

# Stargazing Targets, July, 2022

## DMAS Ashton Public Nights / Ashton Observatory



| Targets > west to east               | Angular size | Distance    | Dia (Sep) | Mag           |
|--------------------------------------|--------------|-------------|-----------|---------------|
| M64 spiral galaxy (Black Eye)        | 10.5 min     | 14 Mly      | 44 kly    | 8.4           |
| M87 elliptical galaxy Virgo A        | 7 min        | 55 Mly      | 113 kly   | 8.7           |
| M3 globular cluster                  | 18 min       | 33 kly      | 174 ly    | 6.2           |
| M53 globular cluster                 | 13 min       | 58 kly      | 221 ly    | 7.6           |
| Porrima (Gamma Virginis) double star | -            | 38 ly       | (39 AU)   | 3.5 & 3.5     |
| Izar (Epsilon Bootis) double star    | -            | 203 ly      | (180 AU)  | 4.8 & 2.5     |
| M5 globular cluster                  | 23 min       | 24 kly      | 164 ly    | 5.7           |
| Antares (Alpha Scorpii) double star  | -            | 550 ly      | (528 AU)  | 1.1 & 5.4     |
| M4 globular cluster                  | 36 min       | 7.2 kly     | 75 ly     | 5.6           |
| 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           |
| M17 Omega Nebula                     | 46 min       | 4.2 kly     | 57 ly     | 6.0           |
| M16 Eagle Nebula                     | 35 min       | 5.7 kly     | 58 ly     | 6.4           |
| M22 globular cluster                 | 32 min       | 10 kly      | 97 ly     | 5.1           |
| M11 Wild Duck open cluster           | 32 min       | 6.1 kly     | 57 ly     | 5.8           |
| Epsilon Lyrae (Double Double)        | -            | 162 ly      | (110 AU)  | 5 - 6         |
| M57 Ring nebula                      | 1.4 min      | 1400 ly     | 0.6 ly    | 8.8           |
| Albireo double star                  | -            | 430 ly      | (4610 AU) | 3.1 & 4.7     |
| Collinder 399 open cl (Coathanger)   | 89 min       | 4.2 kly     | 109 ly    | 3.6           |
| M27 Dumbbell nebula                  | 8 min        | 1400 ly     | 3.2 ly    | 7.1           |
| M52 open cluster                     | 15 min       | 4.6 kly     | 20 ly     | 6.9           |
| NGC 7789 Caroline's Rose open cl     | 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       |
| M81 spiral galaxy (Bodes)            | 22 min       | 12 Mly      | 74 kly    | 6.8           |
| M82 spiral galaxy (Cigar)            | 11 min       | 12 Mly      | 38 kly    | 8.0           |
| MizarAB & Alcor double star          | -            | 86 ly       | (26.1 AU) | 2.2/3.8 & 4.0 |
| 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           |
| Saturn planet 6 (rises 11 p.m.)      | 18.3 sec     | 9.0 AU      | 9.4xEarth | 0.3           |
| Moon: full=July13; new=July28        | 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).

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.