

Chart 33													
Name	M	Const.	Mag.	Type	Size	R.A.	Decl.	C	R	S	O	# Stars	B
<b>Common</b>					<b>Notes</b>								
Berk 65		CAS	10.2	OC	5.0m	2h 39.0m	60° 25.0'					20	
Cr 33		CAS	5.9	OC	40.0m	2h 59.3m	60° 24.0'					25	
Cr 34		CAS	6.8	OC	25.0m	3h 00.9m	60° 25.0'						
Czernik 13		CAS	10.4	OC	6.0m	2h 44.7m	62° 21.0'					10	
IC 342		CAM	12.0	GAL	20.9m x 20.4m	3h 46.8m	68° 06.0'	C5					
F,vL,R,vsBN - Local Group Member													
IC 356		CAM	10.5	GAL	4.5m x 3.5m	4h 07.8m	69° 49.0'						
pF,pL,BM,* 8.5 4' north													
IC 1848		CAS	6.5	DN	40m x 10m	2h 51.4m	60° 25.0'					10	
Cl,star following,in F neby - Neby descr: eL;vF;90' X 45'													
Mel 20		PER	1.2	OC	185m	3h 22.0m	49° 00.0'					50	B
10X50-vB,vvL,scattered; 39° - Alpha Per moving cluster (Mag does not include Alpha Per)													
NGC 1027		CAS	6.7	OC	20.0m	2h 42.6m	61° 36.0'					40	
Cl,L,scatt stars, one 10th mag - H VIII 66;Scattered group 12*													
NGC 1444		PER	6.6	OC	4.0m	3h 49.4m	52° 40.0'						
Cl of ab 30*12...14 - H VIII 80;In Cam OB1?													
NGC 1491		PER		DN	6m x 9m	4h 03.2m	51° 19.0'		R19	S82	O		
vB,S,iF,bM,r,* inv - H I 258													
NGC 1496		PER	9.6	OC	6.0m	4h 04.5m	52° 40.0'					10	
Cl,segment of a ring													
NGC 1501		CAM	12.0	PN	56s x 48s	4h 07.0m	60° 55.0'		R20	S9	O		
pB,pS,vIE,1'Diam - H IV 53;PK144+6.1													
NGC 1502		CAM	6.9	OC	8m	4h 07.8m	62° 20.0'				O	45	
Cl,pRi,cC,iF - H VII 47;Incl Struve 484 5"sep PA 130 & Struve 485 18" 6" 11"mul*													
NGC 1513		PER	8.4	OC	9.0m	4h 09.9m	49° 31.0'				O	50	
Cl,L,vRi,pC,st vL - H VII 60													
NGC 1528		PER	6.4	OC	24.0m	4h 15.3m	51° 13.0'				O	40	B
Cl,B,vRi,cC - H VII 61;80 * mag 8...;1 deg NNW from b1 PER													
NGC 1545		PER	6.2	OC	18.0m	4h 20.9m	50° 15.0'				O	20	
Cl,pRi,iC,st L - H VIII 85													
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 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													
Stock 23		CAM		OC	15.0m	3h 16.3m	60° 02.0'					25	B
13"-pB,pL,nRi,scatt,17* at 100X													
Tombaugh 5		CAM	8.4	OC	17.0m	3h 47.8m	59° 03.0'					60	
Tr 3		CAS	7.0	OC	23.0m	3h 11.8m	63° 15.0'					30	B
L,nC													
Kemble 1		CAM	5.0	AST		3h 60.0m	63° 00.0'					20	B
Kemble's Cascade					20 stars nearly in a row								

