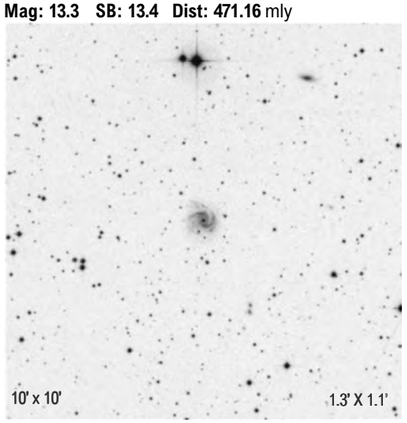
OTHER NAMES:
UGC 1048
MCG 6-4-29
CGCG 521-32
IRAS 01254+3403

COMMON NAMES:

NGC 562 — ANDROMEDA

Type: Galaxy Sc
Mag: 13.3 SB: 13.4 Dist: 471.16 mly

RA 1:28:29.30
Dec +48:23:13



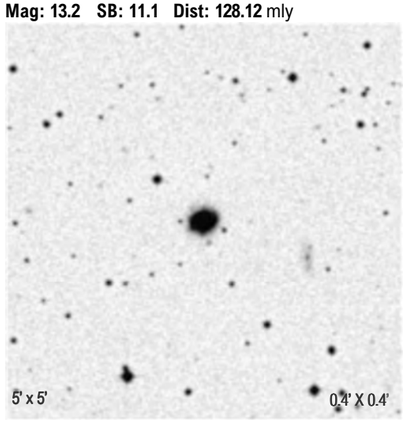
OTHER NAMES:
UGC 1049
MCG 8-3-25
CGCG 551-20
IRAS 01254+4807

COMMON NAMES:

NGC 573 — ANDROMEDA

Type: Galaxy S?
Mag: 13.2 SB: 11.1 Dist: 128.12 mly

RA 1:30:49.30
Dec +41:15:26



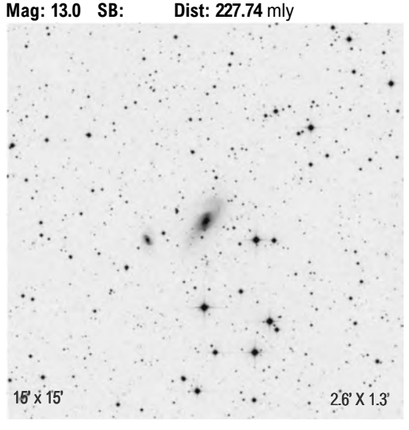
OTHER NAMES:
UGC 1078
CGCG 537-10
IRAS 01278+4100

COMMON NAMES:

NGC 590 — ANDROMEDA

Type: Galaxy SB0-a
Mag: 13.0 SB: Dist: 227.74 mly

RA 1:33:40.70
Dec +44:55:45



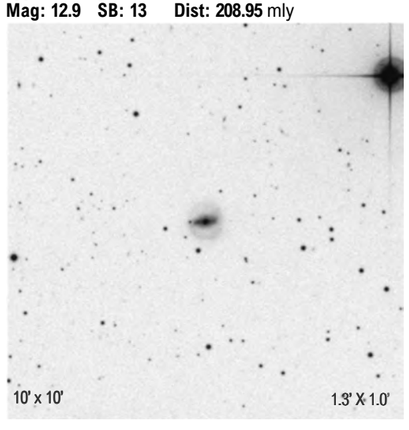
OTHER NAMES:
UGC 1109
MCG 7-4-3
CGCG 537-13
KCPG 37B

COMMON NAMES:

NGC 591 — ANDROMEDA

Type: Galaxy SB0-a
Mag: 12.9 SB: 13 Dist: 208.95 mly

RA 1:33:31.10
Dec +35:40:6



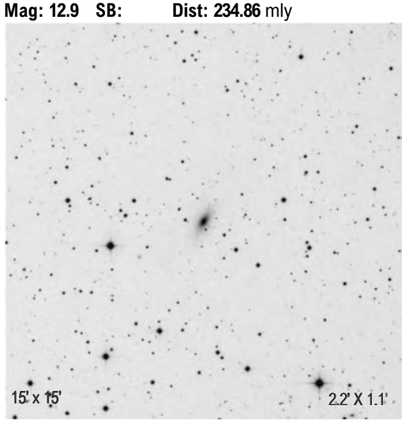
OTHER NAMES:
UGC 1111
MCG 6-4-38
MK 1157
CGCG 521-46
IRAS 01306+3524

COMMON NAMES:

NGC 605 — ANDROMEDA

Type: Galaxy S0
Mag: 12.9 SB: Dist: 234.86 mly

RA 1:35:2.30
Dec +41:14:52



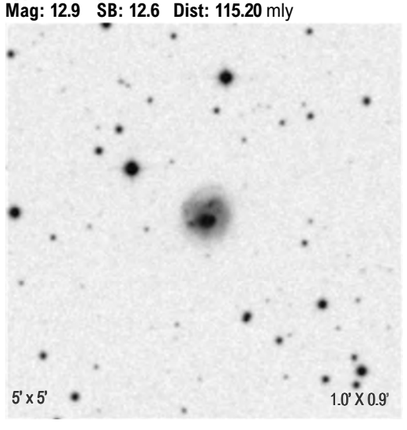
OTHER NAMES:
UGC 1128
MCG 7-4-4
CGCG 537-14

COMMON NAMES:

NGC 620 — ANDROMEDA

Type: Galaxy C/P
Mag: 12.9 SB: 12.6 Dist: 115.20 mly

RA 1:36:59.60
Dec +42:19:22



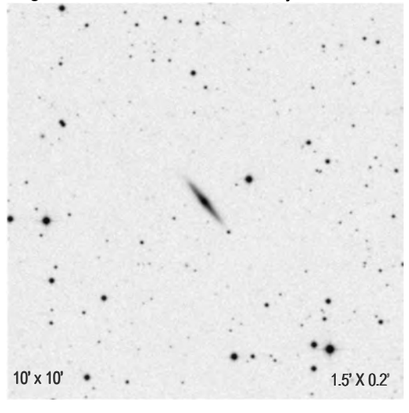
OTHER NAMES:
UGC 1150
MCG 7-4-6
CGCG 537-16
5ZW 81
IRAS 01340+4204

COMMON NAMES:

NGC 653 — ANDROMEDA

Type: Galaxy Sab
Mag: 13.5 SB: 12 Dist: 251.27 mly

RA 1:42:25.60
Dec +35:38:19



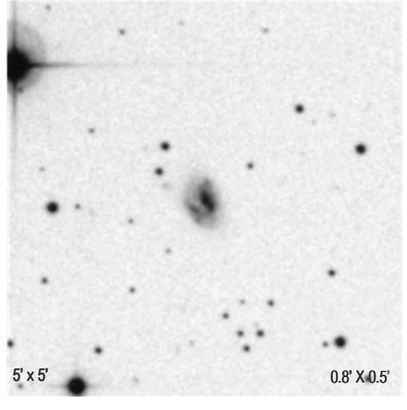
OTHER NAMES:
UGC 1193
MCG 6-4-58
CGCG 521-70

COMMON NAMES:

NGC 662 — ANDROMEDA

Type: Galaxy Sc
Mag: 13.0 SB: Dist: 259.83 mly

RA 1:44:35.50
Dec +37:41:47



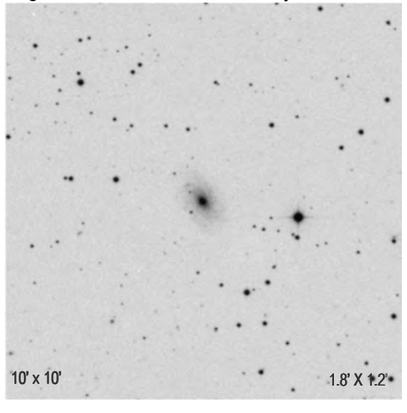
OTHER NAMES:
UGC 1220
MCG 6-4-60
CGCG 521-73
IRAS 01416+3726
KUG 0141+374
KARA 62

COMMON NAMES:

NGC 668 — ANDROMEDA

Type: Galaxy Sb
Mag: 13.1 SB: Dist: 206.70 mly

RA 1:46:22.60
Dec +36:27:36



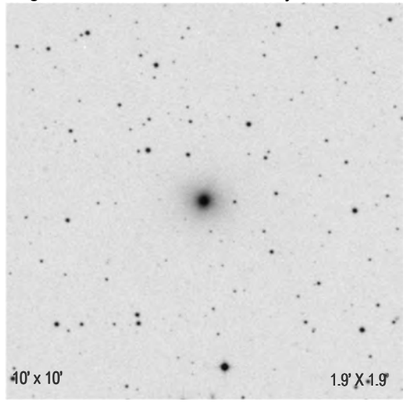
OTHER NAMES:
UGC 1238
MCG 6-5-3
CGCG 521-80
CGCG 522-1
IRAS 01434+3612

COMMON NAMES:

NGC 679 — ANDROMEDA

Type: Galaxy E-S0
Mag: 12.3 SB: Dist: 232.03 mly

RA 1:49:43.70
Dec +35:47:10



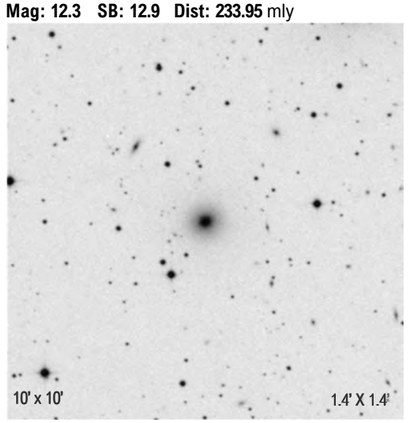
OTHER NAMES:
UGC 1283
MCG 6-5-12
CGCG 522-15
5ZW 114

COMMON NAMES:

NGC 687 — ANDROMEDA

Type: Galaxy S0
Mag: 12.3 **SB:** 12.9 **Dist:** 233.95 mly

RA 1:50:33.20
Dec +36:22:15



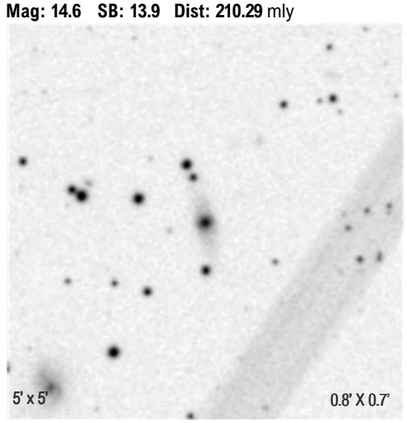
OTHER NAMES:
UGC 1298
MCG 6-5-14
CGCG 522-17

COMMON NAMES:

NGC 700 — ANDROMEDA

Type: Galaxy S0
Mag: 14.6 **SB:** 13.9 **Dist:** 210.29 mly

RA 1:52:16.80
Dec +36:2:12



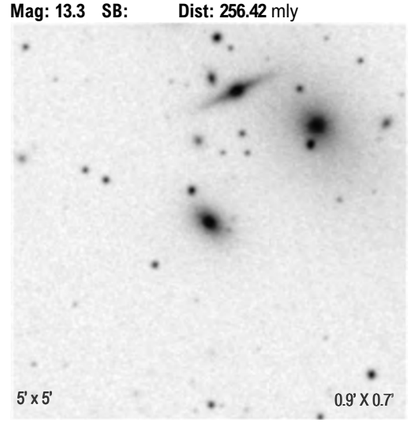
OTHER NAMES:
CGCG 522-30

COMMON NAMES:

NGC 703 — ANDROMEDA

Type: Galaxy E-S0
Mag: 13.3 **SB:** **Dist:** 256.42 mly

RA 1:52:39.60
Dec +36:10:20



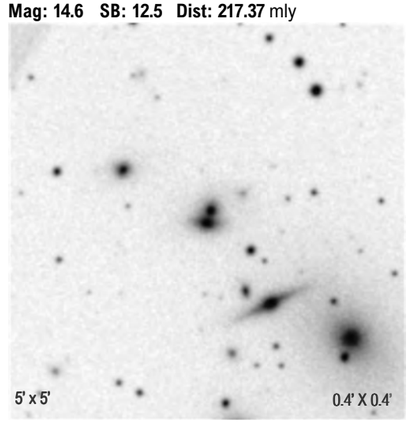
OTHER NAMES:
UGC 1346
MCG 6-5-29
CGCG 522-37

COMMON NAMES:

NGC 704 — ANDROMEDA

Type: Galaxy C
Mag: 14.6 **SB:** 12.5 **Dist:** 217.37 mly

RA 1:52:38.00
Dec +36:7:28



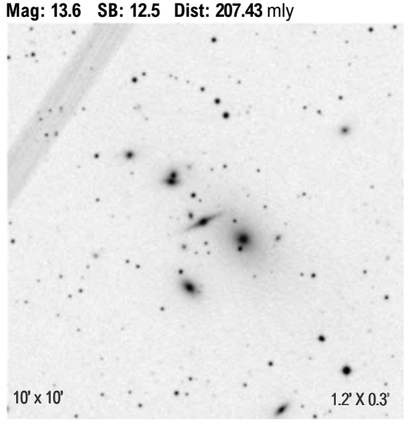
OTHER NAMES:
CGCG 522-33

COMMON NAMES:

NGC 705 — ANDROMEDA

Type: Galaxy S0-a
Mag: 13.6 **SB:** 12.5 **Dist:** 207.43 mly

RA 1:52:41.60
Dec +36:8:40



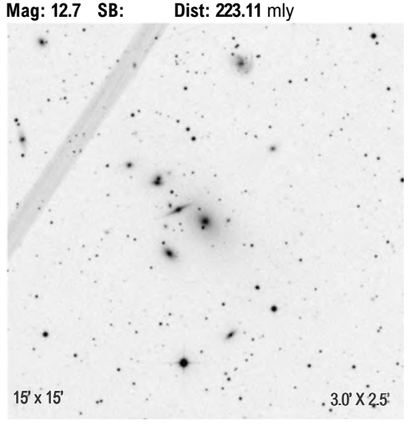
OTHER NAMES:
UGC 1345
MCG 6-5-30
CGCG 522-36
6ZW 90

COMMON NAMES:

NGC 708 — ANDROMEDA

Type: Galaxy E2
Mag: 12.7 **SB:** **Dist:** 223.11 mly

RA 1:52:46.40
Dec +36:9:8



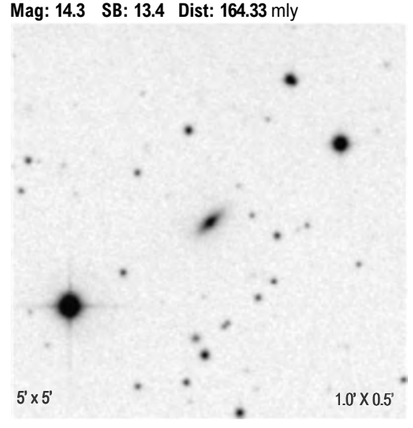
OTHER NAMES:
UGC 1348
MCG 6-5-31
CGCG 522-39

COMMON NAMES:

NGC 709 — ANDROMEDA

Type: Galaxy S0
Mag: 14.3 **SB:** 13.4 **Dist:** 164.33 mly

RA 1:52:50.60
Dec +36:13:23



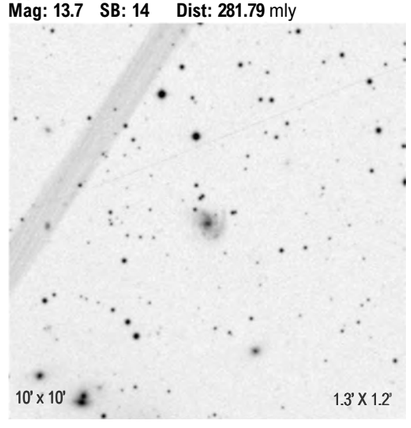
OTHER NAMES:
CGCG 522-40

COMMON NAMES:

NGC 710 — ANDROMEDA

Type: Galaxy Sc
Mag: 13.7 **SB:** 14 **Dist:** 281.79 mly

RA 1:52:54.00
Dec +36:3:12



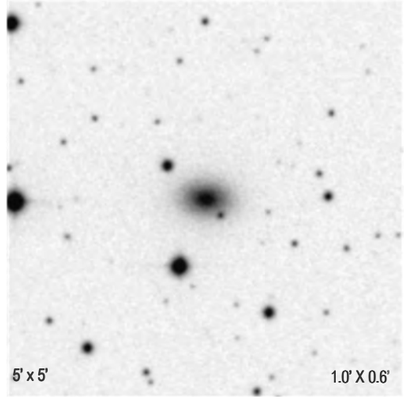
OTHER NAMES:
UGC 1349
MCG 6-5-33
CGCG 522-41
KUG 0149+358B
IRAS 01499+3548

COMMON NAMES:

NGC 712 — ANDROMEDA

Type: Galaxy S0
Mag: 12.8 **SB:** 12.1 **Dist:** 244.93 mly

RA 1:53:8.40
Dec +36:49:11



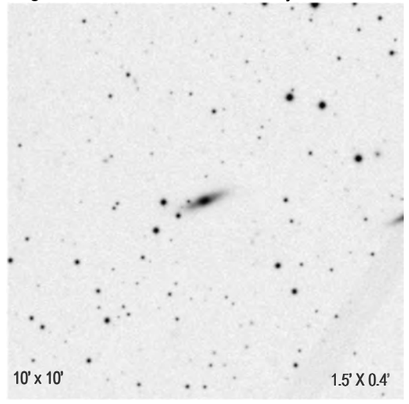
OTHER NAMES:
UGC 1352
MCG 6-5-35
CGCG 522-43

COMMON NAMES:

NGC 714 — ANDROMEDA

Type: Galaxy S0-a
Mag: 13.1 **SB:** 12.4 **Dist:** 203.03 mly

RA 1:53:29.60
Dec +36:13:17



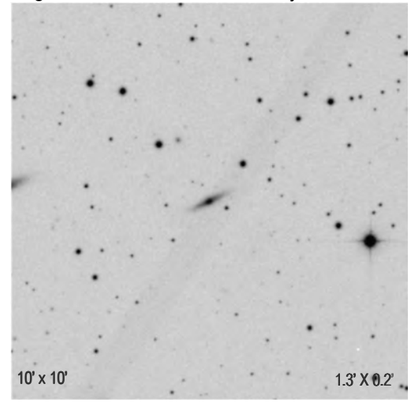
OTHER NAMES:
UGC 1358
MCG 6-5-37
CGCG 522-47

