

July Observing List

Prepared by Bill Breeden

Double Stars (Astronomical League)

- _____ 61. Xi Sco SAO 159665 Const. SCO Type DS RA 16 04.4 Decl. -11° 22' Mag. 4.8 7.3
- _____ 62. Struve 1999 SAO 159670 Const. SCO Type DS RA 16 04.4 Decl. -11° 27' Mag. 7.4 8.1
- _____ 63. Beta Sco SAO 159682 Graffias Const. SCO Type DS RA 16 05.4 Decl. -19° 48' Mag. 2.6 4.9
- _____ 64. Kappa Her SAO 101951 Const. HER Type DS RA 16 08.1 Decl. +17° 03' Mag. 5.3 6.5
- _____ 65. Nu Sco SAO 159763 Const. SCO Type DS RA 16 12.0 Decl. -19° 28' Mag. 4.3 6.4
- _____ 66. Sigma CrB SAO 65165 Const. COB Type DS RA 16 14.7 Decl. +33° 52' Mag. 5.6 6.6
- _____ 67. 16 / 17 Dra SAO 30012 Const. DRA Type DS RA 16 36.2 Decl. +52° 55' Mag. 5.4 6.4 5.5
- _____ 68. Mu Dra SAO 30239 Const. DRA Type DS RA 17 05.3 Decl. +54° 28' Mag. 5.7 5.7
- _____ 69. Alpha Her SAO 102680 Rasalgethi Type DS RA 17 14.6 Decl. +14° 23' Mag. 3.5 5.4
- _____ 70. Delta Her SAO 84951 Sarin Const. HER Type DS RA 17 15.0 Decl. +24° 50' Mag. 3.1 8.2
- _____ 71. 36 Oph SAO 185199 Const. OPH Type DS RA 17 15.3 Decl. -26° 36' Mag. 5.1 5.1
- _____ 72. Omicron Oph SAO 122387 Const. OPH Type DS RA 17 18.0 Decl. -24° 17' Mag. 5.4 6.9
- _____ 73. Rho Her SAO 66000 Const. HER Type DS RA 17 23.7 Decl. +37° 09' Mag. 4.6 5.6
- _____ 74. Nu Dra SAO 30447 Kuma Const. DRA Type DS RA 17 32.2 Decl. +55° 11' Mag. 4.9 4.9
- _____ 75. Psi Dra SAO 8890 Const. DRA Type DS RA 17 41.9 Decl. +72° 09' Mag. 4.9 6.1

Carbon Stars (Astronomical League)

- _____ 59. RR Her SAO 29781 RA 16 04 13 Decl. +50 29 56 Mag. 7.8 – 12.5 Per. 240 Class C5-C8 (N0e)
- _____ 60. V Oph SAO 159916 RA 16 26 43 Decl. -12 25 35 Mag. 7.3-11.6 Per. 297 Class C5-C7 (N3e)
- _____ 61. SAO 46574 (Her) GSC 3081:810 RA 17 13 31 Decl. +42 06 22 Mag. 7.3-7.7 Class C3 (R0)
- _____ 62. TW Oph GSC 6243:462 RA 17 29 43 Decl. -19 28 22 Mag. 7.0 – 9.0 Per. 185 Class C5 (Nb)
- _____ 63. SZ Sgr SAO 160795 RA 17 44 56 Decl. -18 39 26 Mag. 8.2 – 9.2 Per. 73 Class C7 (Nb)
- _____ 64. T Dra GSC 3914:546 RA 17 56 23 Decl. +58 13 06 Mag. 7.2–13.5 Per. 422 Class C6-C8 (N0e)

Messier Objects

- _____ M4 NGC6121 Const. SCO Type GC RA 16 23.6 Decl. -26 32 Mag. 6.4
- _____ M6 NGC6405 Const. SCO Type OC RA 17 40.1 Decl. -32 13 Mag. 5.3
- _____ M7 NGC6475 Const. SCO Type OC RA 17 53.9 Decl. -34 49 Mag. 4.1
- _____ M9 NGC6333 Const. OPH Type GC RA 17 19.2 Decl. -18 31 Mag. 7.3
- _____ M10 NGC6254 Const. OPH Type GC RA 16 57.1 Decl. -04 06 Mag. 6.7
- _____ M12 NGC6218 Const. OPH Type GC RA 16 47.2 Decl. -01 57 Mag. 6.6
- _____ M13 NGC6205 Great Hercules Clust Const. HER Type GC RA 16 41.7 Decl. +36 28 Mag. 5.7
- _____ M14 NGC6402 Const. OPH Type GC RA 17 37.6 Decl. -03 15 Mag. 7.7
- _____ M19 NGC6273 Const. OPH Type GC RA 17 02.6 Decl. -26 16 Mag. 6.6
- _____ M23 NGC6494 Const. SGR Type OC RA 17 56.8 Decl. -19 01 Mag. 6.9
- _____ M62 NGC6266 Const. OPH Type GC RA 17 01.2 Decl. -30 07 Mag. 6.6
- _____ M80 NGC6093 Const. SCO Type GC RA 16 17.0 Decl. -22 59 Mag. 7.7
- _____ M92 NGC6341 Const. HER Type GC RA 17 17.1 Decl. +43 08 Mag. 6.5
- _____ M107 NGC6171 Const. OPH Type GC RA 16 32.5 Decl. -13 03 Mag. 9.2