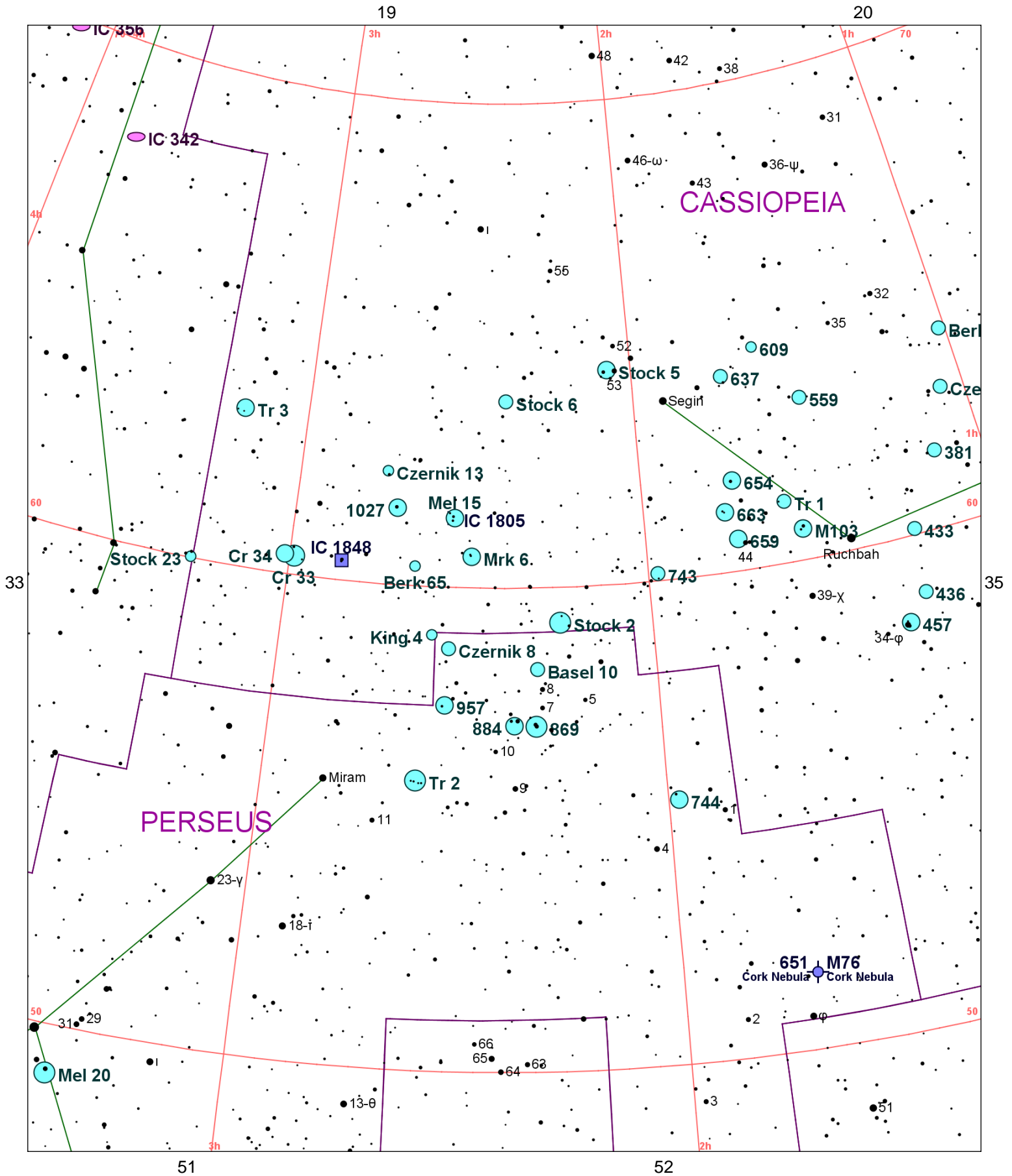


Chart 34													
Name	M	Const.	Mag.	Type	Size	R.A.	Decl.	C	R	S	O	# Stars	B
<b>Common</b>					<b>Notes</b>								
Basel 10		PER	9.9	OC		2h 18.8m	58° 19.0'					12	
Berk 62		CAS	9.3	OC	10.0m	1h 01.0m	63° 57.0'					50	
Berk 65		CAS	10.2	OC	5.0m	2h 39.0m	60° 25.0'					20	
Cr 33		CAS	5.9	OC	40.0m	2h 59.3m	60° 24.0'					25	
Cr 34		CAS	6.8	OC	25.0m	3h 00.9m	60° 25.0'						
Czernik 3		CAS	9.9	OC	3.0m	1h 04.1m	62° 48.0'					8	
Czernik 8		PER	9.7	OC	7.0m	2h 33.0m	58° 44.0'					10	
Czernik 13		CAS	10.4	OC	6.0m	2h 44.7m	62° 21.0'					10	
IC 342		CAM	12.0	GAL	20.9m x 20.4m	3h 46.8m	68° 06.0'	C5					
F,vL,R,vsBN - Local Group Member													
IC 356		CAM	10.5	GAL	4.5m x 3.5m	4h 07.8m	69° 49.0'						
pF,pL,BM,* 8.5 4' north													
IC 1805		CAS	6.5	DN	60m x 60m	2h 32.7m	61° 27.0'					40	
Cl,C,eL neby extends following - In Cas OB6;cluster is Mel 15;neby eF;Irr loop 90' diam													
IC 1848		CAS	6.5	DN	40m x 10m	2h 51.4m	60° 25.0'					10	
Cl,star following,in F neby - Neby descr: eL;vF;90' X 45'													
King 4		CAS	10.5	OC	3.0m	2h 35.7m	58° 60.0'					20	
Mel 15		CAS	6.6	OC	21.0m	2h 32.6m	61° 27.0'					40	B
13"-B,pL,pRi,pC; 20" at 135X; some neby to S - 19" in scattered oval w compress center;incl in IC 1805 neby													
Mel 20		PER	1.2	OC	185m	3h 22.0m	49° 00.0'					50	B
10X50-vB,vvL,scattered; 39" - Alpha Per moving cluster (Mag does not include Alpha Per)													
Mrk 6		CAS	7.1	OC	4.5m	2h 29.6m	60° 39.0'					6	B
13"-9 pB* and 6 pF* in Small grp at 100X - About 12 *													
NGC 381		CAS	9.3	OC	6.0m	1h 08.4m	61° 35.0'					50	
Cl,pC - H VIII 64;in Cas OB1?													
NGC 433		CAS	9.0	OC	2.5m	1h 15.2m	60° 08.0'					15	
Cl,S,IC													
NGC 436		CAS	8.8	OC	6.0m	1h 16.0m	58° 49.0'				O	30	
Cl,S,iF,pC - H VII 45													
NGC 457		CAS	6.4	OC	13.0m	1h 19.5m	58° 17.0'	C13	R8	S14	O	80	B
Cl,B,L,pRi,*7,8,10 - H VII 42;Phi Cas is not a member;Not incl in mag													
NGC 559		CAS	9.5	OC	4.4m	1h 29.5m	63° 19.0'	C8				60	
Cl,B,pL,pRi - H VII 48													
NGC 581	M103	CAS	7.4	OC	6.0m	1h 33.4m	60° 39.0'				O	40	B
Cl,pL,B,R,Ri,*10..11 - in Cas OB8;incl Struve 131 6-9m 14"													
NGC 609		CAS	11.0	OC	3.0m	1h 36.4m	64° 32.0'						
Cl,S,pRi,*14...													
NGC 637		CAS	8.2	OC	3.5m	1h 43.1m	64° 02.0'					20	
Cl,pS,B & vF stars - H VII 49													
NGC 650	M76	PER	11.0	PN	163s x 107s	1h 42.3m	51° 35.0'				O		
Cork Nebula vB,p of Dneb - aka Little Dumbbell Nebula; PK130-10.1													
NGC 651		PER	11.0	PN	163s x 107s	1h 42.3m	51° 35.0'						
Cork Nebula vB,f of Dneb - aka Little Dumbbell Nebula; faintest M obj;H I 193													
NGC 654		CAS	6.5	OC	5.0m	1h 44.0m	61° 53.0'				O	60	
Cl,iF,Ri,1*6.7m - H VII 46;in Cas OB8?;50* mags 11..14													
NGC 659		CAS	7.9	OC	5.0m	1h 44.4m	60° 40.0'					40	
Cl,iRi,st B - H VIII 65;30* mags 12...													
NGC 663		CAS	7.1	OC	16m	1h 46.0m	61° 15.0'	C10	R9	S15	O	80	B
Cl,B,L,eRi,st pL - H VI 31;in Cas OB8;incl Struve 151 152 & 153													
NGC 743		CAS	9.5	OC	5.0m	1h 58.5m	60° 10.0'					12	
Cl,not Ri,D*													
NGC 744		PER	7.9	OC	11.0m	1h 58.5m	55° 28.0'					20	
Cl,pL,pRi,iF,*11..13													
NGC 869		PER	5.3	OC	30m	2h 19.1m	57° 08.0'	C14	R17	S79	O	200	B
Cl,vvL,vRi,*7...14 - H VI 33;h Per;in Per OB1;Double Cluster w NGC 884													
NGC 884		PER	6.1	OC	30m	2h 22.5m	57° 09.0'			S80	O	150	B

