

Chart 65													
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								
Mel 111		COM	1.8	OC	275m	12h 25.0m	26° 00.0'				O	80	B
Coma Berenices Star Cluster					10X50-eB,eL,nRi,nC; 32" in arrowhead shape								
NGC 3941		UMA	10.3	GAL	3.5m x 2.5m	11h 52.9m	36° 59.0'		R44	S98	O		
					vB,pL,R,smbM *9 - H I 173								
NGC 4136		COM	11.0	GAL	3.9m x 3.6m	12h 09.3m	29° 56.0'						
					F,vL,vgmbM - H II 321								
NGC 4147		COM	10.3	GC	4.0m	12h 10.1m	18° 33.0'						
					vB,pL,R,gbM,rrr - H I 19;Stars F								
NGC 4151		CVN	10.8	GAL	6.8m x 5.3m	12h 10.5m	39° 24.0'				O		
					vB,S,R,vsmbMBN,p of 2 - H I 165;P w NGC 4145;NGC 4156 @ 5.2';Ho 345c @ 8.8'								
NGC 4153		COM	10.3	GC	4.1m	12h 10.1m	18° 33.0'						
					B,pL,E,bM - H I 11;equals NGC 4147; best possible ID								
NGC 4203		COM	10.9	GAL	3.5m x 3.2m	12h 15.1m	33° 12.0'				O		
					vB,S,R,psmbM - H I 175								
NGC 4214		CVN	9.8	GAL	8.4m x 7.2m	12h 15.6m	36° 20.0'		R60	S34	O		
					cB,cL,iE,biN,=NGC 4208 - H I 95								
NGC 4228		CVN	10.2	GAL	8.4m x 7.2m	12h 15.6m	36° 20.0'						
					vF,L,R,gbM,(=4214?)								
NGC 4244		CVN	10.4	GAL	15.9m x 1.8m	12h 17.5m	37° 48.0'	C26	R61	S35	O		
					pB,vL,eE43,vgbM,vsBN or *? - H V 41								
NGC 4251		COM	10.7	GAL	3.6m x 2.5m	12h 18.1m	28° 10.0'				O		
					vB,S,E,vsmbMN,*6-7 f 90" - H I 89;lens shape								
NGC 4274		COM	10.4	GAL	6.8m x 2.4m	12h 19.8m	29° 37.0'		R68	S26	O		
					vB,vL,E90,mbMN - H I 75;Saturn-like inner ring w F outer halo								
NGC 4278		COM	10.2	GAL	4m x 3.9m	12h 20.1m	29° 17.0'				O		
					vB,pL,R,mbM,r,1 of 3 - H I 90;Triple chain w NGC 4283 @ 3.6';NGC 4286 @ 8.8'								
NGC 4293		COM	10.4	GAL	5.5m x 2.9m	12h 21.2m	18° 23.0'						
					F,vL,E,lbM,r,vsBN - H V 5;Spiral pattern dim;heavy dust lanes								
NGC 4314		COM	10.6	GAL	3.9m x 3.7m	12h 22.5m	29° 54.0'						
					cB,L,E150,sbM,* np,eBN w spir struct - H I 76								
NGC 4395		CVN	10.2	GAL	12.3m x 10m	12h 25.8m	33° 33.0'						
					eF,vL,np of Dneb - H V 29								
NGC 4414		COM	10.1	GAL	3.6m x 2m	12h 26.5m	31° 13.0'		R69	S27	O		
					vB,L,E,g,vsmbM*,B diff N in B bulge - H I 77								
NGC 4494		COM	9.8	GAL	4.5m x 4.3m	12h 31.4m	25° 46.0'		R70	S28	O		
					vB,pL,R,vsmbMN - H I 83								
NGC 4530		CVN	4.3	MISC		12h 33.8m	41° 21.0'						
					neb * 4mag (8 CVn)								
NGC 4559		COM	10.0	GAL	11m x 4.9m	12h 36.0m	27° 58.0'	C36	R71	S29	O		
					vB,vL,mE150,gbM,3 * f - H I 92;SN 1941a;multi arm spiral								
NGC 4565		COM	9.6	GAL	14.9m x 2m	12h 36.3m	25° 59.0'	C38	R72	S30	O		
					!!B,eL,eE135,vsbMN = *10-11 - H V 24;NGC 4562 @ 13.4';classic edge-on galaxy								
NGC 4618		CVN	10.8	GAL	4.2m x 3.4m	12h 41.6m	41° 09.0'						
					B,L,E,mbM,curved branch n - H I 178;P w NGC 4625 @ 8.3'								
NGC 4631		CVN	9.2	GAL	15.2m x 2.8m	12h 42.1m	32° 32.0'	C32	R64	S38	O		
					vB,vL,eE70,bMN,* att n - H V 42;P w NGC 4627 @ 2.5'								
NGC 4656		CVN	10.5	GAL	15.3m x 2.4m	12h 44.0m	32° 10.0'		R65	S39	O		
					pB,L,vmE34,sp of 2 - H I 176;NGC 4657 superimposed								
NGC 4657		CVN	10.6	GAL	1.1m x 0.7m	12h 44.1m	32° 13.0'						
					pF,L,E90,nf of 2 - H I 177;superimposed on NGC 4656								
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

Chart 65													
Name	M	Const.	Mag.	Type	Size	R.A.	Decl.	C	R	S	O	# Stars	B
Common					Notes								
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 5024	M53	COM	7.7	GC	14.4m	13h 12.9m	18° 10.0'				O		B
					!B,vC,iR,vvmbM,st 12... - 1 deg NE of Alpha Comae Berenices								
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								

