

The following list is a result of too many nights racing through Messier marathons, wandering through the Herschel 400, scanning the southern horizon for unexpected treasures, star-hopping for invisible faint fuzzies, and finally, finding myself at the helm of a 22-inch Go-To telescope, not knowing what to look at next! You'll no doubt recognize many of the objects I've included. Many are the finest, most visited, destinations in the night sky. Some are the best in their class, although they may still seem a challenge with apertures under 20 inches. A few will make you yearn for your old 3-inch refractor, or dark skies from your earliest deep sky memories.

The list is compiled in "constellation by right ascension, right ascension within constellation", order. If you use digital setting circles or a driven Go-To telescope, you'll appreciate the "by constellation" tasking. The SkyQ designation rates the objects first by sky quality (naked-eye limiting magnitude 4-5-6+ was what I had in mind, it varies...), and exclamation marks flag objects that are particularly notable. For double and multiple stars, judge your night and your telescope on the Size/Sep column. Remarks are mostly from old notes scribbled at the eyepiece of a 20-inch Dobsonian or a 5-inch richest field refractor. Some notes were culled from other observer's posts, periodicals, and numerous texts. Positional elements for all NGC and IC objects are epoch 2000, stellar positional elements are mixed. Current separations for double stars are estimated for 2000 (some are surprising if you've been observing true binaries for 30 years!) The farthest south object in the list is Alpha Centauri, followed closely by Eta Carina. The dimmest object, and most challenging, would have to be Einstein's Cross at magnitude 17 1/2, followed by the Twin Lensing Quasar in Ursa Major at 16 1/2 (which was pretty easy at the Winter Star Party in my old 20-incher.) All told, of the 400 objects in the list there are 179 galaxies, 59 planetary nebulae, 37 open clusters, 29 globular clusters, 21 diffuse or "bright" nebulae, 4 super nova remnants, and 2 lensed quasars (numerous anecdotal objects are interspersed in the Remarks column.) The remaining 75 stellar objects are double and multiple stars, contrasting color double stars, and a good sampling of the best deep red carbon stars. There are 145 objects listed with a SkyQ of 4, perfect for small telescopes or average nights. On a better than average night you can easily add 170 objects with a SkyQ of 5, and on those truly remarkable deep sky nights, 85 objects with a SkyQ of 6 will test your telescope optics and your observing skills.

If you find I've omitted one of your favorite objects, make a note and send it to me. Similarly, if you feel an object on the list is overrated, I'd like to hear your opinion on that as well. The list is an evolving project, I hope you have as much fun using it as I had creating it.

Vic Menard  
vicmenard@aol.com

## My Favorite Deep Sky Go-To Tour (aka: The List)

SkyQ	NGC/other	Type	RA	DEC	Con	Mag	Size/Sep	Remarks
6	7793	G	23 57.8	-32 35	SCL	9.1	6'x4'	Sd, loose spiral pattern
6	24	G	00 09.9	-24 58	SCL	11.3	6'x1'	easy edge-on
6	55	G	00 14.9	-39 11	SCL	7.8	25'x4'	Irregular
6	134	G	00 30.4	-33 15	SCL	10.1	5'x1'	Sb/Sc, nearly edge-on, in field of Eta SCL
4 !!	253	G	00 47.6	-25 17	SCL	8.9	24.6'x4.5'	Bright nearly edge-on galaxy with structure
5 !	288	GC	00 52.8	-26 35	SCL	7.2	10'	Loose structured globular
6	613	G	01 34.3	-29 25	SCL	10	5.8'	SBc, faint arm
4 !!	7789	OC	23 57.0	+56 44	CAS	9.6	30'	Well resolved cluster of 900 stars with dark lanes
4 !	h3053	CDBL	00 02.5	+66 06	CAS	5.9	15"	B-m7.3, yellow, blue
4 !!	Eta	CDBL	00 49.0	+57 49	CAS	3.5	12.9"	B-m7.5, yellow, blue, Achird
5	278	G	00 52.1	+47 33	CAS	11.3	1.3'	Compact face-on spiral with structure
6	281	DN	00 52.8	+56 37	CAS	8	23'x27'	faint
4 !!	457	OC	01 19.1	+58 20	CAS	6.4	12'	Dragonfly Cluster 200 stars
4 !!	663	OC	01 46.0	+61 15	CAS	7.1	11'	Rich scatter of stars
6	896	DN	02 24.8	+61 54	CAS	8	20'	Use UHC, dark nebulae involved
4 !	Iota	MULT	02 29.0	+67 24	CAS	4.6	2.5"	B-m6.9, C-m8.4, 7.3"