Chart 34													
Name	M	Const.	Mag.	Type	Size	R.A.	Decl.	C	R	S	O	# Stars	B
<b>Common</b>					<b>Notes</b>								
					Cl,vL,vRi,ruby*M - H VI 34;chi Per;in Per OB1;Double Cluster w NGC 869								
NGC 957		PER	7.6	OC	11.0m	2h 33.3m	57° 34.0'				O	30	
					Cl,pL,pRi,*13...15 - Incl D* B1314 and J. Herschel 2143;Barns-diamond dust								
NGC 1027		CAS	6.7	OC	20.0m	2h 42.6m	61° 36.0'					40	
					Cl,L,scatt stars, one 10th mag - H VIII 66;Scattered group 12*								
Stock 2		CAS	4.4	OC	60.0m	2h 15.0m	59° 16.0'					50	B
					13"-vB,vL,nC,vRi at 60X; 88°, nice chains - 2 deg north of Double Cluster; easy in binocs								
Stock 5		CAS	7.0	OC	15.0m	2h 04.5m	64° 26.0'					25	
					13"-B,pL,nRi,nC at 100X; 17°; just naked eye								
Stock 6		CAS	10.0	OC	20.0m	2h 23.7m	63° 52.0'					20	
Stock 23		CAM		OC	15.0m	3h 16.3m	60° 02.0'					25	B
					13"-pB,pL,nRi,scatt,17* at 100X								
Tr 1		CAS	8.1	OC	4.5m	1h 35.7m	61° 17.0'				O	20	
					S,pC - 2 10 mag * and haze of unresolved stars								
Tr 2		PER	5.9	OC	20.0m	2h 37.3m	55° 59.0'					20	B
					13"-pB,pL,pRi,sC at 100X; 20°; BI-Gold D* inv - Moderatly rich about 30 * to 11 mag some faint * to south								
Tr 3		CAS	7.0	OC	23.0m	3h 11.8m	63° 15.0'					30	B
					L,nC								