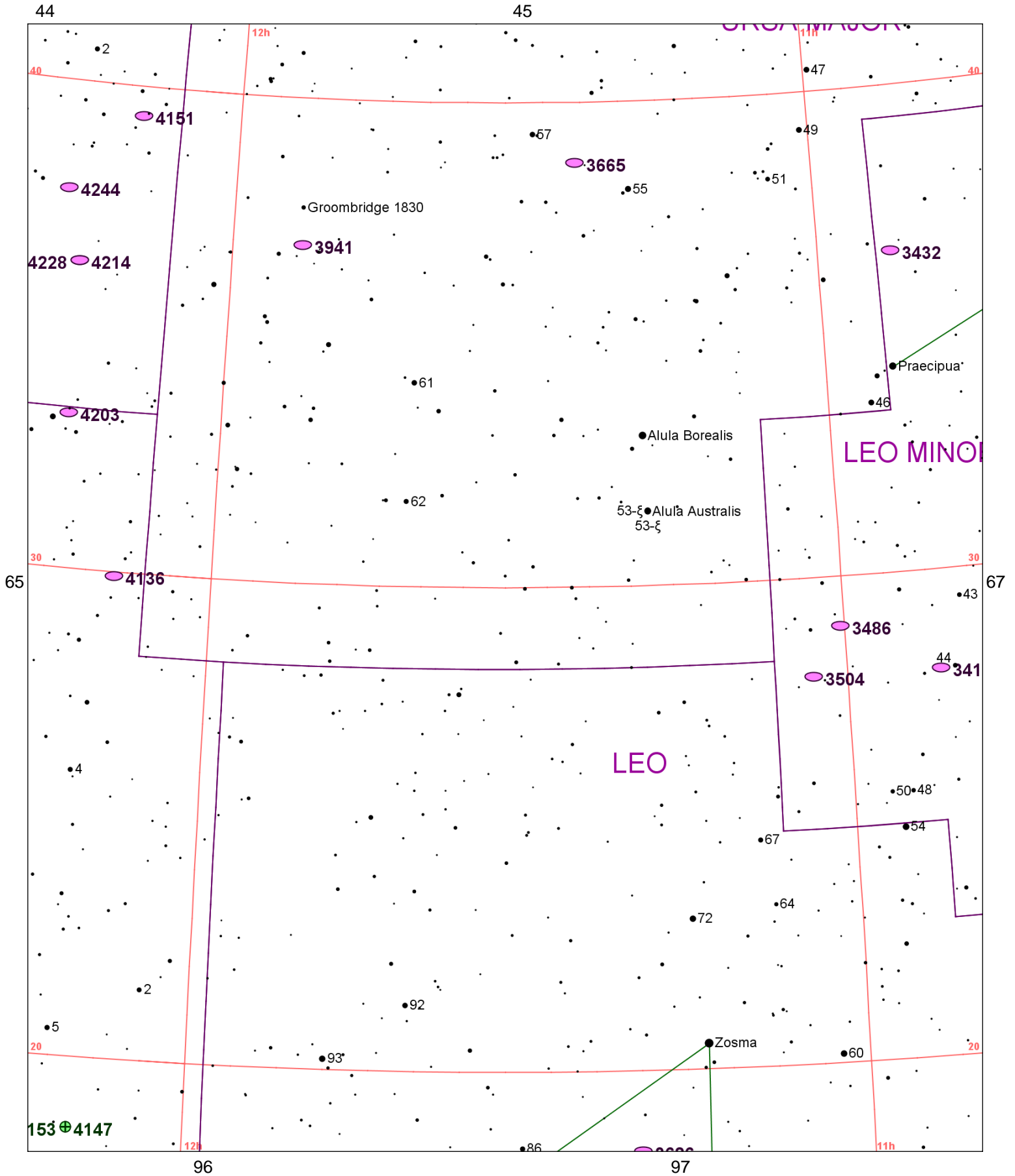


Chart 66													
Name	M	Const.	Mag.	Type	Size	R.A.	Decl.	C	R	S	O	# Stars	B
Common					Notes								
NGC 3414		LMI	11.0	GAL	3.6m x 3.1m	10h 51.3m	27° 58.0'						
					B,pL,R,mbM - H II 362;P w NGC 3418 at 8'2;UGC 5959								
NGC 3432		LMI	11.3	GAL	6.6m x 1.6m	10h 52.5m	36° 37.0'		R53	S66			
					pB,pL,vmE 40,** close sp - H I 172;P w UGC 5983;mag 17;1.2'X1.0'								
NGC 3486		LMI	10.5	GAL	6.8m x 4.8m	11h 00.4m	28° 59.0'						
					cB,cL,R,gmbM - H I 87								
NGC 3504		LMI	11.0	GAL	2.7m x 2.5m	11h 03.2m	27° 58.0'				O		
					B,L,E,mbMN,rr,p of 2 - H I 88;P w NGC 3512 at 12.0';PA72;comp 4.0';PA55;0.4'X0.1'								
NGC 3626		LEO	11.0	GAL	3.2m x 2.4m	11h 20.1m	18° 21.0'	C40					
					B,S,vIE,sbM - H II 52;Indense part of clust;nearest comp 2' PA73 .5'X0.4'								
NGC 3665		UMA	10.8	GAL	3.5m x 3m	11h 24.7m	38° 46.0'				O		
					cB,cL,iR,pgmbM - H I 219;P w NGC 3658								
NGC 3941		UMA	10.3	GAL	3.5m x 2.5m	11h 52.9m	36° 59.0'		R44	S98	O		
					vB,pL,R,smbM *9 - H I 173								
NGC 4136		COM	11.0	GAL	3.9m x 3.6m	12h 09.3m	29° 56.0'						
					F,vL,vgmbM - H II 321								
NGC 4147		COM	10.3	GC	4.0m	12h 10.1m	18° 33.0'						
					vB,pL,R,gbM,rrr - H I 19;Stars F								
NGC 4151		CVN	10.8	GAL	6.8m x 5.3m	12h 10.5m	39° 24.0'				O		
					vB,S,R,vsmbMBN,p of 2 - H I 165;P w NGC 4145;NGC 4156 @ 5.2';Ho 345c @ 8.8'								
NGC 4153		COM	10.3	GC	4.1m	12h 10.1m	18° 33.0'						
					B,pL,E,bM - H I 11;equals NGC 4147; best possible ID								
NGC 4203		COM	10.9	GAL	3.5m x 3.2m	12h 15.1m	33° 12.0'				O		
					vB,S,R,psmbM - H I 175								
NGC 4214		CVN	9.8	GAL	8.4m x 7.2m	12h 15.6m	36° 20.0'		R60	S34	O		
					cB,cL,iE,biN,=NGC 4208 - H I 95								
NGC 4228		CVN	10.2	GAL	8.4m x 7.2m	12h 15.6m	36° 20.0'						
					vF,L,R,gbM,(=4214?)								
NGC 4244		CVN	10.4	GAL	15.9m x 1.8m	12h 17.5m	37° 48.0'	C26	R61	S35	O		
					pB,vL,eE43,vgbM,vsBN or *? - H V 41								

