

Nick James

British Astronomical Association

Observing the Deep Sky

Greenwich B2B – November 2024



Equipment

- Naked Eye
- Binoculars
- Telescope

Binoculars



Telescopes



Dobsonian Telescopes



Smart telescopes



My telescope is bigger than yours...



The Deep Sky Zoo

- Things outside the solar system (except variable stars?)
- Nebulae
 - Bright
 - Dark
 - Planetary
- Clusters of stars
 - Open clusters
 - Globular clusters
- Supernova remnants
- Galaxies

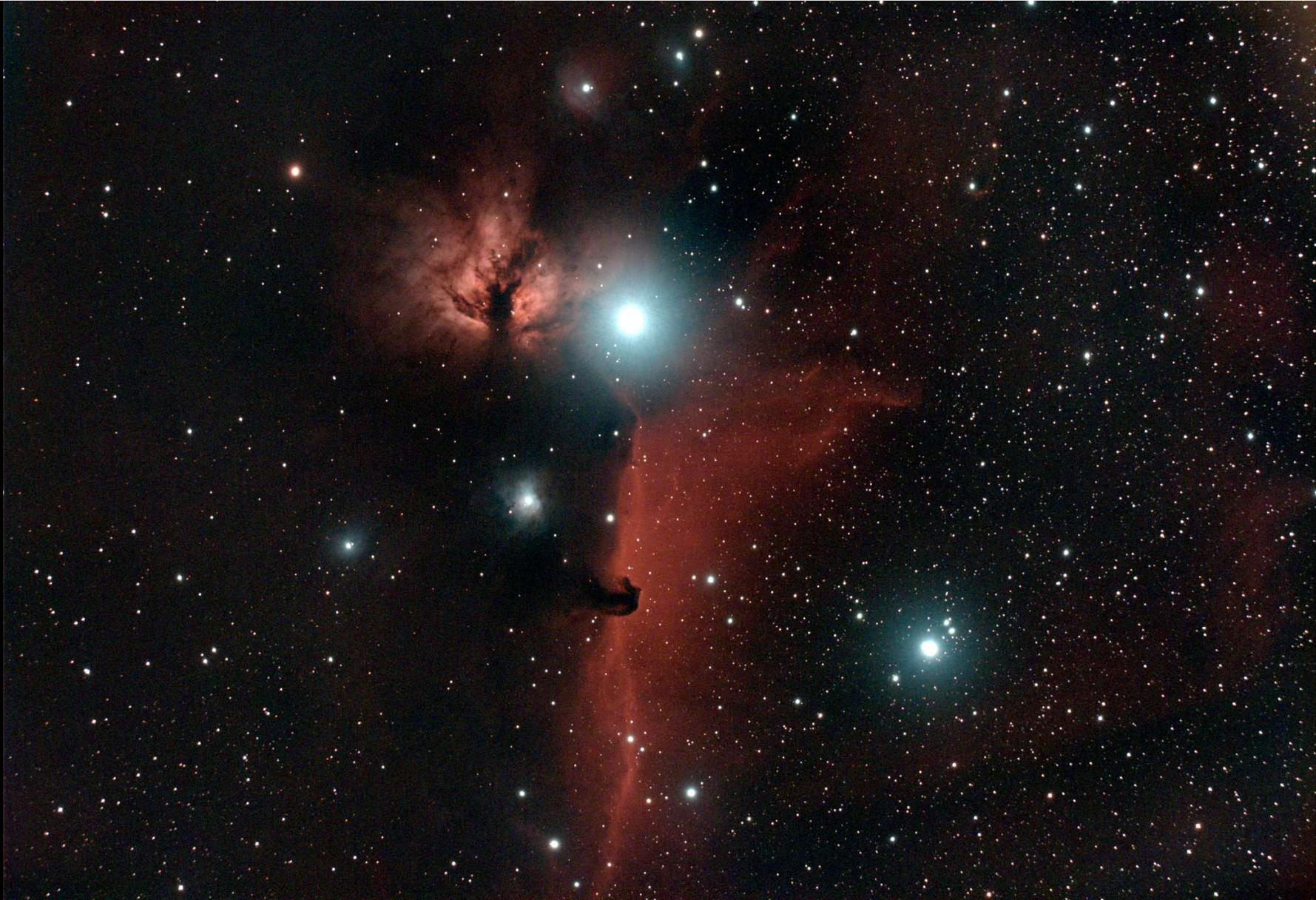


Earth, Chelmsford, 33 m FOV 83.7° 54.8 FPS 2024-11-30 23:00:00 UTC+00:00

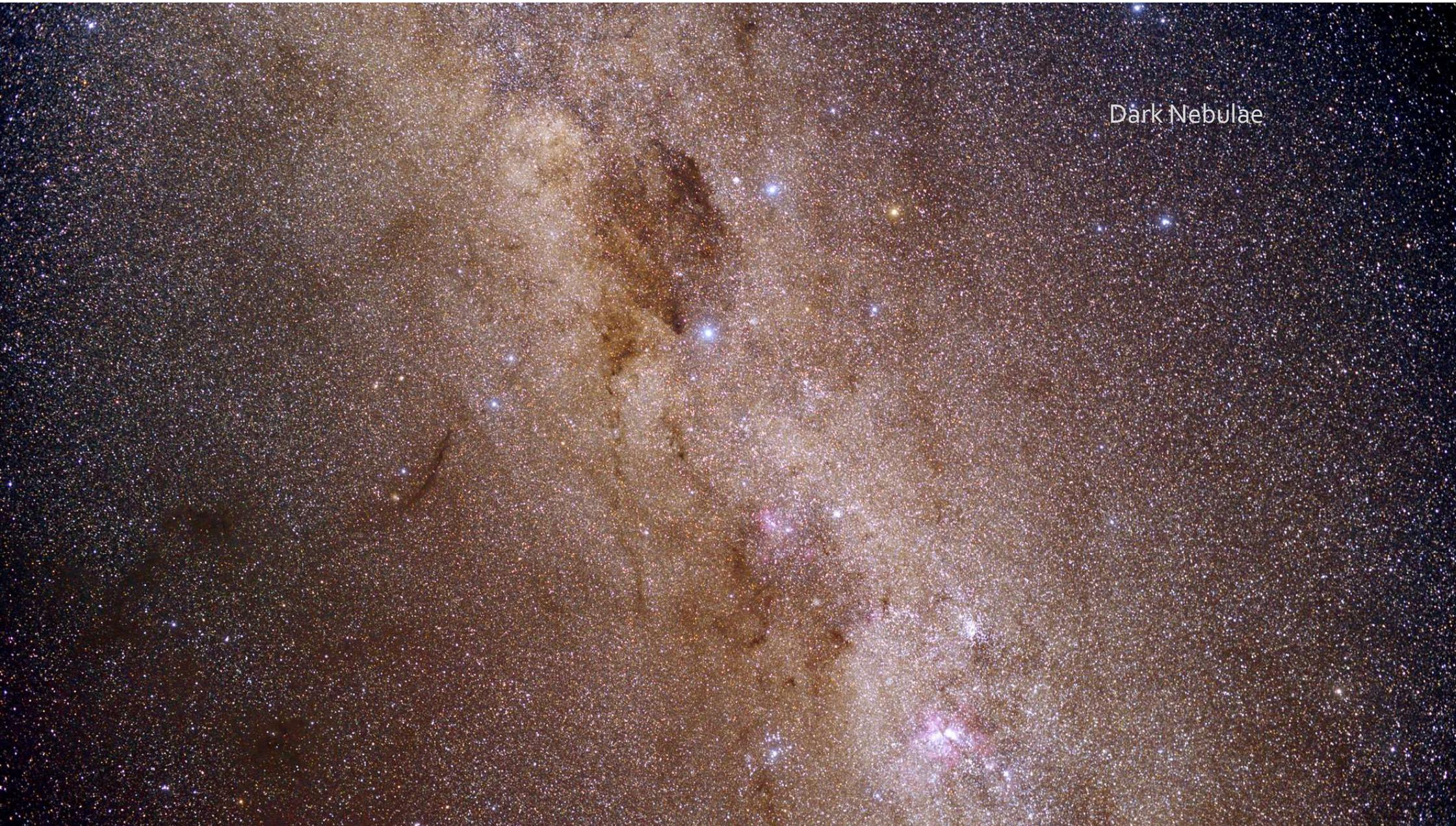
A row of small, light-colored icons for navigation and control, including a north arrow, a globe, a zoom-in (+) and zoom-out (-) symbol, a refresh symbol, a search symbol, a play/pause symbol, and a power symbol.



