

# Stargazing Targets, October, 2021

## Ashton Observatory



Targets – west to east	Angular size	Distance	True Dia (Sep)	Mag
M17 Omega Nebula	46 min	4.2 kly	57 ly	6.0
M16 Eagle Nebula	35 min	5.7 kly	58 ly	6.4
M11 Wild Duck open cluster	32 min	6.1 kly	57 ly	5.8
M22 globular cluster	32 min	10 kly	97 ly	5.1
Alcor & Mizar double-double stars	-	86 ly	(27 AU)	4.0 & 2.2/3.9
M51 spiral galaxy (Whirlpool)	14 min	28 Mly	112 kly	8.0
M101 spiral gal (Pinwheel)	24 min	23 Mly	162 kly	7.8
M13 globular cluster (Hercules)	20 min	23 kly	135 ly	5.8
M92 globular cluster	14 min	27 kly	110 ly	6.4
Rasalgethi (Alpha Her) dbl star	-	360 ly	(516 AU)	3.5 & 5.4
M57 Ring planetary nebula	1.4 min	1400 ly	0.6 ly	8.8
M27 Dumbbell nebula	8 min	1400 ly	3.2 ly	7.1
Epsilon Lyrae (Double Double)	-	162 ly	(163/164 AU)	5/6. & 5/5
Albireo double star	-	400 ly	(4240 AU)	3.1 & 4.7
Collinder 399 open cl (Coathanger)	89 min	4.2 kly	109 ly	3.6
M15 globular cluster	18 min	34 kly	178 ly	6.2
M2 globular cluster	16 min	38 kly	175 ly	6.5
Saturn planet 6	17.0 sec	9.8 AU	9.4xEarth	0.6
NGC 7009 planetary n. (Saturn)	0.5 min	3.2 kly	0.5 ly	7.8
Jupiter, planet 5	43.4sec	4.5 AU	11.2xEarth	-2.6
NGC 7293 planetary n. (Helix)	15 min	790 ly	3.4 ly	7.6
Neptune, planet 8	2.3 sec	29 AU	3.9xE	7.8
M31 spiral gal (Andromeda)	178 min	2.5 Mly	131 kly	3.3
M33 spiral galaxy (Triangulum)	62 min	2.8 Mly	51 ly	5.8
Uranus, planet 7	3.8 sec	18.8 AU	4.0xE	5.7
Almach (Gamma And) tpl star	-	390 ly	(1130 AU)	2.2, 5.0, 6.5
M34 open cluster	35 min	1600 ly	16.6 ly	5.2
M52 open cluster	15 min	4.6 kly	20 ly	6.9
NGC 7789 Caroline's Rose	25 min	5.9 kly	43 ly	6.7
NGC 457 Owl Cluster	20 min	7.9 kly	46 ly	6.4
NGC 869/884 Double Cluster	18/18 min	6.8/9.6 kly	36/50 ly	5.3/6.1
M45 open cluster (Pleiades)	120 min	430 ly	15 ly	1.5
NGC 253 spiral galaxy (Silver Dollar)	27 min	12 Mly	94 kly	7.0
NGC 6946 spiral galaxy (Fireworks)	11 min	22 Mly	73 kly	8.9
Moon: full = Oct 20; new = Oct 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.