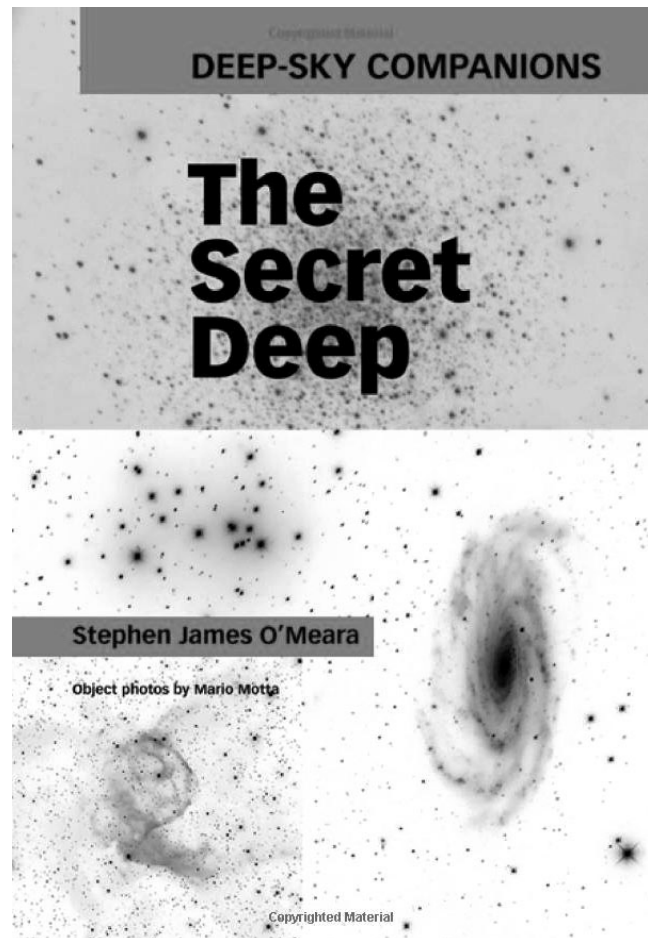


Secret Deep

In this fresh list, Stephen James O'Meara presents 109 new objects for stargazers to observe. The Secret Deep list contains many exceptional objects, including a planetary nebula whose last thermal pulse produced a circumstellar shell similar to the one expected in the final days of our Sun's life; a piece of the only supernova remnant known visible to the unaided eye; the flattest galaxy known; the largest edge-on galaxy in the heavens; the brightest quasar; and the companion star to one of the first black hole candidates ever discovered. Featuring galaxies, clusters and nebulae not covered in previous Deep-Sky Companions books (Messier, Caldwell and Hidden Treasures), this is a wonderful addition to the series and an essential guide for any deep-sky observer.



Secret Deep Catalog

OC: open cluster PN: planetary nebula SG: spiral galaxy
 GC: globular cluster SR: supernova remnant EG: elliptical galaxy
 BN: emission nebula IG: irregular galaxy