6	IC289	PN	03 10.3	+61 19	CAS	13	.5'	annular
6	7640	G	23 22.1	+40 51	AND	10.8	11'x2.5'	S(B)b - definition
4 !!	7662	PN	23 25.9	+42 33	AND	9.0	32" x 28"	The Blue Snowball, annular, turquoise disk with central star
5	VX	Carbon	00 17.2	+44 26	AND	8-10		N7 Carbon Star, 367 days
4 !!	224, M31	G	00 42.7	+41 16	AND	4	180'x35'	Andromeda Galaxy w/M32 and M110
4 !!	Gamma	CDBL	02 03.9	+42 20	AND	2.2	9.8"	B-m5.1, yellow, blue, Alamak C-m6.3, 0.5", blue
5 !	891	G	02 22.6	+42 21	AND	11.5	11.8'x1.1'	Edge-on galaxy with dark lane, almost transparent
5 !!	598, M33	G	01 33.9	+30 39	TRI	5.3	60'	Pinwheel Galaxy
4 !	Iota	CDBL	02 12.4	+30 18	TRI	5.3	3.9"	B-m6.9, yellow, blue
5 !	628, M74	G	01 36.7	+15 47	PSC	8.8	8'	Face on Sc - mini M101
4	Alpha	DBL	02 02.0	+02 45	PSC	4.2	1.5"	B-m5.2, Alrisha
5 !	246	PN	00 47.0	-11 53	CET	8.5	240"	3D bubble nebula with central and other embedded stars
4 !	Gamma	DBL	02 40.7	+03 02	CET	3.6	2.8"	B-m6.2
4 !	1068, M77	G	02 42.7	-00 01	CET	8.4	6'	Seyfert

4 !	Gamma	DBL	01	53.5	+19	17	ARI	4.6	7.8"	B-m4.7, Mesarthim
5	772	G	01	59.3	+19	01	ARI	10.9	5'x3'	Easy face-on spiral, elongated with bright nucleus
4 !!	650-1, M76	PN	01	42.3	+51	34	PER	10.5	1.5'	Little Dumbbell Nebula
4 !!	869, 884	OC	02	19.0	+57	09	PER	4.4	36'	Double Cluster
4 !	1023	G	02	40.4	+39	04	PER	9.2	4.0'x1.2'	Lens-shaped elliptical galaxy
4 !	Eta	CDBL	02	50.6	+55	53	PER	3.8	28.4"	B-m8.5, yellow, blue, Miram
5	1245	OC	03	14.7	+47	15	PER	6.9	30'	Dim, rich scatter of pinpoint stars
6 !	1275	G	03	19.8	+41	34	PER	11.6	2.6'x1.9'	Perseus A - brightest member of Perseus I Cluster (A426)
6	1491	DN	04	03.4	+51	19	PER	11.2	3'x3'	Use UHC, looks like a comet
5	1513	OC	04	10.0	+49	31	PER	8.8	12'	U-shaped, fairly condensed cluster of 40 stars
5	1528	OC	04	15.4	+51	14	PER	6.2	25'	Rich triangular scatter of 80 stars
6	1579	DN	04	30.2	+35	16	PER	8	12'x8'	Reflection Nebula
6 !	1049	GC	02	39.7	-34	17	FOR	12.9	24"	Extragalactic GC - Part of Fornax Dwarf System
6	1097	G	02	46.0	-30	17	FOR	9.3	9.3'	SBb
6	1316	G	03	22.7	-37	12	FOR	8.8	3.5x2.5	SOp w/mag12.2 NGC1317 (Sb)
5	1360	PN	03	33.3	-25	51	FOR	9.4	6'x4.5'	egg-shaped, irregular - m8 central star
5 !!	1365	G	03	33.6	-36	08	FOR	9.5	8'x3.5'	SBc, big, easy bar and spiral structure
6	1380	G	03	36.5	-34	59	FOR	10.2	5'x2'	SO, lens shaped - Fornax I Cluster
6	1398	G	03	38.9	-26	20	FOR	9.7	4.5'x3.8'	SBb - round, very faint spiral arms
6	1084	G	02	46.0	-07	35	ERI	10.6	3'x1.5'	Sc - dark lane
4 !	Theta	DBL	02	58.3	-40	18	ERI	3.2	8.2"	B-m4.3, Acamar
6	1187	G	03	02.6	-22	52	ERI	11.3	5.4'x4'	SBc, multiple arm spiral, bar?, slightly tilted
6 !	1232	G	03	09.8	-20	35	ERI	9.9	7'x6'	Sc, multiple arms, face-on spiral, mini M101
6	1291	G	03	17.3	-41	08	ERI	8.5	10.5'	SB, round
6	1421	G	03	42.5	-13	29	ERI	11.4	3'x0.5'	Sb, gray splinter, mottled, hooked on one end
4 !	32	CDBL	03	53.8	-02	58	ERI	4.7	6.9"	B-m6.2, yellow, blue
6	1532	G	04	12.1	-32	52	ERI	11.8	5'x1'	Sb, nearly edge-on, w/m12.1 NGC1531
4 !!	1535	PN	04	14.2	-12	44	ERI	9.3	20"	Smaller version of NGC3242
5 !	Omicron 2	DBL	04	15.4	-07	36	ERI	9.5	8.5"	C-m11.1, red dwarf and white dwarf, A component is m4.5, 82" distant, Beid
6	1433	G	03	42.0	-47	13	HOR	10	6.8'	SBA - prominent bar, nearly face-on
4 !!	1435, M45	DN	03	46.1	+23	47	TAU	1.4	90'	Pleiades w/Merope Nebula
5	1514	PN	04	09.2	+30	47	TAU	9.0	2'x1.5'	mag 9.4 central star
5 !	1952, M1	SNR	05	34.5	+22	01	TAU	8.5	6'x4'	Crab Nebula
4 !	R	Carbon	04	57.3	-14	53	LEP	6-11		N6 Carbon Star, Hind's Crimson Star, 432 days
4 !	1904, M79	GC	05	24.5	-24	33	LEP	8	3'	Small, well resolved
5	IC418	PN	05	27.5	-12	42	LEP	9.3	14" x 11"	Small, round, pink, central star, the Raspberry
6	1964	G	05	33.4	-21	57	LEP	10.8	6'x2'	Sb, elongated, embedded HII regions
6	1792	G	05	05.2	-37	59	COL	10.2	3'x1'	Sc, elongated
6 !	1808	G	05	07.7	-37	31	COL	9.9	7.2'	SB, faint outer arms, bar front-to-back, brighter nucleus, some spiral arm structure
5 !	1851	GC	05	14.1	-40	03	COL	7.3	11'	faint stars
4	W	Carbon	05	02.8	+01	07	ORI	6.5-10		N5 Carbon Star, 210 days
4	Beta	DBL	05	14.5	-08	11	ORI	0.2	9.2"	B-m6.7, Rigel
4	Eta	DBL	05	24.5	-02	23	ORI	3.7	1.5"	B-m5.1, WSP Snowman
4 !	Lambda	DBL	05	34.8	-09	52	ORI	3.6	4.3"	B-m5.5, yellowish, purple?