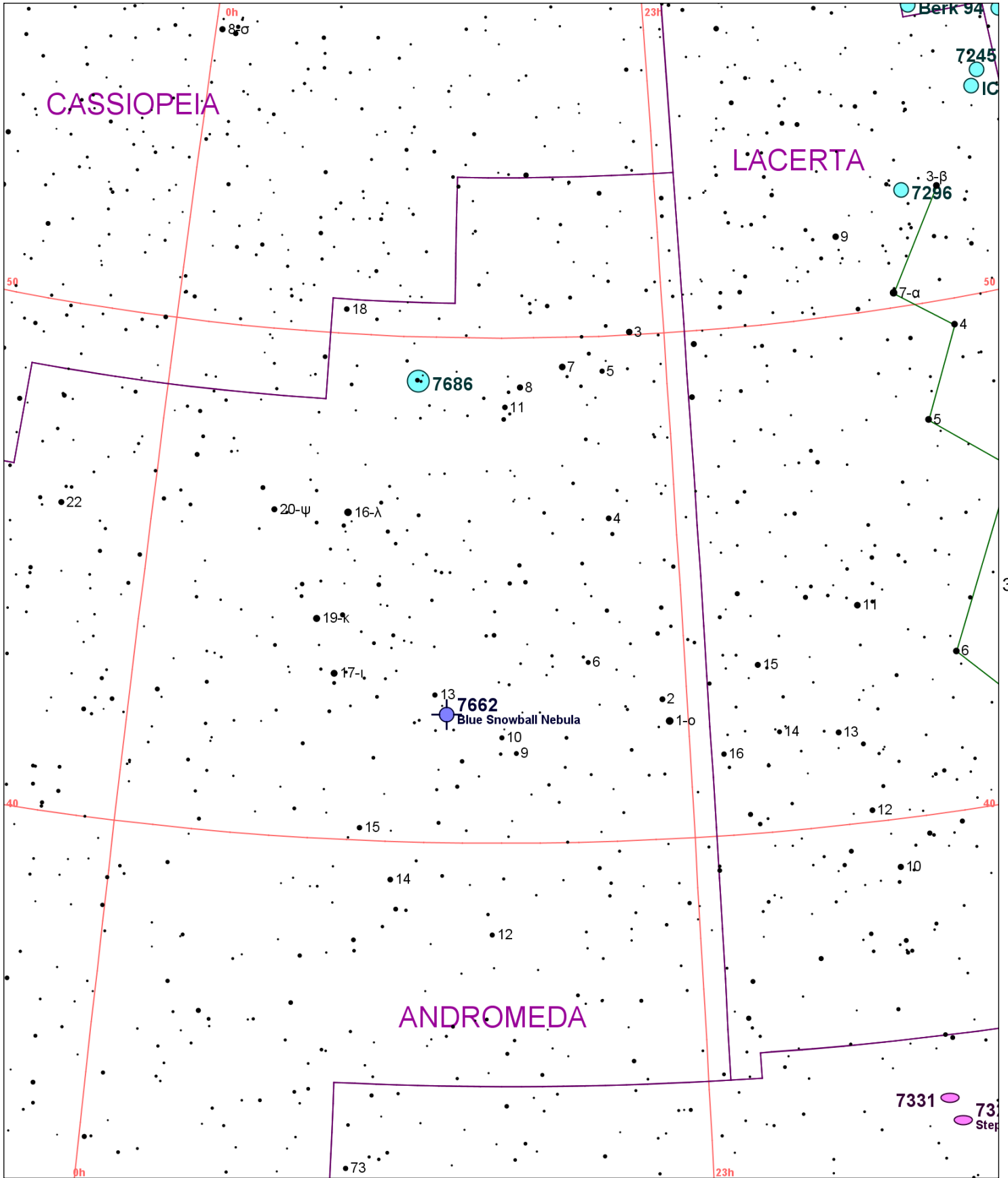


Chart 35													
Name	M	Const.	Mag.	Type	Size	R.A.	Decl.	C	R	S	O	# Stars	B
<b>Common</b>					<b>Notes</b>								
Berk 4		CAS	10.6	OC	5.0m	0h 45.5m	64° 24.0'					25	
Berk 58		CAS	9.7	OC	8.0m	0h 00.2m	60° 58.0'					30	
Berk 59		CEP	11.0	OC	10.0m	0h 02.6m	67° 23.0'					40	
13"-F,S,nC, 12 F* at 135X													
Berk 62		CAS	9.3	OC	10.0m	1h 01.0m	63° 57.0'					50	
Czernik 3		CAS	9.9	OC	3.0m	1h 04.1m	62° 48.0'					8	
Frolov 1		CAS	9.2	OC		23h 57.4m	61° 38.0'						
Harvard 21		CAS	9.0	OC	4.0m	23h 54.1m	61° 46.0'					6	
pRi,C - 20 F*													
King 12		CAS	10.0	OC	2.0m	23h 53.0m	61° 58.0'					15	
13"-pB,S,sE; 15* at 135X; D* invl - 27 stars from 10...16 mag													
King 14		CAS	8.5	OC	7.0m	0h 31.9m	63° 10.0'					20	
13"-pB,pL,E; 20* nice dark lanes invl at 100X - Rich cl in rich field;29 * in 10' X 6'													
King 16		CAS	10.3	OC	3.0m	0h 43.7m	64° 11.0'					35	
compact and small													
King 21		CAS	9.8	OC	2.5m	23h 49.9m	62° 43.0'					20	
13"-pF,pS; 17* at 135X													
NGC 103		CAS	9.8	OC	5.0m	0h 25.3m	61° 19.0'					30	
Cl,pS,pC,st 11...18 - In Cas OB4													
NGC 129		CAS	6.5	OC	21.0m	0h 30.0m	60° 13.0'					35	B
Cl,vL,pRi,IC,st 9...13 - H VIII 79;Contains DL Cas													
NGC 133		CAS	9.4	OC	7.0m	0h 31.3m	63° 21.0'					5	
Cl,pL,st 10...D * inv													
NGC 146		CAS	9.1	OC	7.0m	0h 32.9m	63° 19.0'					20	
Cl,pL,IC,st 11-12,D*													
NGC 147		CAS	9.5	GAL	13.5m x 8.2m	0h 33.2m	48° 30.0'	C17					
vF,vL,iR,gsmbM,*1.1 - Dwarf EI;P w NGC 185 at 58';low surface br													
NGC 189		CAS	8.8	OC	3.7m	0h 39.6m	61° 05.0'					15	
Cl,pL,R,st 11...15													
NGC 225		CAS	7.0	OC	12.0m	0h 43.6m	61° 46.0'					15	
Cl,L,IC,st 9...10 - H VIII 78;W shaped													
NGC 281		CAS	7.4	DN	4.0m	0h 53.0m	56° 37.0'		R7	S13	O		
F,vL,dif,S triple * on np edge													
NGC 381		CAS	9.3	OC	6.0m	1h 08.4m	61° 35.0'					50	
Cl,pC - H VIII 64;In Cas OB1?													
NGC 433		CAS	9.0	OC	2.5m	1h 15.2m	60° 08.0'					15	
Cl,S,IC													
NGC 436		CAS	8.8	OC	6.0m	1h 16.0m	58° 49.0'				O	30	
Cl,S,iF,pC - H VII 45													
NGC 457		CAS	6.4	OC	13.0m	1h 19.5m	58° 17.0'	C13	R8	S14	O	80	B
Cl,B,L,pRi,*7,8,10 - H VII 42;Phi Cas is not a member;Not incl in mag													
NGC 559		CAS	9.5	OC	4.4m	1h 29.5m	63° 19.0'	C8				60	
Cl,B,pL,pRi - H VII 48													
NGC 581	M103	CAS	7.4	OC	6.0m	1h 33.4m	60° 39.0'				O	40	B
Cl,pL,B,R,Ri,*10..11 - in Cas OB8;incl Struve 131 6-9m 14"													
NGC 609		CAS	11.0	OC	3.0m	1h 36.4m	64° 32.0'						
Cl,S,pRi,*14...													
NGC 637		CAS	8.2	OC	3.5m	1h 43.1m	64° 02.0'					20	
Cl,pS,B & vF stars - H VII 49													
NGC 650	M76	PER	11.0	PN	163s x 107s	1h 42.3m	51° 35.0'				O		
Cork Nebula vB,p of Dneb - aka Little Dumbbell Nebula; PK130-10.1													
NGC 651		PER	11.0	PN	163s x 107s	1h 42.3m	51° 35.0'						
Cork Nebula vB,f of Dneb - aka Little Dumbbell Nebula; faintest M obj;H I 193													
NGC 654		CAS	6.5	OC	5.0m	1h 44.0m	61° 53.0'				O	60	
Cl,iF,Ri,1*6.7m - H VII 46;In Cas OB8?;50* mags 11..14													
NGC 659		CAS	7.9	OC	5.0m	1h 44.4m	60° 40.0'					40	
Cl,iRi,st B - H VIII 65;30* mags 12...													

Chart 35													
Name	M	Const.	Mag.	Type	Size	R.A.	Decl.	C	R	S	O	# Stars	B
<b>Common</b>					<b>Notes</b>								
NGC 663		CAS	7.1	OC	16m	1h 46.0m	61° 15.0'	C10	R9	S15	O	80	B
Cl,B,L,eRi,st pL - H VI 31;In Cas OB8;incl Struve 151 152 & 153													
NGC 743		CAS	9.5	OC	5.0m	1h 58.5m	60° 10.0'					12	
Cl,not Ri,D*													
NGC 7654	M52	CAS	6.9	OC	13.0m	23h 24.2m	61° 35.0'				O	200	B
L,Ri,mCM,*9..13 - Messier saw neby there is none													
NGC 7748		CEP	7.1	MISC		23h 44.9m	69° 45.0'						
vL neby,surrounds *7													
NGC 7762		CEP	10.0	OC	11.0m	23h 49.8m	68° 02.0'					40	
Cl,pRi,pC,*11...15 - H VII 55													
NGC 7788		CAS	9.4	OC	9.0m	23h 56.7m	61° 24.0'					20	
Cl,S,pRi,vC,st 10,13.. - in Cas OB5?													
NGC 7789		CAS	6.7	OC	16m	23h 57.4m	56° 43.0'		R5	S16	O	300	B
Cl,vL,vRi,vmC,st 11...18 - H VI 30;1000 members from 11 to 18 mag													
NGC 7790		CAS	8.5	OC	17m	23h 58.4m	61° 13.0'					40	
Cl,pRi,pC - H VII 56;Contains CE Cas													
Stock 5		CAS	7.0	OC	15.0m	2h 04.5m	64° 26.0'					25	
13"-B,pL,nRi,nC at 100X; 17"; just naked eye													
Stock 24		CAS	8.8	OC	4.0m	0h 39.7m	61° 57.0'					20	
Superb at high power in 10" scope													
Tr 1		CAS	8.1	OC	4.5m	1h 35.7m	61° 17.0'				O	20	
S,pC - 2 10 mag * and haze of unresolved stars													