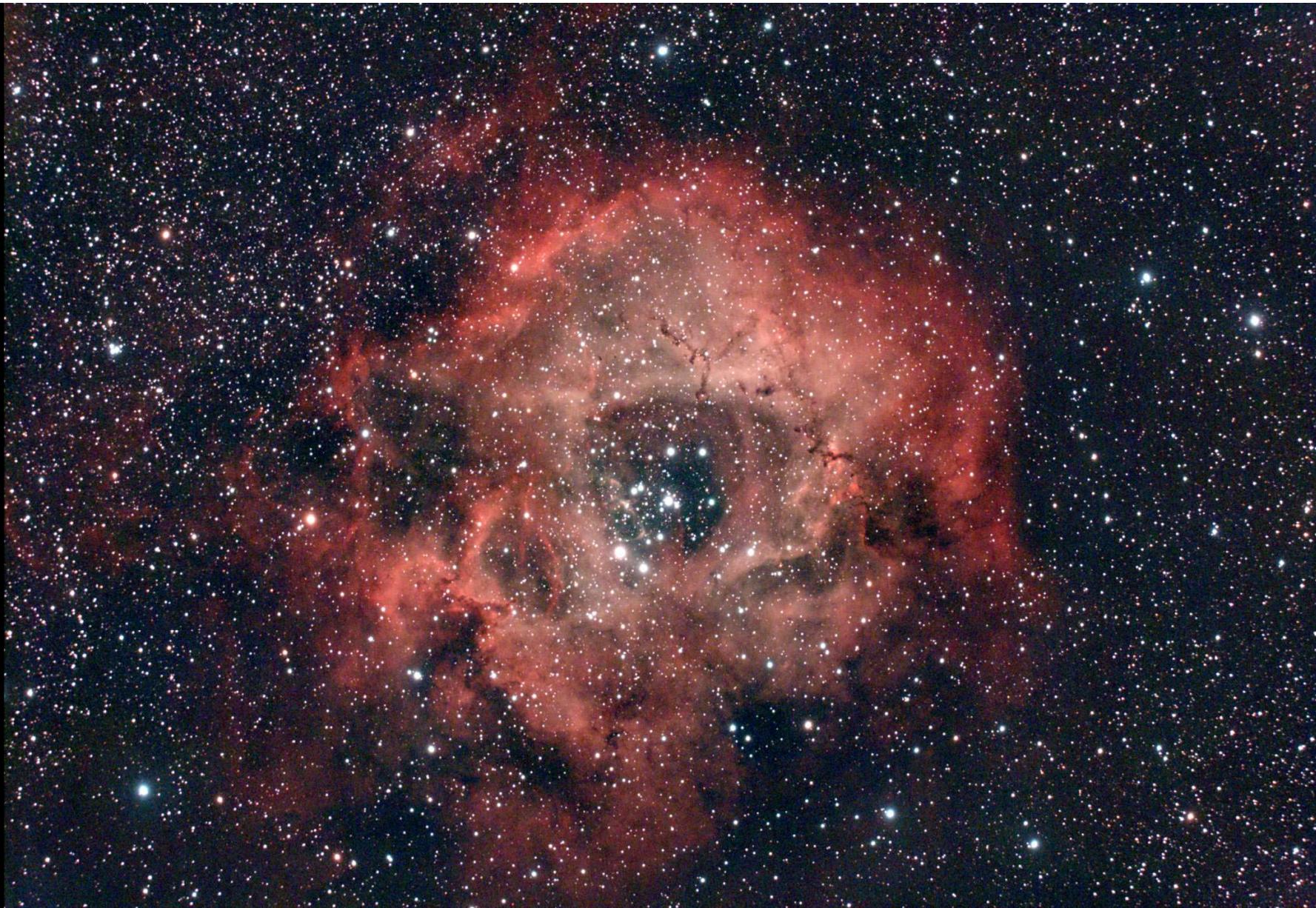




Object: B33 - Horsehead Nebula, Observer: Nick James
Mid time: 2020-01-20 21:14:20, Span: 3864s, Exposure: 60x60s
Telescope: 90mm, f/5 refr., Camera: ASI294MC
Scale: 2.13 "/pix, FoV 147.4x109.4 arcmin, PR: 5.1 deg, ZP: 23.33 mag



Dark Nebulae



Object: Rosette Nebula, NGC2517, Observer: Nick James
Mid time: 2020-01-20 23:29:15, Span: 3000s, Exposure: 60x60s
Telescope: 90mm, f/5 refl., Camera: ASI294MC
Scale: 0.13 "/pix, FOV: 147.4x100.4 arcmin, PA: 5.1 deg., ZP: 23.83 mag