4 !!	1976, M42	DN	05	35.4	-05	27	ORI	4	60'	w/M43 Orion Nebula, Theta 1 - The Trapezium, also nearby, DN- NGC1999 1.2° south, use high power to reveal detail
4	Sigma	MULT	05	36.2	-02	38	ORI	3.7	.25"	B-m?, C-m10, 11.2", D-m7.5, 12.9", E-m6, 42" faint triple star Struve761 same field 3.5' distant
6 !?	IC434	DN	05	41.0	-02	24	ORI	-	3'	Horsehead Nebula (B33)
5 !	2024	DN	05	41.9	-01	51	ORI	10.5	30'	Flame or Maple Leaf Nebula, Zeta - triple star
5	2022	PN	05	42.1	+09	05	ORI	11.5	28"	Annular planetary with central star
5	2068, M78	DN	05	46.7	+00	03	ORI	10	8'x6'	Comet like
4 !!	2169	OC	06	08.4	+18	57	ORI	5.9	7'	The "37" Cluster
5	2194	OC	06	13.8	+12	48	ORI	9.2	8'	Faint, rich grouping of finely resolved stars
4 !	1907	OC	05	28.0	+35	19	AUR	8.2	7'	Nice compact cluster, 110 stars
4 !	2099, M37	OC	05	52.4	+32	33	AUR	6.2	20'	Best Messier OC in Auriga
6	IC2149	PN	05	56.3	+46	07	AUR	10.7	12" x 6"	mag 11.6 central star, very small
4	Theta	DBL	05	56.3	+37	13	AUR	2.6	3"	B-m7.1
4 !	2168, M35	OC	06	08.9	+24	20	GEM	5.3	30'	Mag11.0 N2158 faint, small, very rich OC SW of M35
5	2266	OC	06	43.2	+26	58	GEM	9.8	5'	Similar to M11
5	2304	OC	06	55.0	+18	01	GEM	10.1	5.5'	Irregular cluster of pinpoint stars, compact

5	2355	OC	07	16.9	+13	47	GEM	9.5	9'	Rich compact cluster of 70 stars
4 !	Delta	CDBL	07	20.1	+22	00	GEM	3.6	5.7"	B-m8.2, yellow, blue, Wasat
5 !	2371-2	PN	07	25.6	+29	29	GEM	11.0	54"x35"	Two lobed planetary nebula surrounds central star, look for arcs on short axis - 135"? w/OIII
6 !	Abell 21	PN	07	29.0	+13	15	GEM	10.3		The Medusa Nebula, use OIII, PK205+14.1
4 !!	2392	PN	07	29.2	+20	55	GEM	9.5	47"x43"	The Clown Face or Eskimo nebula
4 !	Alpha	DBL	07	34.6	+31	54	GEM	1.9	3.8"	B-m2.9, Castor
5	2420	OC	07	38.5	+21	34	GEM	10.2	7'	Well resolved cluster with nebulosity
4 !	8	CDBL	06	23.8	+04	36	MON	4.5	13"	B-m6.5, gold, blue
4 !	Beta	MULT	06	28.8	-07	01	MON	4.7	7.4"	B-m5.2, C-m6.1, 2.8"
5 !	2244	DN	06	32.4	+04	52	MON	6.2	40'	Rosette Nebula, best with UHC and wide field
5 !	2261	DN	06	39.2	+08	44	MON	10	2'	Hubble's Variable Nebula
4	2323, M50	OC	07	03.2	-08	20	MON	6	10'	100 stars
6	2346	PN	07	09.4	-00	48	MON	11.8	1'	central star variable m11.3 - 13.5, 16 days
5 !	2506	OC	08	00.2	-10	47	MON	7.6	10'	Cluster of stars resolves into two groups (800 stars)
6	2207	G	06	16.4	-21	22	CMA	10.7	3'x1.5'	interacting w/IC2163 (m13)
4	Alpha	DBL	06	45.2	-16	42	CMA	-1.5	5"	B-m8.5, separation widening, Sirius
4	Epsilon	DBL	06	58.7	-28	58	CMA	1.5	8"	B-m7.8, Adhara, try this one before Sirius
4 !	h3945	CDBL	07	16.6	-23	18	CMA	4.8	26.6"	B-m6.8, orange, white
5 !	2360	OC	07	17.8	-15	37	CMA	9.5	12'	Rich cluster of 50 stars, salt and pepper
5 !	2359	DN	07	18.6	-13	12	CMA	11	8'	the Whistle Nebula - Thor's Helmet, Wolf-Rayet central star
4 !!	2362	OC	07	18.8	-24	57	CMA	10.5	6'	Cluster of 40 stars surrounds Tau Canis Majoris, the Arkenstone
5 !	1501	PN	04	07.0	+60	55	CAM	11.5	50"	A classic planetary nebula, mottling evident w/good seeing
4 !	1502	OC	04	07.7	+62	20	CAM	5.3	7'	Irregular cluster, 25 stars, shaped like a cross-bow, Kemble's Cascade emanates from OC
4	ST	Carbon	04	46.0	+68	05	CAM	7-8.5		N5 Carbon Star, 195 days
5	U	Carbon	05	37.5	+62	29	CAM	8-9.5		N5 Carbon Star, 412 days
5 !	2403	G	07	36.9	+65	36	CAM	8.9	17'x10'	Large nearly face-on Sc-type spiral galaxy with structure
6	2655	G	08	55.6	+78	13	CAM	10.1	4'x3'	Sa mottled - round
6	IC3568	PN	12	32.9	+82	33	CAM	9.0	15"	very small
5	2421	OC	07	36.3	-20	37	PUP	9.4	8'	Large, fairly rich cluster of dim stars
4 !	2423	OC	07	37.1	-13	52	PUP	6.9	20'	Cluster of 60 stars with nebulosity
4	Kappa	DBL	07	38.8	-26	47	PUP	4.5	9.8"	B-m4.6, Markeb
4 !!	2437, M46	OC	07	41.8	-14	49	PUP	6	28'	w/PN N2438, annular, mag 11.3, 68"
5 !	2440	PN	07	41.9	-18	13	PUP	11.5	54"x20"	Bright, mini Bug Nebula, considerable detail
6	2452	PN	07	47.4	-27	20	PUP	12.2	.5'	annular
5	2477	OC	07	52.3	-38	33	PUP	5.8	27'	300 stars, m11+
5 !	2467	DN	07	52.6	-26	23	PUP	7.2	16'	the Skull Nebula, Wolf-Rayet central star
4 !	2539	OC	08	10.7	-12	50	PUP	8.2	21'	Large cluster of 150 stars, resolves easily
5	2567	OC	08	18.6	-30	38	PUP	8.3	10'	Chain of 6 stars through cluster of 50 stars
4 !	Zeta	MULT	08	12.2	+17	39	CNC	5.6	0.7"	B-m6.0, C-m7.3, 5.9", Tegmeni
4 !	Iota-1	CDBL	08	46.7	+28	46	CNC	4.2	30.4"	B-m6.6, yellow, blue
4	X	Carbon	08	55.4	+17	14	CNC	5.6-7.5		N7.7 Carbon Star
4 !	12	MULT	06	46.2	+59	26	LYN	5.4	1.7"	B-m6.0, C-m7.4, 8"
