

RASC Toronto Centre Members Night – Apr 23, 2016 – May Observing Targets

By Chris Vaughan chris.vaughan@astrogeo.ca

Emphasis is on the must-sees and some overlooked gems and fun items seen only in mid spring (i.e., not circumpolar). For deep sky objects “M” designates Messier List object, “C” Caldwell List Object, “NGC” New General Catalogue, “IC” Index Catalogue for nebulae, and “Mel” for Melotte Open Cluster Catalogue.

For stars, I give the proper names (spellings may vary) or nicknames, plus Bayer designation (Greek letter plus Latin constellation name) and/or Flamsteed designation (numeral and Latin constellation name), and the visual magnitude “mag”. For doubles/multiples I have provided mags, separations “sep” in minutes (′) or seconds (″), colours, etc.

No nebulae this month!

Leo (Leonis) and Virgo (Virginis)

Algieba (Gamma Leonis) – pretty pair of yellow stars (mags 2.6 and 3.8, sep. 4.5″) easily split

Quasar 3C 273 – Brightest quasar, challenge at mag 12.89, in Virgo, 2.4 Billion LY away! 3.5° NE of 15 Virginis

Coma Berenices (Comae Berenices)

North Galactic Pole (NGP) – situated near the star 31 Com. Many galaxies are observable in this region of sky because we are looking through less of the Milky Way. (The south galactic pole (SGP) is in Sculptor, near NGC288. There are far fewer galaxies in that direction.)

Black-Eye Galaxy / M64 / NGC4826 – Bright mag 8.5 spiral galaxy with a bright core surrounded by a dark rim. A nice 9.3′ x 5.4′ sitting at an oblique angle (Imaging target)

Needle Galaxy / NGC4565 / C38 – A giant (15.8′ x 2.1′) edge-on spiral galaxy showing at a bright mag 9.6. Bisected by a dust lane visible in 8″ scopes. (Imaging target)

Mel 111 – Huge (2°) open cluster only 288 LY away, ~50 stars of mag 4.8 and dimmer (binos)

M53 / NGC5024 / Mel 117 and NGC5053 – are two globular clusters (mag 7.7 and 9.9) only 1° apart!

Canes Venatici (Canum Venaticorum)

Whirlpool Galaxy / M51 / NGC5194 – large (11.2′ x 6.9′) bright mag 8.4 face-on spiral galaxy. Defined spiral arms and colourful star-forming regions make it excellent for imaging. Associated with more distant small barred spiral galaxy NGC 5195 (imaging target)

Sunflower Galaxy / M63 / NGC5055 – First discovery of Charles Mechain in 1779. Large (10′ x 6′) spiral galaxy of mag 8.6 (imaging target)

Whale Galaxy / NGC4631 / C32 – edge-on spiral galaxy, large (17′ x 3.5′) and high integrated brightness mag 9.8. It’s distorted gravitationally – hence the Whale name (Imaging target)

M3 / NGC5272 / Mel 119 – One of the brightest (mag 6.19) globular clusters visible to Canadians, with up to half a million stars. Large 18′ diameter.

M94 / NGC4736 – face-on barred spiral galaxy with a very bright core and concentric rings of star formation. Total mag 8.2 and size of 14.4′ x 12′ (Imaging target)

Cor Corali (Alpha CVn) – “Heart of King Charles”, a very wide double star white mag 2.9 and yellow mag 5.6 (sep. 19″)

La Superba (Y CVn) / HIP62223 / SAO44317 – deep red semi-regular variable carbon star, mag 5.0-6.5 over 158 days. One of the sky's reddest stars – visible in binoculars.

Western Serpens (Serpentis)

M5 / NGC 5904 / Mel 133 – A very fine globular cluster discovered in 1702, mag 5.6 and 23' across

Boötes (Boötis)

Arcturus (Alpha Boötis) – Brightest star in northern hemisphere (4th overall) and one of the closest giant stars to us at 37LY. Is a very close double (sep. 0.3")

Izar (Epsilon Boötis) – A very fine double of Yellow mag 2.6 and Blue mag 4.8 (Sep. 3")

Alkalurops (Mu1,2 Boötis) (51 Boötis A) & Inkalunis (51 Boötis B) – Triple! A white mag 4.3 star sitting 109" from a close pair comprising a yellow mag 7.1 star and a white mag 7.6 star (sep 2")

Xi Boötis – At 22 LY it's a very close star system to us. A double star yellow mag 4.8 and orange mag 7 (Sep. 6.4") but separation varies from 2.5" to 7" over 152 years.

Zeta Boötis – A nice double with a Yellow mag 5 star and a Blue-green mag 5.9 star (Sep. 6.3") orbiting every 123 years

Corona Borealis (Coronae Borealis)

Alphekka (Alpha CrB) – Eclipsing Binary of little variation in brightness mag 2.2. Part of the Romulan Empire in Star Trek

Sigma CrB – Triple system of Sun-like stars visible as double yellow stars of mags 5.8 and 6.7 (Sep. 7.2")

Additional Caldwell/Messier Objects (with NGC designation)

M49 / NGC4472 (Vir), M58 / NGC4579 (Vir), M59 / NGC4621 (Vir), M60 / NGC4649 (Vir), M61 / NGC4303 (Vir), M84 / NGC4374 (Vir), M86 / NGC4406 (Vir), M87 / NGC4486 (Vir), M89 / NGC4552 (Vir), M90 / NGC4569 (Vir), M104 / NGC4594 (Vir)

M65 / NGC3623 (Leo), M66 / NGC3627 (Leo), M95 / NGC3351 (Leo), M96 / NGC3368 (Leo), M105 / NGC3379 (Leo)

M85 / NGC4382 (Com), M88 / NGC4501 (Com), M91 / NGC4548 (Com), M98 / NGC4192 (Com), M99 / NGC4254 (Com), M100 / NGC4321 (Com), C35 / NGC4889 (Com), C36 / NGC4559 (Com)

M94 / NGC4736 (CVn), M106 / NGC4258 (CVn), C21 / NGC4449 (CVn), C29 / NGC5005 (CVn), C26 / NGC4344 (CVn)

C45 / NGC5248 (Boö)