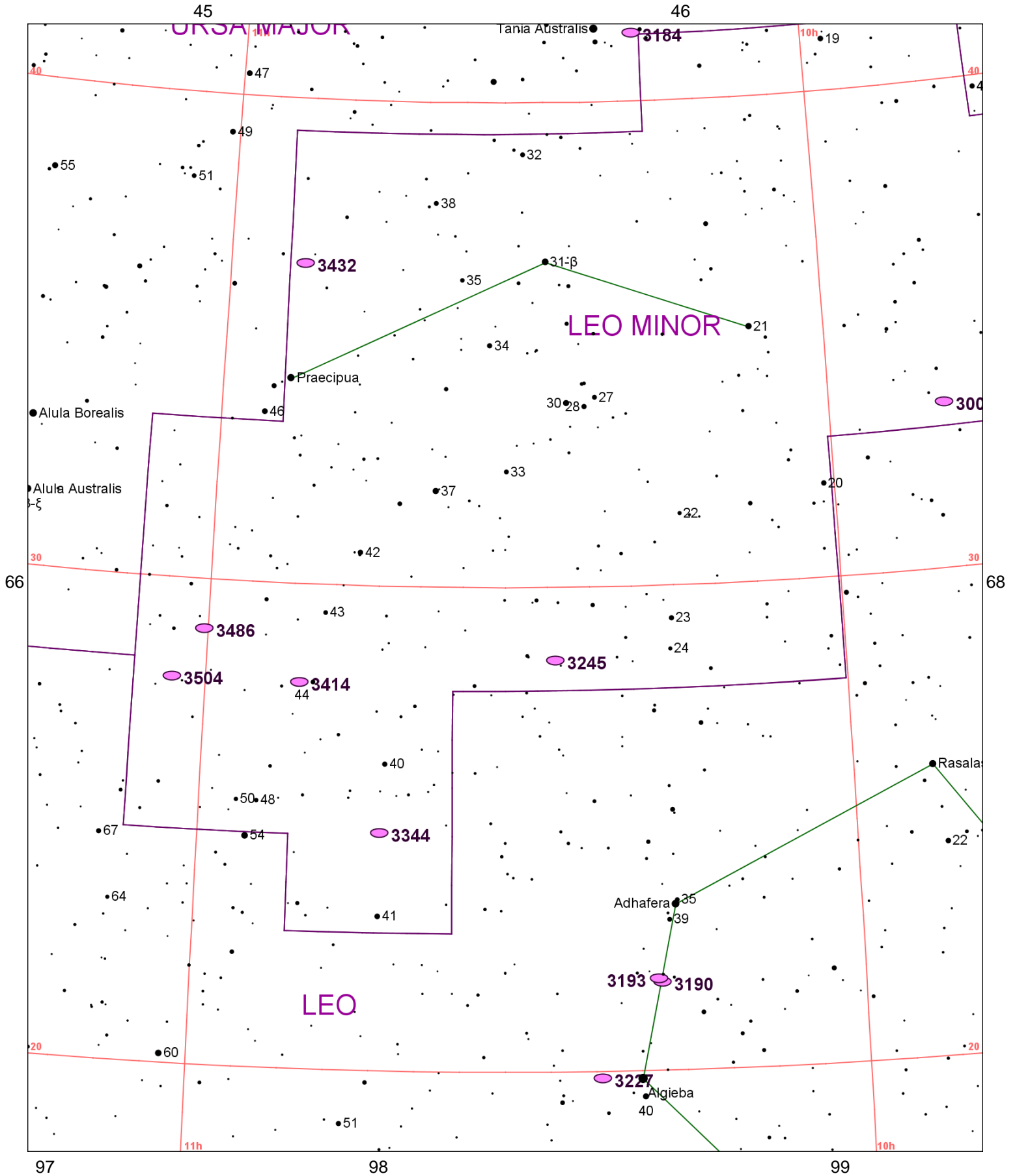


Chart 67													
Name	M	Const.	Mag.	Type	Size	R.A.	Decl.	C	R	S	O	# Stars	B
Common					Notes								
NGC 3003		LMI	11.9	GAL	5.7m x 1.4m	9h 48.6m	33° 25.0'		R51				
!,cB,L,vmE90 - H V 26;BM;no def N;dk mark & knots;filam arms													
NGC 3184		UMA	9.8	GAL	7.6m x 7.4m	10h 18.3m	41° 25.0'		R42	S95	O		
pB,vL,R,vgbM - H I 168;svBN;smooth lens w spiral pattern of dark markings													
NGC 3190		LEO	11.1	GAL	4m x 1.5m	10h 18.1m	21° 50.0'				O		
B,pS,E,psbMN - H II 44;bright in grp;disturbed edge-on spiral;P w NGC 3187													
NGC 3193		LEO	10.9	GAL	2.9m x 2.8m	10h 18.4m	21° 54.0'						
B,S,vIE,pslbM,*9.5,354,80" - H II 45;NGC 3189-90 group;vB center in smooth nebula													
NGC 3227		LEO	10.3	GAL	6.6m x 5m	10h 23.5m	19° 52.0'				O		
pB,cL,R,D - H II 29;P w NGC 3226;vF env surr system;50' E of Gamma Leo													
NGC 3245		LMI	10.8	GAL	3.5m x 2.4m	10h 27.3m	28° 30.0'						
vB,pL,E 0,smbMEN - H I 86													
NGC 3344		LMI	9.9	GAL	7.1m x 6.8m	10h 43.5m	24° 55.0'		R52	S65	O		
cB,L,gbM,* inv,2 st f - H I 81													
NGC 3414		LMI	11.0	GAL	3.6m x 3.1m	10h 51.3m	27° 58.0'						
B,pL,R,mbM - H II 362;P w NGC 3418 at 8';UGC 5959													
NGC 3432		LMI	11.3	GAL	6.6m x 1.6m	10h 52.5m	36° 37.0'		R53	S66			
pB,pL,vmE 40,** close sp - H I 172;P w UGC 5983;mag 17;1.2'X1.0'													
NGC 3486		LMI	10.5	GAL	6.8m x 4.8m	11h 00.4m	28° 59.0'						
cB,cL,R,gmbM - H I 87													
NGC 3504		LMI	11.0	GAL	2.7m x 2.5m	11h 03.2m	27° 58.0'				O		
B,L,E,mbMN,rr,p of 2 - H I 88;P w NGC 3512 at 12.0';PA72;comp 4.0';PA55;0.4'X0.1'													

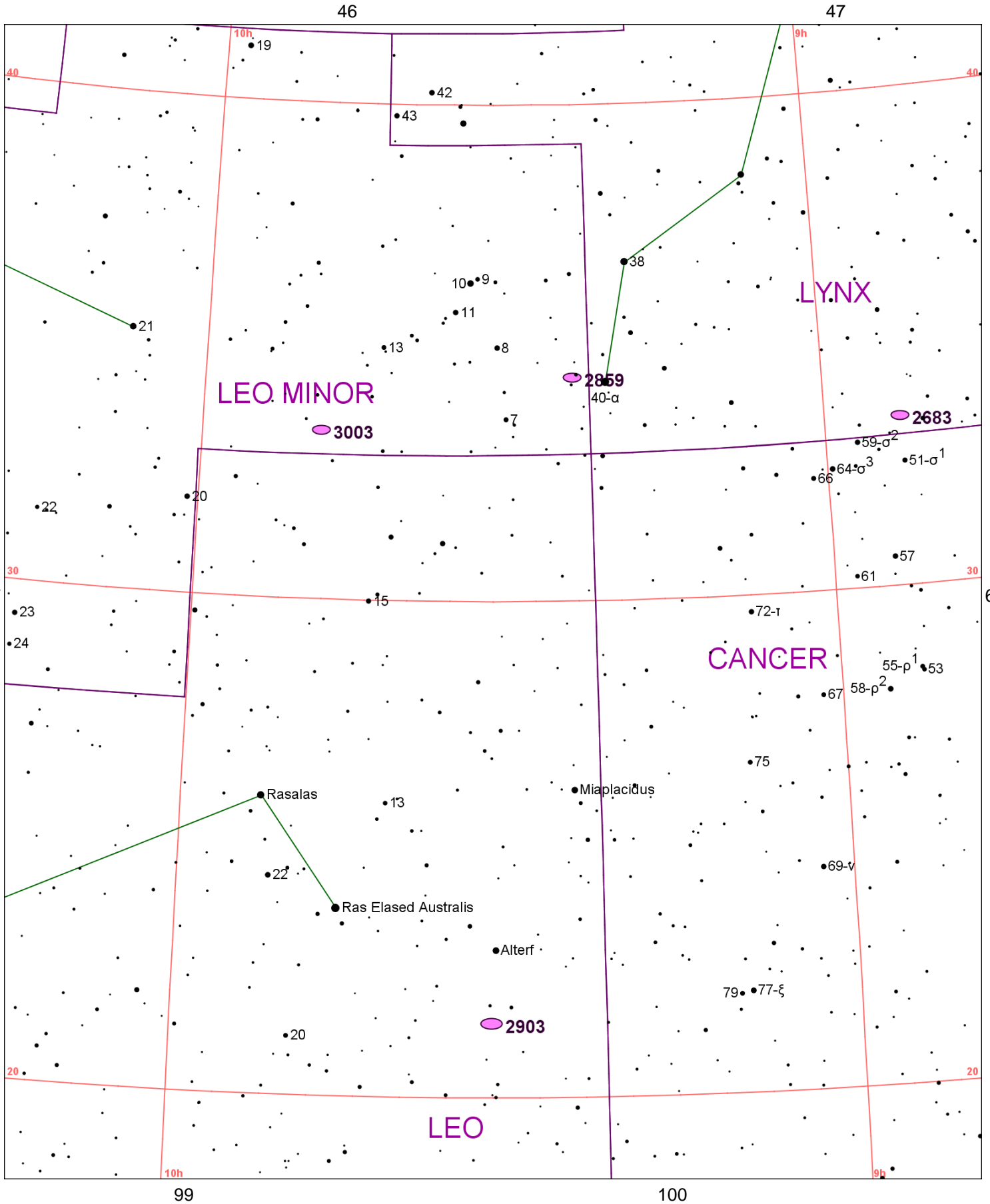


Chart 68													
Name	M	Const.	Mag.	Type	Size	R.A.	Decl.	C	R	S	O	# Stars	B
Common					Notes								
NGC 2683		LYN	9.8	GAL	8.8m x 2.5m	8h 52.7m	33° 25.0'		R39	S67	O		
vB,vL,vmE39,gmbM - H I 200;peanut-shaped bulge;many filam; arm w dk lanes 1 side													
NGC 2859		LMI	10.9	GAL	4m x 3.6m	9h 24.3m	34° 31.0'						
vB,pL,R,smbM - H I 137;bright nucleus in diff. bar w diff. blobs													
NGC 2903		LEO	9.0	GAL	12m x 5.6m	9h 32.2m	21° 30.0'		R54	S60	O		
cB,vL,E,gmbM,r,sp of 2 - H I 56;short B nucleus bar;fine multi arm spiral													
NGC 3003		LMI	11.9	GAL	5.7m x 1.4m	9h 48.6m	33° 25.0'		R51				
!,cB,L,vmE90 - H V 26;BM;no def N;dk mark & knots;filam arms													

