DEEP-SKY OBJECTS

Name	R. A h m	Dec. ° ′	Con	Type	V	Dimensions	Notes
GALAXIES							
N1399	3 38.5	–35 27	For	E+1	9.6	6′.9 × 6′.5	(2)
N1407	3 40.2	–18 35	Eri	E+0	9.7	4′.6 × 4′.3	
N1433	3 42.0	–47 13	Hor	SBab	9.9	6′.5 × 5′.9	
N1808	5 07.7	–37 31	Col	SABa	9.9	6′.5 × 3′.9	
OPEN CLUSTERS							
Pleiades	3 47.0	+24 07	Tau	oc-gn	1.2	120′	M45
Hyades	4 27	+16	Tau	oc	0.5	330′	
N1647	4 46.0	+19 04	Tau	oc	6.4	40′	
N1662	4 48.5	+10 56	Ori	oc	6.4	12′	
N1746	5 03.6	+23 49	Tau	oc	6.1	40′	
N1912	5 28.7	+35 50	Aur	oc	6.4	15′	M38
N1981	5 35.2	– 4 26	Ori	oc	4.2	28′	(5)
N1976	5 35.4	– 5 23	Ori	oc-gn	3.7	45′	M42, (6)
N1980	5 35.4	– 5 54	Ori	oc	2.5	15′	(7)
N1977	5 35.5	– 4 52	Ori	oc-gn	4.2	20′	(5)
N1960	5 36.1	+34 08	Aur	oc	6.0	10′	M36
N2099	5 52.4	+32 33	Aur	oc	5.6	15′	M37
N2169	6 08.4	+13 57	Ori	oc	5.9	6′	
N2168	6 08.9	+24 20	Gem	oc	5.1	25′	M35
N2244	6 32.4	+ 4 52	Mon	oc-gn	4.8	27′	(9)
N2264	6 41.1	+ 9 53	Mon	oc-gn	3.9	20′	
N2281	6 49.3	+41 04	Aur	oc	5.4	25′	
N2287	6 46.0	–20 44	CMa	oc	4.5	39′	M41
N2301	6 51.8	+ 0 28	Mon	oc	6.0	15′	
N2323	7 03.2	– 8 20	Mon	oc	5.9	15′	M50
N2343	7 08.3	–10 39	Mon	oc	6.7	6′	
N2354	7 14.3	–25 44	CMa	oc	6.5	18′	
N2362	7 18.8	–24 57	CMa	oc	3.8	6′	(10)
N2422	7 36.6	–14 30	Pup	oc	4.4	25′	M47
N2423	7 37.1	–13 52	Pup	oc	6.7	12′	
N2439	7 40.8	–31 39	Pup	oc	6.9	9′	(12)
N2437	7 41.8	–14 49	Pup	oc	6.1	20′	M46
N2447	7 44.6	–23 52	Pup	oc	6.2	10′	M93
N2451	7 45.4	–37 58	Pup	oc	2.8	50′	(13)
N2477	7 52.3	–38 33	Pup	oc	5.8	20′	
N2467	7 52.6	–26 23	Pup	oc-gn	~7	16′	
N2527	8 05.3	–28 10	Pup	oc	6.5	10′	
GLOBULAR CLUSTERS							
N1851	5 14.1	–40 03	Col	gc	7.1	12′	
N1904	5 24.5	–24 33	Lep	gc	7.7	9′.6	M79
PLANETARY NEBULAE							
N1360	3 33.3	–25 51	For	pn	9.4	6′.4	(1)
N1514	4 09.3	+30 47	Tau	pn	10.9	2′.2	(26)
N1535	4 14.2	–12 44	Eri	pn	9.6	51″	
I 418	5 27.5	–12 42	Lep	pn	9.3	12″	
I 2165	6 21.7	–12 59	CMa	pn	10.5	28″	I 2165
N2392	7 29.2	+20 55	Gem	pn	9.1	54″	(11)
N2438	7 41.8	–14 44	Pup	pn	10.8	1′.3	(27)
N2440	7 41.9	–18 12	Pup	pn	9.4	1′.3	
DIFFUSE NEBULAE							
N1499	4 00.7	+36 37	Per	gn	~5	160′ × 40′	(3)
N1952	5 34.5	+22 01	Tau	gn	~8	6′ × 4′	M1,(4)
N1982	5 35.6	– 5 16	Ori	gn	~7	20′ × 15′	M43, (8)
Sh-264	5 38.2	+ 9 54	Ori	gn	~5		(28)
N2068/71	5 46.7	+ 0 06	Ori	gn	~8	8′ × 6′/7′ × 5′	M78
Barnard's Loop	5 56	+ 2 30	Ori	gn	~5	Large	(29)