Object: M45, Observer: Nick James
Mid time: 2018-12-16 02:31:10, Span: 7149s, Exposure: 57x120s
Telescope: 345mm FL, f/4.8, Camera: ASI294MC
Scale: 2.77 "/pix, FoV 191.1x139.2 arcmin, PR: 3.8 deg, ZP: 24.89 mag

Planetary Nebula M57 - The Ring



Iain Cartwright

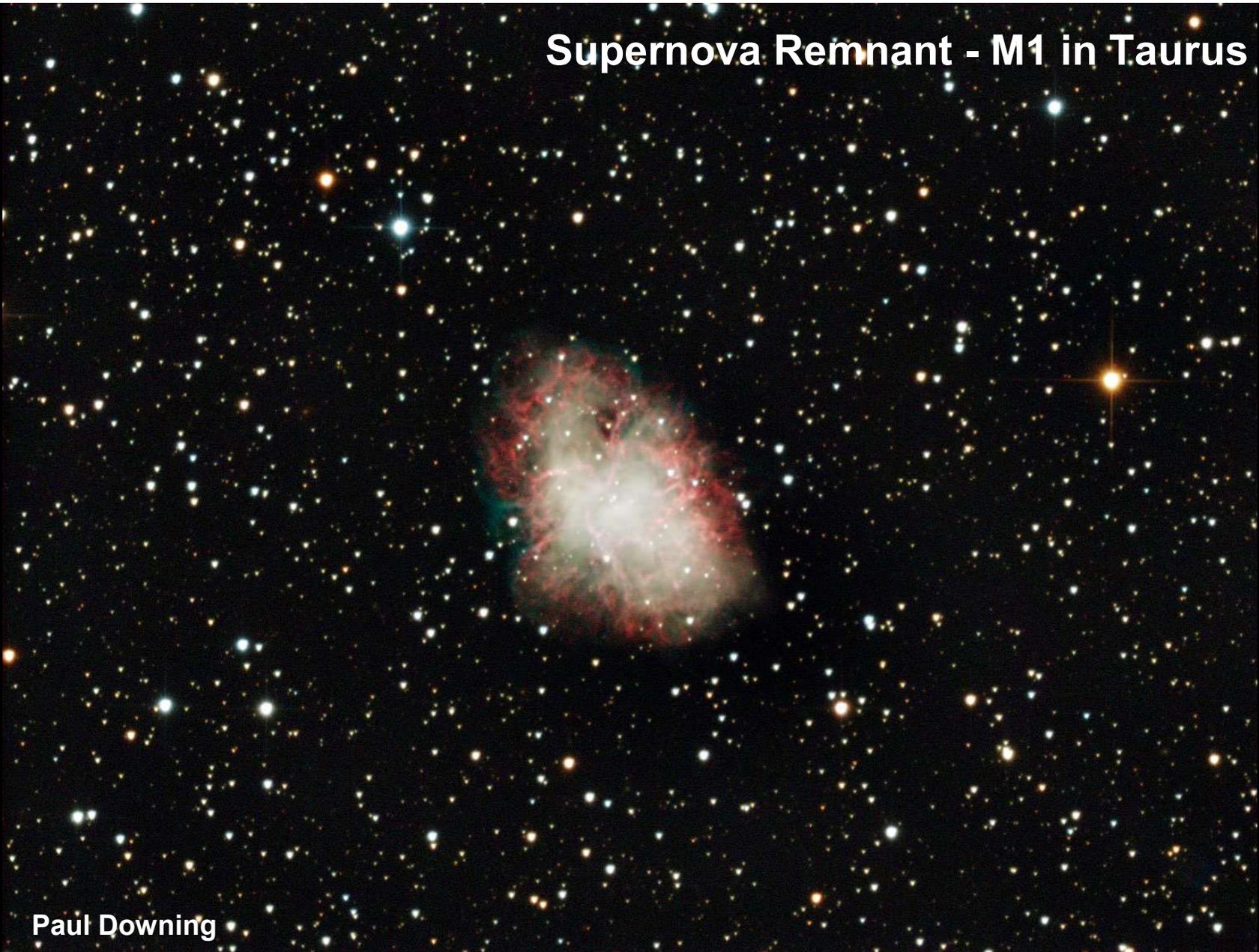
Open Cluster - The Double Cluster in Perseus