6	2419	GC	07	38.1	+38	53	LYN	11.5	2'	Galactic Wanderer
6 !?	JE1	PN	07	57.8	+53	25	LYN	12.1	7'	low power and filter! faint Helix
6	2537	G	08	13.2	+46	00	LYN	11.7	1.7'x1.5'	the Bear Paw Galaxy, round, dusty
4 !!	2683	G	08	52.7	+33	25	LYN	9.6	8'x1.3'	Edge-on galaxy, dark lane, mottled structure
5	2613	G	08	33.4	-22	58	PYX	10.4	6.6'x1.3'	Dim, warped edge-on galaxy
5 !	2818	OC	09	16.0	-36	37	PYX	8.2	9'	about 30 stars, contains m13 PN (2818A - 40" bipolar nebula in elliptical ring)
4	Gamma	DBL	08	09.4	-47	20	VEL	1.8	41"	B-m4.3, C-mag8, 62"
4 !!	3132	PN	10	07.0	-40	26	VEL	9.2	50"	the Eight-burst Nebula, m10 central star
5	2997	G	09	45.6	-31	11	ANT	11	6'x5'	Sc, tight spiral w/dark spirals, unusual
5	3044	G	09	53.7	+01	35	SEX	12.0	4'x1'	edge-on, bar-like core
4 !!	3115	G	10	05.2	-07	43	SEX	9.3	4.0x1.2	The Spindle Galaxy. lens-shaped
6	3166	G	10	13.8	+03	26	SEX	10.6	5.2'x2.7'	interacting w/mag10.5 N3169 (4.8'x3.2') and fainter N3165
6	3003	G	09	48.6	+33	25	LMI	11.7	4'x1'	SBc, nearly edge-on
6	3344	G	10	43.5	+24	55	LMI	10	6'x5'	Sc, face-on, mini M101
5	3395	G	10	49.8	+32	59	LMI	12.1	2'x1'	Sc interacting w/N3396 - Pec (m12.2) 3'x1' - group of 3 galaxies 23' east, N3430, 24, 13
5 !	3432	G	10	52.5	+36	37	LMI	11.4	5.8'x.8'	Edge-on streak w/3 stars superimposed
5 !!	2903	G	09	32.2	+21	30	LEO	8.9	11.0'x4.6'	Spiral arms, dark lanes, central condensation

5 !!	3190	G	10	18.1	+21	50	LEO	11.0	3.0'x1.0'	Elongated galaxy in nice group of 4 galaxies (N3185, 87, 93) (Hickson 44)
4 !!	Gamma	DBL	10	19.9	+19	52	LEO	2.2	4.4"	B-m3.5, Algieba
5	3227	G	10	23.5	+19	52	LEO	10.8	3'x1'	Seyfert - interacting w/mag 11.4 N3226 (1')
5	3351, M95	G	10	44.0	+11	42	LEO	9	3'	Face on barred spiral
5	3368, M96	G	10	46.8	+11	49	LEO	9	6'x4'	Distorted w/dust lane and spiral structure
5	3384	G	10	48.3	+12	38	LEO	10.0	4.4'x1.4'	Elliptical galaxy in the same field as M105 and NGC3389
4 !	3521	G	11	05.8	-00	02	LEO	8.9	7'x4'	Bright elongated galaxy with black eye
5	3607	G	11	16.9	+18	03	LEO	10.0	2'	w/3599 (m12), 3605 (m13), and 3608 (m11), all ellipticals
4 !	3623, M65	G	11	18.9	+13	05	LEO	9	8'x1.5'	dark lane, w/M66
4 !	3627, M66	G	11	20.2	+12	59	LEO	8.5	8'x2.5'	Irr, distorted, also N3628 edge-on w/dust lane
5 !	3628	G	11	20.3	+13	36	LEO	9.4	12.0'x1.5'	Dim edge-on with dark lane, near M65 and M66
6 !?	3753	G	11	37.9	+21	59	LEO	14	1'	Copeland's Septet (Hickson 57)
6 !?	3842	G	11	44.0	+19	57	LEO	13.3	1'	Leo Cluster (A1367)
5 !!	3372	DN	10	43.8	-59	52	CAR	4.5	80'x85'	the Eta Carina Nebula
5	2768	G	09	11.6	+60	02	UMA	10.3	2.0'x1.0'	Elongated galaxy with bright nucleus
5 !	2841	G	09	22.0	+50	58	UMA	9.3	6.4'x2.4'	Elongated galaxy with central condensation
6	2976	G	09	47.3	+67	55	UMA	10.2	3.4'x1.3'	S/I
5	2985	G	09	50.4	+72	17	UMA	10.6	5.5'x5'	Face-on spiral near M81 and M82 - round
4 !	3031, M81	G	09	55.6	+69	04	UMA	7.9	21'x10'	Massive spiral galaxy, Bode's Nebula
4 !!	3034, M82	G	09	55.8	+69	41	UMA	9.4	9'x4'	edge-on galaxy disrupted by M81
6 !?		Q	10	01.3	+55	54	UMA	16.5	6"	Twin Quasar Mirage
5 !	3079	G	10	02.0	+55	41	UMA	10.6	8.0'x1.0'	Distorted edge-on galaxy with dustlane, the Twin Quasar Mirage north-northwest about 15'
5	3184	G	10	18.3	+41	25	UMA	9.8	4'	Sc - mini M101
6	3198	G	10	19.9	+45	33	UMA	10.4	8'x3'	Sc - mini M101, tilted 30 degrees
6	3359	G	10	46.6	+63	13	UMA	10.5	6'x4'	S(B)c - mottled - S-shaped
5 !	3556, M108	G	11	11.5	+55	40	UMA	10	8'x1'	mottled
5 !	3587, M97	PN	11	14.8	+55	01	UMA	11	3'	Owl Nebula
4	Xi	DBL	11	18.2	+31	32	UMA	4.3	1.8"	B-m4.8, Alula Australis, 60 year binary
6	3631	G	11	21.0	+53	10	UMA	10.4	4'	Sc - mini M101
5	3675	G	11	26.1	+43	35	UMA	10.9	4'x1.7'	Bright, elongated galaxy with dark structure near nucleus
6	3718	G	11	32.6	+53	04	UMA	10.5	8'x4'	SBap - mini 5128 w/N3729 m11.3 Pec (Hickson 56 7' south)
6 !	3726	G	11	33.3	+47	02	UMA	10.4	6'x4'	Sc - S-shaped - mini M83
5	3877	G	11	46.1	+47	30	UMA	11.8	4'x1'	mottled, nearly edge-on
5	3893	G	11	48.6	+48	43	UMA	11.3	3.7'x1.9'	Face on with spiral structure?, knots, embedded stars
6	3938	G	11	52.8	+44	07	UMA	10.4	5'	Sc - mottled, face-on
6	3945	G	11	53.2	+60	41	UMA	10.6	5'x3'	SBa, faint bar, almost face-on
6 !	3953	G	11	53.8	+52	20	UMA	10.1	6.0'x2.8'	Sb - tilted 40 degrees, bar?
5	3992, M109	G	11	57.6	+53	23	UMA	9.5	7'x4'	Almost face on barred spiral
5	4051	G	12	03.2	+44	32	UMA	10.3	4.5'x3.6'	Large, diffuse spiral w/stellar core, structure?
