

What's Up?

September 9-October 14, 2022



By: Michael Wright



What's Up – Solar System



DATE	SOLAR SYSTEM SKY EVENTS
Sep. 10	Full Moon in western Pisces
Sep. 16	Neptune at Opposition
Sep. 16	Mars 4°S of Moon, rising in East at 11pm (nice binocular sight)
Sep. 17	Moon at Last Quarter in Taurus
Sep. 20	Moon 1.9°S of Pollux at 4am
Sep. 23	Zodiacal Light visible on Eastern Horizon before morning twilight for next two weeks
Sep. 23	Fall Equinox
Sep. 25	New Moon in Virgo
Sep. 26	Jupiter at Opposition

Morning Sky

Mars – TAU Ceres - LEO
 Venus - LEO/VIR
 Pallas - MON/CMa
 Mercury - VIR (Late Sept-Oct)

Most of the Night

Jupiter – PSC Juno - AQR
 Saturn - CAP
 Neptune - AQR
 Vesta – AQR/CAP

Evening Sky

Mercury - VIR (Early Sept)
 Pluto - SGR

PLanet
anner

Grey = Close to Sun



What's Up – Solar System

DATE	SOLAR SYSTEM SKY EVENTS
Oct. 03	First Quarter in Sagittarius
Oct. 05	Saturn 5°N of Moon (nice binocular sight!)
Oct. 08	Neptune 3°N of Moon in early morning sky
Oct. 08	Jupiter 3°N of Moon in evening sky (nice binocular sight!)
Oct. 08	Mercury at greatest elongation W in morning sky
Oct. 09	Full Moon in Pisces
Oct. 12	Moon less than 1° from Uranus from 1-3am! (Occultation in Western Canada)

Morning Sky

Mars – TAU Ceres - LEO
 Venus - LEO/VIR
 Pallas - MON/CMa
 Mercury - VIR (Late Sept-Oct)

Most of the Night

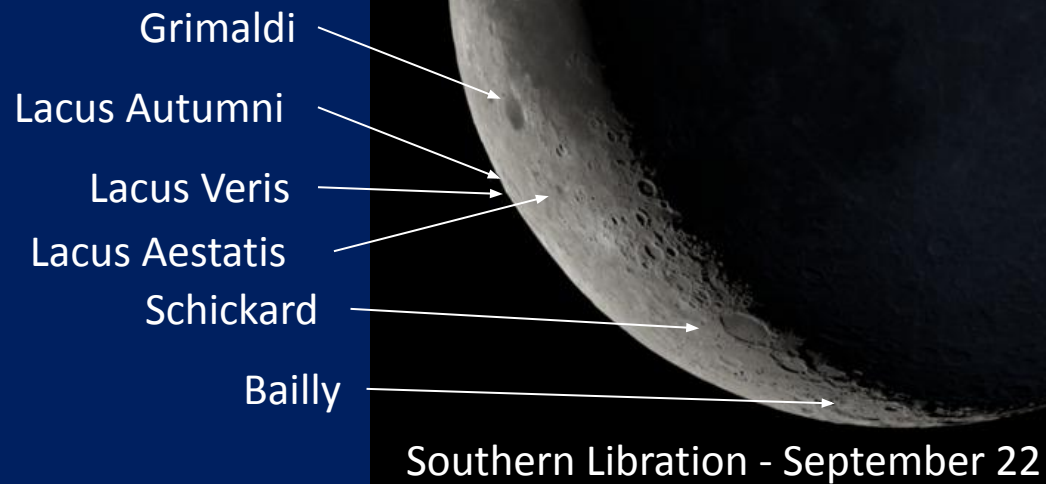
Jupiter – PSC Juno - AQR
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 Vesta – AQR/CAP

Evening Sky

Mercury - VIR (Early Sept)
 Pluto - SGR

PLANET
 planet
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 Grey = Close to Sun