S	NGC/IC/...	Type	Mag	RA	Dec	Con
S1	VDB 1	BN	-	00h 11.0m	+58° 46'	Cas
S2	134	SG	10.4	00h 30.4m	-31° 15'	Scl
S3	488	SG	10.3	01h 21.8m	+05° 15'	Psc
S4	654	OC	6.5	01h 44.0m	+61° 53'	Cas
S5	Cr 463	OC	5.7	01h 45.7m	+71° 49'	Cas
S6	Stock 2	OC	4.4	02h 14.7m	+59° 29'	Cas
S7	936	SG	10.2	02h 27.6m	-01° 09'	Cet
S8	1084	SG	10.7	02h 46.0m	-07° 35'	Eri
S9	1245	OC	8.4	03h 14.7m	+47° 14'	Per
S10	1300	SG	10.4	03h 19.7m	-19° 25'	Eri
S11	1342	OC	6.7	03h 31.7m	+37° 22'	Per
S12	1400	SG	11.0	03h 39.5m	-18° 41'	Eri
S13	1407	EG	9.7	03h 40.2m	-18° 35'	Eri
S14	1491	BN	-	04h 03.4m	+51° 19'	Per
S15	1514	PN	10.9	04h 09.6m	+30° 46'	Tau
S16	1579	BN	-	04h 30.2m	+35° 16'	Per
S17	1750	OC	6	05h 04.3m	-23° 44'	Tau
S18	1758	OC	7.5	05h 04.7m	-23° 48'	Tau
S19	1788	BN	-	05h 06.9m	-03° 21'	Ori
S20	1807	OC	7.0	05h 10.8m	+16° 31'	Tau
S21	1817	OC	7.7	05h 12.4m	+16° 41'	Tau
S22	IC 417	BN	8	05h 28.1m	+34° 26'	Aur
S23	1931	BN	10.1	05h 31.4m	+34° 15'	Aur
S24	Cr 70	OC	0.6	05h 35.6m	-01° 05'	Ori
S25	2022	PN	11.9	05h 42.1m	+09° 05'	Ori
S26	Sh2-276	SR	-	05h 52.5m	+00° 45'	Ori
S27	IC 2149	PN	10.7	05h 56.4m	+46° 06'	Aur
S28	2149	BN	-	06h 03.5m	-09° 44'	Mon
S29	2170	BN	-	06h 07.5m	-06° 24'	Mon
S30	2281	OC	5.4	06h 48.3m	+41° 05'	Aur
S31	2298	GC	9.3	06h 49.0m	-36° 00'	Pup
S32	2316	BN	-	06h 59.7m	-07° 46'	Mon
S33	2343	OC	6.7	07h 08.1m	-10° 37'	Mon
S34	2346	PN	11.8	07h 09.4m	-00° 48'	Mon
S35	2359	BN	-	07h 18.6m	-13° 12'	CMa
S36	2371-2	PN	11.3	07h 25.5m	+29° 29'	Gem
S37	2420	OC	8.3	07h 38.4m	+21° 34'	Gem
S38	3079	SG	10.9	10h 02.0m	+55° 41'	UMa
S39	3077	IG	9.8	10h 03.3m	+68° 44'	UMa
S40	3166	SG	10.4	10h 13.8m	+03° 26'	Sex