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Chart 36													
Name	M	Const.	Mag.	Type	Size	R.A.	Decl.	C	R	S	O	# Stars	B
<b>Common</b>					<b>Notes</b>								
Berk 94		CEP	8.7	OC	4.0m	22h 22.7m	55° 51.0'					10	
IC 1442		LAC	9.1	OC	5m	22h 16.5m	54° 03.0'					20	
					Cl of neb stars								
NGC 7226		CEP	9.6	OC	1.8m	22h 10.5m	55° 25.0'					25	
					pB,L,in cluster								
NGC 7245		LAC	9.2	OC	5.0m	22h 15.3m	54° 20.0'						
					Cl,C,st eS - H VI 29;50 vF stars								
NGC 7296		LAC	9.7	OC	4.0m	22h 28.2m	52° 17.0'					20	
					Cl,iR,IC,st vS - H VII 41								
NGC 7320		PEG	12.6	GAL	2.3m x 1.4m	22h 36.1m	33° 57.0'				O		
Stephan's Quintet (part)					F,vS - Brightest in Stephan's Quintet								
NGC 7331		PEG	9.5	GAL	10.2m x 4.2m	22h 37.1m	34° 25.0'	C30	R3	S78	O		
					B,pL,pmE163,smbM - H I 53;UGC 12113;Brightest in group of F obj;sev dark lanes								
NGC 7662		AND	8.6	PN	17s x 14s	23h 25.9m	42° 32.0'	C22	R11	S2	O		
Blue Snowball Nebula					!!! Planetary or annular neb,vB,pS,R,blue - H IV 18;Barnard-cent * variable?								
NGC 7686		AND	5.6	OC	15.0m	23h 30.1m	49° 08.0'					20	
					Cl,P,IC,st 7...11 - H VIII 69;12* mags 8...13								