COMMON NAMES:

NGC 717 — ANDROMEDA

Type: Galaxy S0-a
Mag: 13.9 **SB:** 12.5 **Dist:** 228.29 mly

RA 1:53:55.00
Dec +36:13:47



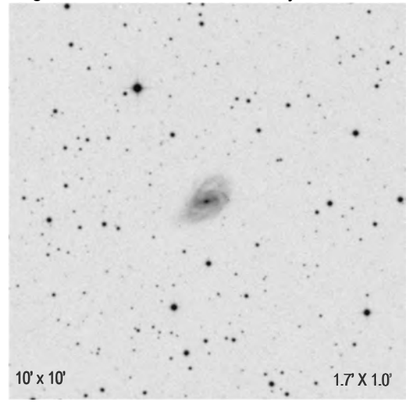
OTHER NAMES:
UGC 1363
MCG 6-5-41
CGCG 522-52

COMMON NAMES:

NGC 721 — ANDROMEDA

Type: Galaxy SBbc
Mag: 13.5 **SB:** 13.9 **Dist:** 257.21 mly

RA 1:54:45.40
Dec +39:22:59



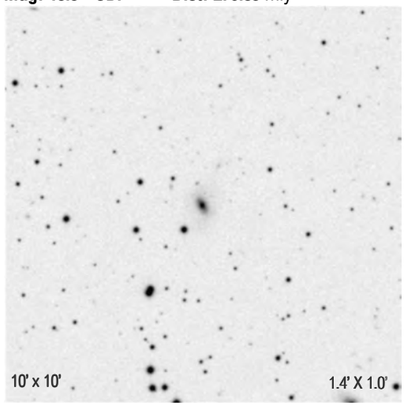
OTHER NAMES:
UGC 1376
MCG 6-5-43
CGCG 522-56
IRAS 01517+3908

COMMON NAMES:

NGC 732 — ANDROMEDA

Type: Galaxy S0
Mag: 13.5 **SB:** **Dist:** 270.85 mly

RA 1:56:27.70
Dec +36:48:8



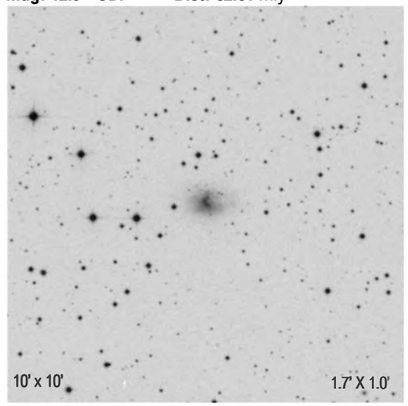
OTHER NAMES:
UGC 1406
MCG 6-5-57
MK 1011
IRAS 01535+3633
ARAK 64
CGCG 522-76

COMMON NAMES:

NGC 746 — ANDROMEDA

Type: Galaxy Im
Mag: 12.9 **SB:** **Dist:** 32.31 mly

RA 1:57:51.00
Dec +44:55:6



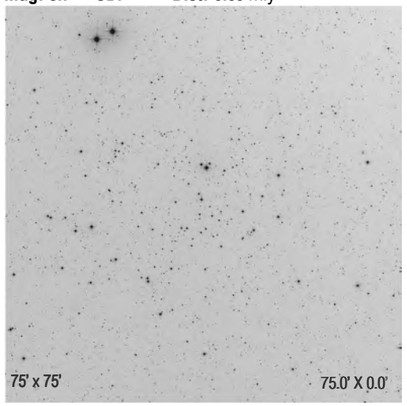
OTHER NAMES:
UGC 1438
MCG 7-5-3
CGCG 538-4
IRAS 01548+4441

COMMON NAMES:

NGC 752 — ANDROMEDA

Type: Open Cluster III1m
Mag: 5.7 **SB:** **Dist:** 0.00 mly

RA 1:57:35.00
Dec +37:50:0



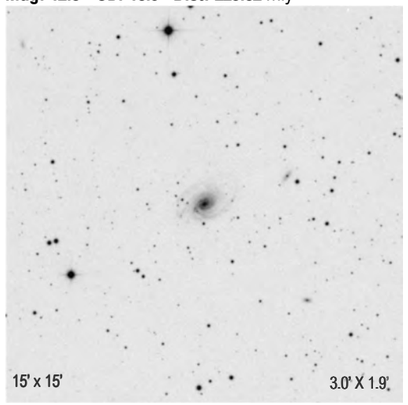
OTHER NAMES:
OCL 363

COMMON NAMES:

NGC 753 — ANDROMEDA

Type: Galaxy SBbc
Mag: 12.3 **SB:** 13.9 **Dist:** 225.32 mly

RA 1:57:42.40
Dec +35:54:57



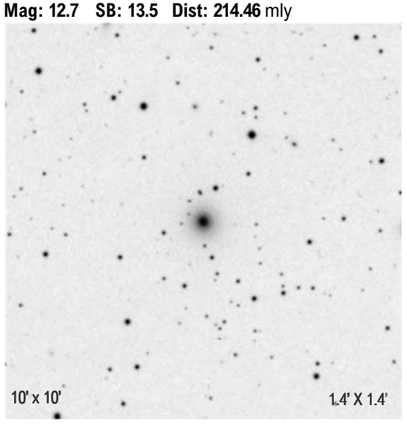
OTHER NAMES:
UGC 1437
MCG 6-5-66
CGCG 522-86
IRAS 01547+3540

COMMON NAMES:

NGC 759 — ANDROMEDA

Type: Galaxy E0
Mag: 12.7 **SB:** 13.5 **Dist:** 214.46 mly

RA 1:57:50.30
Dec +36:20:35



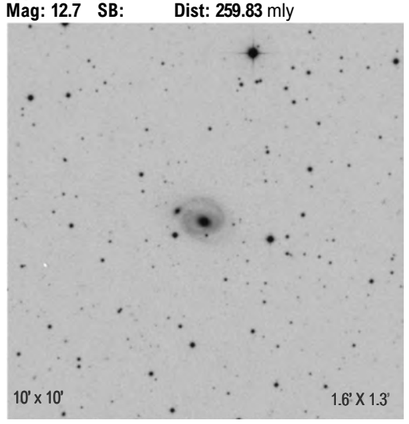
OTHER NAMES:
UGC 1440
MCG 6-5-67
CGCG 522-87
IRAS 01548+3605

COMMON NAMES:

NGC 797 — ANDROMEDA

Type: Galaxy SBa
Mag: 12.7 **SB:** **Dist:** 259.83 mly

RA 2:3:27.90
Dec +38:7:3



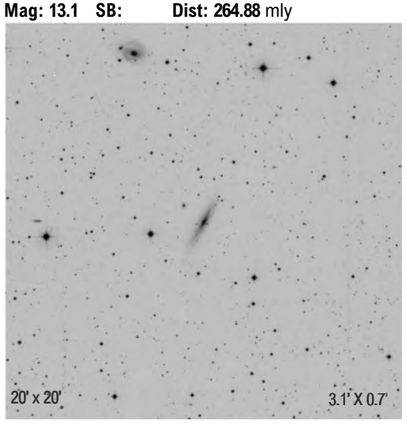
OTHER NAMES:
UGC 1541
MCG 6-5-78
CGCG 522-105
VV 428
5ZW 170
NPM1G +37.0077

COMMON NAMES:

NGC 801 — ANDROMEDA

Type: Galaxy Sc
Mag: 13.1 **SB:** **Dist:** 264.88 mly

RA 2:3:44.90
Dec +38:15:34



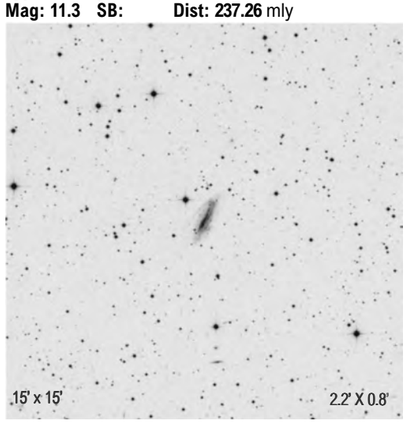
OTHER NAMES:
UGC 1550
MCG 6-5-79
CGCG 522-106
IRAS 02007+3801

COMMON NAMES:

NGC 812 — ANDROMEDA

Type: Galaxy Sbc
Mag: 11.3 **SB:** **Dist:** 237.26 mly

RA 2:6:51.70
Dec +44:34:21



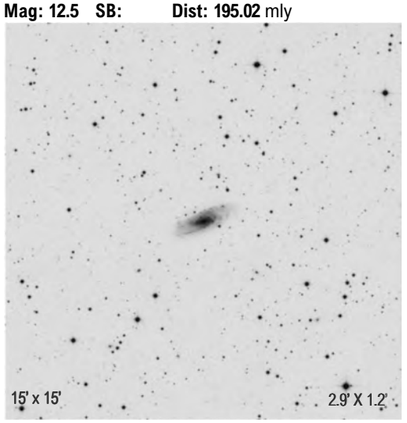
OTHER NAMES:
UGC 1598
MCG 7-5-14
CGCG 538-19
IRAS 02037+4419