NOTES

1. Bright central star
2. Brightest in Fornax galaxy cluster
3. California Nebula
4. Crab Nebula, a supernova remnant
5. In Orion's Sword
6. Orion Nebula + Trapezium (θ^1 Ori)
7. Includes ι Ori (see ADS 4193) and in Orion's Sword
8. Appendage to Orion Nebula
9. Includes Rosette Nebula (90′ diam)
10. Includes τ CMa
11. Eskimo Nebula, bright central star
12. Includes R Pup
13. Includes c Pup
14. Naked-eye pair in Hyades; brighter star slightly variable
15. Naked-eye/binocular pair in Hyades
16. Same as DW Eri, fainter star slightly variable.
17. Fainter star is very close pair
18. Rigel
19. Same as KW Aur, brighter star slightly variable
20. Fainter star is very close pair
21. In cluster N1980
22. Same as V1030 Ori, fainter star slightly variable, several other components
23. Third star: V=6.1; 9″.9 (1963), a remarkable triple!
24. Castor (Heintz 1988 orbit)
25. Same as PV Pup, fainter star slightly variable.
26. Bright central star.
27. North side of M46.
28. lambda Ori Nebula
29. Shw-276

DOUBLE STARS

Name	R. A. h m	Dec ° ′	Con	V	Sep (Date)	Notes
ADS 2582	3 31.3	+27 34	Tau	6.6,7.0	11″.3 (1973)	
Δ 16 = f Eri	3 48.6	–37 37	Eri	4.7,5.4	8″.0 (1975)	
ADS 2850 = 32 Eri	3 54.3	– 2 57	Eri	4.8,6.1	6″.8 (1966)	
$\theta^{1,2}$ Tau	4 28.7	+15 52	Tau	3.4,3.8	5″.6 (2000)	(14)
$\sigma^{1,2}$ Tau	4 39.3	+15 55	Tau	4.7,5.1	7″.3 (2000)	(15)
ADS 3409 = 55 Eri	4 43.6	– 8 48	Eri	6.7,6.8	9″.3 (1975)	(16)
ADS 3597	5 00.6	+ 3 37	Ori	6.7,7.0	21″.3 (1973)	
ADS 3623	5 02.0	+ 1 37	Ori	6.5,7.7	14″.6 (1973)	(17)
ADS 3823 = β Ori	5 14.5	– 8 12	Ori	0.1,6.8	9″.5 (1974)	(18)
ADS 3824 = 14 Aur	5 15.4	+32 41	Aur	5.1,8.0	14″.6 (1973)	(19)
ADS 3954	5 21.8	–24 46	Lep	5.4,6.6	3″.5 (1983)	
ADS 3978	5 23.3	– 8 25	Ori	6.0,7.8	6″.0 (1973)	
ADS 3991	5 23.9	– 0 52	Ori	6.1,7.1	2″.7 (1975)	(20)
ADS 4068 = 118 Tau	5 29.3	+25 09	Tau	5.8,6.6	4″.8 (1981)	
ADS 4131	5 32.2	+17 03	Tau	6.1,6.5	9″.6 (1972)	
ADS 4179 = λ Ori	5 35.1	+ 9 56	Ori	3.6,5.6	4″.4 (1978)	
ADS 4193 = ι Ori	5 35.4	– 5 55	Ori	2.8,6.9	11″.4 (1973)	(21)
ADS 4241 = σ Ori	5 38.7	– 2 36	Ori	3.8,6.6	12″.9 (1973)	(22)
ADS 4263 = ζ Ori	5 40.8	– 1 57	Ori	1.9,4.0	2″.6 (1976)	
ADS 4749	6 09.0	+ 2 30	Ori	5.7,6.9	29″.5 (1973)	
ADS 4773 = 41 Aur	6 11.6	+48 43	Aur	6.3,7.0	7″.7 (1973)	
ADS 5012 = ε Mon	6 23.8	+ 4 36	Mon	4.4,6.7	12″.9 (1961)	
ADS 5107 = β Mon	6 28.8	– 7 02	Mon	4.7,5.2	7″.2 (1974)	(23)
ADS 5166 = 20 Gem	6 32.3	+17 47	Gem	6.3,7.0	20″.0 (1973)	
Δ 32	6 42.3	–38 24	Pup	6.6,7.9	8″.0 (1975)	
ADS 5559 = 38 Gem	6 54.6	+13 11	Gem	4.7,7.7	7″.1 (2000)	
ADS 5654 = ε CMa	6 58.6	–28 58	CMa	1.5,7.4	7″.5 (1951)	
Δ 38	7 04.0	–43 36	Pup	5.5,6.8	21″.1 (1977)	
h3928	7 05.5	–34 47	Pup	6.4,7.8	2″.7 (1979)	
ADS 5951	7 16.6	–23 19	CMa	4.8,6.8	26″.8 (1974)	
Δ 49	7 28.9	–31 51	Pup	6.4,7.1	8″.9 (1968)	
ADS 6126	7 29.4	–15 00	Pup	6.4,7.5	2″.0 (2000)	
ADS 6190	7 34.3	–23 28	Pup	5.8.5.9	9″.6 (1965)	
ADS 6175 = α Gem	7 34.6	+31 53	Gem	1.9,2.9	3″.9 (2000)	(24)
ADS 6255 = κ Pup	7 38.8	–26 48	Pup	4.5,4.7	9″.9 (1964)	
ADS 6381 = 5 Pup	7 47.9	–12 12	Pup	5.6,7.7	2″.0 (1975)	
ADS 6348 = 2 Pup	7 45.5	–14 41	Pup	6.1,6.9	16″.8 (1973)	(25)
Δ 59	7 59.2	–49 59	Pup	6.4,6.4	16″.4 (1957)	