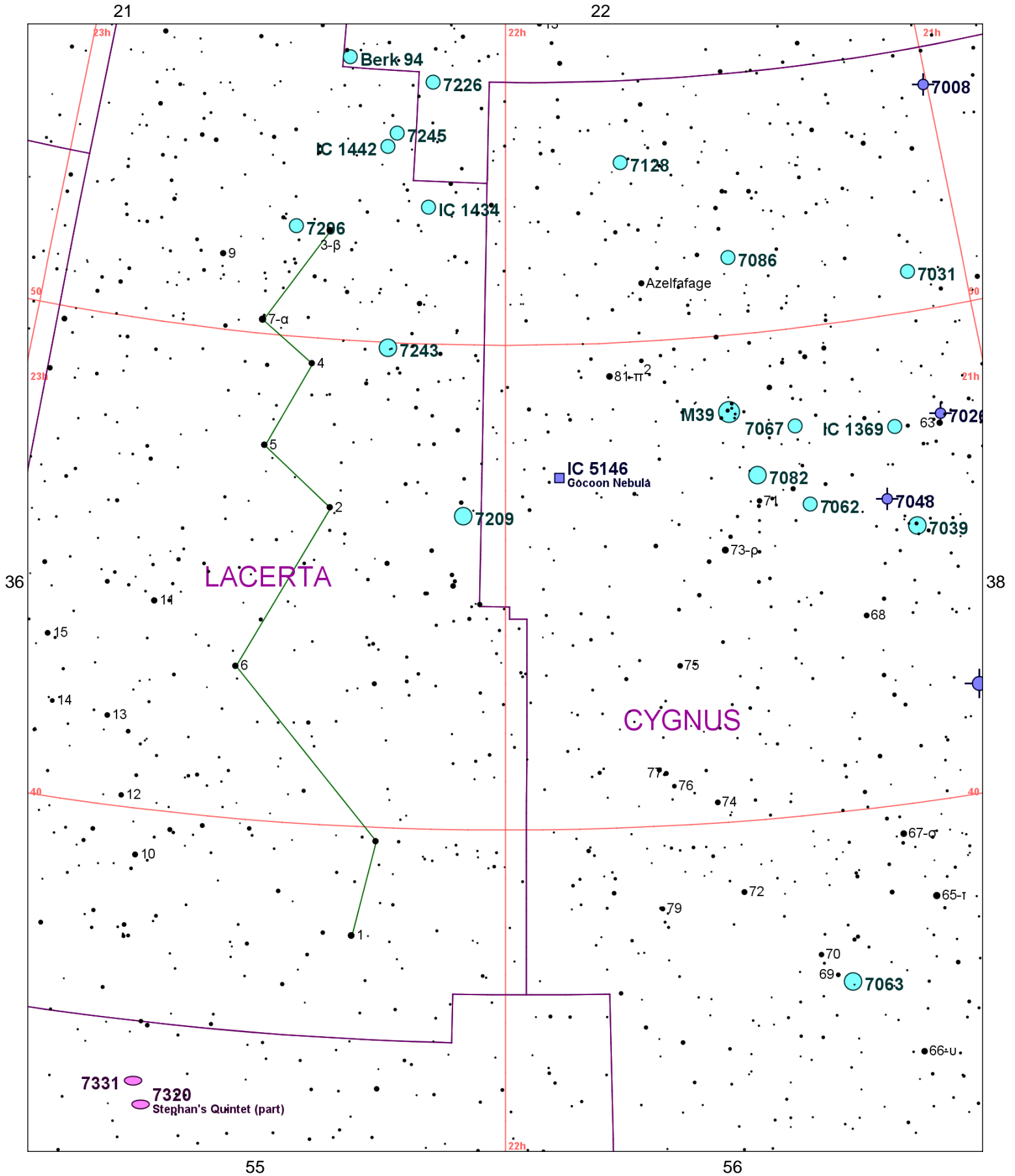


Chart 37													
Name	M	Const.	Mag.	Type	Size	R.A.	Decl.	C	R	S	O	# Stars	B
<b>Common</b>					<b>Notes</b>								
Berk 94		CEP	8.7	OC	4.0m	22h 22.7m	55° 51.0'					10	
IC 1369		CYG	8.8	OC	4.0m	21h 12.1m	47° 44.0'					40	
					S,F,stars 13 mag - Barnard saw nebulosity-there is none								
IC 1434		LAC	9.0	OC	8.0m	22h 10.5m	52° 50.0'					40	
					fine cl,6 branches,st 12-15 mag								
IC 1442		LAC	9.1	OC	5m	22h 16.5m	54° 03.0'					20	
					Cl of neb stars								
IC 5146		CYG	10.0	DN	20m x 10m	21h 53.4m	47° 16.0'	C19			O	20	
Cocoon Nebula					F,L,iR,*9.5 m invl.br + drk masses invl - Cocoon neb;at end of dark streamer B168								
NGC 7008		CYG	12.0	PN	86s x 69s	21h 00.5m	54° 33.0'				O		
					cB,L,E45,r,** att - H I 192								
NGC 7026		CYG	12.0	PN	25s x 9s	21h 06.3m	47° 51.0'				O		
					pB,biN								
NGC 7027		CYG	9.6	PN	18s x 11s	21h 07.0m	42° 14.0'		R101	S47	O		
					eB,S - bizarre spectrum								
NGC 7031		CYG	9.1	OC	5.0m	21h 07.3m	50° 50.0'					50	
					Cl of triple st,IC - H VIII 74								
NGC 7039		CYG	7.6	OC	25.0m	21h 11.2m	45° 39.0'					50	
					Cl,vL,pRi,E,st 10...								
NGC 7048		CYG	11.0	PN	60s x 50s	21h 14.3m	46° 17.0'						
					pF,pL,dif,iR,vIbM								
NGC 7062		CYG	8.3	OC	7.0m	21h 23.5m	46° 23.0'					30	
					Cl,pS,pRi,pC,st13... - H VII 51								
NGC 7063		CYG	7.0	OC	8.0m	21h 24.4m	36° 30.0'					12	B
					Cl,P,st10...								
NGC 7067		CYG	9.7	OC	3.0m	21h 24.2m	48° 01.0'					20	
					Cl,P,(neb) - H VII 50								
NGC 7082		CYG	7.2	OC	25.0m	21h 29.4m	47° 05.0'						
					Cl,L,cRi,IC,st10..13 - H VII 52								
NGC 7086		CYG	8.4	OC	9.0m	21h 30.5m	51° 36.0'					50	
					Cl,cL,vRi,pC,*11..16 - H VI 32								
NGC 7092	M39	CYG	4.6	OC	32m	21h 32.2m	48° 26.0'				O	30	B
					Cl,vL,P,vIC,*7...10 - Large but loose cluster								
NGC 7128		CYG	9.7	OC	3.1m	21h 44.0m	53° 43.0'					35	
					Cl,S,pRi,has a ruby *9.5 - H VII 40								
NGC 7209		LAC	7.7	OC	25.0m	22h 05.1m	46° 29.0'			S58	O	25	B
					Cl,L,cRi,pC,st9...12 - H VII 53								
NGC 7226		CEP	9.6	OC	1.8m	22h 10.5m	55° 25.0'					25	
					pB,L,in cluster								
NGC 7243		LAC	6.4	OC	21.0m	22h 15.1m	49° 54.0'	C16		S59	O	40	B
					Cl,L,P,IC,st vL - H VIII 75;Incl Struve 2890 D*								
NGC 7245		LAC	9.2	OC	5.0m	22h 15.3m	54° 20.0'						
					Cl,C,st eS - H VI 29;50 vF stars								
NGC 7296		LAC	9.7	OC	4.0m	22h 28.2m	52° 17.0'					20	
					Cl,iR,IC,st vS - H VII 41								
NGC 7320		PEG	12.6	GAL	2.3m x 1.4m	22h 36.1m	33° 57.0'				O		
Stephan's Quintet (part)					F,vS - Brightest in Stephan's Quintet								
NGC 7331		PEG	9.5	GAL	10.2m x 4.2m	22h 37.1m	34° 25.0'	C30	R3	S78	O		
					B,pL,pmE163,smbM - H I 53;UGC 12113;Brightest in group of F obj;sev dark lanes								