Globular cluster, M15

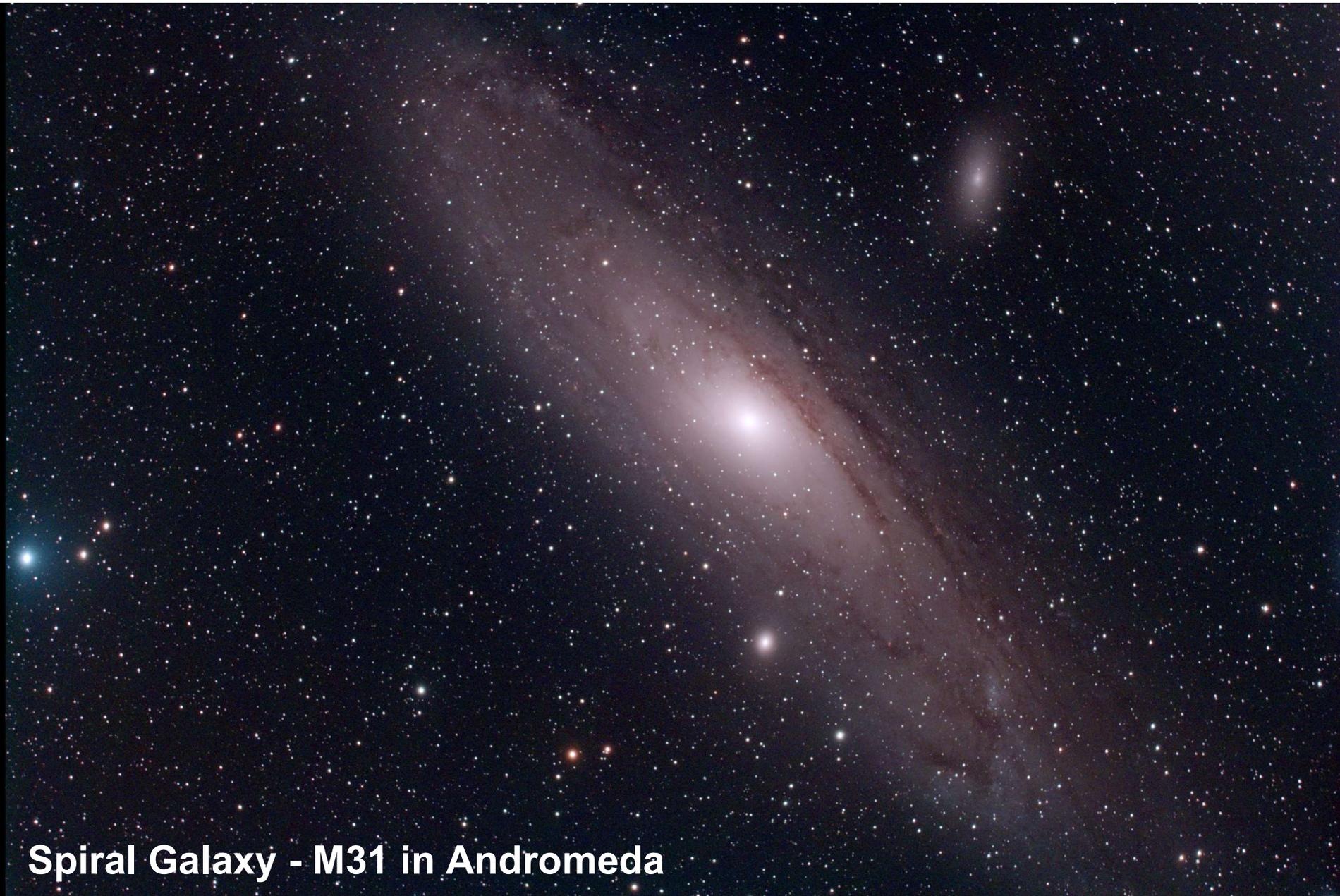
Object: M_15, Observer: Nick James
Mid time: 2020-09-20 20:12:33, Span: 1190s, Exposure: 18x60s
Telescope: C11 Edge HD, Camera: Finger Lakes 1.211 Version N
Scale: 1.29 "/pix, FoV 33.1x22.0 arcmin, PA: 0.3 deg, ZP: 25.91 mag