5	4088	G	12	05.6	+50	33	UMA	10.5	4'x1.5'	Sb, warped, nearly edge-on
5	4096	G	12	06.0	+47	29	UMA	10.6	6'x1'	Sc - Irregular, mini 253
5	4605	G	12	40.0	+61	37	UMA	11	4'x1.2'	Scp - warped
4 !	Zeta	DBL	13	23.9	+54	56	UMA	2.3	14.4"	B-m4.0, Mizar, Alcor (m4.0) 11.8' east
5 !!	5457, M101	G	14	03.2	+54	21	UMA	8	22'	Face on Sc - Pinwheel Galaxy
6	2610	PN	08	33.4	-16	09	HYA	12.8	37"	annular, use high power
4 !!	3242	PN	10	24.8	-18	38	HYA	7.8	40"	The Ghost of Jupiter, green and violet CBS
6	3311	G	10	36.7	-27	32	HYA	11.6	2.2'	Hydra I Cluster - N3308, 9, 12, 14AB pec (like Cocoon Galaxy)
4 !	V	Carbon	10	49.2	-20	59	HYA	6.5-12		N6 Carbon Star, 575 days
5	3621	G	11	18.3	-32	49	HYA	10.5	5'x2'	Large diffuse galaxy in kite shaped stellar asterism
4 !!	5236, M83	G	13	37.0	-29	52	HYA	7	10'x8'	Sc
5	4027	G	11	59.5	-19	16	CRV	11.6	2.0'x1.7'	Sc - distorted
5 !	4038/9	G	12	01.9	-18	52	CRV	11.5	2.5'	Ring-Tail Galaxy
4 !!	4361	PN	12	24.5	-18	48	CRV	10.8	81"	Big, gray, oval with bright central star
6	4169	G	12	12.2	+29	10	COM	13	2.1'	The Box, Hickson 61
5 !	4192, M98	G	12	13.8	+14	54	COM	9.7	8'x2'	mottled
4 !	4254, M99	G	12	18.8	+14	25	COM	9.5	4'	three spiral arms, Pinwheel
5 !	4274	G	12	19.8	+29	37	COM	10.3	6.7'x1.3'	Mini M106, with NGC4278 (m10.2) and 4283 (m12.0)
5	4293	G	12	21.2	+18	23	COM	11.5	4.6'x1.6'	Elongated peculiar spiral galaxy, bright, mottled
5	4298	G	12	21.5	+14	36	COM	11.4	3.2'x1.9'	w/mag11.6 N4302 (5.2'x1.1') dark lane
5	4321, M100	G	12	22.9	+15	49	COM	9.2	5'	Face on Sc
5	4350	G	12	24.0	+16	42	COM	11.0	1.8'x0.5'	Nice lenticular galaxy with elliptical companion

5 !!	4414	G	12	26.4	+31	13	COM	9.7	3.2'x1.5'	Bright elongated Sc galaxy with black-eye?
5 !	4419	G	12	26.9	+15	03	COM	11.4	2.2'x0.6'	Elongated SB galaxy, 2 nuclei, dark lane?
6 !	4450	G	12	28.5	+17	05	COM	10.1	5'x3'	Sb - dark lanes
5	4494	G	12	31.4	+25	47	COM	9.6	1.3'x1.4'	Round, elliptical galaxy, bright stellar core near field star
5 !	4501, M88	G	12	32.0	+14	25	COM	9	5'x2.5'	spiral structure
4 !	24	CDBL	12	35.1	+18	22	COM	5.2	20.3"	B-m6.8, yellow, blue
5	4548, M91	G	12	35.4	+14	30	COM	9.5	4'	Face on barred spiral
5 !	4559	G	12	36.0	+27	58	COM	9.9	11'x4.5'	Diffuse elongated galaxy with spiral structure
4 !!	4565	G	12	36.3	+25	59	COM	9.5	14.4'x1.2'	Dark lane, stellar nucleus, spans eyepiece field
5 !!	4725	G	12	50.4	+25	30	COM	8.9	10'x5.5'	Backwards S, bright core, big and diffuse
4 !!	4826, M64	G	12	56.7	+21	41	COM	8.5	6'x3'	Black-eye Galaxy
6 !?	4874	G	12	59.6	+27	58	COM	11.9	2.7'	Coma Cluster (A1656) also N4889 (m11.4)
5 !	5024, M53	GC	13	12.9	+18	10	COM	7.6	3.3'	Small, loose? resolves well
5	3918	PN	11	50.3	-57	11	CEN	8	10"	the Blue Planetary Nebula, small blue disk
5	4945	G	13	05.4	-49	28	CEN	9.2	15'x2'	Sc, large, elongated, and dim
6	5102	G	13	22.0	-36	38	CEN	9.7	6'x2.5'	SO - round
4 !!	5128	G	13	25.5	-43	01	CEN	7.2	10'x8'	Centaurus A
4 !!	5139	GC	13	26.8	-47	29	CEN	3.7	36'	Omega Centauri
5	IC4329	G	13	49.1	-30	18	CEN	12.8	1.5'x0.5'	IC4329 galaxy group, 9 galaxies in 25' field
4 !	Alpha	DBL	14	40.0	-60	50	CEN	0.0	17.5"	B-m1.2, Rigel Kent, m11.1 Proxima 131' southwest
5 !	4111	G	12	07.1	+43	04	CVN	9.7	3.3'x0.6'	Mini version of NGC 3115
5	4214	G	12	15.6	+36	20	CVN	9.7	6.6'x5.8'	Large, bright, mottled, stellar core
4	2	CDBL	12	16.1	+40	40	CVN	5.8	11"	B-m8.1, gold, blue
4 !	4244	G	12	17.5	+37	49	CVN	10.1	14'x1'	Sb - spindle
4 !!	4258, M106	G	12	19.0	+47	18	CVN	8	19'x8'	Distorted, tilted spiral
5 !	4449	G	12	28.2	+44	06	CVN	9.2	4.1'x3.4'	The Box Galaxy, irregular with spiral structure, knots
4 !	4490	G	12	30.6	+41	38	CVN	9.7	5.6'x2.1'	The Cocoon Galaxy, extensive core, looping arm - interacting pair with mag11.6 N4485
5 !	4618	G	12	41.5	+41	09	CVN	10.8	4'	Sc pec, mottled, spiral structure - w/N4625 (m12.3)
4 !!	4631	G	12	42.1	+32	32	CVN	9.3	12.6'x1.4'	The Whale, companion galaxy NGC4627
4 !!	4656	G	12	44.0	+32	10	CVN	10.3	19'x2'	Fish hook galaxy w/many knots and 2 nuclei, companion galaxy NGC4657
4 !	Y	Carbon	12	45.1	+45	26	CVN	5-6.5		N3 Carbon Star, 158 days
5	4736, M94	G	12	50.9	+41	07	CVN	7.5	7'x3'	Sb - pec
4 !	Alpha	DBL	12	56.0	+38	18	CVN	2.9	19.4"	B-m5.5, yellow, blue? Cor Caroli
5 !	5005	G	13	10.9	+37	03	CVN	9.8	4.4'x1.7'	Elongated spiral galaxy, tilted, mottled with bright elongated double? core, NGC5033 0.5° southeast
6	5033	G	13	13.4	+36	36	CVN	10.1	10'x5'	Sb, elongated, faint spiral arms
5 !	5055, M63	G	13	15.8	+42	02	CVN	8.5	10'x6'	the Sunflower Galaxy
4 !!	5194, M51	G	13	29.9	+47	12	CVN	8	11'x7'	Whirlpool Galaxy - companion N5195
4 !!	5272, M3	GC	13	42.2	+28	23	CVN	6.4	10'	Brilliant, nicely condensed GC
5	5353	G	13	53.5	+40	17	CVN	11.1	2.8'x1.5'	N5353 Group, 4 galaxies in 12' field - N5353/4 interacting, 5371 m11.3 Sb 27' east (Hickson 68)
5	4179	G	12	12.9	+01	18	VIR	11.6	2.7'x0.6'	Mini version of M104
4 !	4216	G	12	15.9	+13	09	VIR	9.9	7.4'x0.9'	Edge-on galaxy, bright core, dark lane?