Caldwell Objects

- _____ C6 NGC6543 Cat's Eye Nebula Const. DRA Type PN RA 17 58 36.00 Decl. +66 38 00.0 Mag. 8.8
- _____ C69 NGC6302 Bug Nebula Const. SCO Type PN RA 17 13 42.00 Decl. -37 06 00.0 Mag. 12.8
- _____ C75 NGC6124 Const. SCO Type OC RA 16 25 36.00 Decl. -40 40 00.0 Mag. 5.8
- _____ C76 NGC6231 Const. SCO Type OC RA 16 54 00.00 Decl. -41 48 00.0 Mag. 2.6
- _____ C81 NGC6352 Const. ARA Type GC RA 17 25 30.00 Decl. -48 25 00.0 Mag. 8.1
- _____ C82 NGC6193 Const. ARA Type OC RA 16 41 18.00 Decl. -48 46 00.0 Mag. 5.2
- _____ C86 NGC6397 Const. ARA Type GC RA 17 40 42.00 Decl. -53 40 00.0 Mag. 5.6
- _____ C89 NGC6067 S Norma Cluster Const. NOR Type OC RA 16 18 54.00 Decl. -57 54 00.0 Mag. 5.4
- _____ C95 NGC6025 Const. TRA Type OC RA 16 03 42.00 Decl. -60 30 00.0 Mag. 5.1
- _____ C107 NGC6101 Const. APS Type GC RA 16 25 48.00 Decl. -72 12 00.0 Mag. 9.3

Royal Astronomical Society of Canada Objects

- _____ 88. NGC6503 Const. DRA Type G-Sb RA 17 49.4 Decl. +70 09 Mag. 10.2
- _____ 89. NGC6543 Cat's Eye Nebula Const. DRA Type PN RA 17 58.6 Decl. +66 38 Mag. 8.8
- _____ 90. NGC6210 Const. HER Type PN RA 16 44.5 Decl. +23 49 Mag. 9.3
- _____ 91. NGC6369 Const. OPH Type PN RA 17 29.3 Decl. -23 46 Mag. 10.4
- _____ 102. NGC6445 Const. SGR Type PN RA 17 49.2 Decl. -20 01 Mag. 11.8

Hidden Treasures (Stephen O'Meara)

- _____ 78. NGC6210 Const. HER Type PN RA 16h44m30s Decl. +23°49'00" Mag. 8.8
- _____ 79. NGC6242 Const. SCO Type OC RA 16h55m33s Decl. -39°27'39" Mag. 6.4
- _____ 80. NGC6281 Const. SCO Type OC RA 17h04m41s Decl. -37°59'07" Mag. 5.4
- _____ 81. NGC6369 Const. OPH Type PN RA 17h29m20s Decl. -23°45'35" Mag. 11.4
- _____ 82. NGC6400 Const. SCO Type OC RA 17h40m13s Decl. -36°56'52" Mag. 8.8
- _____ 83. IC 4665 Const. OPH Type OC RA 17h46m18s Decl. +05°43'00" Mag. 4.2
- _____ 84. NGC6445 Const. SGR Type PN RA 17h49m15s Decl. -20°00'34" Mag. 11.2
- _____ 85. NGC6503 Const. DRA Type GAL RA 17h49m24s Decl. +70°09'00" Mag. 10.2
- _____ 86. NGC6441 Const. SCO Type GC RA 17h50m12s Decl. -37°03'00" Mag. 7.2
- _____ 87. Barnard's Star Const. OPH Type STAR RA 17h57m48s Decl. +04°42'00" Mag. 9.5
- _____ A14. IC 4603 Const. OPH Type NbRF RA 16h25m36s Decl. -24°28'00" Mag. ---
- _____ A15. NGC6356 Const. OPH Type GC RA 17h23m36s Decl. -17°49'00" Mag. 8.9
- _____ A16. NGC6388 Const. SCO Type GC RA 17h36m17s Decl. -44°44'05" Mag. 6.7

Secret Deep (Stephen O'Meara)

- _____ 71. IC4593 Const. HER Type PN RA 16h11.7m Decl. +12°04' Mag. 10.7 Size"12""
- _____ 72. NGC6144 Const. SCO Type GC RA 16h27.2m Decl. -26°01' Mag. 9 Size 9'
- _____ 73. NGC6207 Const. HER Type GAL RA 16h43.1m Decl. +36°50' Mag. 11.6 Size 3'x1'
- _____ 74. NGC6229 Const. HER Type GC RA 16h46.9m Decl. +47°32' Mag. 9.4 Size 5'
- _____ 75. NGC6293 Const. OPH Type GC RA 17h10.2m Decl. -26°35' Mag. 8.2 Size 8'
- _____ 76. NGC6309 Const. OPH Type PN RA 17h14.1m Decl. -12°55' Mag. 11.5 Size"16""
- _____ 77. NGC6356 Const. OPH Type GC RA 17h23.6m Decl. -17°49' Mag. 8.2 Size 10'
- _____ A19. IC4603 Const. OPH Type BN RA 16h25.6m Decl. -24°28' Mag. -- Size 35'x20'

Notes: This list contains deep sky objects with Right Ascension (RA) of 16 and 17 hours. These lines of RA cross the meridian (the highest point they can reach) near 10:00 pm during July. This list can also be used at 8:00 pm in August, and at midnight in June. Declination can be used to determine if an object is visible from your latitude. Observing all objects in each monthly list will allow you to observe all objects in the catalogs represented here over the course of one year.

Key: M=Messier Catalog. C=Caldwell Catalog. NGC=New General Catalogue. IC=Index Catalog. SAO=Smithsonian Astrophysical Observatory Star Catalog. Const.=Constellation. DS=Double Star. GSC=Guide Star Catalog. GC=Globular Cluster. OC=Open Cluster. GAL=Galaxy. SG=Spiral Galaxy. PN=Planetary Nebula. EN=Emission Nebula. RN=Reflection Nebula. BN=Bright Nebula. AST=Asterism. RA=Right Ascension. Decl.=Declination. Mag.=Magnitude. Size=Apparent Size.

Updated 5/19/2023.