

Stargazing Targets, August, 2025

Ashton Observatory



Targets > west to east	Angular size	Distance	Dia (Sep)	Mag
Mars, planet 4 (very low west)	4.3 sec	2019 AU	0.53 x Earth	1.6
M87 giant elliptical galaxy Virgo A	8 min	55 Mly	132 kly	8.6
M64 spiral galaxy (Black Eye)	10 min	17 Mly	51 kly	8.5
M53 globular cluster	2.2 min	60 kly	39 ly	7.6
M3 globular cluster	2.2 min	33 kly	21 ly	6.2
M5 globular cluster	4.2 min	24 kly	29 ly	5.7
M4 globular cluster	7.3 min	7.2 kly	15 ly	5.6
M12 globular cluster	4.3 min	15 kly	19 ly	6.7
M10 globular cluster	3.6 min	14 kly	15 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
M17 Omega nebula (Swan)	46 min	4.2 kly	57 ly	6.0
M16 Eagle nebula	35 min	5.7 kly	58 ly	6.4
M22 globular cluster	6.5 min	10 kly	20 ly	5.1
M11 Wild Duck open cluster	32 min	6.1 kly	57 ly	5.8
Epsilon Lyrae (Double Double)	-	162 ly	(162 AU)	5/6 & 5/5
M57 Ring planetary nebula	1.4 min	1400 ly	0.6 ly	8.8
Albireo double star	-	400 ly	(4610 AU)	3.1 & 4.7
Collinder 399 open cl (Coathanger)	89 min	4.2 kly	109 ly	3.6
M27 Dumbbell planetary nebula	8 min	1700 ly	4 ly	7.1
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 Owl open cluster	20 min	7.9 kly	46 ly	6.4
NGC 869/884 open cl (Dbl Cluster)	18/18 min	6.8/9.6 kly	36/50 ly	5.3/6.1
M81/82 spiral galaxy (Bode's/Cigar)	24/11 min	12 Mly	87/40 kly	6.9/8.4
Alcor & Mizar double-double stars	-	82/86 ly	(26 AU)	4.0 & 2.2/3.9
M51 spiral galaxy (Whirlpool)	11 min	28 Mly	91 kly	8.4
M101 spiral gal (Pinwheel)	29 min	23 Mly	20 kly	7.9
M13 globular cluster (Hercules)	3.0 min	23 kly	135 ly	5.8
M92 globular cluster	2.2 min	26 kly	17 ly	6.4
M2 globular cluster	1.9 min	37 kly	20 ly	6.5
M15 globular cluster	2.1 min	33 kly	21 ly	6.2
M31 Andromeda spiral gal	189 min	2.6 Mly	142 kly	3.4
Saturn planet 6 (view after 11pm)	19.0 sec	8.7 AU	9.4 x Earth	0.8
Moon: new=Aug.23; full=Aug.9	32.0 min	240,000 mi	2,160 mi	-12.4max

Notes: Most data from SkySafari Pro7 smartphone application, 2025.

Angular size=as viewed from Earth; Distance=distance from Earth; Dia=overall true size; (Sep)=distance separating 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).

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

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