COMMON NAMES:

NGC 818 — ANDROMEDA

Type: Galaxy SBbc
Mag: 12.5 **SB:** **Dist:** 195.02 mly

RA 2:8:44.40
Dec +38:46:38



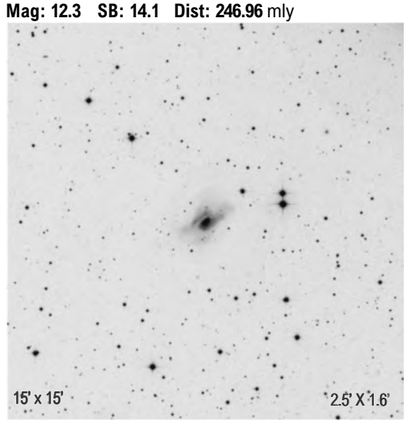
OTHER NAMES:
UGC 1633
MCG 6-5-86
CGCG 522-116
IRAS 02057+3832

COMMON NAMES:

NGC 828 — ANDROMEDA

Type: Galaxy Sa/P
Mag: 12.3 **SB:** 14.1 **Dist:** 246.96 mly

RA 2:10:9.50
Dec +39:11:28



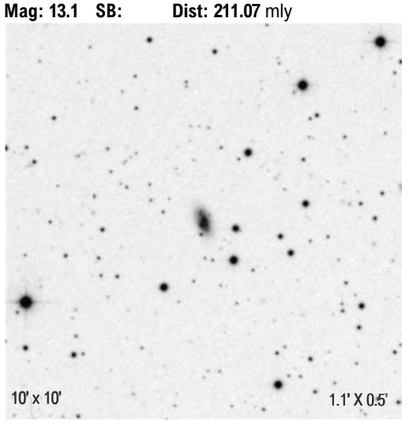
OTHER NAMES:
UGC 1655
MCG 6-5-92
CGCG 522-125
6ZW 177
IRAS 02071+3857

COMMON NAMES:

NGC 834 — ANDROMEDA

Type: Galaxy Sbc
Mag: 13.1 **SB:** **Dist:** 211.07 mly

RA 2:11:1.20
Dec +37:39:58



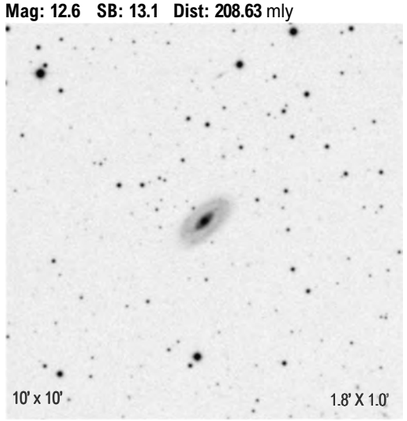
OTHER NAMES:
UGC 1672
MCG 6-5-99
CGCG 522-128
IRAS 02080+3725
ARAK 77
KUG 0208+374

COMMON NAMES:

NGC 841 — ANDROMEDA

Type: Galaxy SBab
Mag: 12.6 **SB:** 13.1 **Dist:** 208.63 mly

RA 2:11:17.40
Dec +37:29:51



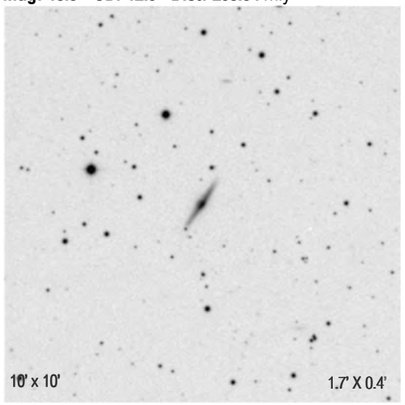
OTHER NAMES:
UGC 1676
MCG 6-5-101
CGCG 522-131
IRAS 02082+3715
5ZW 194
KUG 0208+372

COMMON NAMES:

NGC 845 — ANDROMEDA

Type: Galaxy Sb
Mag: 13.5 SB: 12.9 Dist: 203.54 mly

RA 2:12:19.70
Dec +37:28:39



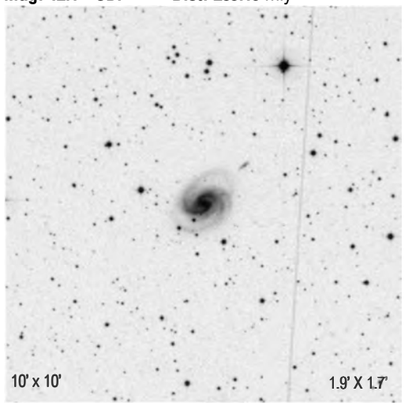
OTHER NAMES:
UGC 1695
MCG 6-5-104
CGCG 522-135
IRAS 02093+3714

COMMON NAMES:

NGC 846 — ANDROMEDA

Type: Galaxy SBab
Mag: 12.1 SB: Dist: 235.19 mly

RA 2:12:12.10
Dec +44:34:5



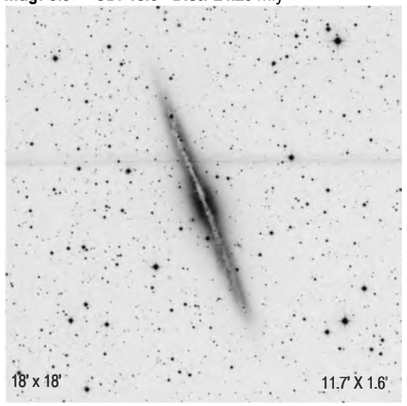
OTHER NAMES:
NGC 847
UGC 1688
MCG 7-5-24
CGCG 538-32
IRAS 02090+4420

COMMON NAMES:

NGC 891 — ANDROMEDA

Type: Galaxy Sb
Mag: 9.9 SB: 13.6 Dist: 24.26 mly

RA 2:22:33.00
Dec +42:20:50



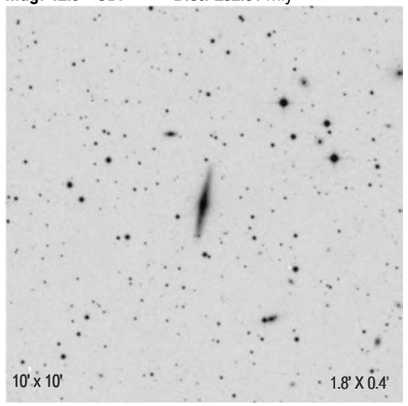
OTHER NAMES:
UGC 1831
MCG 7-5-46
CGCG 538-52
IRAS 02195+4209

COMMON NAMES:
Sliver Galaxy

NGC 898 — ANDROMEDA

Type: Galaxy Sab
Mag: 12.9 SB: Dist: 252.51 mly

RA 2:23:20.20
Dec +41:57:6



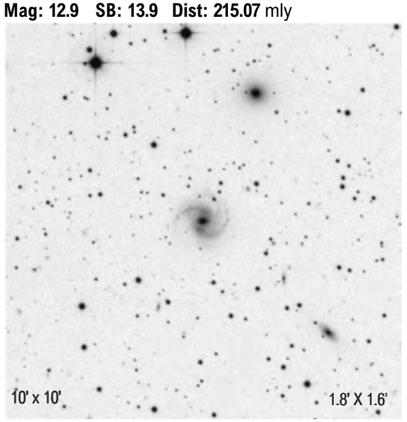
OTHER NAMES:
UGC 1842
MCG 7-6-4
CGCG 538-58
CGCG 539-4
IRAS 02201+4143

COMMON NAMES:

NGC 906 — ANDROMEDA

Type: Galaxy SBab
Mag: 12.9 SB: 13.9 Dist: 215.07 mly

RA 2:25:16.20
Dec +42:5:25



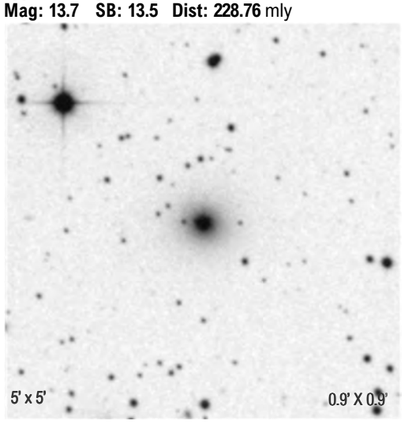
OTHER NAMES:
UGC 1868
MCG 7-6-12
CGCG 539-14
IRAS 02221+4152

COMMON NAMES:

NGC 909 — ANDROMEDA

Type: Galaxy E0
Mag: 13.7 SB: 13.5 Dist: 228.76 mly

RA 2:25:22.70
Dec +42:2:10



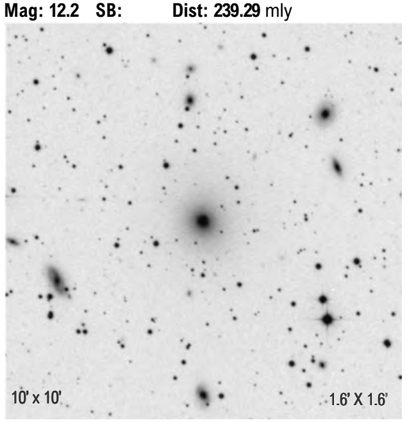
OTHER NAMES:
UGC 1872
MCG 7-6-13
CGCG 539-16
NPM1G +41.0066

COMMON NAMES:

NGC 910 — ANDROMEDA

Type: Galaxy E0
Mag: 12.2 SB: Dist: 239.29 mly

RA 2:25:26.80
Dec +41:49:27



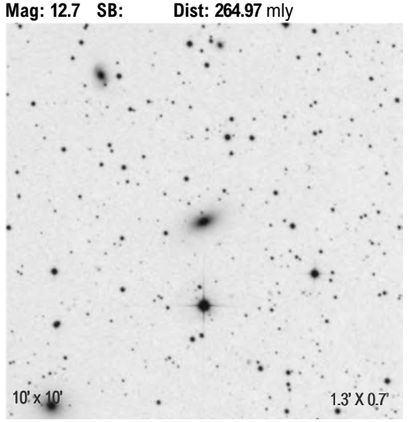
OTHER NAMES:
UGC 1875
MCG 7-6-14
CGCG 539-17

COMMON NAMES:

NGC 911 — ANDROMEDA

Type: Galaxy E5
Mag: 12.7 SB: Dist: 264.97 mly

RA 2:25:42.40
Dec +41:57:24



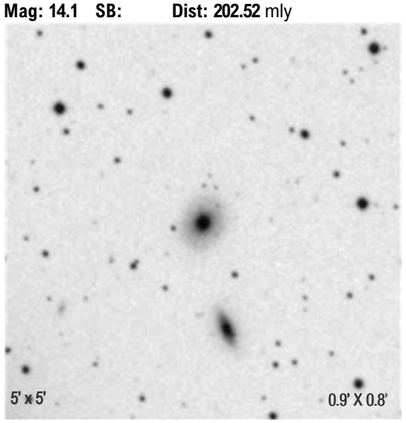
OTHER NAMES:
UGC 1878
MCG 7-6-16
CGCG 539-21

COMMON NAMES:

NGC 912 — ANDROMEDA

Type: Galaxy E-S0
Mag: 14.1 SB: Dist: 202.52 mly

RA 2:25:42.70
Dec +41:46:41



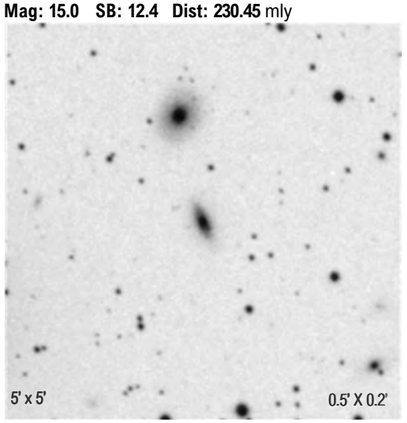
OTHER NAMES:
MCG 7-6-15
CGCG 539-20
NPM1G +41.0069

COMMON NAMES:

NGC 913 — ANDROMEDA

Type: Galaxy S0
Mag: 15.0 SB: 12.4 Dist: 230.45 mly

RA 2:25:44.80
Dec +41:47:57



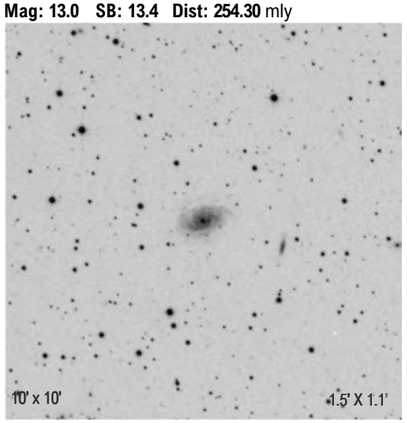
OTHER NAMES:

COMMON NAMES:

NGC 914 — ANDROMEDA

Type: Galaxy Sc
Mag: 13.0 SB: 13.4 Dist: 254.30 mly

RA 2:26:5.10
Dec +42:8:41



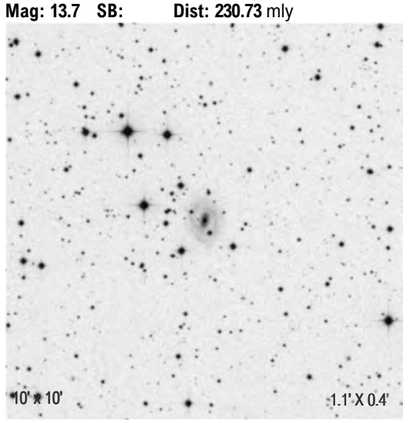
OTHER NAMES:
UGC 1887
MCG 7-6-17
CGCG 539-23
IRAS 02229+4155

COMMON NAMES:

NGC 920 — ANDROMEDA

Type: Galaxy S?
Mag: 13.7 SB: Dist: 230.73 mly

RA 2:28:45.80
Dec +45:58:16



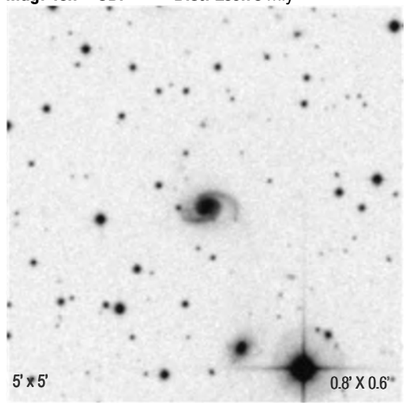
OTHER NAMES:
IC 1799
UGC 1943
MCG 8-5-12
CGCG 553-14
NPM1G +45.0061

COMMON NAMES:

NGC 923 — ANDROMEDA

Type: Galaxy Sb
Mag: 13.7 **SB:** **Dist:** 259.73 mly

RA 2:27:34.60
Dec +41:58:41



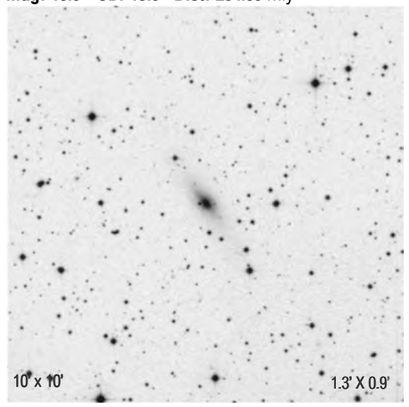
OTHER NAMES:
UGC 1915
MCG 7-6-22
CGCG 539-30
IRAS 02244+4145

COMMON NAMES:

NGC 933 — ANDROMEDA

Type: Galaxy S
Mag: 13.9 **SB:** 13.9 **Dist:** 234.59 mly

RA 2:29:17.40
Dec +45:54:43



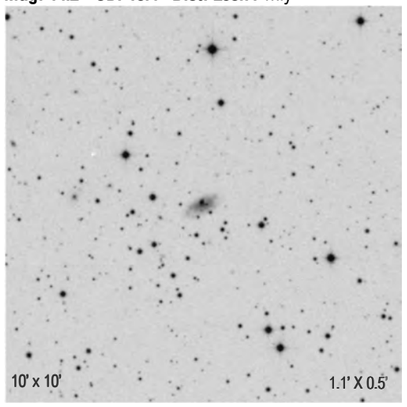
OTHER NAMES:
UGC 1956
MCG 8-5-13
CGCG 553-16
NPM1G +45.0062

COMMON NAMES:

NGC 937 — ANDROMEDA

Type: Galaxy SBc
Mag: 14.2 **SB:** 13.4 **Dist:** 258.77 mly

RA 2:29:28.10
Dec +42:14:59



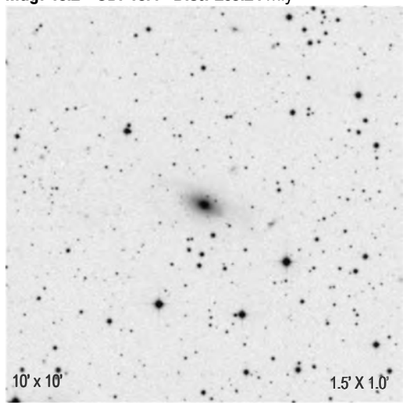
OTHER NAMES:
UGC 1961
MCG 7-6-24
CGCG 539-32

COMMON NAMES:

NGC 946 — ANDROMEDA

Type: Galaxy S0
Mag: 13.2 **SB:** 13.4 **Dist:** 265.24 mly

RA 2:30:38.40
Dec +42:13:59



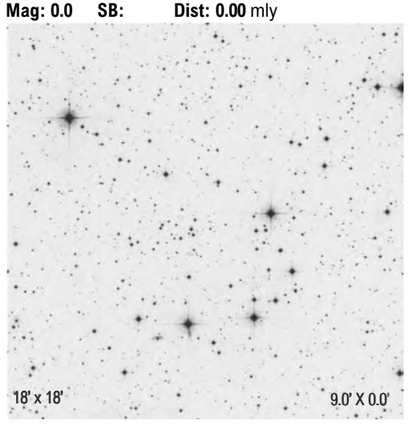
OTHER NAMES:
UGC 1979
MCG 7-6-26
CGCG 539-34
NPM1G +42.0091