S	NGC/IC	Type	Mag	RA	Dec	Con
S41	3169	SG	10.2	10h 14.2m	+03° 28'	Sex
S42	3198	SG	10.3	10h 19.9m	+45° 33'	UMa
S43	3226	EG	11.4	10h 23.4m	+19° 54'	Leo
S44	3227	SG	10.3	10h 23.5m	+19° 52'	Leo
S45	3432	SG	11.2	10h 52.5m	+36° 37'	LMI
S46	3675	SG	10.2	11h 26.1m	+43° 35'	UMa
S47	3893	SG	10.5	11h 48.6m	+48° 43'	UMa
S48	3953	SG	10.1	11h 53.8m	+52° 20'	UMa
S49	4036	SG	10.7	12h 01.4m	+61° 54'	UMa
S50	4051	SG	10.2	12h 03.2m	+44° 32'	UMa
S51	4111	SG	10.7	12h 07.1m	+43° 04'	CVn
S52	4147	GC	10.3	12h 10.1m	+18° 32'	Com
S53	4293	SG	10.4	12h 21.2m	+18° 23'	Com
S54	4414	SG	10.1	12h 26.4m	+31° 13'	Com
S55	4435	SG	10.8	12h 27.7m	+13° 05'	Vir
S56	4438	SG	10.2	12h 27.8m	+13° 01'	Vir
S57	4450	SG	10.1	12h 28.5m	+17° 05'	Com
S58	4461	SG	11.2	12h 29.0m	+13° 11'	Vir
S59	3C 273	Quasar	12.4	12h 29.1m	+02° 03'	Vir
S60	4473	EG	10.2	12h 29.8m	+13° 26'	Com
S61	4477	SG	10.4	12h 30.0m	+13° 38'	Com
S62	4636	EG	9.5	12h 42.8m	+02° 41'	Vir
S63	4665	SG	10.5	12h 45.1m	+03° 03'	Vir
S64	4753	IG	9.9	12h 52.4m	-01° 12'	Vir
S65	4762	SG	10.3	12h 52.9m	+11° 04'	Vir
S66	5033	SG	10.2	13h 13.4m	+36° 36'	CVn
S67	5195	SG	9.6	13h 30.0m	+47° 16'	CVn
S68	5466	GC	9.0	14h 05.4m	+28° 32'	Boo
S69	5846	EG	10.0	15h 06.4m	+01° 36'	Vir
S70	5907	SG	10.3	15h 15.9m	+56° 20'	Dra
S71	IC 4593	PN	10.7	16h 11.7m	+12° 04'	Her
S72	6144	GC	9.0	16h 27.2m	-26° 01'	Sco
S73	6207	SG	11.6	16h 43.1m	+36° 50'	Her
S74	6229	GC	9.4	16h 46.9m	+47° 32'	Her
S75	6293	GC	8.2	17h 10.2m	-26° 35'	Oph
S76	6309	PN	11.5	17h 14.1m	-12° 55'	Oph
S77	6356	GC	8.2	17h 23.6m	-17° 49'	Oph
S78	6522	GC	8.3	18h 03.6m	-30° 02'	Sgr
S79	6528	GC	9.6	18h 04.8m	-30° 03'	Sgr
S80	6563	PN	11.0	18h 12.1m	-33° 52'	Sgr
S81	6589	BN	-	18h 16.9m	-19° 47'	Sgr
S82	6595	BN	-	18h 17.1m	-19° 52'	Sgr
S83	6638	GC	9.2	18h 30.9m	-25° 30'	Sgr
S84	6664	OC	7.8	18h 36.5m	-08° 11'	Sct
S85	6717	GC	8.4	18h 55.1m	-22° 42'	Sgr

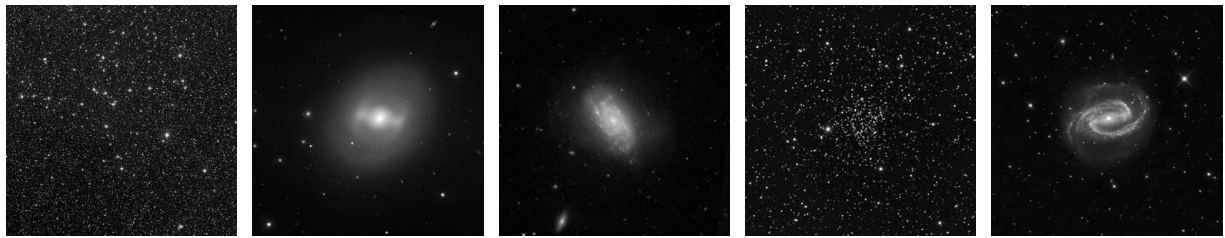
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S86	6751	PN	11.9	19h 05.9m	-06° 00'	Aql
S87	6755	OC	7.5	19h 07.8m	+04° 16'	Aql
S88	6756	OC	10.6	19h 08.7m	+04° 42'	Aql
S89	6778	PN	11.9	19h 18.4m	-01° 36'	Aql
S90	6781	PN	11.4	19h 18.5m	+06° 32'	Aql
S91	6804	PN	12.2	19h 31.6m	+09° 13'	Aql
S92	6811	OC	6.8	19h 37.2m	+46° 22'	Cyg
S93	Cygnus X-1	Star	8.8	19h 58.4m	+35° 12'	Cyg
S94	O'Meara 3	Asterism	-	20h 05.3m	+47° 32'	Cyg
S95	6891	PN	10.5	20h 15.2m	+12° 42'	Del
S96	6894	PN	12.3	20h 16.4m	+30° 34'	Cyg
S97	IC 1318(a)	BN	-	20h 16.6m	+41° 49'	Cyg
S98	6905	PN	11.1	20h 22.4m	+20° 06'	Del
S99	6910	OC	6.6	20h 23.2m	+40° 47'	Cyg
S100	6939	OC	7.8	20h 31.5m	+60° 40'	Cep
S101	7026	PN	10.9	21h 06.3m	+47° 51'	Cyg
S102	7048	PN	12.2	21h 14.2m	+46° 17'	Cyg
S103	7129	BN	-	21h 42.8m	+66° 06'	Cep
S104	7160	OC	6.1	21h 53.7m	+62° 36'	Cep
S105	7209	OC	7.7	22h 05.8m	+46° 29'	Lac
S106	7354	PN	12.2	22h 40.3m	+61° 17'	Cep
S107	7510	OC	7.9	23h 11.1m	+60° 34'	Cep
S108	7538	BN	-	23h 13.5m	+61° 31'	Cep
S109	7790	OC	8.5	23h 58.4m	+61° 12'	Cas