5 !	4303, M61	G	12	21.9	+04	28	VIR	10	5'	Face on Sc
4 !	4374, M84	G	12	25.1	+12	53	VIR	9.3	2'	w/M86, N4388, N4387 - the Flux Capacitor
4	4382, M85	G	12	25.4	+18	11	VIR	8.9	4'x2'	Barred Spiral N4394 7' east
5 !	4429	G	12	27.4	+11	07	VIR	10.2	3.3'x1'	SO lenticular, bright, elongated, with 2 bright field stars
5 !	4435	G	12	27.7	+13	05	VIR	10.3	1.3'x0.8'	The Eyes Galaxies w/N4438, mag10.8, 8'x3'
4	4472, M49	G	12	29.8	+08	00	VIR	8.5	3'x2'	Irr Galaxy N4470 10' south
4 !	4486, M87	G	12	30.8	+12	24	VIR	8.6	2'	Jet extends NW
5 !	4517	G	12	32.8	+00	07	VIR	10.4	6'x1'	Sc - edge-on
5 !	4526	G	12	34.0	+07	42	VIR	9.6	3.3'x1'	Elongated elliptical galaxy with bright core flanked by 2 stars
5 !	4535	G	12	34.3	+08	12	VIR	10.0	6'x4'	SBc - S-shaped
5	4536	G	12	34.5	+02	11	VIR	10.4	6.9'x2.6'	Distorted galaxy with dimmer NGC4527 (m10.4 mottled spindle) 3C273 1.4 degrees west
5 !	4567	G	12	36.5	+11	15	VIR	11.3	3'x2'	w/mag10.8 4568 (4.6'x2') the Siamese Twins
5 !	4569, M90	G	12	36.8	+13	10	VIR	9	7'x3'	dust lanes
5 !	4579, M58	G	12	37.7	+11	49	VIR	9	4'x3'	Tai fighter - SBa
4 !!	4594, M104	G	12	40.0	-11	37	VIR	8	6'x2'	Sombrero Galaxy
5	Gamma	DBL	12	41.7	-01	27	VIR	3.5	1"	B-m3.5, closing to 0.3" in 2007 (171 year orbit), Porrira
5	4649, M60	G	12	43.7	+11	33	VIR	9	3'	w/Mag 11 Galaxy N4647, M59 25' same direction as N4647

5	4654	G	12	44.0	+13	08	VIR	10.5	4'x2'	Sc
5 !	4666	G	12	45.1	-00	28	VIR	10.8	3.8'x0.8'	Like M104, w/faint companions NGC4668, N4653 20' west
5 !	4698	G	12	48.4	+08	29	VIR	10.5	3'x1.1'	Easy, elongated, bright core w/dark lane?
5	4697	G	12	48.6	-05	48	VIR	9.3	2.2'x1.4'	Bright, elongated, and easy - roundish
5 !	4699	G	12	49.0	-08	40	VIR	9.3	3'x2'	elongated spiral, brighter center with faint structure
5	4753	G	12	52.4	-01	12	VIR	9.9	3.3'x1.1'	Big irregular galaxy, diffuse, mottled, brighter core
5 !	4762	G	12	52.9	+11	14	VIR	10.2	3.7'x0.4'	Mini version of NGC4565, NGC4754 in same field
5	4866	G	12	59.5	+14	10	VIR	11.2	6.8'x0.8'	Elongated spiral with brighter nucleus and embedded field star
5	5054	G	13	17.0	-16	38	VIR	11.5	3.8'x2.2'	Big distorted face-on spiral with nucleus and suspect spiral arms
5 !	5247	G	13	38.1	-17	53	VIR	10.5	5'x4'	Sb - backward S
5	5364	G	13	56.2	+05	01	VIR	10.4	6.2'x3'	Face-on spiral with faint spiral structure, with mag 10.2 N5363
5 !	5566	G	14	20.3	+03	56	VIR	10.4	5.6'x1.1'	Tilted edge-on galaxy with brighter core and suspect spiral structure, with NGC5574 and 5576
5 !	5746	G	14	44.9	+01	57	VIR	10.1	6.2'x0.8'	Faint, large, edge-on galaxy with squarish nucleus and dark lane!!
6	5846	G	15	06.4	+01	36	VIR	10.2	3'	w/5846A, 5839, 45, and 50(SBb) - all others ellipticals
5	5248	G	13	37.5	+08	53	BOO	10.2	6.1'x4.4'	Diffuse Sc galaxy with brighter core and broad spiral arms
5	5676	G	14	32.8	+49	28	BOO	11.2	3'x1'	Sc - easy, elongated, even brightness, with spiral structure
4	Pi	DBL	14	40.7	+16	25	BOO	4.9	5.7"	B-m5.8
4 !	Epsilon	CDBL	14	45.0	+27	04	BOO	2.5	2.8"	B-m5.0, orange, white, Izar
4 !	Xi	DBL	14	51.4	+19	05	BOO	4.7	7.2"	B-m6.9, orange, blue?