Supernova Remnant - M1 in Taurus

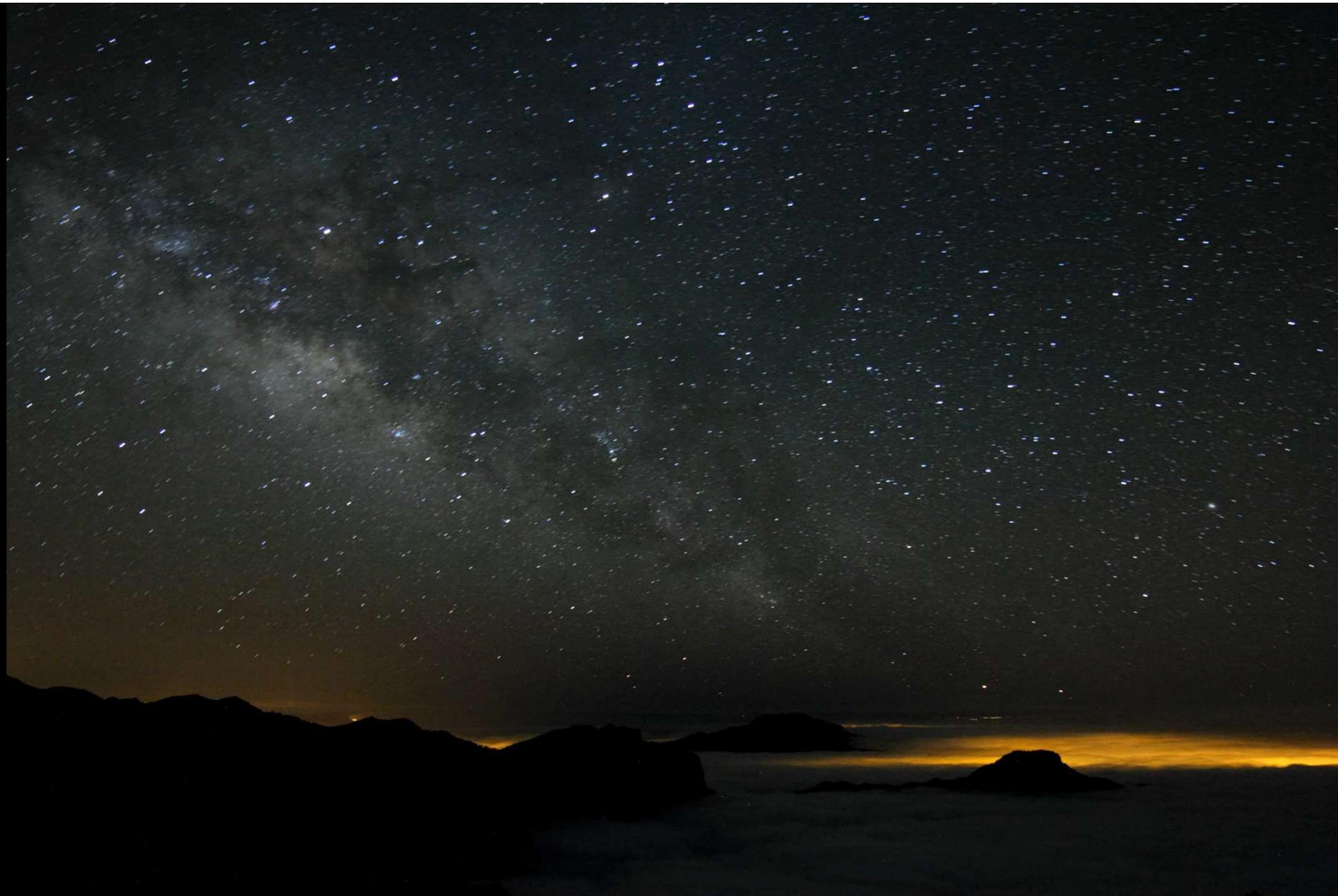


Paul Downing





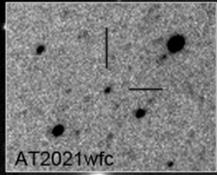
Spiral Galaxy - M31 in Andromeda



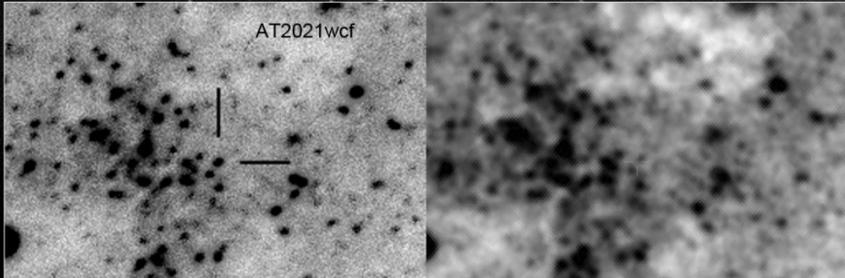
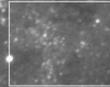
Spiral Galaxy - M51 in Canes Venatici