Secret Deep Observing Log

S	Date	S	Date	S	Date
1		38		75	
2		39		76	
3		40		77	
4		41		78	
5		42		79	
6		43		80	
7		44		81	
8		45		82	
9		46		83	
10		47		84	
11		48		85	
12		49		86	
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24		61		98	
25		62		99	
26		63		100	
27		64		101	
28		65		102	
29		66		103	
30		67		104	
31		68		105	
32		69		106	
33		70		107	
34		71		108	
35		72		109	
36		73			
37		74			



S1 VDB 1 S2 NGC134 S3 NGC488 S4 NGC654 S5 Cr 463



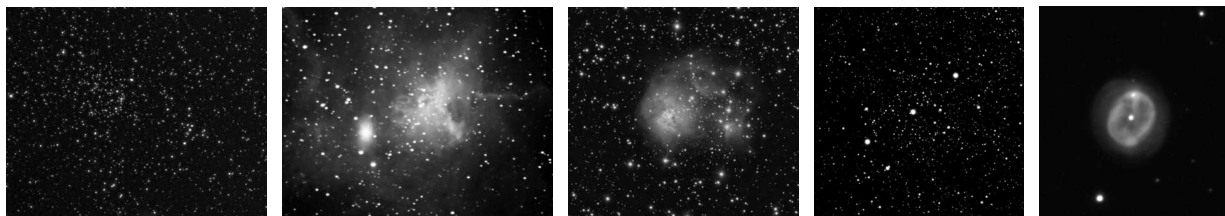
S6 Stock 2 S7 NGC936 S8 NGC1084 S9 NGC1245 S10 NGC1300



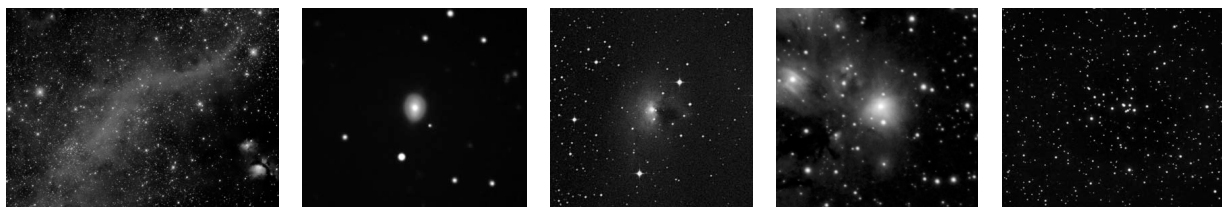
S11 NGC1342 S12 NGC1400 S13 NGC1407 S14 NGC1491 S15 NGC1514



S16 NGC1579 S17 NGC1750 S18 NGC1758 S19 NGC1788 S20 NGC1807



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S26 Sh2-276 S27 IC2149 S28 NGC2149 S29 NGC2170 S30 NGC2281



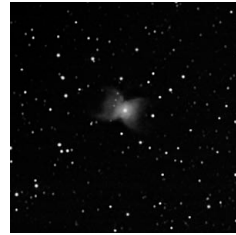
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S32 NGC2316