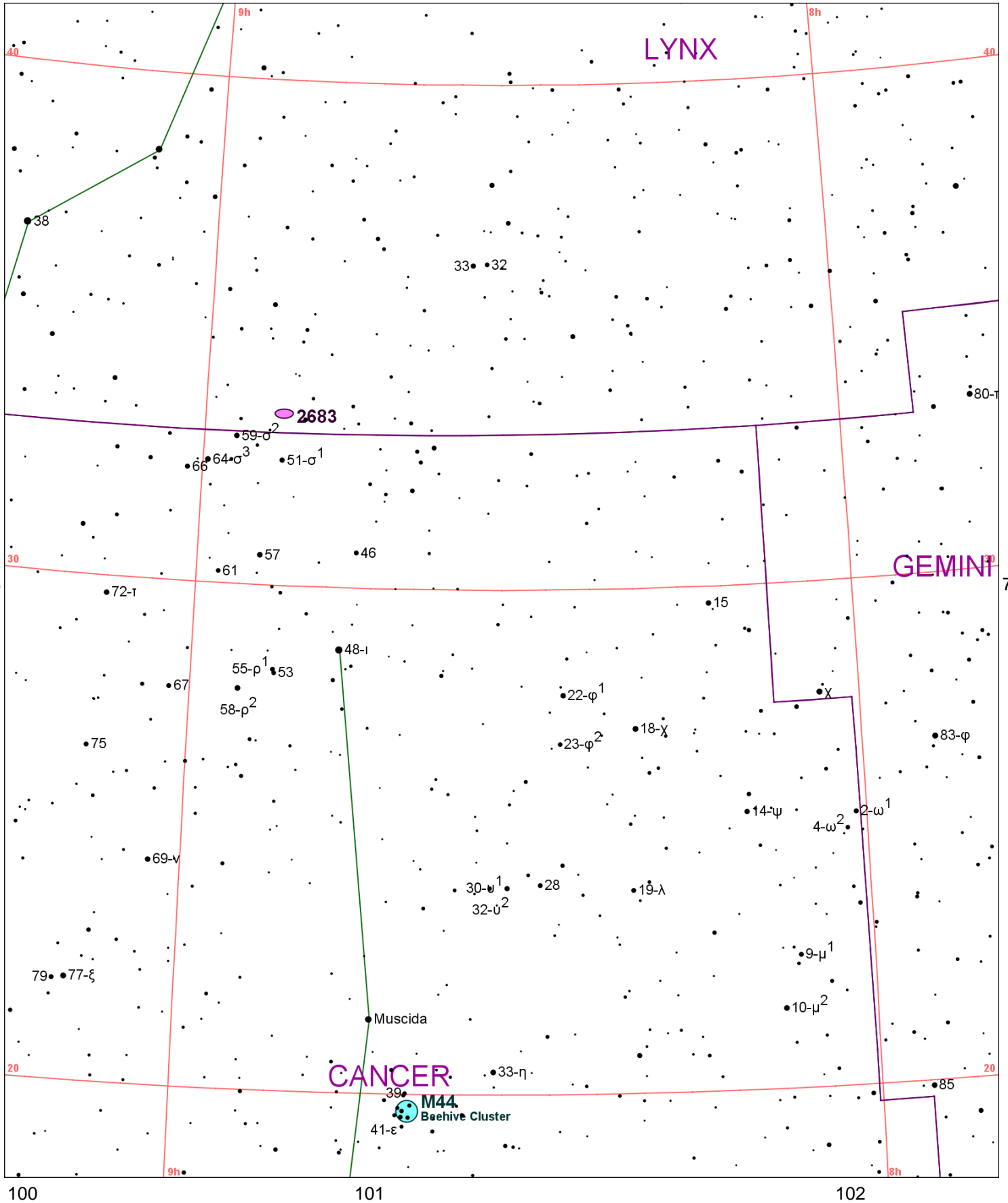


Chart 69													
Name	M	Const.	Mag.	Type	Size	R.A.	Decl.	C	R	S	O	# Stars	B
Common					Notes								
NGC 2632	M44	CNC	3.1	OC	95m	8h 40.0m	19° 40.0'				O	50	B
Beehive Cluster					!! - aka Praesepe; 200 memb to 14 mag								
NGC 2683		LYN	9.8	GAL	8.8m x 2.5m	8h 52.7m	33° 25.0'		R39	S67	O		
					vB,vL,vmE39,gmbM - H I 200;peanut-shaped bulge;many filam; arm w dk lanes 1 side								

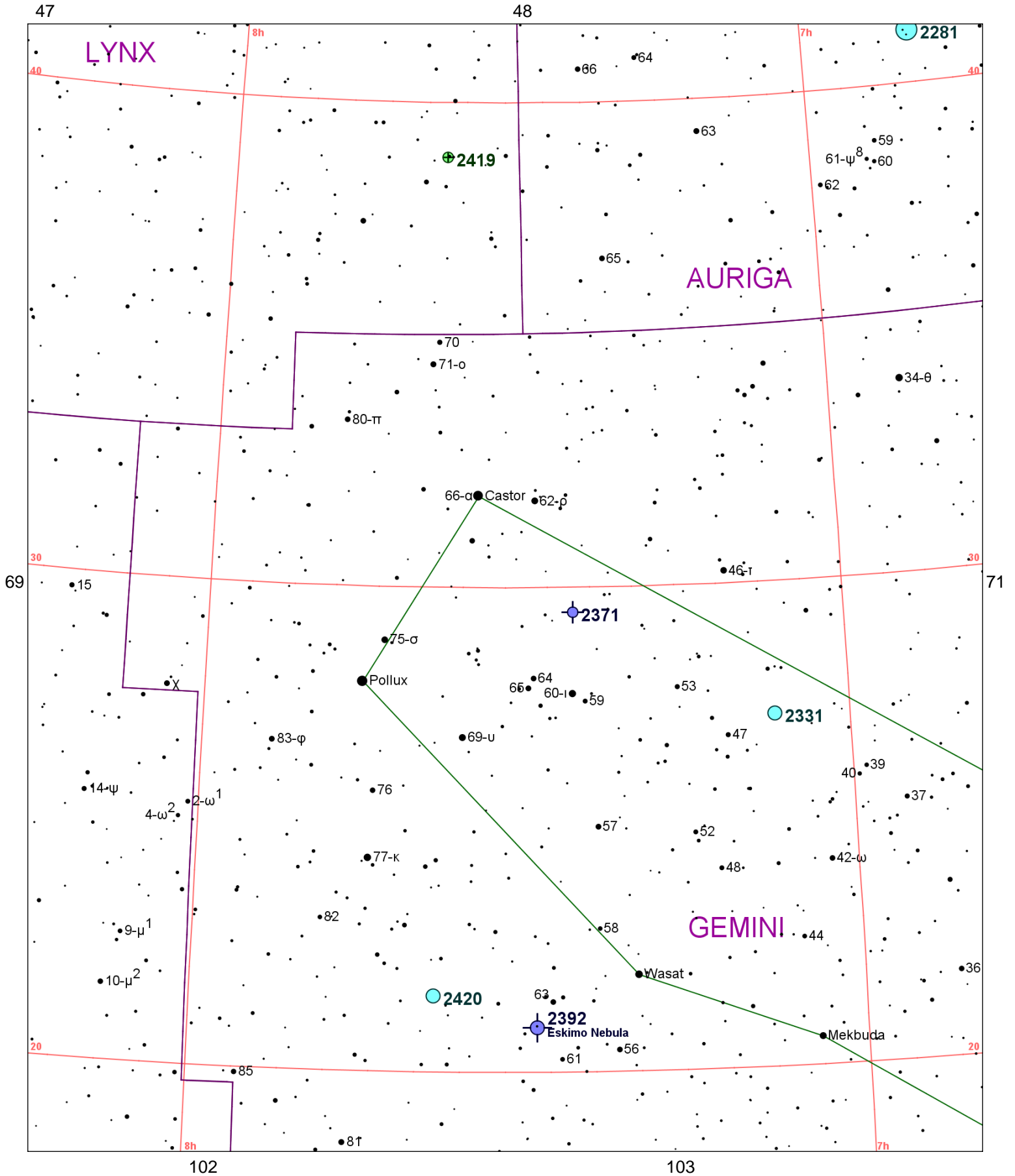


Chart 70													
Name	M	Const.	Mag.	Type	Size	R.A.	Decl.	C	R	S	O	# Stars	B
Common					Notes								
NGC 2281		AUR	5.4	OC	15.0m	6h 48.3m	41° 05.0'					30	B
					Cl,pRi,vIC,st pL - H VIII 71								
NGC 2331		GEM	8.5	OC	18.0m	7h 07.0m	27° 16.0'					30	
					Cl,L,vIC,S Cl inv - H VIII 40								
NGC 2371		GEM	13.0	PN	74s x 54s	7h 25.6m	29° 29.0'		R30		O		
					B,S,R,bMN,p of Dneb - H II 316;faint double-lobed planetary;use filter;PK189+19.1								
NGC 2392		GEM	8.6	PN	47s x 43s	7h 29.2m	20° 55.0'	C39	R31	S54	O		B
Eskimo Nebula					B,S,R,*9M,*8 nf 100" - aka Clown Face Nebula; H IV 45;PK197+17.1;sev shells								
NGC 2419		LYN	10.4	GC	6.2m	7h 38.1m	38° 53.0'	C25			O		
					pB,pL,IE 90deg,vqbM,*7-8 267deg,4' dist - H I 218;Most distant globular;Brightest * 17 mag								
NGC 2420		GEM	8.3	OC	10.0m	7h 38.4m	21° 34.0'				O	100	
					Cl,cL,Ri,C,st 11...18 - H VI 1								