6 !	IC4406	PN	14	22.4	-44	09	LUP	10.6	100"x37"	elliptical
6	6026	PN	16	01.4	-34	32	LUP	12.5	50"	ring-shape
4 !!	5904, M5	GC	15	18.6	+02	05	SER	6	12'	Spectacular, numerous chains of stars
5	5921	G	15	21.9	+05	04	SER	10.8	4'	SBb - face-on
4	Delta	DBL	15	34.8	+10	32	SER	4.1	3.9"	B-m5.2, widening
6	6027	G	15	59.2	+20	45	SER	12.4	2.2'	Seyfert's Sextet, mag14.5 - 17 (Hickson 79)
5 !	6611, M16	DN	18	18.8	-13	47	SER	8	30'	Eagle Nebula
6	3735	G	11	36.0	+70	32	DRA	12	4.2'	Hickson 55 25' northwest
5 !	5866, M102	G	15	06.5	+55	46	DRA	10.0	3'x1'	E6p lenticular
5 !	5907	G	15	15.9	+56	19	DRA	11.3	11.1'x0.7'	Elongated, no nucleus, dark lane suspect
5	6503	G	17	49.4	+70	09	DRA	10.2	4'x1'	Sb lenticular - mottled
4 !!	6543	PN	17	58.6	+66	38	DRA	8.8	22"	The Cat's Eye, vivid green planetary nebula with helical structure and white or golden central star
4 !	Epsilon	CDBL	19	48.2	+70	15	DRA	3.9	3.3"	B-m7.0, yellow, blue, Tyl
4	Xi	MULT	16	01.6	-11	14	SCO	4.9	.5"	B-m4.9, C-m7.2 orange dwarf, 7" in the same field, Struve1999 AB-12"
4	Beta	DBL	16	05.4	-19	48	SCO	2.7	13.7"	B-m4.9, primary has m10 companion within 1", Acrab
4 !	Nu	MULT	16	09.1	-19	21	SCO	4.6	1.5"	the Southern Double Double B-m5.6, C-m6.8, D-m7.8 CD-2.3", AC - 41.4"
4 !!	6093, M80	GC	16	17.1	-22	59	SCO	7.2	9'	Very condensed
4 !!	6121, M4	GC	16	23.6	-26	32	SCO	6	14'	Nicely resolved, chains of stars cross face of cluster
4	Alpha	DBL	16	29.5	-26	25	SCO	0.9	2.6"	B-m5.5, red, greenish, Antares
6	6153	PN	16	31.5	-40	15	SCO	10.9	28"x21"	ring-shape
4	6231	OC	16	54.0	-41	48	SCO	2.6	15'	100 stars, mags 7 - 13, nebulosity involved, mag8.6 OC Tr24, 1 degree north, 200 stars, 40'
5 !	6302	PN	17	13.7	-37	06	SCO	10	2'x1'	Bug Nebula
5	6337	PN	17	22.3	-38	29	SCO	10	38"x28"	the Cheerio, m14.8 central star
5	6451	OC	17	50.7	-30	13	SCO	8.5	6'	W-shaped cluster of 50 stars
4 !!	6205, M13	GC	16	41.7	+36	28	HER	6	23'	Hercules Cluster
5	6207	G	16	43.1	+36	50	HER	11.3	2'x1.1'	Small, elongated spiral near M13, IC4617 in between, very faint
4 !	6210	PN	16	44.5	+23	49	HER	9.7	.4'	mag 11.7 central star
4	6229	GC	16	47.0	+47	32	HER	9.4	4'	Looks like a planetary nebula at low power
4 !	Alpha	CDBL	17	14.7	+14	23	HER	3-4	4.7"	B-m5.4, red, yellow, Rasalgeti
4 !	6341, M92	GC	17	17.1	+43	08	HER	7	12'	Resolves nicely
4	Rho	DBL	17	23.7	+37	08	HER	4.6	4.0"	B-m5.5
4 !	95	CDBL	18	01.5	+21	35	HER	5.1	6.5"	B-m5.2, yellow, reddish
4 !	6218, M12	GC	16	47.2	-01	57	OPH	7	8'	Loosely concentrated
4	6254, M10	GC	16	57.1	-04	06	OPH	7	8'	Nicely condensed
4	6266, M62	GC	17	01.2	-30	07	OPH	7	6'	Mag 14-16 stars, compact core
4	6273, M19	GC	17	02.6	-26	16	OPH	7	5'	Mag 16 stars, delicate
5 !	6309	PN	17	14.1	-12	55	OPH	11.5	20"x10"	the Box Nebula, m14 central star
4 !	36	DBL	17	15.4	-26	35	OPH	5.1	5.0"	B-m5.1, orange pair
4 !	Omicron (39)	CDBL	17	18.0	-24	17	OPH	5.4	10.8"	B-m6.9, yellow, blue

5 !	6333, M9	GC	17	19.2	-18	31	OPH	7.9	2.4'	w/B64
5 !!	6369	PN	17	29.3	+16	12	OPH	9.9	28"	Round, annular nebula, blue-green disk - the Little Ghost
6	6384	G	17	32.4	+07	04	OPH	10.6	5'x3'	Sb - elongated, faint spiral structure
4 !	70	CDBL	18	02.9	+02	32	OPH	4.2	3"	B-m6.0, yellow, red
5	6572	PN	18	12.1	+06	51	OPH	8.1	15"x12"	Blue-green disk, m12 central star
5	6541	GC	18	08.0	-43	42	CRA	6.6	6'	mag 13 stars
5 !	6440	GC	17	48.9	-20	22	SGR	10.4	0.7'	Small resolved globular cluster with NGC6445
5 !	6445	PN	17	49.2	-20	01	SGR	11.0	38"x29"	Small, greenish? disk in same field with NGC6440
4 !!	6514, M20	DN	18	02.3	-23	02	SGR	7	29'x27'	Trifid Nebula
5 !!	6520	OC	18	03.4	-27	54	SGR	8.1	5'	B86 dark nebula adjacent and easy
4 !!	6523, M8	DN	18	03.8	-24	23	SGR	6	60'x35'	Lagoon Nebula
6	6563	PN	18	12.0	-33	52	SGR	11	1'	annular? - faint
4 !!	6618, M17	DN	18	20.8	-16	11	SGR	7	24'	Swan Nebula
4 !	6626, M28	GC	18	24.5	-24	52	SGR	7	15'	Mag 14-16 stars, compact core, well resolved
4 !!	6656, M22	GC	18	36.4	-23	54	SGR	6	33'	Massive, mag 11-15 stars
4 !	6809, M55	GC	19	40.0	-30	58	SGR	6	15'	Well resolved, mag 12-15 stars
4 !!	6818	PN	19	44.0	-14	09	SGR	9.3	22"x15"	The Little Gem, annular? blue-green planetary, near NGC6822, Barnard's Galaxy (.5° south)
4 !	6705, M11	OC	18	51.1	-06	16	SCT	7	12'	Flying Duck
5 !	6712	GC	18	53.1	-08	42	SCT	10.0	2.1'	Some resolution, faint planetary IC1295 nearby
6	IC1295	PN	18	54.6	-08	50	SCT	12.7	1.5'	annular, owl eyes
5 !	T	Carbon	18	32.3	+37	00	LYR	8-10		N6 Carbon Star, irregular
4 !	Epsilon	MULT	18	44.3	+39	40	LYR	5,6	2.7"	5,5 - 2.3", Double Double
4 !!	6720, M57	PN	18	53.6	+33	02	LYR	9	1'	Ring Nebula
5	6791	OC	19	20.7	+37	51	LYR	9.5	16'	300 stars, fainter version of N7789
4 !	V	Carbon	19	01.7	-05	46	AQL	6.5-8		N6 Carbon Star, 350 days
6	Sh2-071	PN	19	02.0	+02	09	AQL	13	2'	faint, large, elongated w/detail - use filter
6	6772	PN	19	14.6	-02	42	AQL	12.7	84"	faint
5 !	6781	PN	19	18.4	+06	33	AQL	11.0	106"	Mini version of the Dumbbell Nebula
6	6804	PN	19	31.6	+09	13	AQL	12	1'	embedded stars, mag 11 N6803 (5" diameter) 50' north
5	6802	OC	19	30.6	+20	16	VUL	11.0	3.5'	Numerous dim stars, moth shaped
6	6842	PN	19	55.0	+29	17	VUL	13	1'	annular?