COMMON NAMES:

NGC 956 — ANDROMEDA

Type: Open Cluster IV1p
Mag: 0.0 **SB:** **Dist:** 0.00 mly

RA 2:32:14.90
Dec +44:38:48



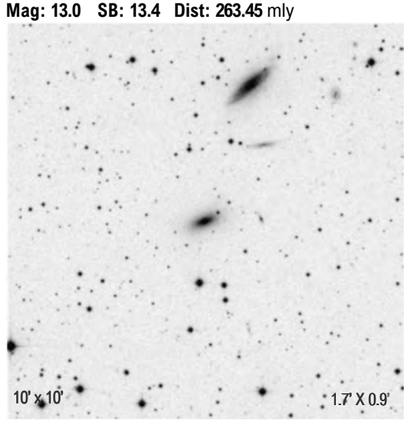
OTHER NAMES:
OCL 377

COMMON NAMES:

NGC 980 — ANDROMEDA

Type: Galaxy S0
Mag: 13.0 **SB:** 13.4 **Dist:** 263.45 mly

RA 2:35:18.50
Dec +40:55:37



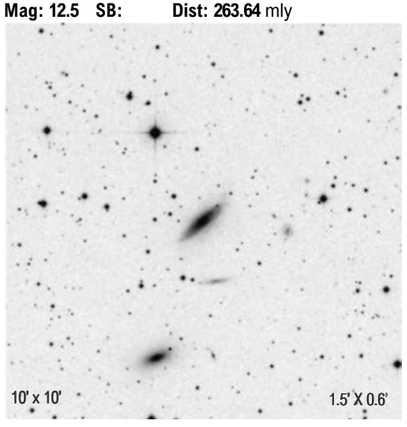
OTHER NAMES:
UGC 2063
MCG 7-6-38
CGCG 539-54

COMMON NAMES:

NGC 982 — ANDROMEDA

Type: Galaxy Sa
Mag: 12.5 **SB:** **Dist:** 263.64 mly

RA 2:35:24.80
Dec +40:52:10



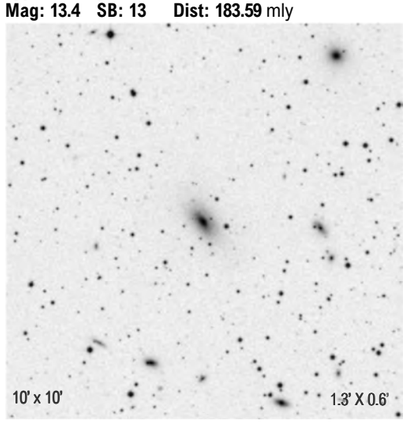
OTHER NAMES:
UGC 2066
MCG 7-6-39
CGCG 539-56
IRAS 02322+4039

COMMON NAMES:

NGC 995 — ANDROMEDA

Type: Galaxy S0
Mag: 13.4 **SB:** 13 **Dist:** 183.59 mly

RA 2:38:31.90
Dec +41:31:44



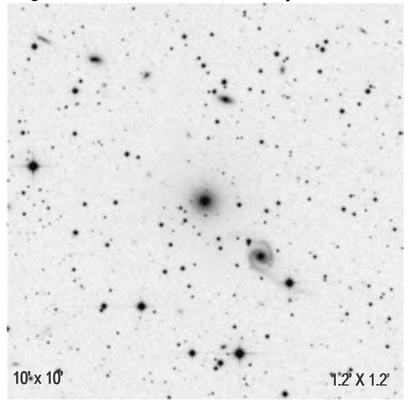
OTHER NAMES:
UGC 2118
MCG 7-6-44
CGCG 539-63

COMMON NAMES:

NGC 996 — ANDROMEDA

Type: Galaxy E0
Mag: 13.0 **SB:** 13.5 **Dist:** 210.66 mly

RA 2:38:39.60
Dec +41:38:50



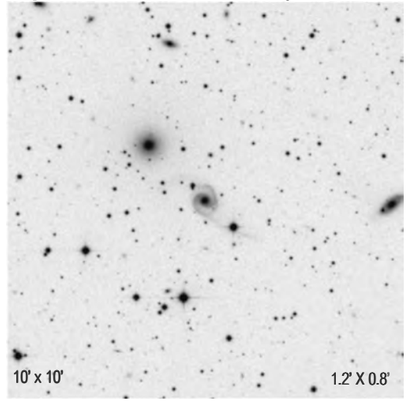
OTHER NAMES:
UGC 2123
MCG 7-6-45
CGCG 539-64

COMMON NAMES:

NGC 999 — ANDROMEDA

Type: Galaxy SBa
Mag: 13.5 **SB:** **Dist:** 201.87 mly

RA 2:38:47.40
Dec +41:40:16



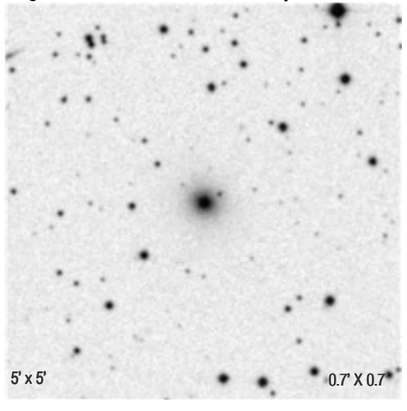
OTHER NAMES:
UGC 2127
MCG 7-6-47
NPM1G +41.0077
CGCG 539-66

COMMON NAMES:

NGC 1000 — ANDROMEDA

Type: Galaxy C
Mag: 14.6 **SB:** **Dist:** 202.01 mly

RA 2:38:49.70
Dec +41:27:37



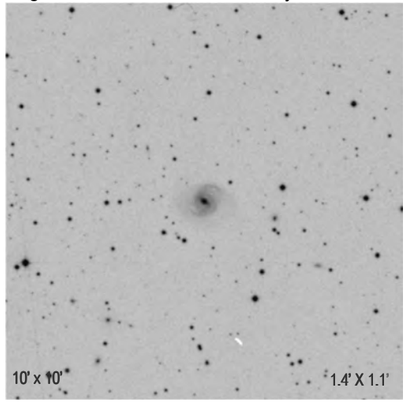
OTHER NAMES:
MCG 7-6-48
CGCG 539-67
NPM1G +41.0078

COMMON NAMES:

NGC 7440 — ANDROMEDA

Type: Galaxy SBa
Mag: 13.5 **SB:** **Dist:** 260.05 mly

RA 22:58:32.50
Dec +35:48:11



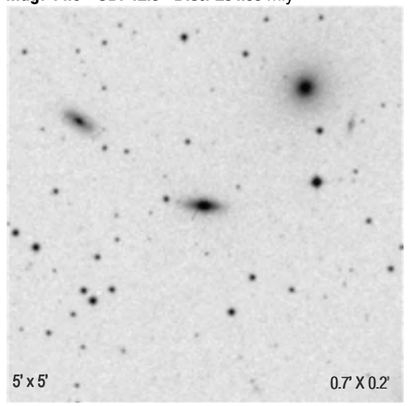
OTHER NAMES:
UGC 12276
MCG 6-50-14
MK 924
CGCG 515-15
NPM1G +35.0477

COMMON NAMES:

NGC 7445 — ANDROMEDA

Type: Galaxy E-S0
Mag: 14.6 **SB:** 12.5 **Dist:** 234.55 mly

RA 22:59:22.40
Dec +39:6:29



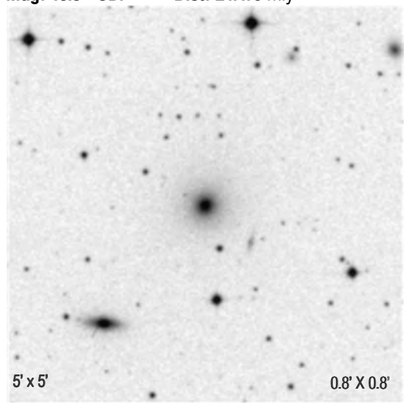
OTHER NAMES:
MCG 6-50-15
CGCG 515-16
NPM1G +38.0473

COMMON NAMES:

NGC 7446 — ANDROMEDA

Type: Galaxy E0
Mag: 13.8 **SB:** **Dist:** 247.79 mly

RA 22:59:28.90
Dec +39:5:0



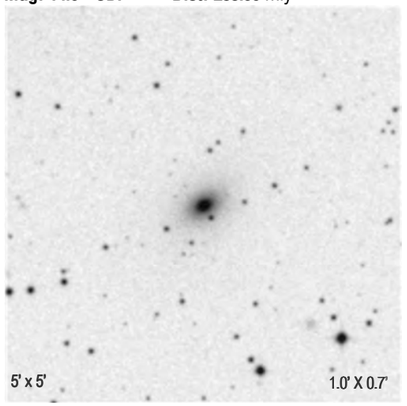
OTHER NAMES:
CGCG 515-17
NPM1G +38.0474

COMMON NAMES:

NGC 7449 — ANDROMEDA

Type: Galaxy E3
Mag: 14.0 **SB:** **Dist:** 233.90 mly

RA 22:59:37.60
Dec +39:8:45



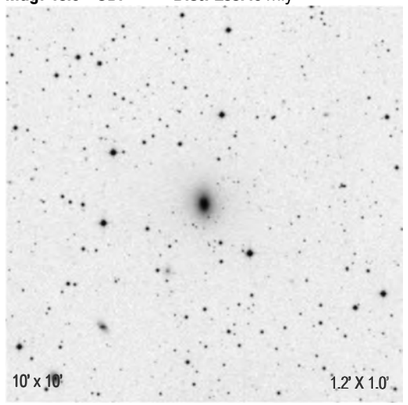
OTHER NAMES:
UGC 12292
MCG 6-50-16
CGCG 515-18

COMMON NAMES:

NGC 7618 — ANDROMEDA

Type: Galaxy E2
Mag: 13.0 **SB:** **Dist:** 238.46 mly

RA 23:19:47.30
Dec +42:51:10



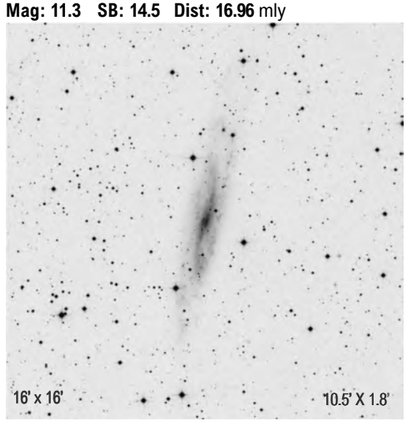
OTHER NAMES:
UGC 12516
MCG 7-47-13
CGCG 532-14

COMMON NAMES:

NGC 7640 — ANDROMEDA

Type: Galaxy SBc
Mag: 11.3 **SB:** 14.5 **Dist:** 16.96 mly

RA 23:22:6.60
Dec +40:50:42



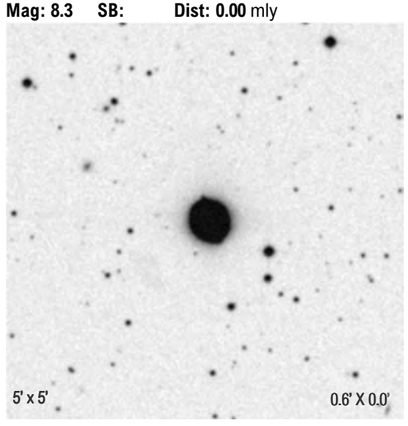
OTHER NAMES:
UGC 12554
MCG 7-48-2
CGCG 532-17
CGCG 533-1
IRAS 23197+4034

COMMON NAMES:

NGC 7662 — ANDROMEDA

Type: Planetary Neb PN
Mag: 8.3 **SB:** **Dist:** 0.00 mly

RA 23:25:53.90
Dec +42:32:8



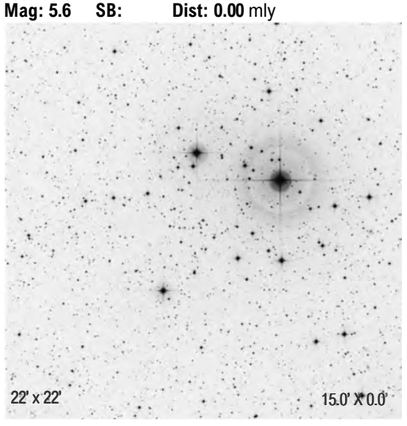
OTHER NAMES:
PK 106-17.1
CS=13.2

COMMON NAMES:
Blue Snowball

NGC 7686 — ANDROMEDA

Type: Open Cluster IV1p
Mag: 5.6 **SB:** **Dist:** 0.00 mly

RA 23:30:7.30
Dec +49:8:3



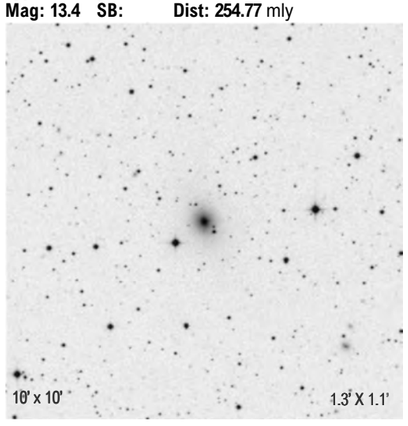
OTHER NAMES:
OCL 251

COMMON NAMES:

NGC 7707 — ANDROMEDA

Type: Galaxy E-S0
Mag: 13.4 **SB:** **Dist:** 254.77 mly

RA 23:34:51.30
Dec +44:18:17



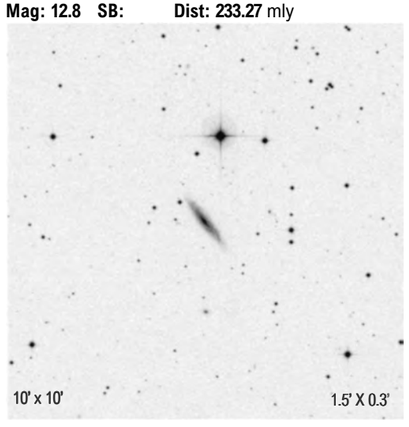
OTHER NAMES:
UGC 12683
MCG 7-48-12
CGCG 533-14
NPM1G +44.0415

COMMON NAMES:

NGC 7831 — ANDROMEDA

Type: Galaxy Sb
Mag: 12.8 **SB:** **Dist:** 233.27 mly

RA 0:7:19.30
Dec +32:36:33



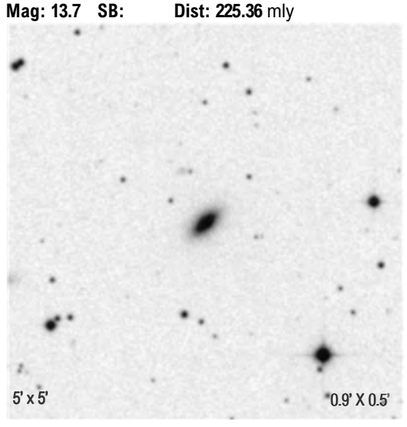
OTHER NAMES:
IC 1530
UGC 60
MCG 5-1-32
IRAS 00047+3219
CGCG 498-78
CGCG 499-50

COMMON NAMES:

NGC 7836 — ANDROMEDA

Type: Galaxy Irr
Mag: 13.7 **SB:** **Dist:** 225.36 mly

RA 0:8:1.60
Dec +33:4:17



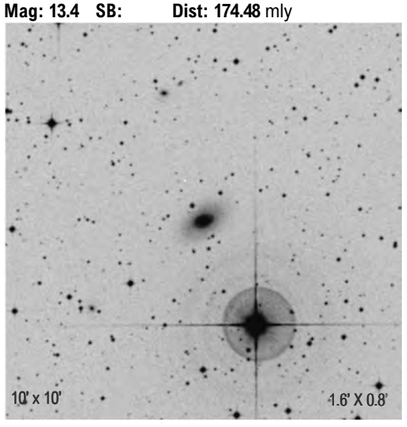
OTHER NAMES:
UGC 65
MK 336
CGCG 499-51
IRAS 00054+3247
KUG 0005+327
NPM1G +32.0005

COMMON NAMES:

NGC 6945 — AQUARIUS

Type: Galaxy E-S0
Mag: 13.4 **SB:** **Dist:** 174.48 mly

RA 20:39:0.50
Dec -4:58:20



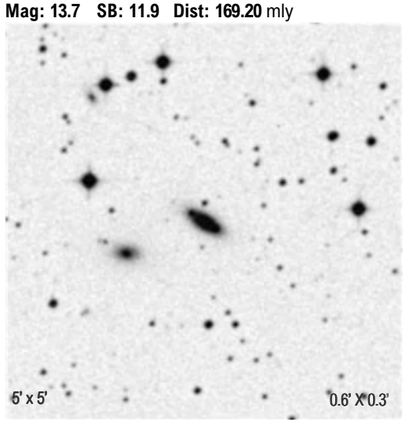
OTHER NAMES:
MCG -1-52-15
near SAO 144663

COMMON NAMES:

NGC 6959 — AQUARIUS

Type: Galaxy S0
Mag: 13.7 **SB:** 11.9 **Dist:** 169.20 mly

RA 20:47:7.20
Dec +0:25:49



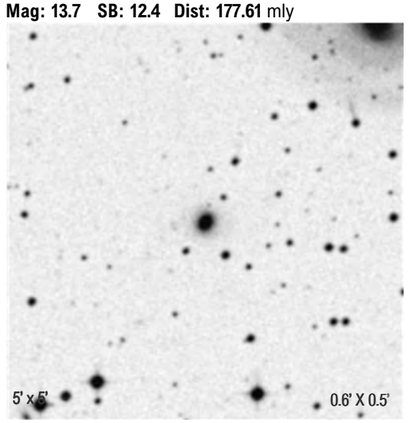
OTHER NAMES:
CGCG 374-13

COMMON NAMES:

NGC 6961 — AQUARIUS

Type: Galaxy E2
Mag: 13.7 SB: 12.4 Dist: 177.61 mly

RA 20:47:10.40
Dec +0:21:50



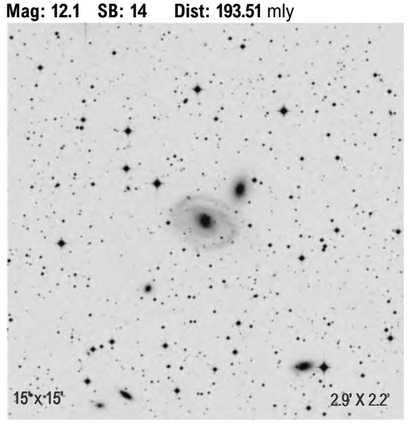
OTHER NAMES:
CGCG 374-14
NPM1G +00.0554

COMMON NAMES:

NGC 6962 — AQUARIUS

Type: Galaxy SBab
Mag: 12.1 SB: 14 Dist: 193.51 mly

RA 20:47:18.90
Dec +0:19:19



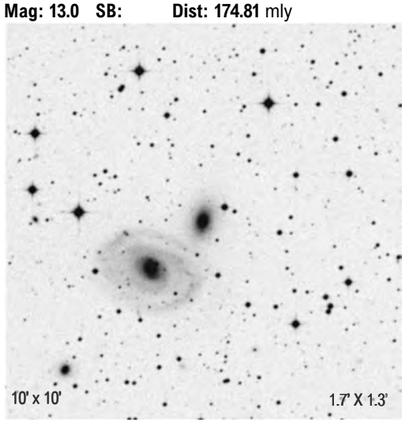
OTHER NAMES:
UGC 11628
MCG 0-53-3
CGCG 374-15
KCPG 548A
IRAS 20447+0008

COMMON NAMES:

NGC 6964 — AQUARIUS

Type: Galaxy E2
Mag: 13.0 SB: Dist: 174.81 mly

RA 20:47:24.20
Dec +0:18:5



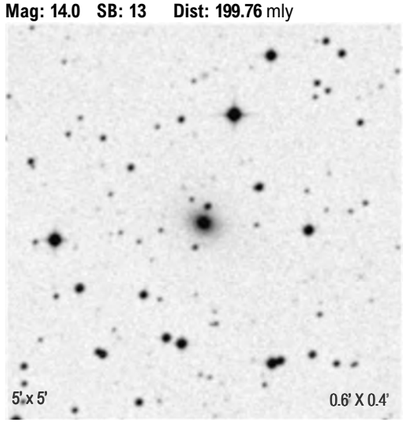
OTHER NAMES:
UGC 11629
MCG 0-53-5
CGCG 374-17
KCPG 548B

COMMON NAMES:

NGC 6965 — AQUARIUS

Type: Galaxy S0
Mag: 14.0 SB: 13 Dist: 199.76 mly

RA 20:47:20.50
Dec +0:29:3



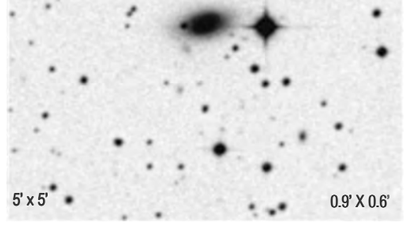
OTHER NAMES:
IC 5058
MCG 0-53-4
CGCG 374-16

COMMON NAMES:

NGC 6967 — AQUARIUS

Type: Galaxy S0-a
Mag: 13.1 SB: 12.6 Dist: 173.16 mly

RA 20:47:34.00
Dec +0:24:44



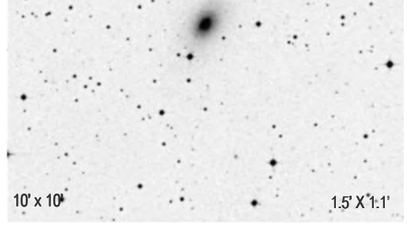
OTHER NAMES:
UGC 11630
MCG 0-53-6
CGCG 374-18
IRAS 20450+0013

COMMON NAMES:

NGC 6968 — AQUARIUS

Type: Galaxy E-S0
Mag: 13.3 SB: 13.9 Dist: 285.51 mly

RA 20:48:32.40
Dec -8:21:35



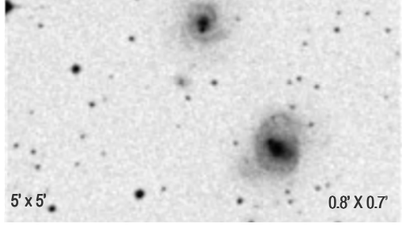
OTHER NAMES:
MCG -2-53-6
NPM1G -08.0539
IRAS 20458-0829

COMMON NAMES:

NGC 6976 — AQUARIUS

Type: Galaxy Sbc
Mag: 14.0 SB: Dist: 273.71 mly

RA 20:52:25.90
Dec -5:46:17



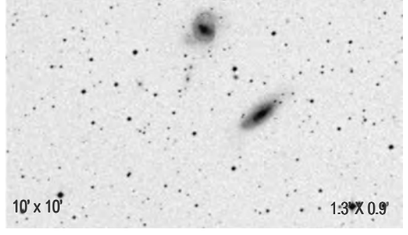
OTHER NAMES:
NGC 6975
MCG -1-53-15
NPM1G -05.0582
HCG 88C

COMMON NAMES:

NGC 6977 — AQUARIUS

Type: Galaxy SBb
Mag: 13.2 SB: Dist: 284.56 mly

RA 20:52:29.60
Dec -5:44:45



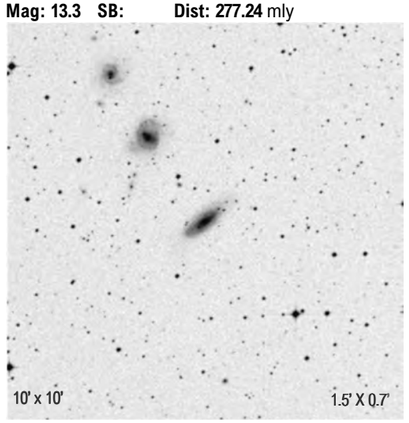
OTHER NAMES:
MCG -1-53-16
HCG 88B
NPM1G -05.0583
IRAS 20499-0555

COMMON NAMES:

NGC 6978 — AQUARIUS

Type: Galaxy Sb
Mag: 13.3 SB: Dist: 277.24 mly

RA 20:52:35.40
Dec -5:42:40



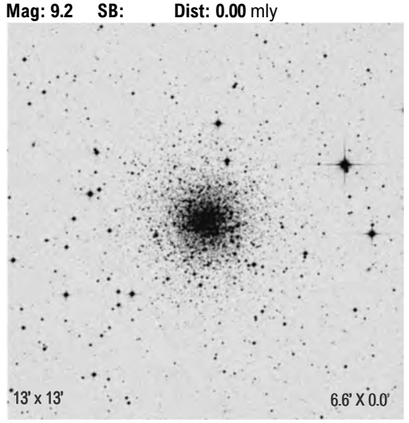
OTHER NAMES:
MCG -1-53-17
HCG 88A
IRAS 20499-0554

COMMON NAMES:

NGC 6981 — AQUARIUS

Type: Globular Cluster IX
Mag: 9.2 SB: Dist: 0.00 mly

RA 20:53:27.90
Dec -12:32:11



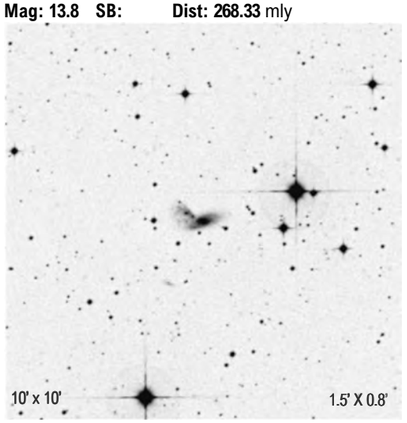
OTHER NAMES:
M 72
GCL 118

COMMON NAMES:

NGC 6985 — AQUARIUS

Type: Galaxy Sa
Mag: 13.8 SB: Dist: 268.33 mly

RA 20:45:3.00
Dec -11:6:15



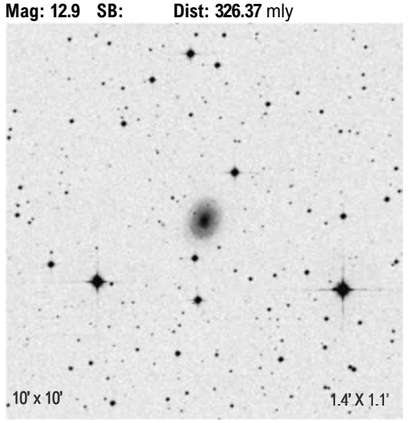
OTHER NAMES:
MCG -2-53-1
VV 546
IRAS 20422-1117

COMMON NAMES:

NGC 7001 — AQUARIUS

Type: Galaxy Sab
Mag: 12.9 SB: Dist: 326.37 mly

RA 21:1:7.70
Dec -0:11:41



OTHER NAMES:
UGC 11663
MCG 0-53-16
CGCG 374-37
NPM1G -00.0540
IRAS 20585-0023

COMMON NAMES: