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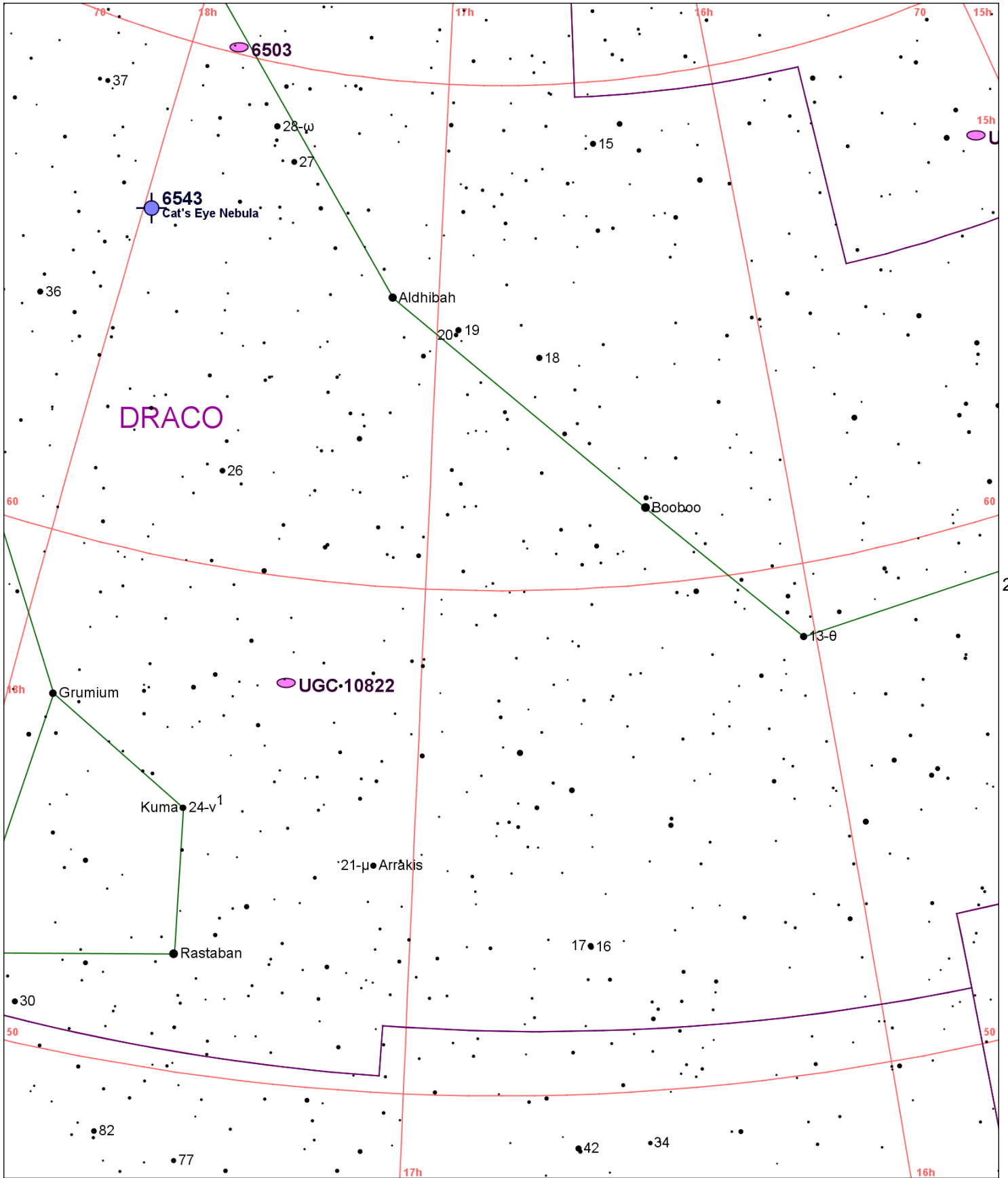


Chart 25

Name	M	Const.	Mag.	Type	Size	R.A.	Decl.	C	R	S	O	# Stars	B
Common					Notes								
NGC 6503		DRA	10.2	GAL	7m x 2.5m	17h 49.5m	70° 09.0'		R88	S49	O		
					pF,L,mE,*9f4'								
NGC 6543		DRA	8.3	PN	22s x 16s	17h 58.6m	66° 38.0'	C6	R89	S50	O		
Cat's Eye Nebula					vB,pS,sbMvSN - H IV 37;PK96+29.1								
UGC 9749		UMI	10.9	GAL	27.3m x 16.0m	15h 08.8m	67° 12.0'						
					13"-vF,L,E 1.5X1 at 60X; low surface brghtnss - Member Local Group								
UGC 10822		DRA	9.9	GAL	33.5m x 18.9m	17h 20.2m	57° 55.0'						
					13"-vF,L,pmE at 60X - Member of Local Group;dwarf elliptical								

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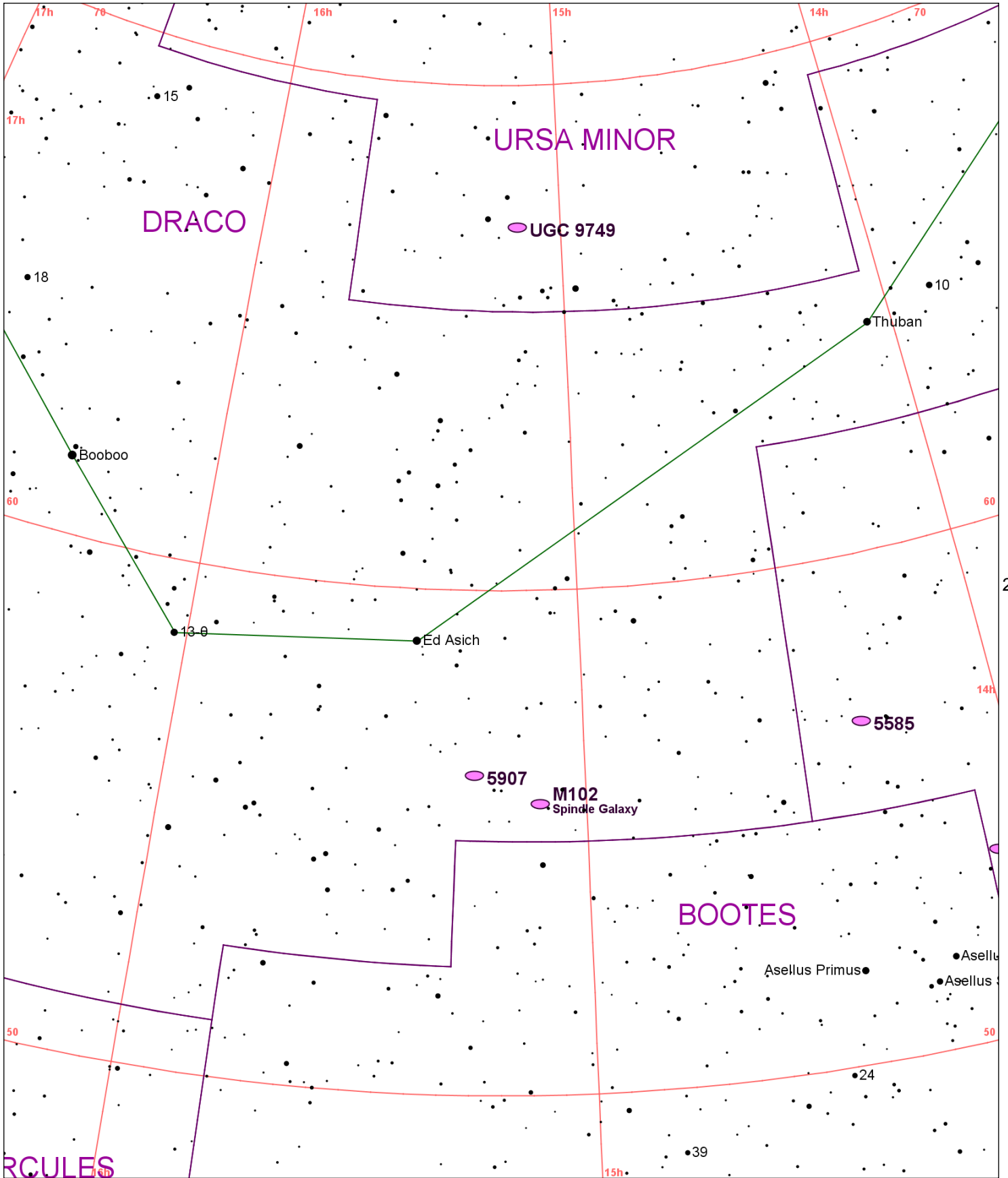


Chart 26													
Name	M	Const.	Mag.	Type	Size	R.A.	Decl.	C	R	S	O	# Stars	B
Common					Notes								
NGC 5474		UMA	10.8	GAL	5m x 4.5m	14h 05.0m	53° 40.0'				O		
					pB,L,bM,P w M101 - H I 214;low surf. bright;smooth part res cent w vsFN;strongly asym								
NGC 5585		UMA	10.7	GAL	5.8m x 3.6m	14h 19.8m	56° 44.0'						
					pF,L,iR,vqmbM,r - H I 235;M 101 group								
NGC 5866	M102	DRA	9.9	GAL	6.5m x 3.1m	15h 06.5m	55° 46.0'				O		B
Spindle Galaxy					vB,cL,pME146,gbM - vBN w dk lane and ansae;NGC 5867 small E neb;H I 215								
NGC 5907		DRA	10.3	GAL	11.8m x 1.3m	15h 15.9m	56° 20.0'		R87	S48	O		
					cB,vL,vmE155,vgBMN - H II 759;vs bulge nearly hidden by strong dk lane; SN 1940a								
UGC 9749		UMI	10.9	GAL	27.3m x 16.0m	15h 08.8m	67° 12.0'						
					13"-vF,L,E 1.5X1 at 60X; low surface brghtnss - Member Local Group								

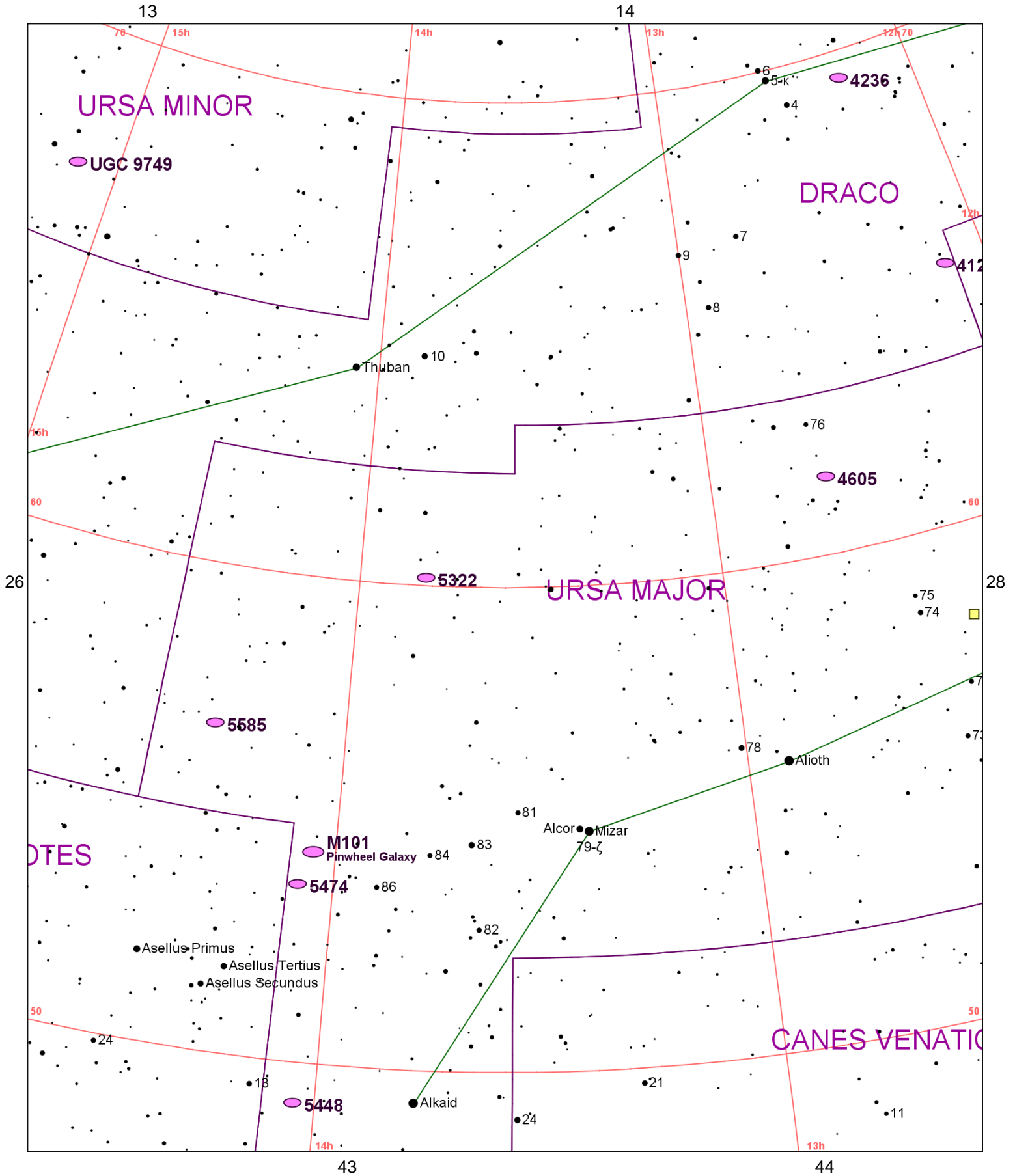


Chart 27													
Name	M	Const.	Mag.	Type	Size	R.A.	Decl.	C	R	S	O	# Stars	B
Common					Notes								
NGC 4125		DRA	9.7	GAL	6m x 5.1m	12h 08.1m	65° 10.0'				O		
					pB,pL,cE,mbM								
NGC 4236		DRA	9.6	GAL	22.6m x 6.9m	12h 16.7m	69° 28.0'	C3					
					vF,eL,mE160,vgbM - H V 51;P w Ho 357b @ 9';L;F spiral structure								
NGC 4605		UMA	10.3	GAL	5.9m x 2.4m	12h 40.0m	61° 36.0'		R48	S101	O		
					B,L,vmE118,glbM - H I 254								
NGC 5322		UMA	10.2	GAL	6m x 4.1m	13h 49.2m	60° 11.0'				O		
					vB,pL,iR,psmbM - H I 256;B diff. N;smooth neb								
NGC 5448		UMA	11.0	GAL	3.8m x 2m	14h 02.8m	49° 10.0'						
					pB,cL,vmE90,smbMN - H II 691;vBN w F bar								
NGC 5457	M101	UMA	7.9	GAL	28.5m x 28.3m	14h 03.2m	54° 21.0'				O		B
					Pinwheel Galaxy								
NGC 5474		UMA	10.8	GAL	5m x 4.5m	14h 05.0m	53° 40.0'				O		
					pB,L,bM,P w M101 - H I 214;low surf. bright;smooth part res cent w vsFN;strongly asym								
NGC 5585		UMA	10.7	GAL	5.8m x 3.6m	14h 19.8m	56° 44.0'						
					pF,L,iR,vqmbM,r - H I 235;M 101 group								
UGC 9749		UMI	10.9	GAL	27.3m x 16.0m	15h 08.8m	67° 12.0'						
					13"-vF,L,E 1.5X1 at 60X; low surface brghtnss - Member Local Group								
Winnecke 4	M40	UMA	9.0	MISC		12h 21.9m	58° 06.0'				O		B
					Neb D* - D* 9.0 & 9.3 mag 50" sep;No neby								

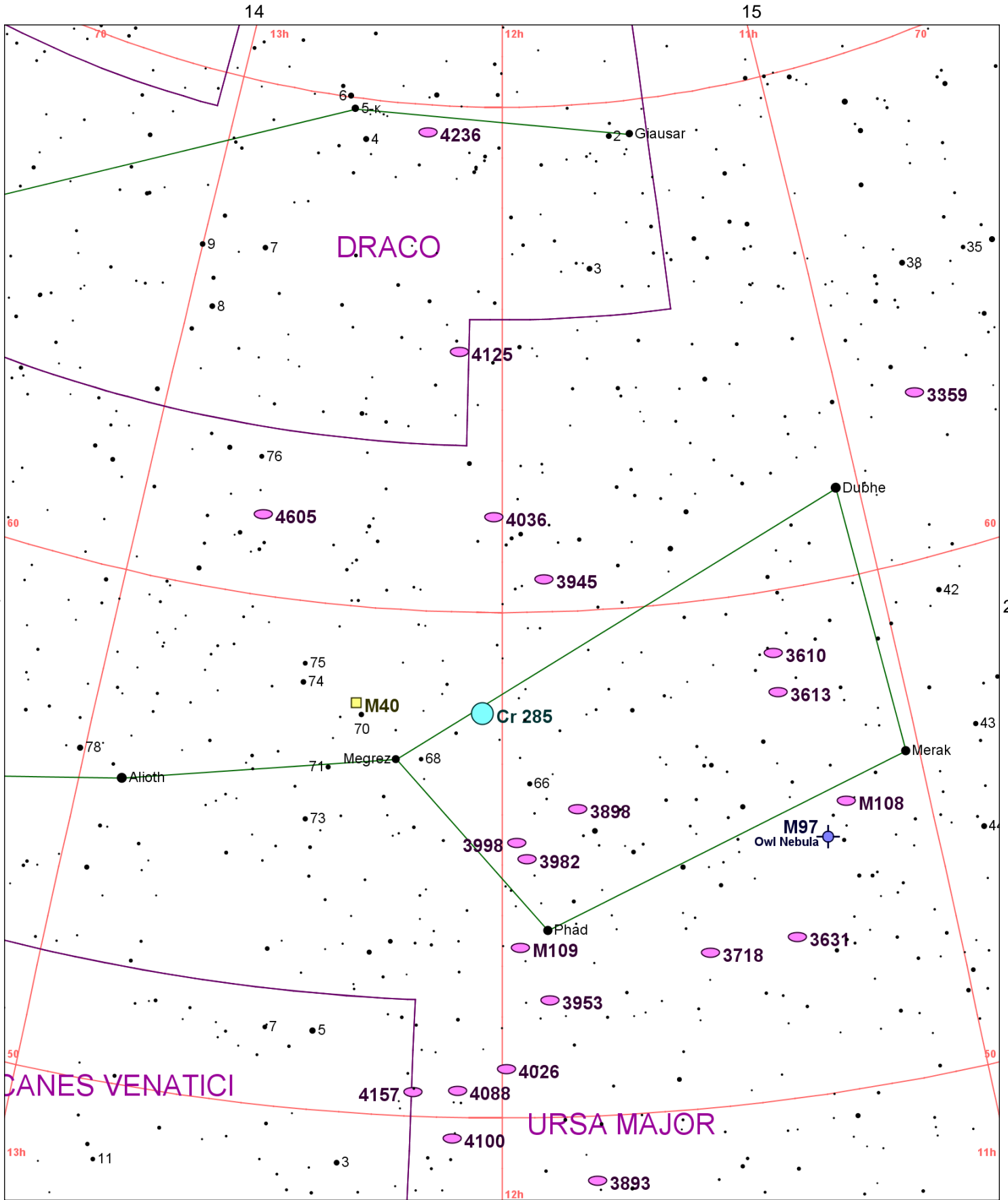


Chart 28													
Name	M	Const.	Mag.	Type	Size	R.A.	Decl.	C	R	S	O	# Stars	B
Common					Notes								
Cr 285		UMA	0.4	OC	1400m	12h 03.0m	58° 00.0'						
					UMa moving cluster								
NGC 3359		UMA	10.6	GAL	7.5m x 4.2m	10h 46.6m	63° 13.0'				O		
					pB,L,E 0,glbM - H V 52								
NGC 3556	M108	UMA	10.0	GAL	8.6m x 2.4m	11h 11.5m	55° 40.0'				O		
					cB,vL,vmE 79,pBM - H V 46;M 97 is 48' SE;nearly edge-on								
NGC 3587	M97	UMA	11.0	PN	202s x 196s	11h 14.8m	55° 01.0'				O		B
					Owl Nebula !! vB,vL,R,vvg,vsbM - PK148+57.1								
NGC 3610		UMA	10.8	GAL	2.5m x 2.5m	11h 18.4m	58° 47.0'						
					vB,pS,IE 90,vsmbMSN - H I 270;comp 3.7';PA232;0.25'X0.25'								
NGC 3613		UMA	10.9	GAL	3.6m x 2m	11h 18.6m	58° 00.0'						
					vB,cL,mE 305,smbMN - H I 271;P w NGC 3619 at 15.7' PA158								
NGC 3631		UMA	10.4	GAL	5m x 4.8m	11h 21.0m	53° 10.0'						
					pB,L,R,svmbMrN - H I 226;SN 1964a;UGC 6360;Arp 27								
NGC 3718		UMA	10.8	GAL	8.2m x 3.5m	11h 32.6m	53° 04.0'						
					pB,vL,R,vglbM - H I 221;P w NGC 3729 at 11.5'ENE;cent dust lane sprl arms								
NGC 3893		UMA	10.5	GAL	4.5m x 2.4m	11h 48.6m	48° 43.0'						
					B,pL,R,mbM - H II 738;P w NGC 3896 at 3.9';PA125								
NGC 3898		UMA	10.7	GAL	3.8m x 2.6m	11h 49.3m	56° 05.0'				O		
					B,pL,IE,svmbM - H I 228;comp 5.0';PA60;0.7'X0.12';NGC 3888 15' south								
NGC 3945		UMA	10.9	GAL	6.4m x 4.2m	11h 53.2m	60° 40.0'						
					B,pL,R,gmbM,r,*12 sp - H I 251								
NGC 3953		UMA	10.1	GAL	6.9m x 3.6m	11h 53.8m	52° 19.0'				O		
					cB,L,E 0,vsbM,fine spiral - H V 45;comps 3.9';PA190;0.3'X0.1';4.6';PA156;0.4'X0.4'								
NGC 3982		UMA	11.0	GAL	2.3m x 2m	11h 56.5m	55° 07.0'						
					B,pL,R,g,sbM,disc - H IV 62								
NGC 3992	M109	UMA	9.8	GAL	7.5m x 4.4m	11h 57.6m	53° 22.0'				O		
					cB,vL,pmE,sbM,BN - H IV 61;theta struc barred sp;Gamma UMa 40' NW								
NGC 3998		UMA	10.7	GAL	2.7m x 2.3m	11h 57.9m	55° 27.0'				O		
					cB,pS,R,vq,svmbM - H I 229;comp 4.7';PA145;0.3'X0.3'								
NGC 4026		UMA	10.8	GAL	4.7m x 1.2m	11h 59.4m	50° 58.0'		R45	S99	O		
					vB,cL,mE176,vsmbM,BN - H I 223;edge on lens shape								
NGC 4036		UMA	10.7	GAL	4m x 1.8m	12h 01.5m	61° 54.0'				O		
					vB,vL,E,vBN - H I 253;NGC 4041 @ 15';spindle shape								
NGC 4088		UMA	10.6	GAL	5.6m x 2.1m	12h 05.6m	50° 32.0'		R46	S100	O		
					B,cL,E55,lbM - H I 206;P w NGC 4085 11' to south;distorted spir arms;UGC 7081								
NGC 4100		UMA	11.2	GAL	5.4m x 1.7m	12h 06.1m	49° 35.0'				O		
					pB,vL,vmE161,vglbM,vsBN - H III 717;nearly edge on spiral								
NGC 4125		DRA	9.7	GAL	6m x 5.1m	12h 08.1m	65° 10.0'				O		
					pB,pL,cE,mbM								
NGC 4157		UMA	11.4	GAL	6.7m x 1.2m	12h 11.1m	50° 29.0'		R47				
					pF,cL,vmE60 - H I 208;SN 1937a;1955a;edge on narrow streak								
NGC 4236		DRA	9.6	GAL	22.6m x 6.9m	12h 16.7m	69° 28.0'	C3					
					vF,eL,mE160,vqbM - H V 51;P w Ho 357b @ 9';L;F spiral structure								
NGC 4605		UMA	10.3	GAL	5.9m x 2.4m	12h 40.0m	61° 36.0'		R48	S101	O		
					B,L,vmE118,glbM - H I 254								
Winnecke 4	M40	UMA	9.0	MISC		12h 21.9m	58° 06.0'				O		B
					Neb D* - D* 9.0 & 9.3 mag 50" sep;No neby								

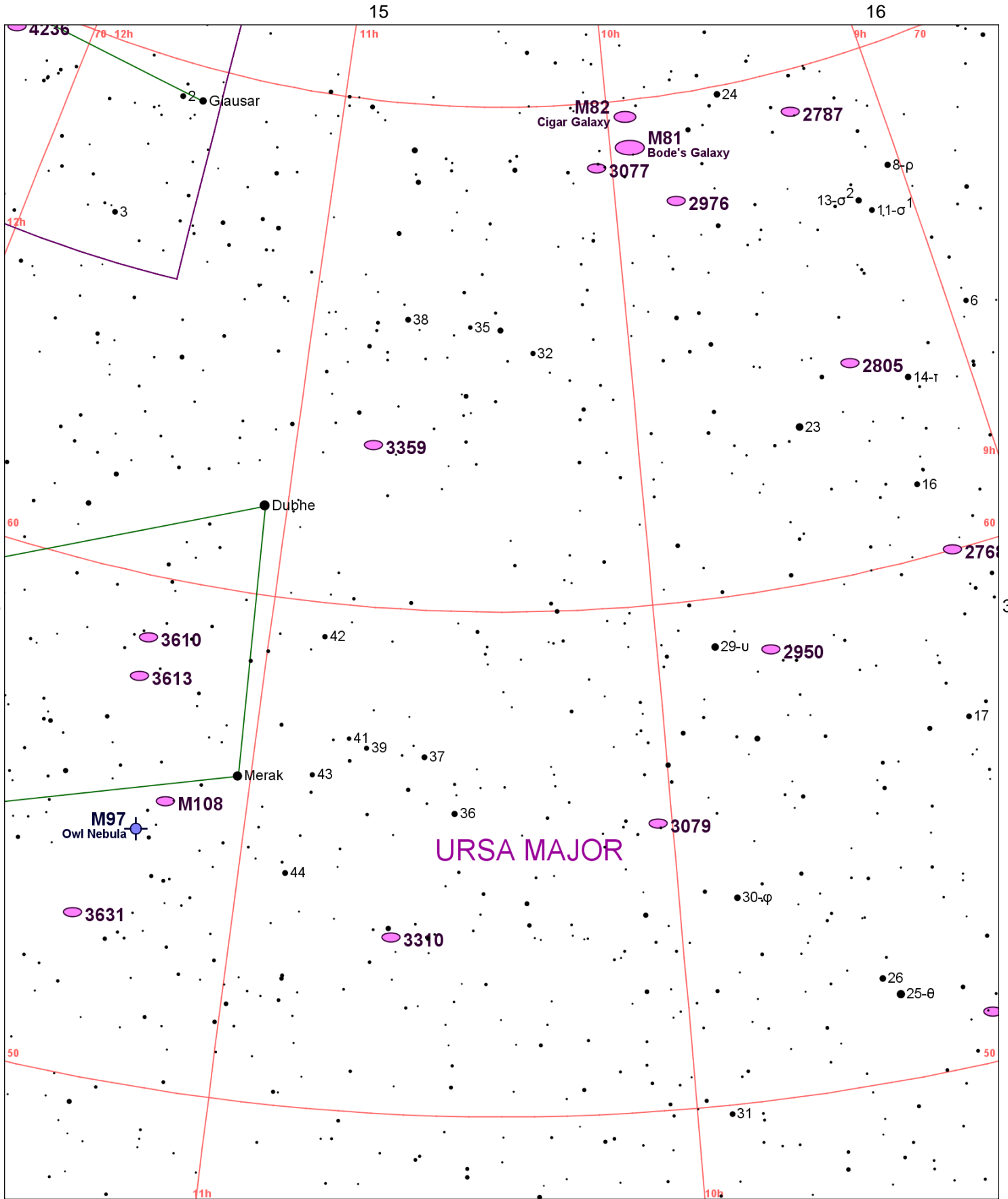


Chart 29													
Name	M	Const.	Mag.	Type	Size	R.A.	Decl.	C	R	S	O	# Stars	B
Common					Notes								
NGC 2768		UMA	9.9	GAL	8.2m x 5.3m	9h 11.6m	60° 02.0'				O		
					cB,cL,IE,psbM,LBN - H I 250;vsVB center; smooth neb in lens and external envelope								
NGC 2787		UMA	10.8	GAL	3.1m x 1.8m	9h 19.3m	69° 12.0'						
					B,pL,IE 90 deg,mbM,r,vS* sf inv - H I 216;B nucl in B inner lens;strong narrow bar w blobs								
NGC 2805		UMA	11.0	GAL	6.3m x 4.5m	9h 20.3m	64° 06.0'						
					vF,L,R,mbM - H III 878;slightly asym;many irreg res vF knotty arms;multi sys								
NGC 2841		UMA	9.2	GAL	7.7m x 3.6m	9h 22.0m	50° 59.0'		R40	S92	O		
					vB,L,vmE151,vsmbM = *10 - H I 205;fine spiral w symmetrical whorls								
NGC 2950		UMA	10.9	GAL	2.7m x 1.8m	9h 42.6m	58° 51.0'						
					B,pS,R,vqymbMN - H IV 68								
NGC 2976		UMA	10.2	GAL	6.2m x 3.1m	9h 47.2m	67° 55.0'				O		
					B,vL,mE152,st inv - H I 285;B main body;chaotic inner w many dk lane;F outer disc								
NGC 3031	M81	UMA	6.9	GAL	24.9m x 11.5m	9h 55.6m	69° 04.0'				O		B
					Bode's Galaxy ! eB,eL,E 156,gsymbM,BN - brightest in group;fine spiral								
NGC 3034	M82	UMA	8.4	GAL	10.5m x 5.1m	9h 55.9m	69° 41.0'				O		B
					Cigar Galaxy vB,vL,vmE(ray) - M81 group;eruptive;H IV 79								
NGC 3077		UMA	9.9	GAL	5.2m x 4.7m	10h 03.3m	68° 44.0'			S94			
					cB,cL,mbM,R w ray - H I 286;M81 group;dust streamers tending to radial direction								
NGC 3079		UMA	10.9	GAL	8.1m x 1.3m	10h 02.0m	55° 41.0'		R41	S93	O		
					vB,L,mE 135,long streak - H V 47;brightest of 3;comp 6.5 nf;0.9'X0.4';mag 14.6								
NGC 3310		UMA	10.8	GAL	2.8m x 2.6m	10h 38.8m	53° 30.0'				O		
					cB,pL,R,vq,vsmbMN 15" - H IV 60;UGC 5786								
NGC 3359		UMA	10.6	GAL	7.5m x 4.2m	10h 46.6m	63° 13.0'				O		
					pB,L,E 0,glbM - H V 52								
NGC 3556	M108	UMA	10.0	GAL	8.6m x 2.4m	11h 11.5m	55° 40.0'				O		
					cB,vL,vmE 79,pBM - H V 46;M 97 is 48' SE;nearly edge-on								
NGC 3587	M97	UMA	11.0	PN	202s x 196s	11h 14.8m	55° 01.0'				O		B
					Owl Nebula !! vB,vL,R,vvg,vsbM - PK148+57.1								
NGC 3610		UMA	10.8	GAL	2.5m x 2.5m	11h 18.4m	58° 47.0'						
					vB,pS,IE 90,vsymbMSN - H I 270;comp 3.7';PA232;0.25'X0.25'								
NGC 3613		UMA	10.9	GAL	3.6m x 2m	11h 18.6m	58° 00.0'						
					vB,cL,mE 305,smbMN - H I 271;P w NGC 3619 at 15.7' PA158								
NGC 3631		UMA	10.4	GAL	5m x 4.8m	11h 21.0m	53° 10.0'						
					pB,L,R,svmbMrN - H I 226;SN 1964a;UGC 6360;Arp 27								
NGC 4236		DRA	9.6	GAL	22.6m x 6.9m	12h 16.7m	69° 28.0'	C3					
					vF,eL,mE160,vgbM - H V 51;P w Ho 357b @ 9';L;F spiral structure								

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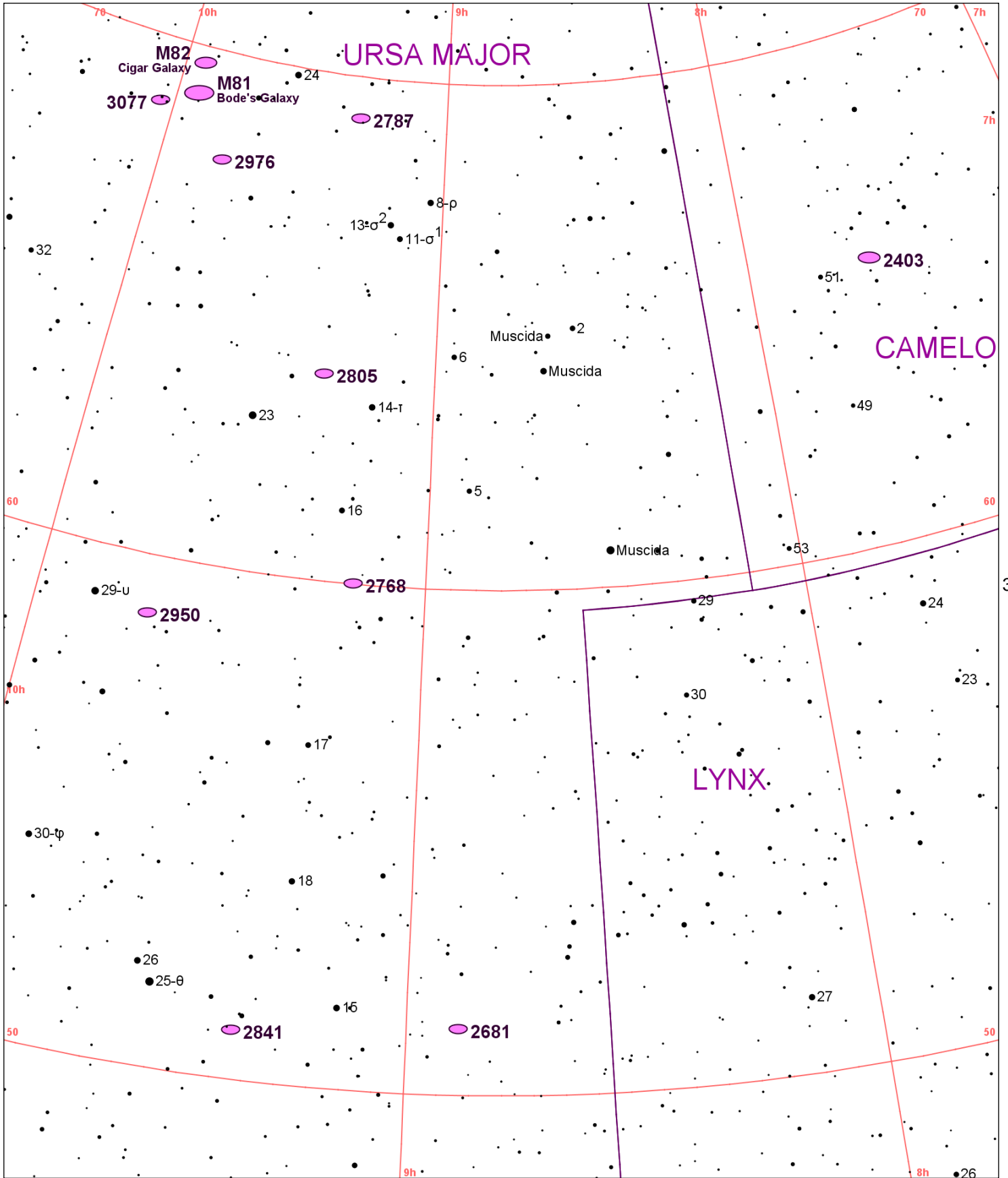


Chart 30													
Name	M	Const.	Mag.	Type	Size	R.A.	Decl.	C	R	S	O	# Stars	B
Common					Notes								
NGC 2403		CAM	8.5	GAL	23.4m x 11.8m	7h 36.8m	65° 36.0'	C7	R37	S10	O		B
					!! cB,eL,vmE,vgmbMN - H V 44;in M81 group;many well res irreg arms;broad bar								
NGC 2681		UMA	10.3	GAL	3.7m x 3.7m	8h 53.5m	51° 19.0'				O		
					vB,vL,vg,vsmbM *10 - H I 242;Compact center and distinct spiral arms								
NGC 2768		UMA	9.9	GAL	8.2m x 5.3m	9h 11.6m	60° 02.0'				O		
					cB,cL,IE,psbM,LBN - H I 250;vsvB center; smooth neb in lens and external envelope								
NGC 2787		UMA	10.8	GAL	3.1m x 1.8m	9h 19.3m	69° 12.0'						
					B,pL,IE 90 deg,mbM,r,vS* sf inv - H I 216;B nucl in B inner lens;strong narrow bar w blobs								
NGC 2805		UMA	11.0	GAL	6.3m x 4.5m	9h 20.3m	64° 06.0'						
					vF,L,R,mbM - H III 878;slightly asym;many irreg res vF knotty arms;multi sys								
NGC 2841		UMA	9.2	GAL	7.7m x 3.6m	9h 22.0m	50° 59.0'		R40	S92	O		
					vB,L,vmE151,vsmbM = *10 - H I 205;fine spiral w symmetrical whorls								
NGC 2950		UMA	10.9	GAL	2.7m x 1.8m	9h 42.6m	58° 51.0'						
					B,pS,R,vqymbMN - H IV 68								
NGC 2976		UMA	10.2	GAL	6.2m x 3.1m	9h 47.2m	67° 55.0'				O		
					B,vL,mE152,st inv - H I 285;B main body;chaotic inner w many dk lane;F outer disc								
NGC 3031	M81	UMA	6.9	GAL	24.9m x 11.5m	9h 55.6m	69° 04.0'				O		B
Bode's Galaxy					! eB,eL,E 156,gsymbM,BN - brightest in group;fine spiral								
NGC 3034	M82	UMA	8.4	GAL	10.5m x 5.1m	9h 55.9m	69° 41.0'				O		B
Cigar Galaxy					vB,vL,vmE(ray) - M81 group;eruptive;H IV 79								
NGC 3077		UMA	9.9	GAL	5.2m x 4.7m	10h 03.3m	68° 44.0'			S94			
					cB,cL,mbM,R w ray - H I 286;M81 group;dust streamers tending to radial direction								

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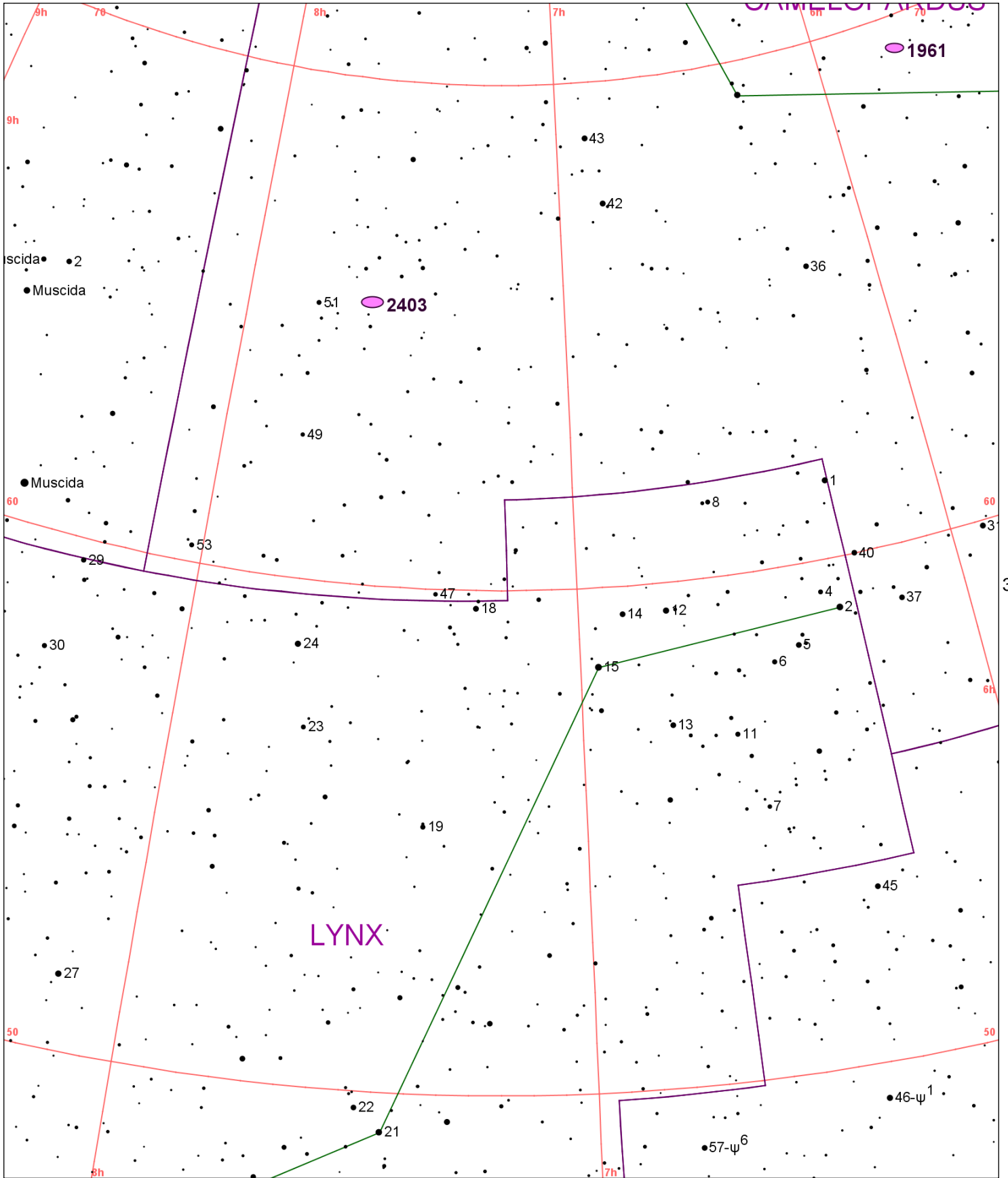