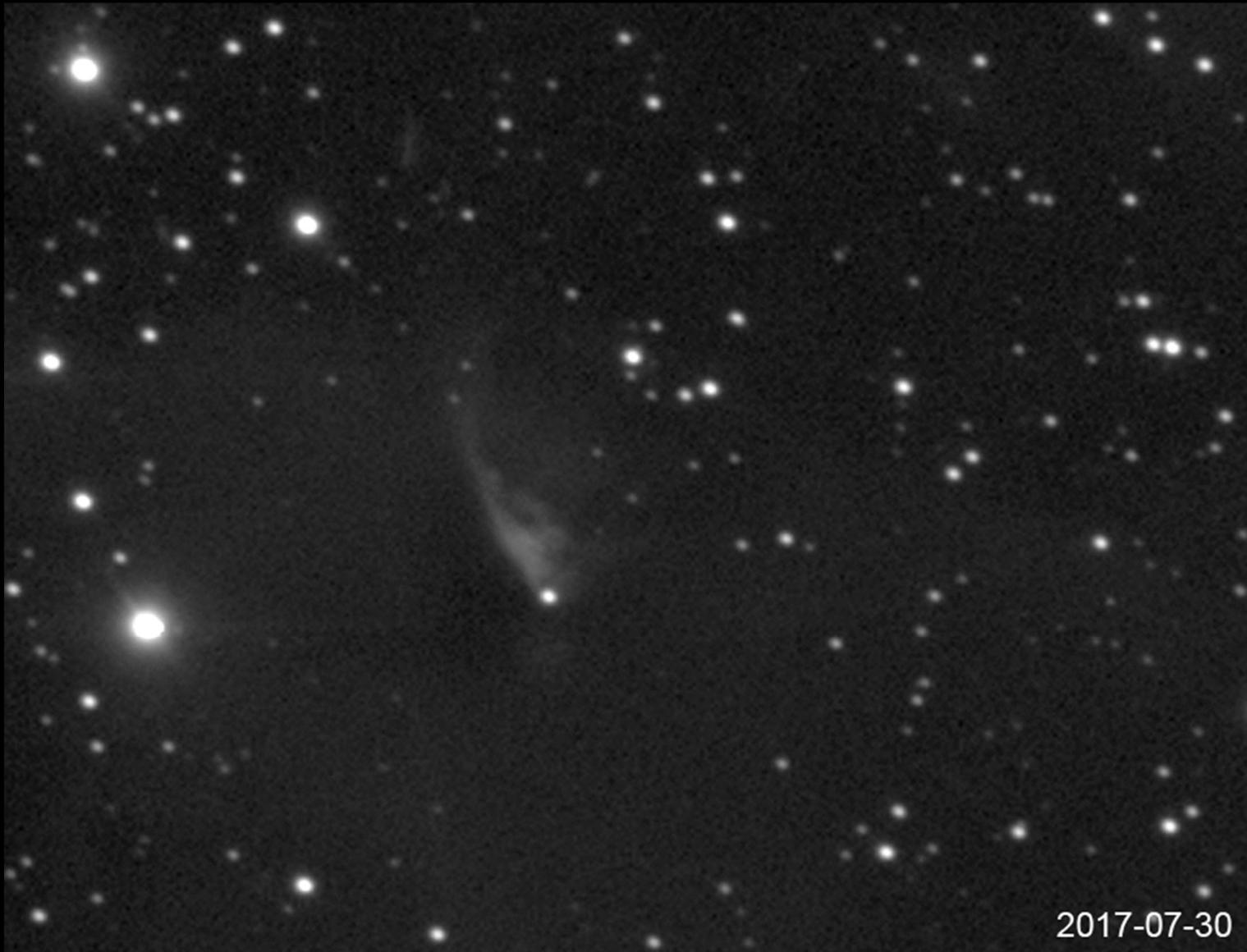


Alan Tough



M33 objects





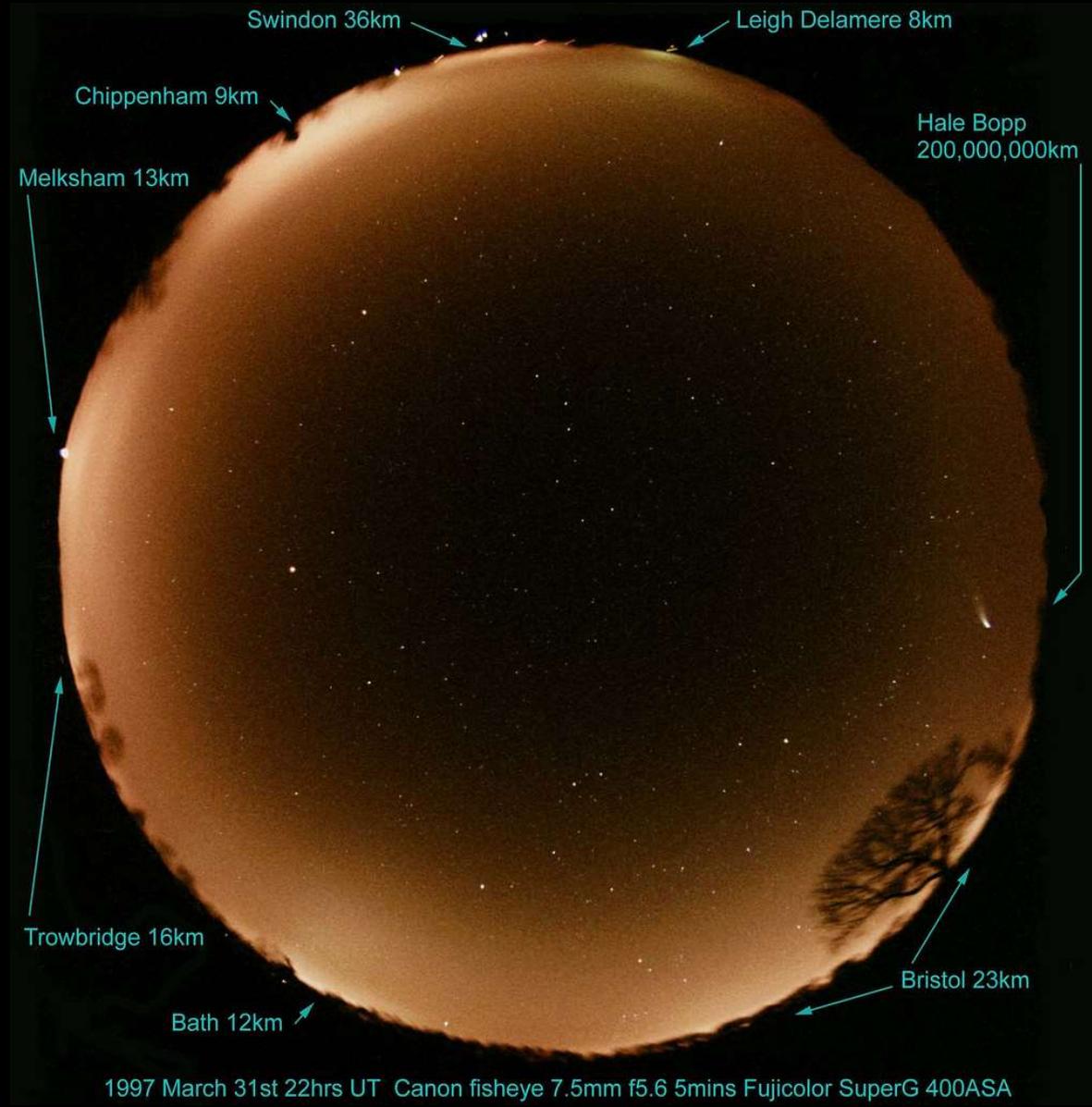
2017-07-30



Light Pollution

- Choose a dark site if possible
- Avoid the Moon
- Shield bright lights if there are any









Catalogues

Messier Catalogue - M numbers

- List created by Charles Messier
- Objects that are not comets!
- Many were found and known about before Messier
- Messier catalogued about 102 objects, with Pierre Mechain
- Another 8 added by later observers



Caldwell Catalogue - C Numbers

- 'Invented' by Patrick Moore
- Level of difficulty similar to Messier Catalogue
- But...
- Intended to include objects Messier might have listed.
- Covers northern and southern hemispheres equally



New General Catalogue - NGC Numbers

- Initial catalogue by William Herschel (1786)
- Systematic sweeps of the sky
- NGC created by Draper (1888)
- Index Catalogue (IC followed on)