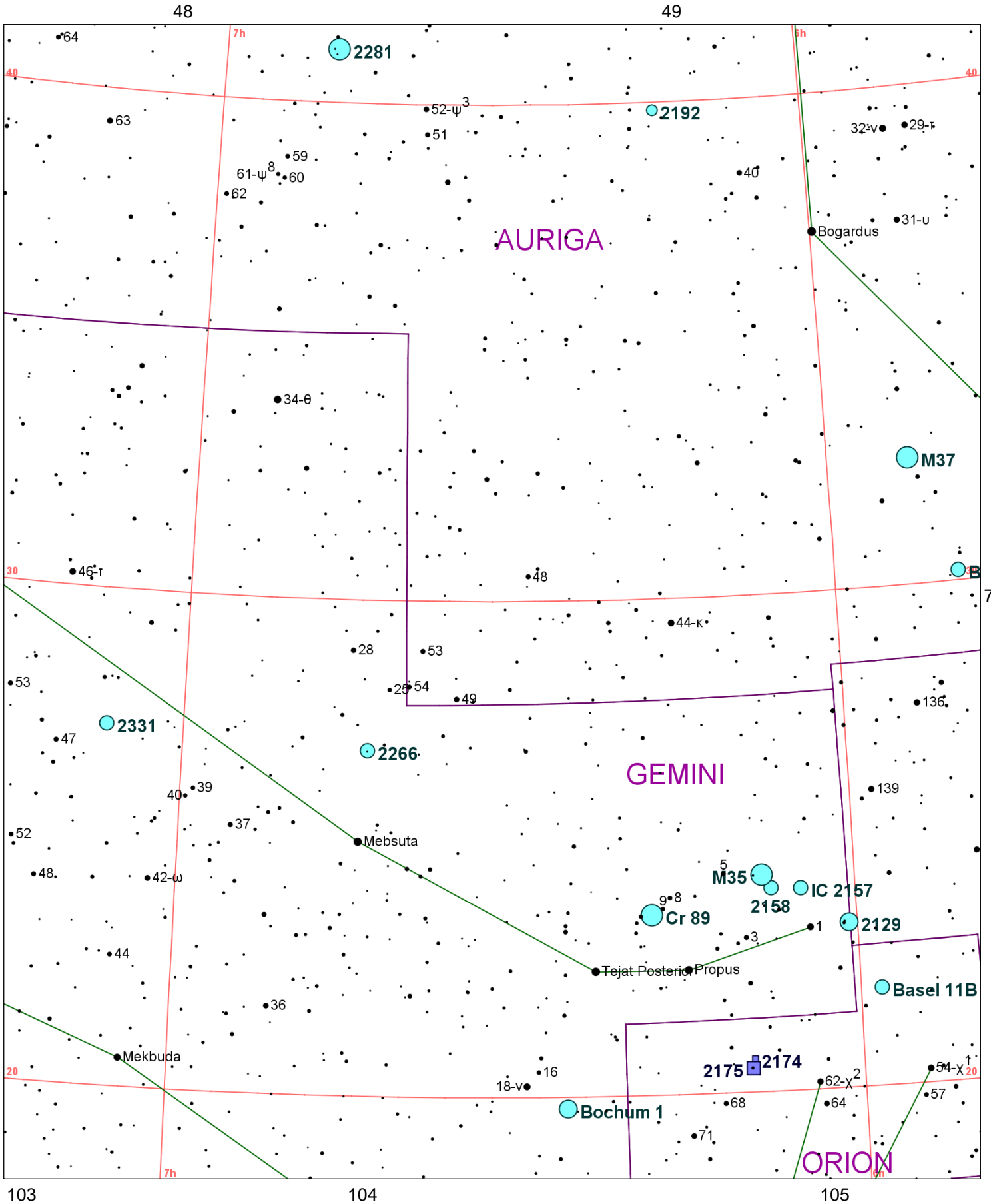


Chart 71													
Name	M	Const.	Mag.	Type	Size	R.A.	Decl.	C	R	S	O	# Stars	B
Common					Notes								
Basel 4		AUR	9.1	OC	8.0m	5h 48.5m	30° 13.0'					15	
Basel 11B		ORI	8.9	OC	10.0m	5h 58.2m	21° 58.0'					12	
Bochum 1		GEM	7.9	OC		6h 25.5m	19° 46.0'						
Cr 89		GEM	5.7	OC	35.0m	6h 18.0m	23° 38.0'					15	
IC 2157		GEM	8.4	OC	7.0m	6h 04.8m	24° 04.0'					20	
Cl,S,about 20 F stars													
NGC 2099	M37	AUR	5.6	OC	24.0m	5h 52.3m	32° 33.0'				O	150	B
!!Cl,Ri,pCM,st L & S - Total population 500*;dark area near center													
NGC 2129		GEM	6.7	OC	7.0m	6h 00.7m	23° 19.0'				O	40	
Cl,pL,40 or 50* 8...15 - H VIII 26													
NGC 2158		GEM	8.6	OC	5.0m	6h 07.4m	24° 06.0'			S53	O		
Cl,pS,mC,vRi,irr triangle * eS - H VI 17;150 F* on edge of M 35													
NGC 2168	M35	GEM	5.1	OC	28.0m	6h 08.2m	24° 22.0'				O	200	B
Cl,vL,eRi,pC,st9...16 - Lord Rosse counted 300*;Orange * invl;NGC 2158 30' SW													
NGC 2174		ORI		DN	40m x 30m	6h 09.4m	20° 40.0'				O		
eF,bet 3 vF * - w IC 2159 sf; contains cluster													
NGC 2175		ORI	6.8	DN	18.0m	6h 09.6m	20° 29.0'					60	
*8 in neb - In Gem OB1?													
NGC 2192		AUR	10.9	OC	6.0m	6h 15.3m	39° 51.0'					45	
Cl,cL,C,iF,st vS - H VII 57;25* mags 12...													
NGC 2266		GEM	9.5	OC	7.0m	6h 43.3m	26° 58.0'				O	50	
Cl,pS,eC,Ri,st 11...15 - H VI 21													
NGC 2281		AUR	5.4	OC	15.0m	6h 48.3m	41° 05.0'					30	B
Cl,pRi,vIC,st pL - H VIII 71													
NGC 2331		GEM	8.5	OC	18.0m	7h 07.0m	27° 16.0'					30	
Cl,L,vIC,S Cl inv - H VIII 40													