4 !!	6853, M27	PN	19	59.6	+22	43	VUL	8	8'	Dumbbell Nebula
4 !	6940	OC	20	34.6	+28	18	VUL	6.3	31'	100+ stars, FG Vulpecula involved red star
5 !	6838, M71	GC	19	53.8	+18	47	SGE	8.5	6'	Small well resolved globular in rich star field
5 !	6905	PN	20	22.4	+20	07	DEL	11.1	44"x37"	The Blue Flash Nebula
4 !	Gamma	CDBL	20	46.7	+16	07	DEL	4.3	9.8"	B-m5.2, yellow, blue
4 !!	Beta	CDBL	19	30.7	+27	57	CYG	3.2	34.8"	B-m5.4, yellow, blue, Albireo
5 !	6819	OC	19	41.3	+40	11	CYG	7.3	10'	900 stars - the Foxhead
4 !!	6826	PN	19	44.8	+50	31	CYG	8.8	27"x24"	The Blinking Planetary, blue nebula with yellow central star
5 !	6888	SNR	20	12.0	+38	21	CYG	10	18'x12'	the Crescent Nebula
6	6894	PN	20	16.4	+30	34	CYG	11.5	55"	annular
5 !	6960	SNR	20	45.7	+30	43	CYG	9	70'x6'	Veil Nebula (W)
5 !	6992	SNR	20	56.4	+31	43	CYG	8	78'x8'	Veil Nebula (E) "Network"
5	7000	DN	20	58.8	+44	20	CYG		120x100'	North American Nebula, best with UHC - wide field, Pelican visible also
5 !	7008	PN	21	00.6	+54	33	CYG	10.7	1.5'	Oval nebula with embedded stars, detail - the Fetus
4	61	DBL	21	06.3	+38	39	CYG	5.2	30"	B-m6.0, 11.2LY distant
6 !	7026	PN	21	06.3	+47	51	CYG	12	24"	miniature M27, mag15 central star
6 !?	7027	PN	21	07.1	+42	14	CYG	8.5	18"	proto-planetary, deep turquoise color
6	7048	PN	21	14.2	+46	16	CYG	12	1'	annular, owl eyes
4	RV	Carbon	21	41.2	+37	47	CYG	7-9.5		N5 Carbon Star, 300 days
5 !	7099, M30	GC	21	40.4	-23	11	CAP	8.1	6'	Condensed nucleus
5 !	7009	PN	21	04.2	-11	22	AQR	8.4	44"x24"	The Saturn Nebula, bright blue elongated disk, central star, ansae
4 !!	7089, M2	GC	21	33.5	-00	49	AQR	7	12'	Very condensed, impressive
4	Zeta	DBL	22	28.7	-00	01	AQR	4.3	2"	B-m4.5, yellowish, bluish?
5 !!	7293	PN	22	39.6	-20	48	AQR	6.5	12'	Helix
6	7606	G	23	19.1	-08	29	AQR	10.8	6'x2'	dark lanes?
4 !	7078, M15	GC	21	30.0	+12	10	PEG	7	12'	Tight, condensed cluster
5	7320	G	22	36.1	+33	57	PEG	12.7	2'x1'	brightest member of Stephan's Quintet, also N7318A/B (Hickson 92)
5 !	7331	G	22	37.1	+34	25	PEG	9.7	10'x2'	Edge on spiral with brighter core, 0.5° north of Stephan's Quintet

6 ?		Q	22	40.5	+03	21	PEG	17.4		Einstein's Cross, 2 m17.4 components, 2 m18.4
5	7448	G	23	00.1	+15	59	PEG	11.2	2'x1'	Easy, distorted, edge-on, tilted about 30°
5	7479	G	23	04.9	+12	19	PEG	11.0	3.4'x2.6'	Dim, big, SBb galaxy, bar visible, backwards S
6	Jones1	PN	23	35.9	+30	27	PEG	12.1	5.2'	Horseshoe shaped
5 !	7814	G	00	03.3	+16	09	PEG	10.5	5'x1'	Sb - mini M104
6	7172	G	22	02.0	-31	52	PSA	11.9	1.6'x0.6'	Sa, edge-on, distorted w/dark lane - w/compact trio of elliptical galaxies 7173-4-6, 7' south (Hickson 90)
5 !	6939	OC	20	31.4	+60	38	CEP	7.8	8'	Nice thinly scattered stars (300), galaxy in field NGC6946
5 !	6946	G	20	34.8	+60	09	CEP	8.8	9.0'x7.5'	Mini M101, definite spiral structure
6	7023	DN	21	02.0	+68	09	CEP	6.8	18'	Nebula (mag10?) surrounds 7th magnitude star
5 !	S	Carbon	21	35.9	+78	24	CEP	7.5-13		N8 Carbon Star, 487 days
6 !	7354	PN	22	40.4	+61	17	CEP	12.2	30"	smaller version of M57
6	7538	DN	23	13.5	+61	31	CEP		9'x6'	similar to M27, faint
4 !!	40	PN	00	13.0	+72	32	CEP	10.2	60"	Bright nebula with central star
6	IC5148	PN	21	59.5	-39	23	GRU	12.9	1.9'	annular
6	7410	G	22	55.0	-39	40	GRU	10.4	4'x1'	SB, nearly edge-on, no structure
5	7582	G	23	18.4	-42	22	GRU	10.6	3'x2'	SBb, Grus Quartet w/m10.7 NGC7552 (SBa), m11.6 NGC7590 (Sb), and m11.4 NGC7599 (SBc - pec)