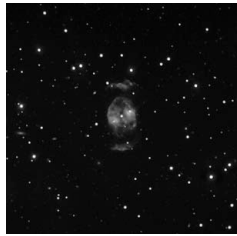
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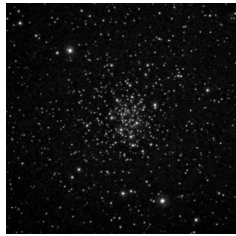
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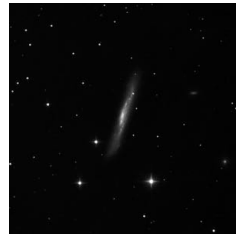
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S36 NGC2370



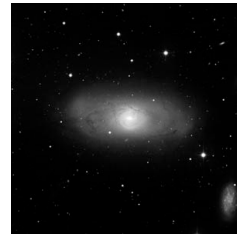
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S38 NGC3079



S39 NGC3077



S40 NGC3166



S41 NGC3169



S42 NGC3198



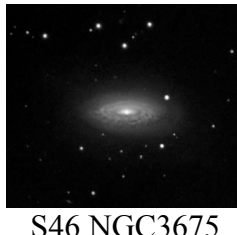
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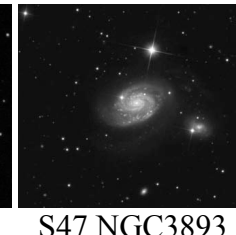
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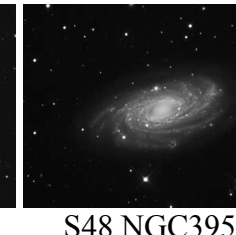
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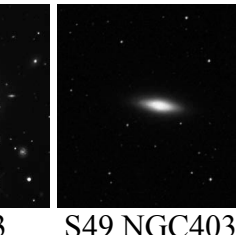
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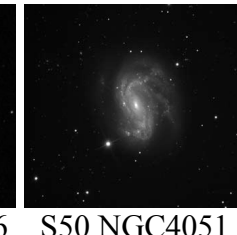
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S48 NGC3953



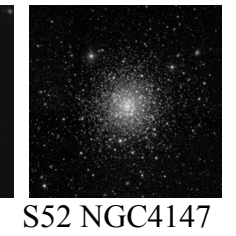
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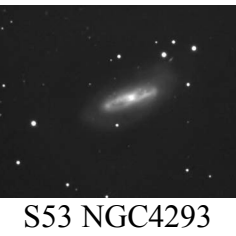
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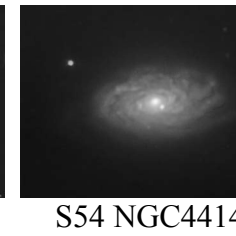
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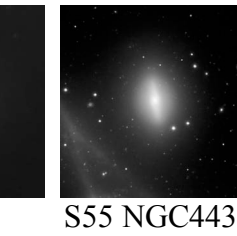
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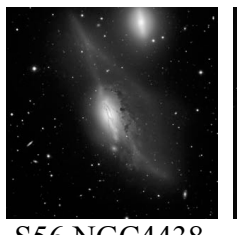
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S54 NGC4414



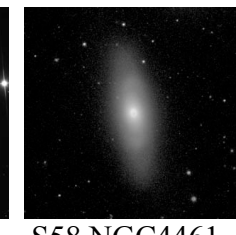
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S56 NGC4438



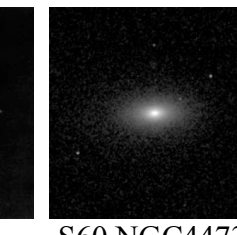
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S58 NGC4461



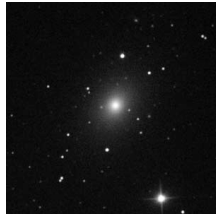
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S60 NGC4473



S61 NGC4477



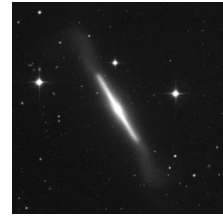
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S63 NGC4665