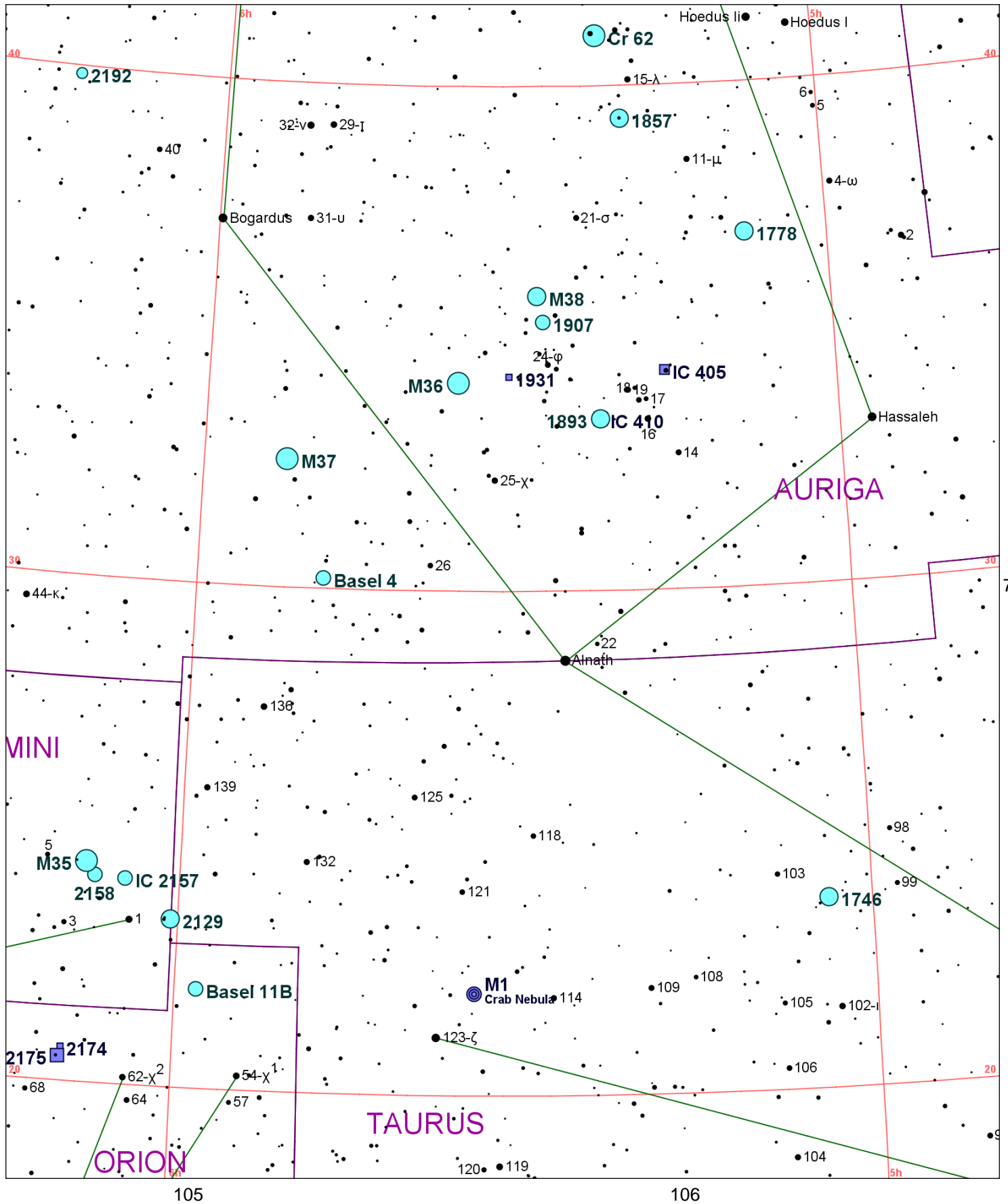


Chart 72													
Name	M	Const.	Mag.	Type	Size	R.A.	Decl.	C	R	S	O	# Stars	B
Common					Notes								
Basel 4		AUR	9.1	OC	8.0m	5h 48.5m	30° 13.0'					15	
Basel 11B		ORI	8.9	OC	10.0m	5h 58.2m	21° 58.0'					12	
Cr 62		AUR	4.2	OC	28.0m	5h 22.5m	40° 60.0'						
IC 405		AUR	10.0	DN	50m x 30m	5h 16.5m	34° 21.0'	C31					
* 6.7 w pB,vL neb - Flaming Star nebula;variable AE Aur in center of neby													
IC 410		AUR	7.5	DN	11m	5h 22.7m	33° 25.0'						
Dif,many st inv - Incl cluster NGC 1893													
IC 2157		GEM	8.4	OC	7.0m	6h 04.8m	24° 04.0'					20	
Cl,S,about 20 F stars													
NGC 1746		TAU	6.1	OC	42m	5h 03.8m	23° 46.0'				O	20	B
Cl,P													
NGC 1778		AUR	7.7	OC	7m	5h 08.1m	37° 01.0'				O	25	
Cl,pC,IRi,iF,st L - H VIII 61													
NGC 1857		AUR	7.0	OC	6m	5h 20.1m	39° 21.0'				O	40	
Cl,pRi,pC,st7... - H VII 33													
NGC 1893		AUR	7.5	OC	11m	5h 22.7m	33° 25.0'					60	B
Cl,L,Ri,IC - In Aur OB2;20* mags 9...12;neby IC 410 invl													
NGC 1907		AUR	8.2	OC	7.0m	5h 28.1m	35° 20.0'			S7	O	30	B
Cl,pRi,pC,R,st9...12 - H VII 39													
NGC 1912	M38	AUR	6.4	OC	21m	5h 28.7m	35° 51.0'				O	100	B
Cl,B,vL,vRi,iF,st L & S - in Aur OB1;Burnham-shaped like Greek letter Pi													
NGC 1931		AUR	10.1	DN	3m x 3m	5h 31.4m	34° 15.0'		R24	S8	O		
vB,L,R,B***in M - H I 261;Contains triple ADS 4112													
NGC 1952	M1	TAU	8.4	SR	8m x 4m	5h 34.5m	22° 01.0'				O		B
Crab Nebula													
NGC 1960	M36	AUR	6.0	OC	12m	5h 36.3m	34° 08.0'				O	60	B
Cl,B,vL,vRi,IC,*9..11 - in Aur OB1;incl Struve 737 10.7"sep													
NGC 2099	M37	AUR	5.6	OC	24.0m	5h 52.3m	32° 33.0'				O	150	B
!!Cl,Ri,pCM,st L & S - Total population 500*;dark area near center													
NGC 2129		GEM	6.7	OC	7.0m	6h 00.7m	23° 19.0'				O	40	
Cl,pL,40 or 50* 8...15 - H VIII 26													
NGC 2158		GEM	8.6	OC	5.0m	6h 07.4m	24° 06.0'			S53	O		
Cl,pS,mC,vRi,irr triangle * eS - H VI 17;150 F* on edge of M 35													
NGC 2168	M35	GEM	5.1	OC	28.0m	6h 08.2m	24° 22.0'				O	200	B
Cl,vL,eRi,pC,st9...16 - Lord Rosse counted 300*;Orange * invl;NGC 2158 30' SW													
NGC 2174		ORI		DN	40m x 30m	6h 09.4m	20° 40.0'				O		
eF,bet 3 vF * - w IC 2159 sf; contains cluster													
NGC 2175		ORI	6.8	DN	18.0m	6h 09.6m	20° 29.0'					60	
*8 in neb - In Gem OB1?													
NGC 2192		AUR	10.9	OC	6.0m	6h 15.3m	39° 51.0'					45	
Cl,cL,C,iF,st vS - H VII 57;25* mags 12...													