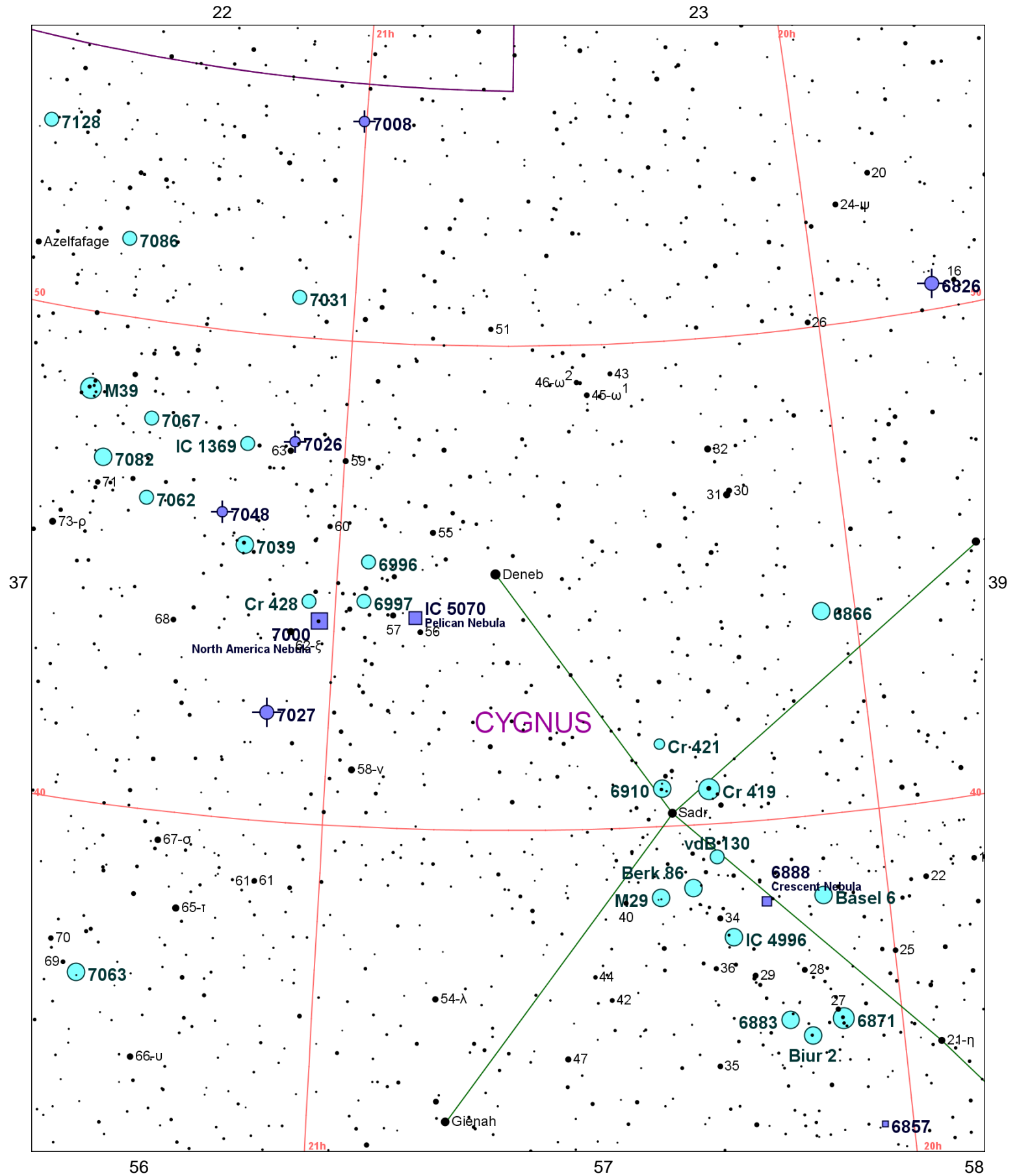


Chart 38													
Name	M	Const.	Mag.	Type	Size	R.A.	Decl.	C	R	S	O	# Stars	B
<b>Common</b>					<b>Notes</b>								
Basel 6		CYG	7.7	OC	14.0m	20h 06.8m	38° 21.0'					40	
					13"-pB,pL,arrowhead shape, 22* at 100X								
Berk 86		CYG	7.9	OC	8.0m	20h 20.4m	38° 42.0'					30	
					13"-pF,pS,nRi,nC 19* 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								
Cr 421		CYG	10.1	OC	6.0m	20h 23.3m	41° 42.0'					22	
					13"-pF,pS,nRi,IC, 22* at 135X								
Cr 428		CYG	8.7	OC	14.0m	21h 03.2m	44° 35.0'					20	
IC 1369		CYG	8.8	OC	4.0m	21h 12.1m	47° 44.0'					40	
					S,F,stars 13 mag - Barnard saw nebulosity-there is none								
IC 4996		CYG	7.3	OC	6.0m	20h 16.5m	37° 38.0'					15	
					Cl,st 8...13								
IC 5070		CYG	8.0	DN	60m x 50m	20h 50.8m	44° 21.0'						
Pelican Nebula					F,dif - w IC 5067;56 Cyg invl								
NGC 6826		CYG	8.8	PN	27s x 24s	19h 44.8m	50° 32.0'	C15	R97	S43	O		
					Planetary,B,pL,R,*11m - H IV 73;Blinking Planetary;PK83+12.1								
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 6866		CYG	7.6	OC	7.0m	20h 03.9m	44° 10.0'				O	80	
					Cl,L,vRi,cC - H VII 59;50* mags 10...								
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 6883		CYG	8.0	OC	15.0m	20h 11.3m	35° 51.0'					30	
					Cl,pRi,** inv								
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								
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 6996		CYG	10.0	OC	7.0m	20h 56.5m	45° 29.0'					40	
					Cl,P,IC								
NGC 6997		CYG	10.0	OC	7m	20h 56.8m	44° 39.0'						
					Cl,P,IC,st L - H VIII 58;Scattered Cl in west part of North America Neb								
NGC 7000		CYG	4.0	DN	120m x 30m	21h 01.8m	44° 12.0'	C20	R100	S46	O		
North America Nebula					F,eeL,dif nebulosity - H V 37?;Cl NGC 6997 invl								
NGC 7008		CYG	12.0	PN	86s x 69s	21h 00.5m	54° 33.0'				O		
					cB,L,E45,r,** att - H I 192								
NGC 7026		CYG	12.0	PN	25s x 9s	21h 06.3m	47° 51.0'				O		
					pB,biN								
NGC 7027		CYG	9.6	PN	18s x 11s	21h 07.0m	42° 14.0'		R101	S47	O		
					eB,S - bizarre spectrum								
NGC 7031		CYG	9.1	OC	5.0m	21h 07.3m	50° 50.0'					50	
					Cl of triple st,IC - H VIII 74								
NGC 7039		CYG	7.6	OC	25.0m	21h 11.2m	45° 39.0'					50	
					Cl,vL,pRi,E,st 10...								
NGC 7048		CYG	11.0	PN	60s x 50s	21h 14.3m	46° 17.0'						
					pF,pL,dif,iR,vlbM								
NGC 7062		CYG	8.3	OC	7.0m	21h 23.5m	46° 23.0'					30	
					Cl,pS,pRi,pC,st13... - H VII 51								
NGC 7063		CYG	7.0	OC	8.0m	21h 24.4m	36° 30.0'					12	B
					Cl,P,st10...								
NGC 7067		CYG	9.7	OC	3.0m	21h 24.2m	48° 01.0'					20	