VARIABLE STARS

Name	R. A. h m	Dec ° ′	Type	Mag.	Epoch (2400000+)	Period (days)
ECLIPSING VARIABLE STARS						
λ Tau	4 00.7	+12 29	EA	3.3–3.80p	35089.204	3.952
HU Tau	4 38.3	+20 41	EA	5.92–6.7V	42412.456	2.056
ε Aur	5 02.0	+43 49	EA	2.92–3.83V	35629	9892
AR Aur	5 18.3	+33 46	EA	6.15–6.82V	38402.183	4.134
WW Aur	6 32.5	+32 27	EA	5.79–6.54V	41399.305	2.525
R CMa	7 19.5	–16 24	EA	5.70–6.34V	44289.361	1.135
V Pup	7 58.2	–49 15	EB	4.7–5.2p	28648.304	1.454
PULSATING VARIABLE STARS						
R Lep	4 59.6	–14 48	M	5.5–11.7v	40800	432.13
RX Lep	5 11.4	–11 51	Lb	5.0–7.0v		
α Ori	5 55.2	+ 7 24	SRc	0.40–1.3v		2110
U Ori	5 55.8	+20 10	M	4.8–12.6v	42280	372.40
η Gem	6 14.9	+22 30	SRb	3.2–3.9v	37725	232.9
T Mon	6 25.2	+ 7 05	δ Cep	5.59–6.60V	36137.090	27.020
RT Aur	6 28.6	+30 30	δ Cep	5.00–5.82V	42361.155	3.728
ζ Gem	7 04.1	+20 34	δ Cep	3.66–4.16V	36791.922	10.150
L_2 Pup	7 13.5	–44 39	SRb	2.6–6.2v	40813	140.42
ERUPTIVE VARIABLE STAR						
U Gem	7 55.1	+22 00	UG	8.2–14.9v		103:
OTHER VARIABLE STARS						
U Mon	7 30.8	– 9 47	RVb	6.1–8.1p	37395	92.26
Al Vel	8 14.1	–44 34	δ Sct	6.4–7.1v		0.111

BRIGHT STARS ON MAP 5 FOR DIGITAL POINTER SETUP

Name	RA (2000.0) Dec	V
Rigel	5 14 32.3 – 8 12 06	0.1
Capella	5 16 41.4 +45 59 53	0.1
Sirius	6 45 08.8 – 6 42 57	–1.5
Procyon	7 39 18.0 + 5 13 30	0.4