Chart 31													
Name	M	Const.	Mag.	Type	Size	R.A.	Decl.	C	R	S	O	# Stars	B
Common					Notes								
NGC 1961		CAM	11.0	GAL	4.5m x 3.1m	5h 42.1m	69° 23.0'						
					cF,pL,iF,mbM,er,* inv - H III 747;hexagonal;2 branch arms w some knots								
NGC 2403		CAM	8.5	GAL	23.4m x 11.8m	7h 36.8m	65° 36.0'	C7	R37	S10	O		B
					!! cB,eL,vmE,vgmbMN - H V 44;in M81 group;many well res irreg arms;broad bar								

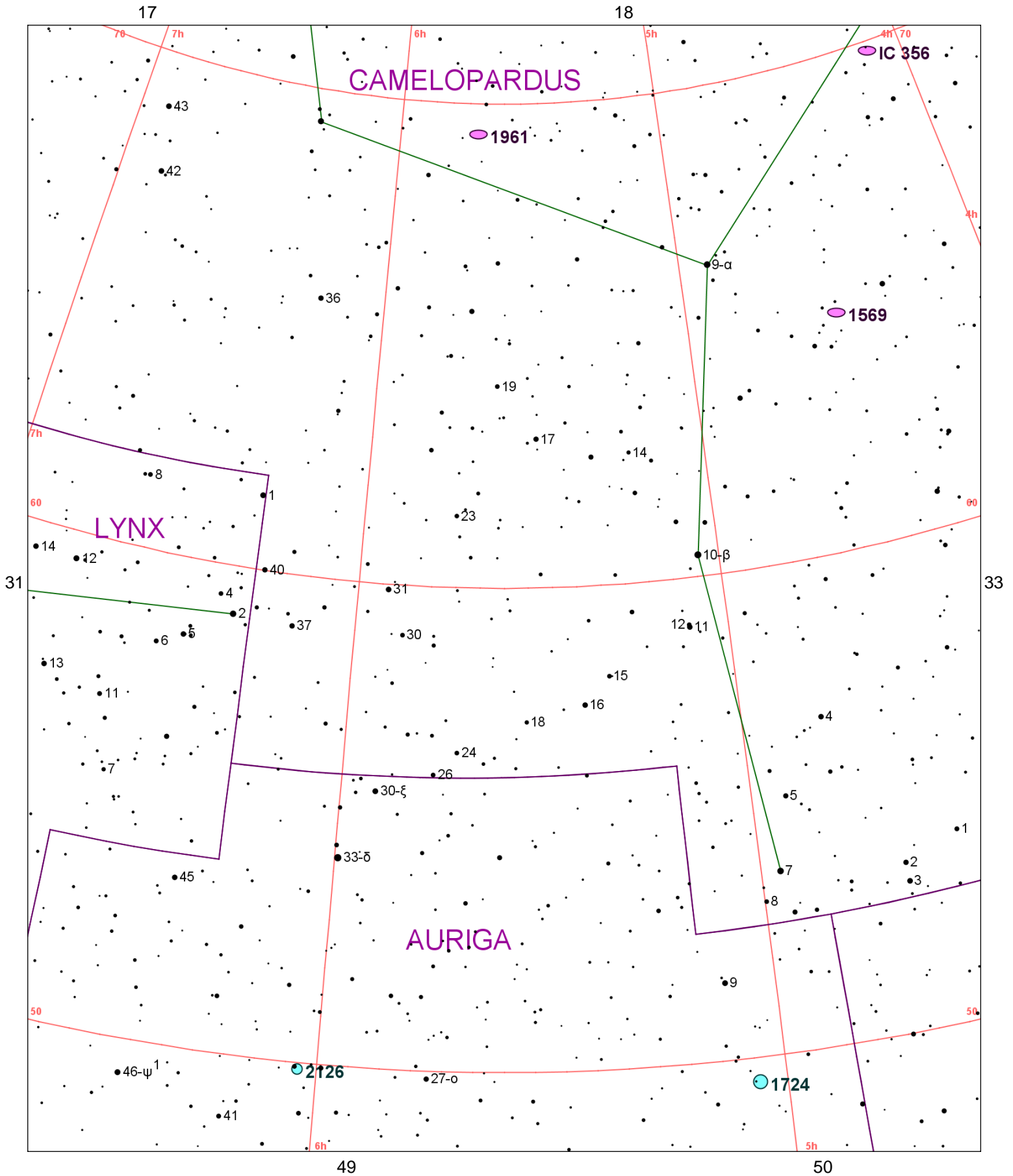


Chart 32													
Name	M	Const.	Mag.	Type	Size	R.A.	Decl.	C	R	S	O	# Stars	B
Common					Notes								
IC 356		CAM	10.5	GAL	4.5m x 3.5m	4h 07.8m	69° 49.0'						
					pF,pL,BM,* 8.5 4' north								
NGC 1569		CAM	11.0	GAL	3.7m x 1.8m	4h 30.8m	64° 51.0'				O		
					pB,S,IE,BNM,*9.5n1' - H II 768;dk markings;well rrr;l trace of spiral structure								
NGC 1724		AUR	10.0	OC		5h 03.5m	49° 30.0'						
					Cl,vS,(st+ neb)								
NGC 1961		CAM	11.0	GAL	4.5m x 3.1m	5h 42.1m	69° 23.0'						
					cF,pL,iF,mbM,er,* inv - H III 747;hexagonal;2 branch arms w some knots								
NGC 2126		AUR	10.2	OC	6.0m	6h 02.5m	49° 52.0'					40	
					Cl,not Ri,*7 north - H VIII 68;Scattered 20 * mags 11..14								