Chart 38													
Name	M	Const.	Mag.	Type	Size	R.A.	Decl.	C	R	S	O	# Stars	B
<b>Common</b>					<b>Notes</b>								
					Cl,P,(neb) - H VII 50								
NGC 7082		CYG	7.2	OC	25.0m	21h 29.4m	47° 05.0'						
					Cl,L,cRi,iC,st10..13 - H VII 52								
NGC 7086		CYG	8.4	OC	9.0m	21h 30.5m	51° 36.0'					50	
					Cl,cL,vRi,pC,*11..16 - H VI 32								
NGC 7092	M39	CYG	4.6	OC	32m	21h 32.2m	48° 26.0'				O	30	B
					Cl,vL,P,vIC,*7...10 - Large but loose cluster								
NGC 7128		CYG	9.7	OC	3.1m	21h 44.0m	53° 43.0'					35	
					Cl,S,pRi,has a ruby *9.5 - H VII 40								
vdB 130		CYG	9.3	OC	6m	20h 17.7m	39° 19.0'					15	

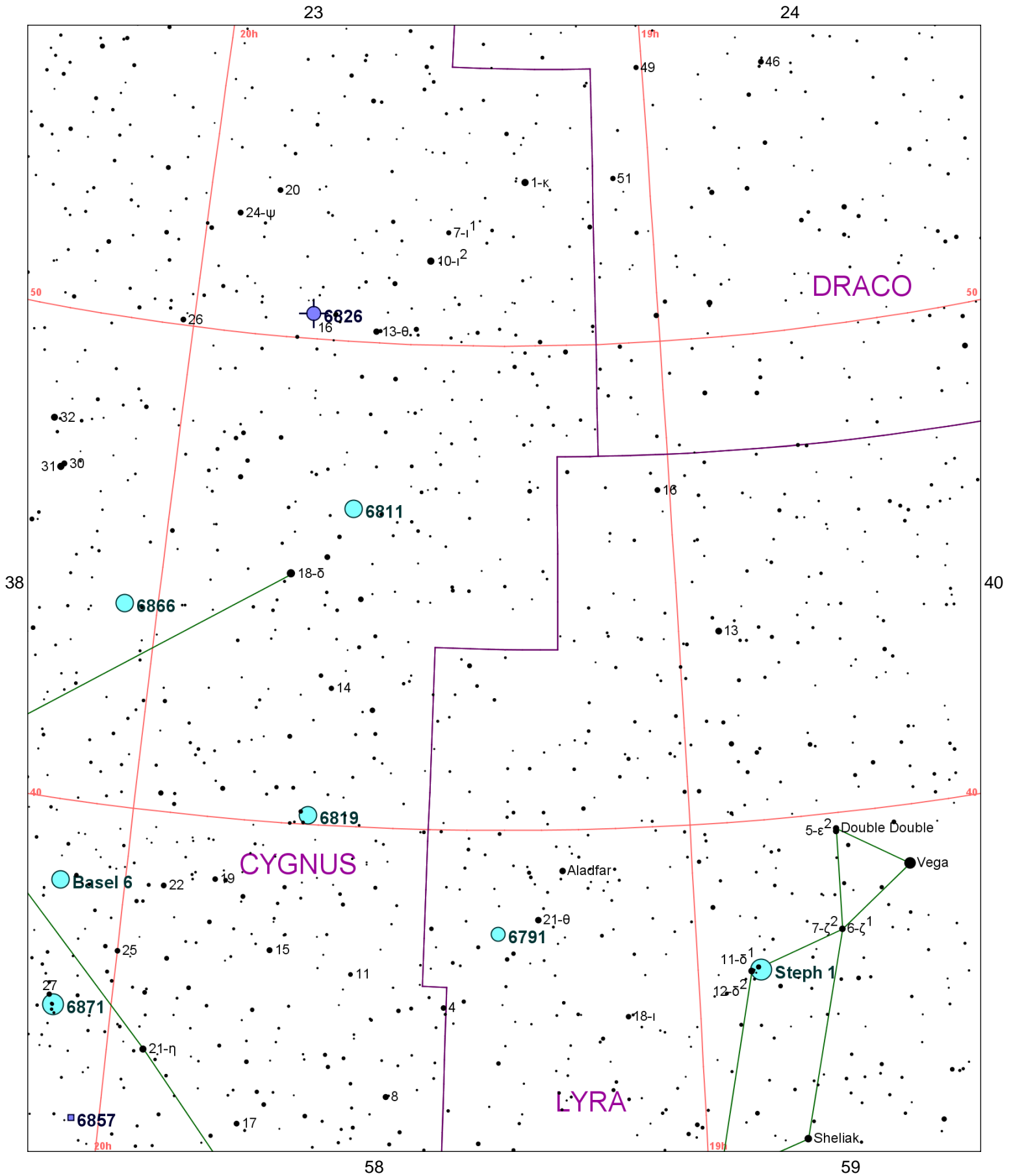




Chart 39													
Name	M	Const.	Mag.	Type	Size	R.A.	Decl.	C	R	S	O	# Stars	B
<b>Common</b>					<b>Notes</b>								
Basel 6		CYG	7.7	OC	14.0m	20h 06.8m	38° 21.0'					40	
13"-pB,pL,arrowhead shape, 22* at 100X													
NGC 6791		LYR	9.5	OC	16m	19h 20.7m	37° 51.0'					300	
vF,L,vRi,*F													
NGC 6811		CYG	6.8	OC	13.0m	19h 38.2m	46° 34.0'				O	70	
Cl,L,pRi,IC,st11..14													
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 6826		CYG	8.8	PN	27s x 24s	19h 44.8m	50° 32.0'	C15	R97	S43	O		
Planetary,B,pL,R,*11m - H IV 73;Blinking Planetary;PK83+12.1													
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 6866		CYG	7.6	OC	7.0m	20h 03.9m	44° 10.0'				O	80	
Cl,L,vRi,cC - H VII 59;50* mags 10...													
NGC 6871		CYG	5.2	OC	20.0m	20h 05.9m	35° 47.0'					15	
Cl,st L&S,D* inv - In Cyg OB3?													
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 40													
Name	M	Const.	Mag.	Type	Size	R.A.	Decl.	C	R	S	O	# Stars	B
<b>Common</b>					<b>Notes</b>								
NGC 6341	M92	HER	6.5	GC	11.2m	17h 17.1m	43° 08.0'				O		B
					vB,vL,eCM,st 12... - Lord Rosse saw spiral structure								