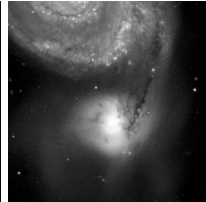
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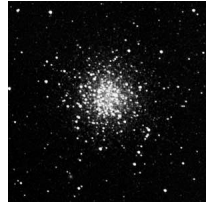
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S66 NGC5033



S67 NGC5195



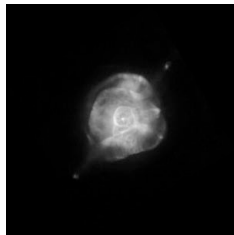
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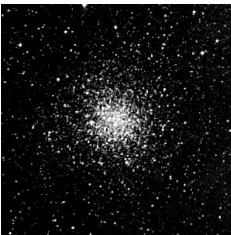
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S70 NGC5907



S71 IC4593



S72 NGC6144



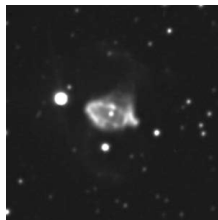
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S74 NGC6229



S75 NGC6293



S76 NGC6309



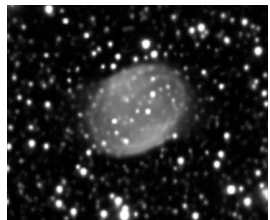
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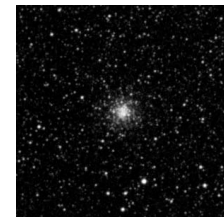
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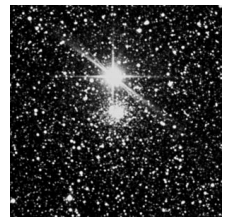
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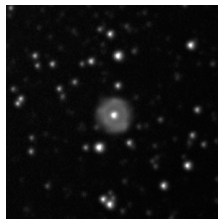
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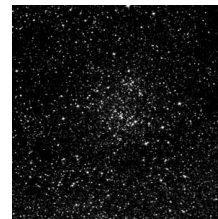
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S85 NGC6717



S86 NGC6751



S87 NGC6755



S88 NGC6756



S89 NGC6778



S90 NGC6781



S91 NGC6804



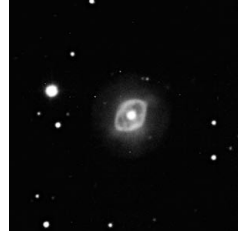
S92 NGC6811



S93 Cygnus X-1



S94 O'Meara 3



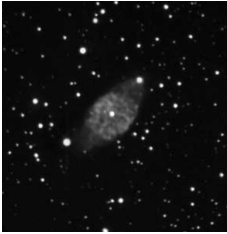
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S96 NGC6894



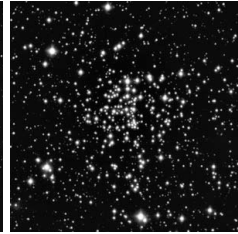
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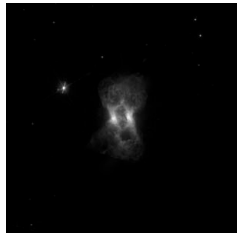
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S99 NGC6910



S100 NGC6939



S101 NGC7026



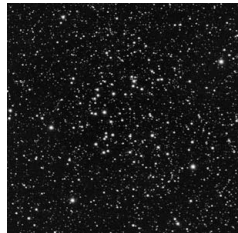
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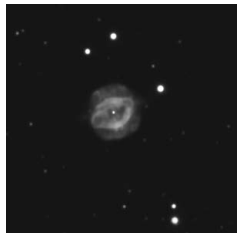
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S104 NGC7160



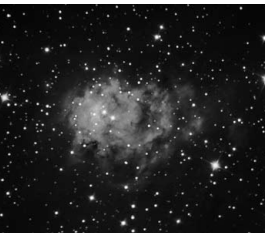
S105 NGC7209



S106 NGC7354



S107 NGC7510



S108 NGC7538



S109 NGC7790