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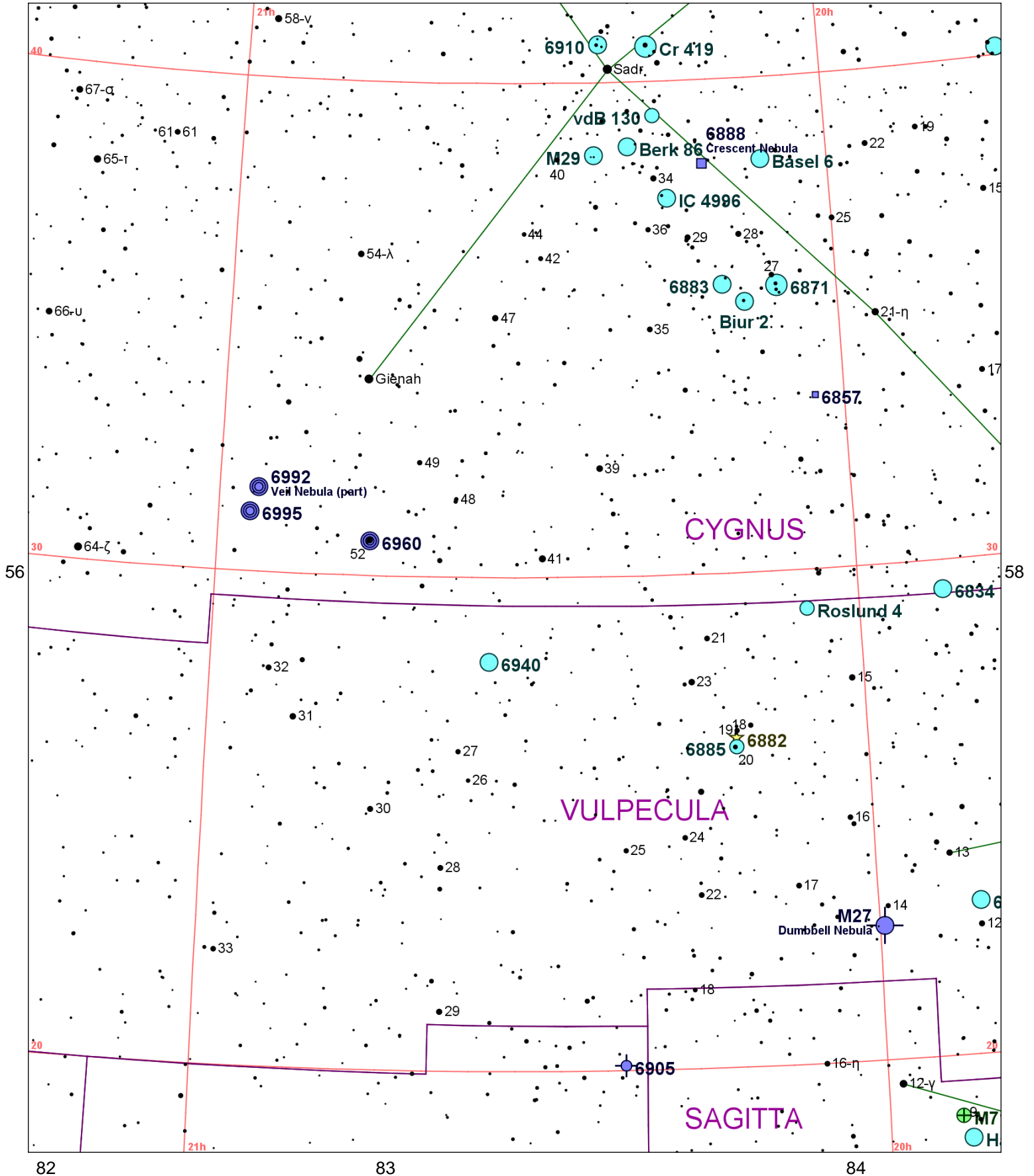


Chart 57													
Name	M	Const.	Mag.	Type	Size	R.A.	Decl.	C	R	S	O	# Stars	B
Common					Notes								
Basel 6		CYG	7.7	OC	14.0m	20h 06.8m	38° 21.0'					40	
					13"-pB,pL,arrowhead shape, 22* at 100X								
Berk 86		CYG	7.9	OC	8.0m	20h 20.4m	38° 42.0'					30	
					13"-pF,pS,nRi,nC 19* mags 10..13 at 135X								
Biur 2		CYG	6.3	OC	13.0m	20h 09.2m	35° 29.0'					10	
					13"-pF,pL,sC,nvRi, 22* mags 11..13 at 100X								
Cr 419		CYG	5.4	OC	4.5m	20h 18.1m	40° 43.0'						
					13"-pB,pL,nRi,sC, 16* mags 11..13 at 100X - Compact but not rich;N of Struve 2666;14 * to 13 mag								
Harvard 20		SGE	7.7	OC	7.0m	19h 53.1m	18° 20.0'					15	
					pL,IC,* 11... - 40 faint * in 12';has two centers								
IC 4996		CYG	7.3	OC	6.0m	20h 16.5m	37° 38.0'					15	
					Cl,st 8...13								
NGC 6819		CYG	7.3	OC	5.0m	19h 41.3m	40° 11.0'		R96	S42	O		B
					Cl,vL,vRi,*11...15 - 150 stars mags 11-16								
NGC 6830		VUL	7.9	OC	12.0m	19h 51.0m	23° 06.0'					20	
					Cl,L,pRi,pC,*11...12 - H VII 9								
NGC 6834		CYG	7.8	OC	5.0m	19h 52.2m	29° 24.0'					50	
					Cl,P,IC,*11...12 - H VIII 16								
NGC 6838	M71	SGE	8.3	GC	6.1m	19h 53.8m	18° 47.0'				O		B
					Cl,vL,vRi,pmC,*11...16 - Arrowhead shape, stars have few metals								
NGC 6853	M27	VUL	7.3	PN	480s x 340s	19h 59.6m	22° 43.0'				O		B
Dumbbell Nebula					!!vB,vL,bi-N,IE - PK60-3.1;Lord Rosse drew 18* invl								
NGC 6857		CYG	11.4	DN	0.8m	20h 02.8m	33° 31.0'				O		
					F,am Milky Way st - H III 144;Oval;PK70+1.2								
NGC 6871		CYG	5.2	OC	20.0m	20h 05.9m	35° 47.0'					15	
					Cl,st L&S,D* inv - In Cyg OB3?								
NGC 6882		VUL	8.1	AST	18.0m	20h 11.9m	26° 40.0'						
					Cl,P,IC - H VIII 22;Near cluster NGC 6885								
NGC 6883		CYG	8.0	OC	15.0m	20h 11.3m	35° 51.0'					30	
					Cl,pRi,** inv								
NGC 6885		VUL	8.1	OC	7.0m	20h 11.9m	26° 29.0'	C37				30	
					Cl,vB,vL,Ri,IC,*6..11 - H VIII 20;With 20 Vul								
NGC 6888		CYG	10.0	DN	20m x 10m	20h 12.8m	38° 19.0'	C27	R98		O		
Crescent Nebula					F,vL,vmE,** att - H IV 72;Wolf-Rayet * invl								
NGC 6905		DEL	12.0	PN	44s x 38s	20h 22.4m	20° 06.0'				O		
					B,pS,R,4S* nr - Blue Flash Nebula								
NGC 6910		CYG	7.4	OC	8m	20h 23.2m	40° 47.0'					50	B
					Cl,pB,pS,P,pC,*20.12 - H VIII 56;In Gamma Cyg nebula and Cyg OB9								
NGC 6913	M29	CYG	6.6	OC	7.0m	20h 23.9m	38° 32.0'				O	50	B
					Cl,P,IC,st L&S - About 20 stars mags 8...								
NGC 6940		VUL	6.3	OC	31m	20h 34.4m	28° 17.0'		R106	S111	O	60	B
					Cl,vB,vL,vRi,cC - H VII 8;100 * mags 9...								
NGC 6960		CYG	7.0	SR	210m x 160m	20h 45.7m	30° 43.0'	C34	R99	S44	O		
					pB,cL,eIF,Kappa Cyg invl - H V 15;Veil Nebula western part;* 52 CYG invl								
NGC 6992		CYG	7.0	SR	60m x 8m	20h 56.4m	31° 43.0'	C33	R99	S45	O		
Veil Nebula (part)					eF,eL,eE,eIF,Bifid - H V 14;Veil Nebula eastern part								
NGC 6995		CYG	7.0	SR	12m	20h 57.1m	31° 13.0'						
					F,eL,neb&st in groups								
Roslund 4		VUL	10.0	OC		20h 04.9m	29° 13.0'					30	
					In nebula IC 4954-5								
vdB 130		CYG	9.3	OC	6m	20h 17.7m	39° 19.0'					15	

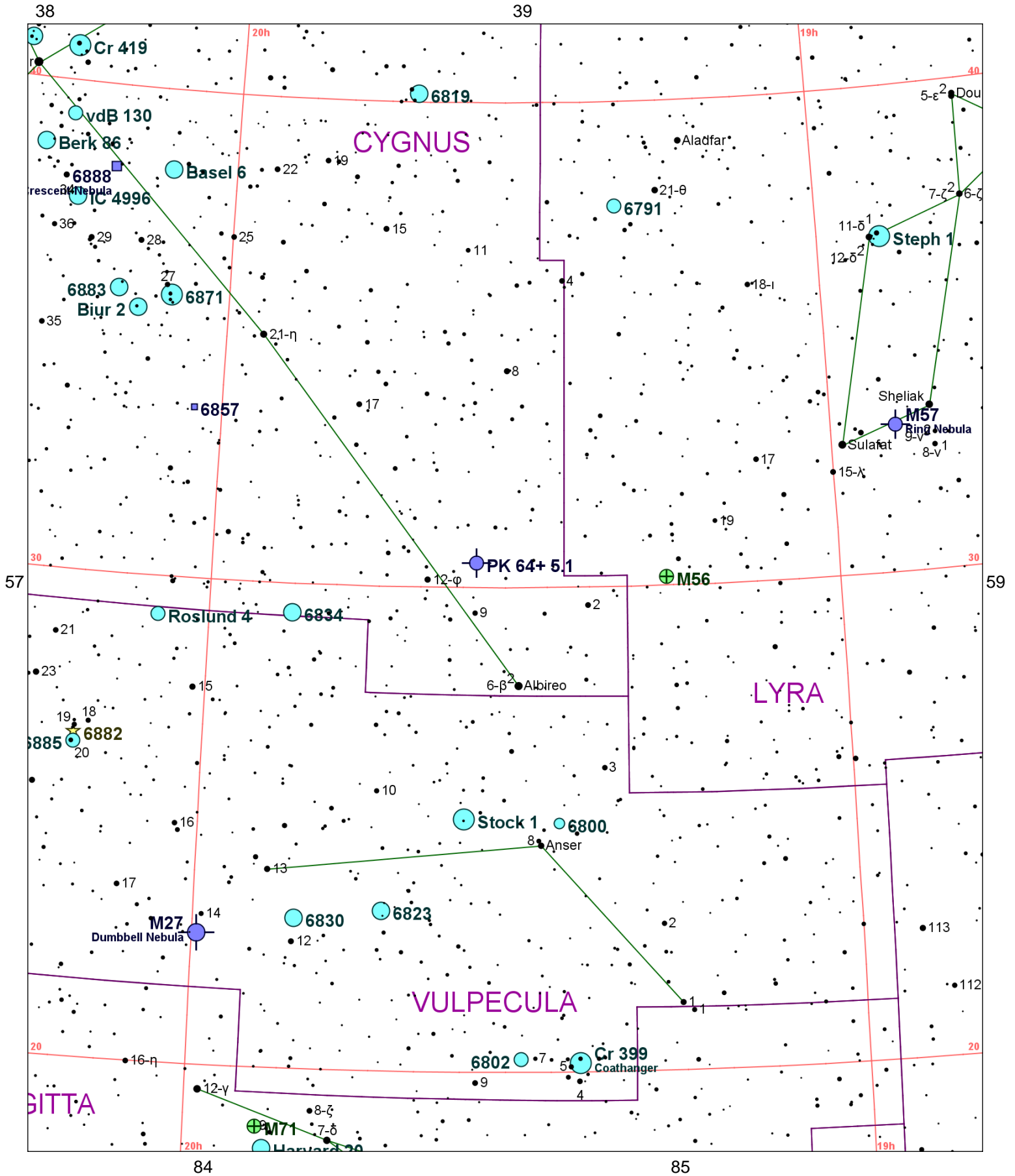


Chart 58													
Name	M	Const.	Mag.	Type	Size	R.A.	Decl.	C	R	S	O	# Stars	B
Common					Notes								
Basel 6		CYG	7.7	OC	14.0m	20h 06.8m	38° 21.0'					40	
					13"-pB,pL,arrowhead shape, 22* at 100X								
Berk 86		CYG	7.9	OC	8.0m	20h 20.4m	38° 42.0'					30	
					13"-pF,pS,nRi,nC 19* mags 10..13 at 135X								
Biur 2		CYG	6.3	OC	13.0m	20h 09.2m	35° 29.0'					10	
					13"-pF,pL,sC,nvRi, 22* mags 11..13 at 100X								
Cr 399		VUL	3.6	OC	140m x 50m	19h 25.4m	20° 11.0'				O	40	B
Coathanger					vL,B incl 4,5,7 Vulp - Brocchi's cluster;easy naked eye								
Cr 419		CYG	5.4	OC	4.5m	20h 18.1m	40° 43.0'						
					13"-pB,pL,nRi,sC, 16* mags 11..13 at 100X - Compact but not rich;N of Struve 2666;14 * to 13 mag								
Harvard 20		SGE	7.7	OC	7.0m	19h 53.1m	18° 20.0'					15	
					pL,IC,* 11... - 40 faint * in 12';has two centers								
IC 4996		CYG	7.3	OC	6.0m	20h 16.5m	37° 38.0'					15	
					Cl,st 8...13								
NGC 6720	M57	LYR	9.4	PN	86s x 62s	18h 53.6m	33° 02.0'				O		
Ring Nebula					Ring neb,B,pL,cE - central* var 14 to 16 mag;PK63+13.1								
NGC 6779	M56	LYR	8.3	GC	5m	19h 16.6m	30° 11.0'				O		B
					B,L,iR,gvmCM,rrr - Stars 11...								
NGC 6791		LYR	9.5	OC	16m	19h 20.7m	37° 51.0'					300	
					vF,L,vRi,*F								
NGC 6800		VUL		OC	5m	19h 27.1m	25° 08.0'				O	20	
					Cl,vL,pRi,vIC,st10.. - H VIII 21;30' NW from Alpha Vul								
NGC 6802		VUL	8.8	OC	3.2m	19h 30.6m	20° 16.0'		R105			50	
					Cl,L,vC,E0,st14...18 - H VI 14;Bar shaped elong N-S								
NGC 6819		CYG	7.3	OC	5.0m	19h 41.3m	40° 11.0'		R96	S42	O		B
					Cl,vL,vRi,*11...15 - 150 stars mags 11-16								
NGC 6823		VUL	7.1	OC	12.0m	19h 43.2m	23° 18.0'				O	30	B
					Cl,cRi,E,st11...12 - H VII 18;In Vul OB1 w nebula NGC 6820;30 * mags 11..12								
NGC 6830		VUL	7.9	OC	12.0m	19h 51.0m	23° 06.0'					20	
					Cl,L,pRi,pC,*11...12 - H VII 9								
NGC 6834		CYG	7.8	OC	5.0m	19h 52.2m	29° 24.0'					50	
					Cl,P,IC,*11...12 - H VIII 16								
NGC 6838	M71	SGE	8.3	GC	6.1m	19h 53.8m	18° 47.0'				O		B
					Cl,vL,vRi,pmC,*11...16 - Arrowhead shape, stars have few metals								
NGC 6853	M27	VUL	7.3	PN	480s x 340s	19h 59.6m	22° 43.0'				O		B
Dumbbell Nebula					!!vB,vL,bi-N,IE - PK60-3.1;Lord Rosse drew 18* invl								
NGC 6857		CYG	11.4	DN	0.8m	20h 02.8m	33° 31.0'				O		
					F,am Milky Way st - H III 144;Oval;PK70+1.2								
NGC 6871		CYG	5.2	OC	20.0m	20h 05.9m	35° 47.0'					15	
					Cl,st L&S,D* inv - In Cyg OB3?								
NGC 6882		VUL	8.1	AST	18.0m	20h 11.9m	26° 40.0'						
					Cl,P,IC - H VIII 22;Near cluster NGC 6885								
NGC 6883		CYG	8.0	OC	15.0m	20h 11.3m	35° 51.0'					30	
					Cl,pRi,** inv								
NGC 6885		VUL	8.1	OC	7.0m	20h 11.9m	26° 29.0'	C37				30	
					Cl,vB,vL,Ri,IC,*6..11 - H VIII 20;With 20 Vul								
NGC 6888		CYG	10.0	DN	20m x 10m	20h 12.8m	38° 19.0'	C27	R98		O		
Crescent Nebula					F,vL,vmE,** att - H IV 72;Wolf-Rayet * invl								
NGC 6910		CYG	7.4	OC	8m	20h 23.2m	40° 47.0'					50	B
					Cl,pB,pS,P,pC,*20.12 - H VIII 56;In Gamma Cyg nebula and Cyg OB9								
PK 64+ 5.1		CYG	9.6	PN	5s	19h 34.8m	30° 31.0'						
					vF,S - Campbell's hydrogen star, BD means Bonner Durchmusterung								
Roslund 4		VUL	10.0	OC		20h 04.9m	29° 13.0'					30	
					In nebula IC 4954-5								
Steph 1		LYR	3.8	OC	20.0m	18h 53.5m	36° 55.0'					15	
					13"-B,pL,nRi,nC at 100X; 15* and Delta LYR - Delta Lyrae cluster								

Chart 58

Name	M	Const.	Mag.	Type	Size	R.A.	Decl.	C	R	S	O	# Stars	B
Common					Notes								
Stock 1		VUL	5.3	OC	60.0m	19h 35.8m	25° 13.0'					40	
					13"-B,vL,nC at 60X; 28° - 47° in 40' field								
vdB 130		CYG	9.3	OC	6m	20h 17.7m	39° 19.0'					15	

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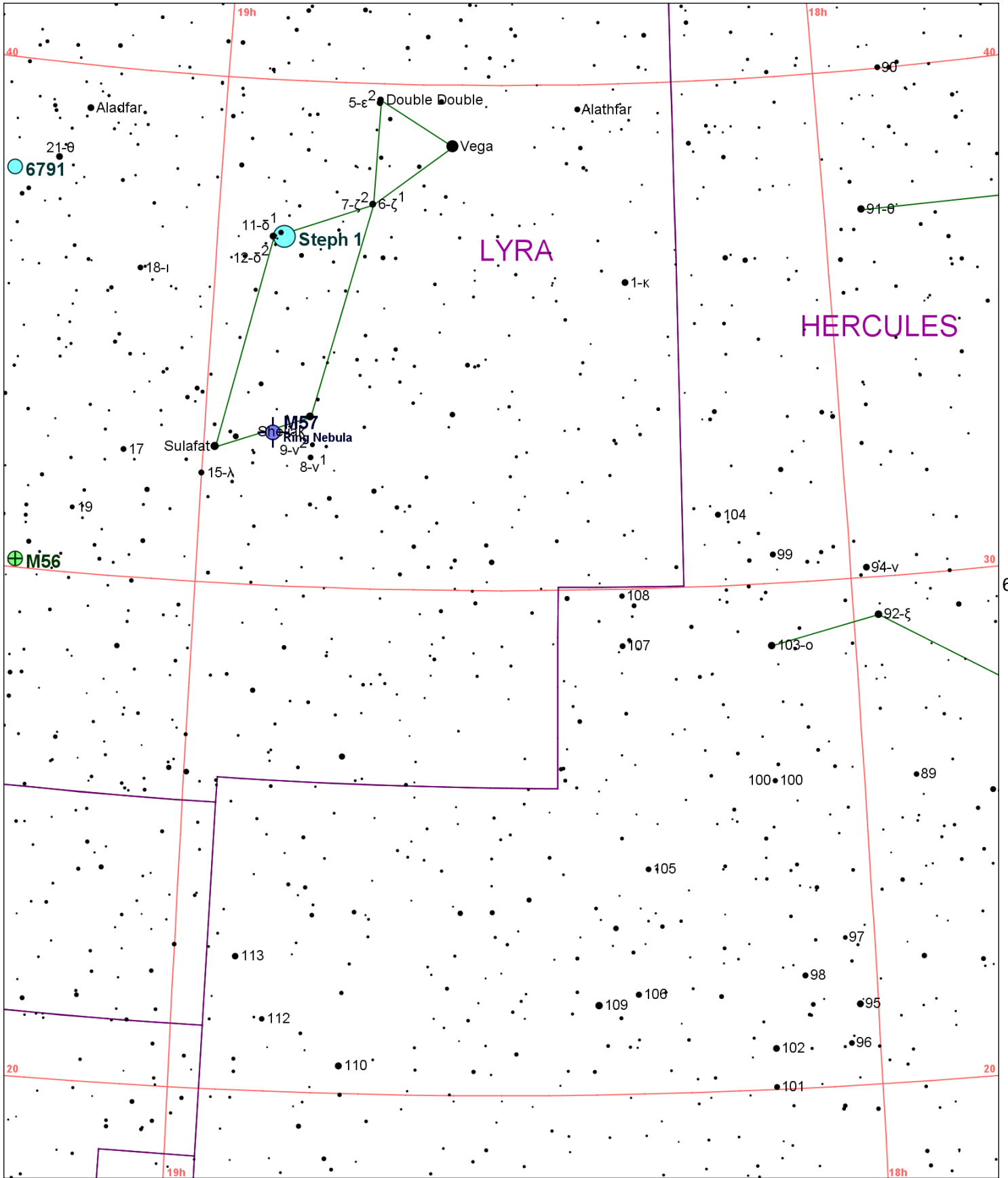


Chart 59													
Name	M	Const.	Mag.	Type	Size	R.A.	Decl.	C	R	S	O	# Stars	B
Common					Notes								
NGC 6720	M57	LYR	9.4	PN	86s x 62s	18h 53.6m	33° 02.0'				O		
Ring Nebula					Ring neb,B,pL,cE - central* var 14 to 16 mag;PK63+13.1								
NGC 6779	M56	LYR	8.3	GC	5m	19h 16.6m	30° 11.0'				O		B
					B,L,iR,gvmCM,rrr - Stars 11...								
NGC 6791		LYR	9.5	OC	16m	19h 20.7m	37° 51.0'					300	
					vF,L,vRi,*F								
Steph 1		LYR	3.8	OC	20.0m	18h 53.5m	36° 55.0'					15	
					13"-B,pL,nRi,nC at 100X; 15* and Delta LYR - Delta Lyrae cluster								

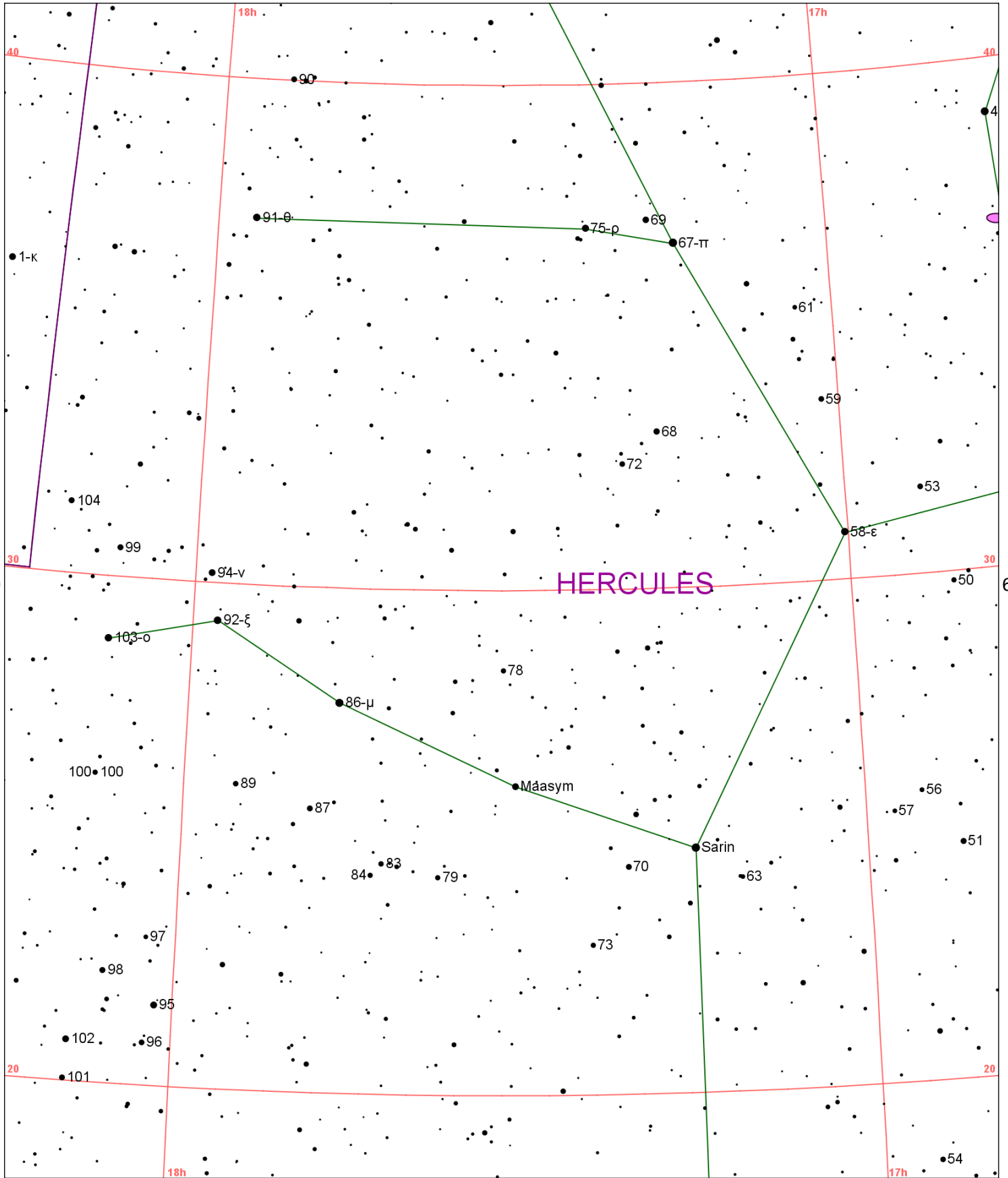


Chart 60													
Name	M	Const.	Mag.	Type	Size	R.A.	Decl.	C	R	S	O	# Stars	B
Common					Notes								
NGC 6207		HER	11.6	GAL	3m x 1.2m	16h 43.1m	36° 50.0'			S55			
					pB,pL,E45,vgmbM - H II 701;No def nucleus;B * nr center;30' NE from M 13								

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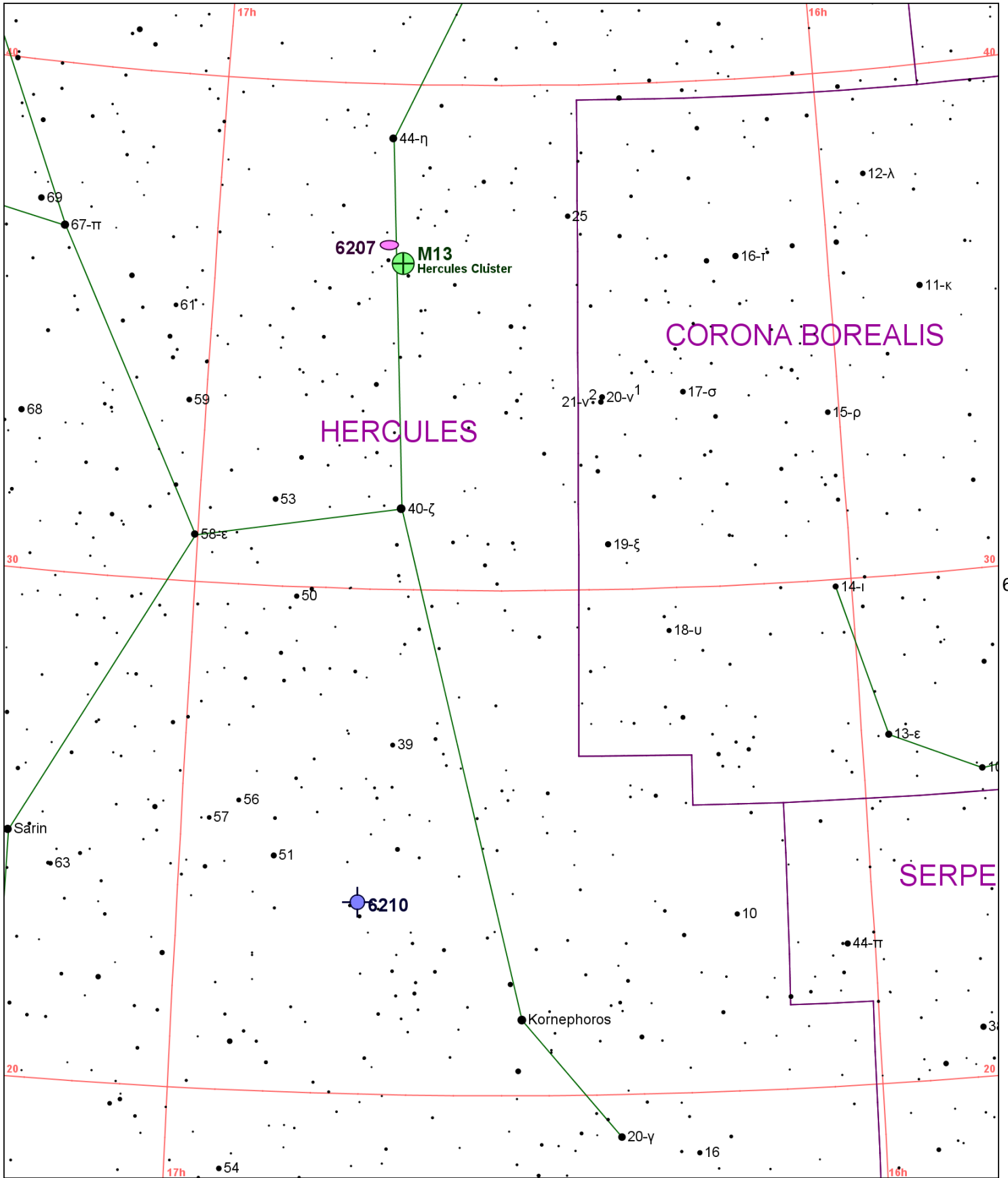


Chart 61													
Name	M	Const.	Mag.	Type	Size	R.A.	Decl.	C	R	S	O	# Stars	B
Common					Notes								
NGC 6205	M13	HER	5.9	GC	23.2m	16h 41.7m	36° 28.0'				O		B
Hercules Cluster					!!eB,vRi,vgeCM,*11... - Messier said round nebula contains no star								
NGC 6207		HER	11.6	GAL	3m x 1.2m	16h 43.1m	36° 50.0'			S55			
					pB,pL,E45,vgmbM - H II 701;No def nucleus;B * nr center;30' NE from M 13								
NGC 6210		HER	9.7	PN	20s x 13s	16h 44.5m	23° 48.0'		R90	S56	O		
					vB,vS,R,disc								

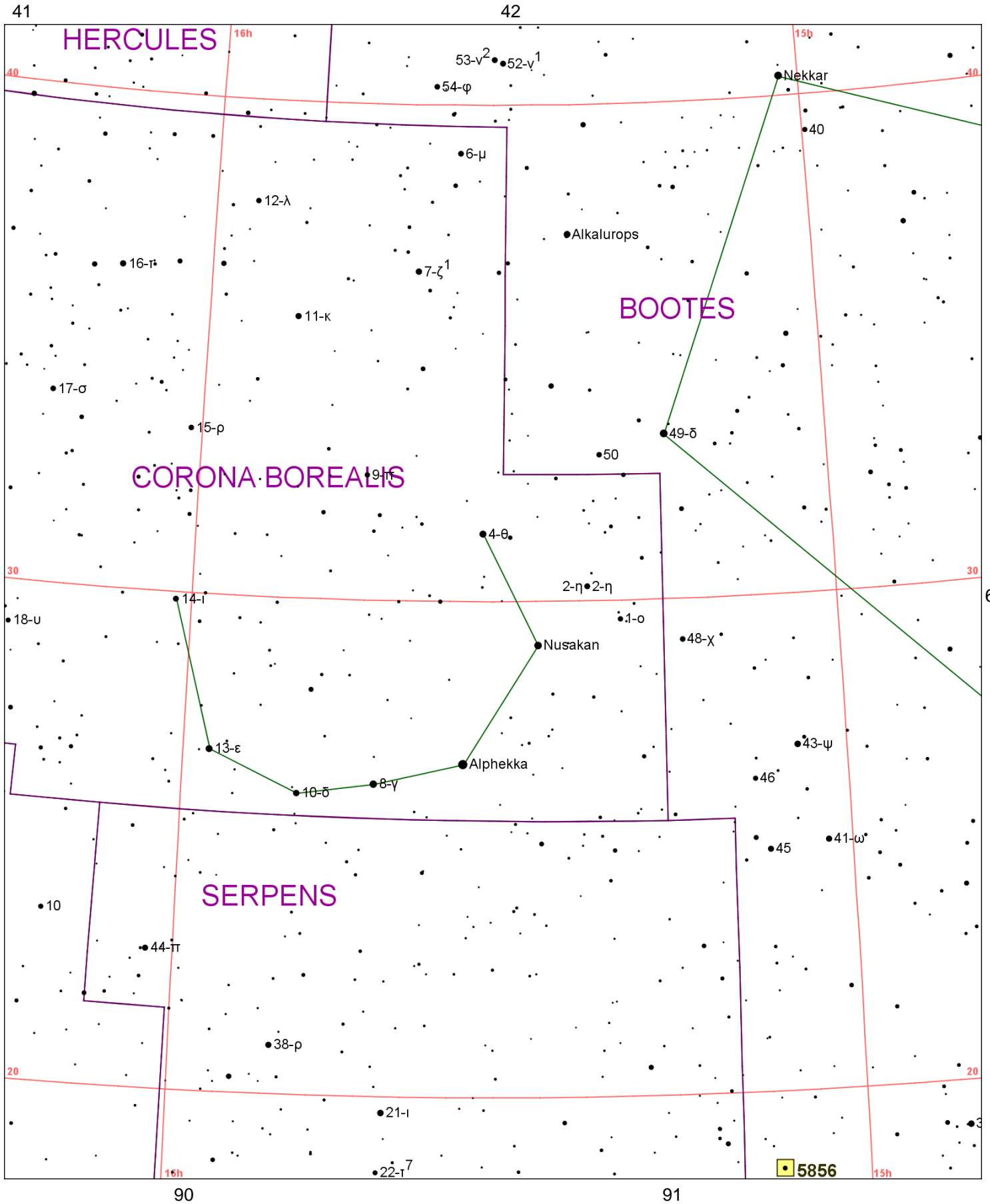
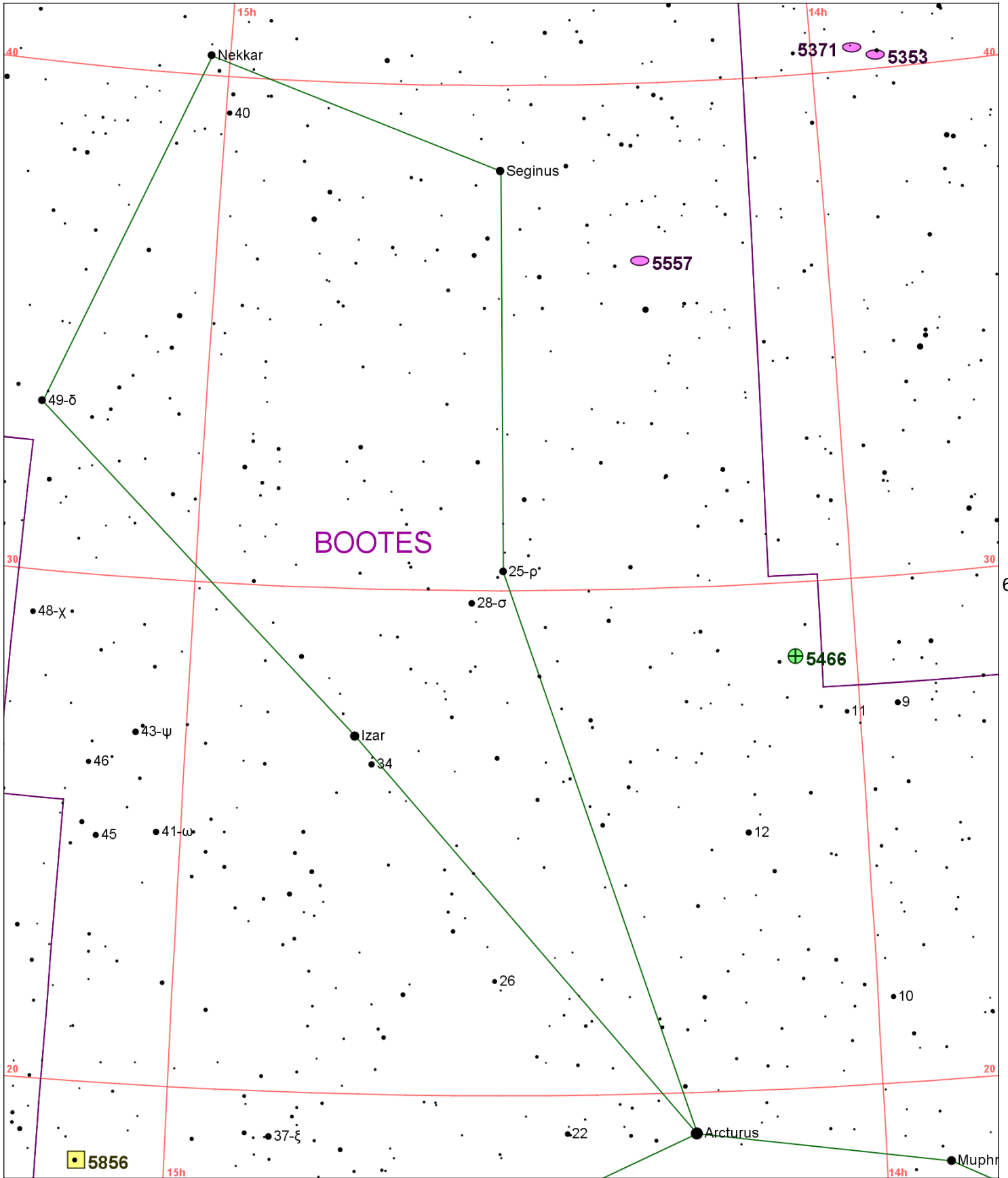


Chart 62													
Name	M	Const.	Mag.	Type	Size	R.A.	Decl.	C	R	S	O	# Stars	B
Common					Notes								
NGC 5856		BOO	6.0	MISC		15h 07.3m	18° 27.0'						
					neb *6? - H IV 71								

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BOOTES

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Chart 63													
Name	M	Const.	Mag.	Type	Size	R.A.	Decl.	C	R	S	O	# Stars	B
Common					Notes								
NGC 5353		CVN	11.0	GAL	2.8m x 1.9m	13h 53.4m	40° 17.0'				O		
pB,S,R,2nd of 4 - H II 714;P w NGC 5354 at 1.3' n;vsBN;lens: diamond shaped													
NGC 5371		CVN	10.6	GAL	4.2m x 3.4m	13h 55.7m	40° 28.0'				O		
pB,L,R,bMFN - vsB diff N;weak bar;sev knotty filam reg arms													
NGC 5466		BOO	9.1	GC	9.2m	14h 05.5m	28° 32.0'		R86		O		
Cl,L,vRi,vmC,st 11... - H VI 9													
NGC 5557		BOO	11.0	GAL	2.4m x 1.9m	14h 18.4m	36° 30.0'						
cB,S,R,vsbM* - H I 99;BN;no struct													
NGC 5856		BOO	6.0	MISC		15h 07.3m	18° 27.0'						
neb *6? - H IV 71													

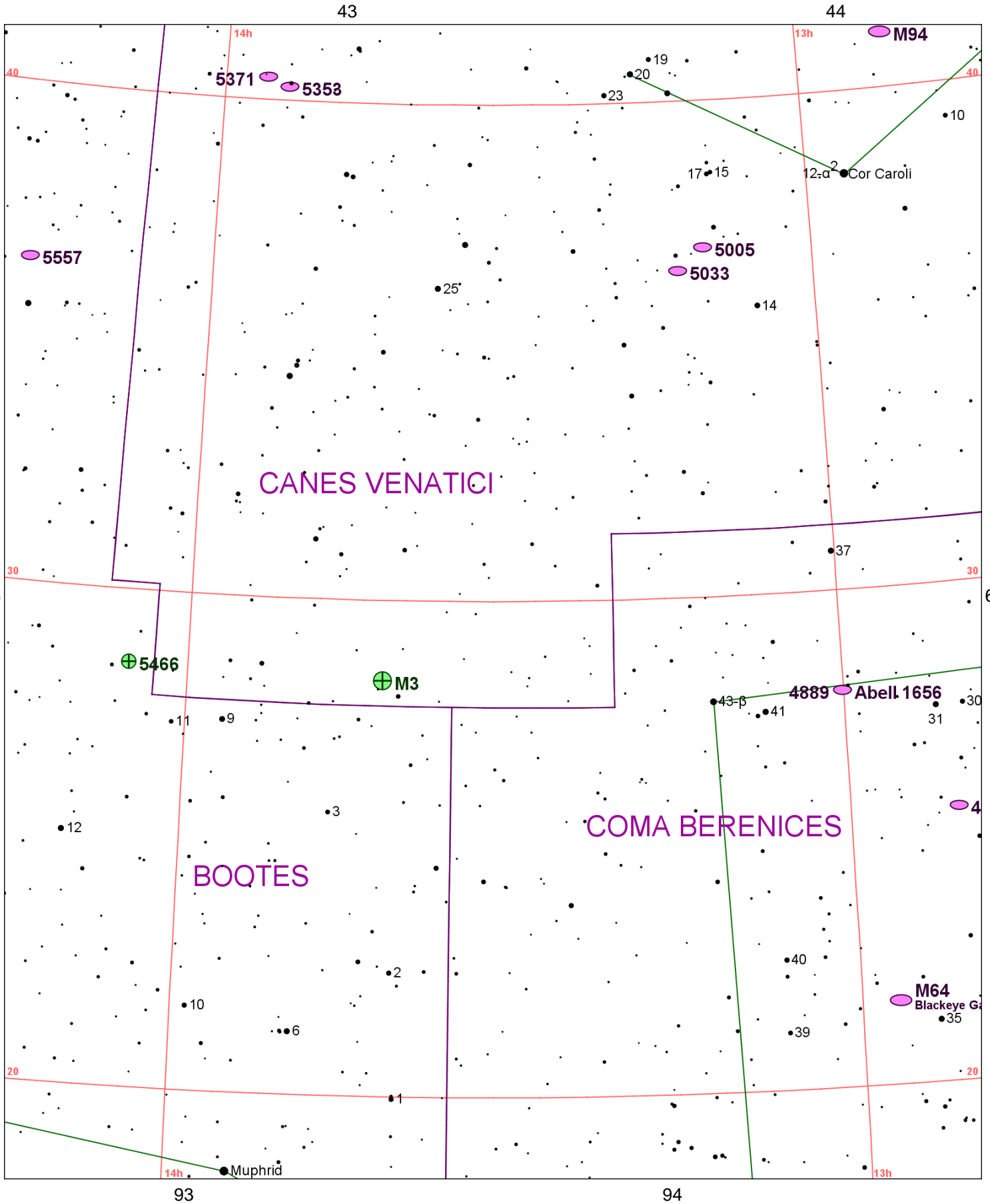


Chart 64													
Name	M	Const.	Mag.	Type	Size	R.A.	Decl.	C	R	S	O	# Stars	B
Common					Notes								
Abell 1656		COM	11.0	MISC	157m	12h 59.8m	27° 59.0'						
					Dense GALCL for amateurs;72 brighter than 15 mag in 2 deg								
NGC 4725		COM	9.4	GAL	10.4m x 7.2m	12h 50.4m	25° 30.0'		R73	S31	O		
					vB,vL,E,vg,vsmbM,eBN - H I 84;P w NGC 4712 @ 12.0'								
NGC 4736	M94	CVN	8.2	GAL	12.3m x 10.8m	12h 50.9m	41° 07.0'				O		B
					vB,L,iR,vsmbM,BN,r								
NGC 4826	M64	COM	8.5	GAL	10.3m x 5m	12h 56.7m	21° 41.0'				O		B
					Blackeye Galaxy								
					!vB,vL,vmE120,bM,SBN - dark marking nr center								
NGC 4889		COM	11.5	GAL	2.8m x 2m	13h 00.1m	27° 59.0'	C35			O		
					pB,pmE,bM,*7 n - H II 321;B in Coma cluster;NGC 4872 @ 0.8' sp;NGC 4886 @ 1.1' np								
NGC 5005		CVN	9.8	GAL	5.8m x 2.9m	13h 10.9m	37° 03.0'	C29	R66	S40	O		
					vB,vL,vmE66,vsbMN - H I 96;P w NGC 5033;eBN in B lens;sev knotty arms								
NGC 5033		CVN	10.2	GAL	9.8m x 3.6m	13h 13.5m	36° 36.0'		R67	S41	O		
					vB,pL,E167,smbM,vBN - H I 97;P w NGC 5005;svBN in B bulge w spir patt of dk lanes								
NGC 5272	M3	CVN	6.4	GC	18.6m	13h 42.2m	28° 23.0'				O		B
					!!eB,vL,vsmbM,st 11... - Lord Rosse-sev dark marks within 5' of center								
NGC 5353		CVN	11.0	GAL	2.8m x 1.9m	13h 53.4m	40° 17.0'				O		
					pB,S,R,2nd of 4 - H II 714;P w NGC 5354 at 1.3' n;vsBN;lens: diamond shaped								
NGC 5371		CVN	10.6	GAL	4.2m x 3.4m	13h 55.7m	40° 28.0'				O		
					pB,L,R,bMFN - vsB diff N;weak bar;sev knotty filam reg arms								
NGC 5466		BOO	9.1	GC	9.2m	14h 05.5m	28° 32.0'		R86		O		
					Cl,L,vRi,vmC,st 11... - H VI 9								
NGC 5557		BOO	11.0	GAL	2.4m x 1.9m	14h 18.4m	36° 30.0'						
					cB,S,R,vsbM* - H I 99;BN;no struct								