

Stargazing Targets, September, 2021

Ashton Observatory



Targets – west to east	Angular size	Distance	Dia (Sep)	Mag
M3 globular cluster	18 min	33 kly	174 ly	6.2
Izar (Epsilon Bootis) double star	-	203 ly	(180 AU)	2.6 & 2.5
M5 globular cluster	23 min	24 kly	164 ly	5.7
M4 globular cluster	36 min	7.2 kly	75 ly	5.6
Alcor & Mizar double stars	-	86 ly	(30 AU)	4.0 & 2.2/3.9
M51 spiral galaxy (Whirlpool)	14 min	28 Mly	112 kly	7.9
M101 spiral galaxy	24 min	23 Mly	162 kly	7.8
M81 spiral galaxy (Bodes)	22 min	12 Mly	74 kly	6.8
M82 spiral galaxy (Cigar)	11 min	12 Mly	38 kly	8.0
M12 globular cluster	16 min	16 kly	73 ly	6.7
M10 globular cluster	20 min	14 kly	84 ly	6.6
M8 Lagoon Nebula	90 min	4.3 kly	114 ly	6.0
M20 Trifid Nebula	29 min	5.2 kly	44 ly	6.3
M22 globular cluster	32 min	10 kly	97 ly	5.1
M17 Omega Nebula (Swan/Check)	46 min	4.2 kly	57 ly	6.0
M16 Eagle Nebula	35 min	5.7 kly	58 ly	6.4
M11 open cluster (Wild Duck)	32 min	6.1 kly	57 ly	5.8
Jupiter, planet 5	48.3 sec	4.1 AU	11.2xEarth	-2.8
Saturn planet 6	18.1 sec	9.1 AU	9.4xEarth	0.4
Epsilon Lyrae (Double Double stars)	-	162 ly	(162/156 AU)	5/6 & 5/5
M57 planetary nebula (Ring)	1.4 min	1400 ly	0.6 ly	8.8
Albireo double star	-	430 ly	(4210 AU)	3.1 & 5.1
M27 planetary nebula (Dumbbell)	8 min	1400 ly	3.2 ly	7.1
Rasalgethi (Alpha Herculis) dbl s	-	360 ly	(516 AU)	3.4 & 5.3
M13 globular cluster (Hercules)	20 min	23 kly	135 ly	5.8
M92 globular cluster	14 min	27 kly	110 ly	6.4
M15 globular cluster	18 min	34 kly	178 ly	6.2
M2 globular cluster	16 min	38 kly	175 ly	6.5
M31 spiral galaxy (Andromeda)	178 min	2.5 Mly	131 kly	3.3
M52 open cluster	15 min	4.6 kly	20 ly	6.9
NGC 7789 open cl (Caroline's Rose)	25 min	5.9 kly	43 ly	6.7
NGC 457 open cl (Owl/Dragonfly)	20 min	7.9 kly	46 ly	6.4
NGC 869/884 open cl (Double Cl)	18/18 min	6.8/9.6 kly	36/50 ly	5.3/6.1
M33, spiral galaxy (Pinwheel)	62 min	2.8 kly	51 ly	5.8
NGC 7293, planetary nebula (Helix)	15 min	790 ly	3.4 ly	7.6
Moon: full = Sep 20; new = Sep 06	32.0 min	240,000 mi	2,160 mi	-12.4max

Notes: Most data from SkySafari Pro6 smartphone application, 2021.

Angular size=as viewed from Earth; Distance=distance from Earth; Dia=overall true size; (Sep)=distance between double stars; Mag=apparent visual magnitude from Earth.

min=arcminute; sec=arcsecond; ly=light year (~5.9 trillion miles); kly=ly x1000; Mly=ly x1,000,000.

AU=astronomical unit, 1AU=the average distance from Earth to Sun (=93,000,000 mi). Oort Cloud ≈3.75 ly dia.

Constellations/stars rise approx. 4 minutes earlier/day. The planets move differently per orbit. Moon about 45 minutes later/night.

Milky Way =120x2 kly; total stars =100-400 billion. MW rotates Solar System =483,000 mph. The MW thru space =1,300,000 mph.