What's Up – Lunar Librations





ROYAL
ASTRONOMICAL
SOCIETY
OF CANADA
KW Centre



What's Up – Lunar Librations



Florey

Mare Humboldtianum

Northern Libration - October 5

Gauss

Lacus
Risoris
Felis

Hecataeus
Humboldt

Eastern Libration - October 11

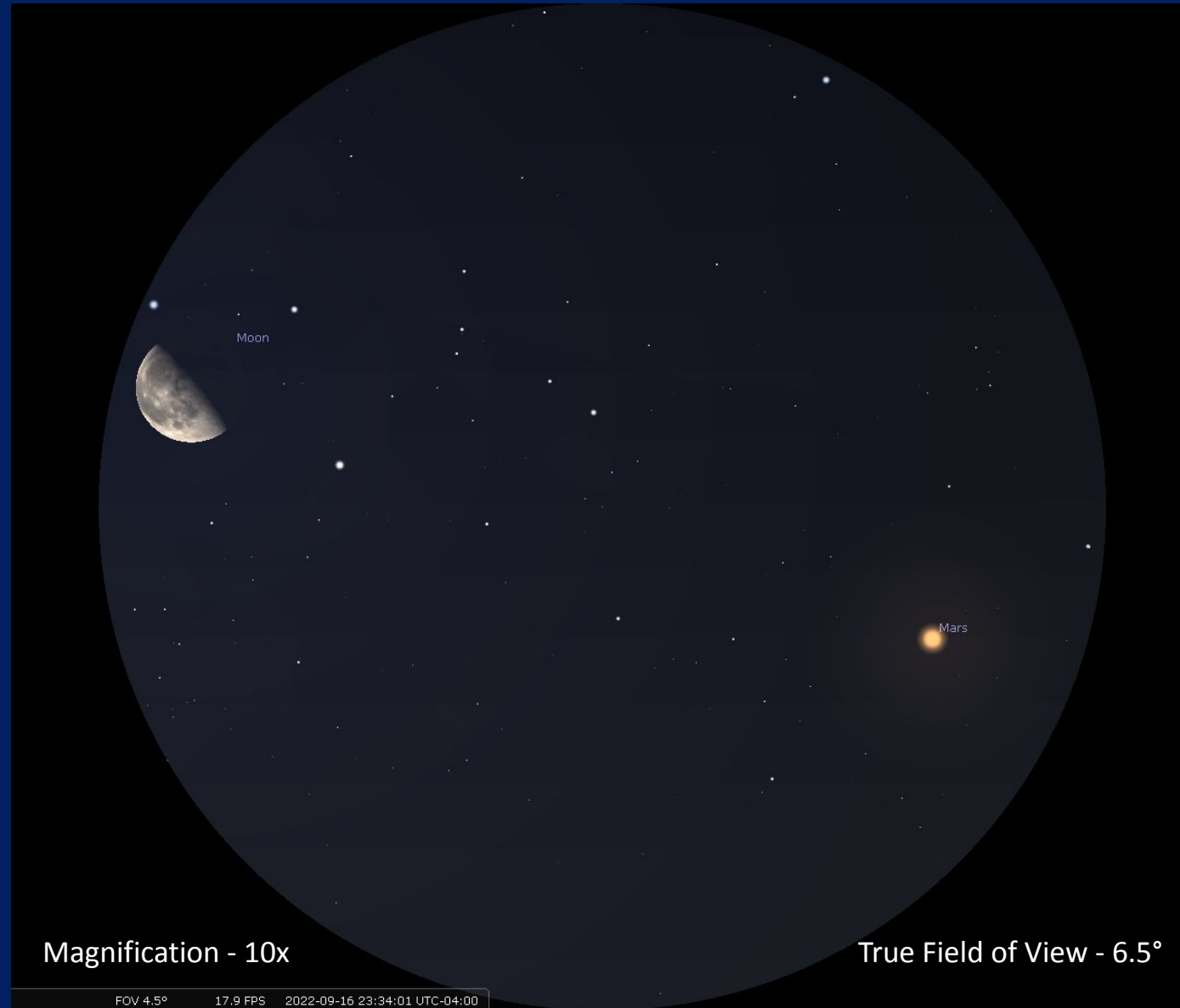
Nice Sight No. 1

Moon & Mars In Binoculars

Fri. Sept 16

11:30 PM

View to SE



Graphic created with Stellarium

Nice Sight No. 2

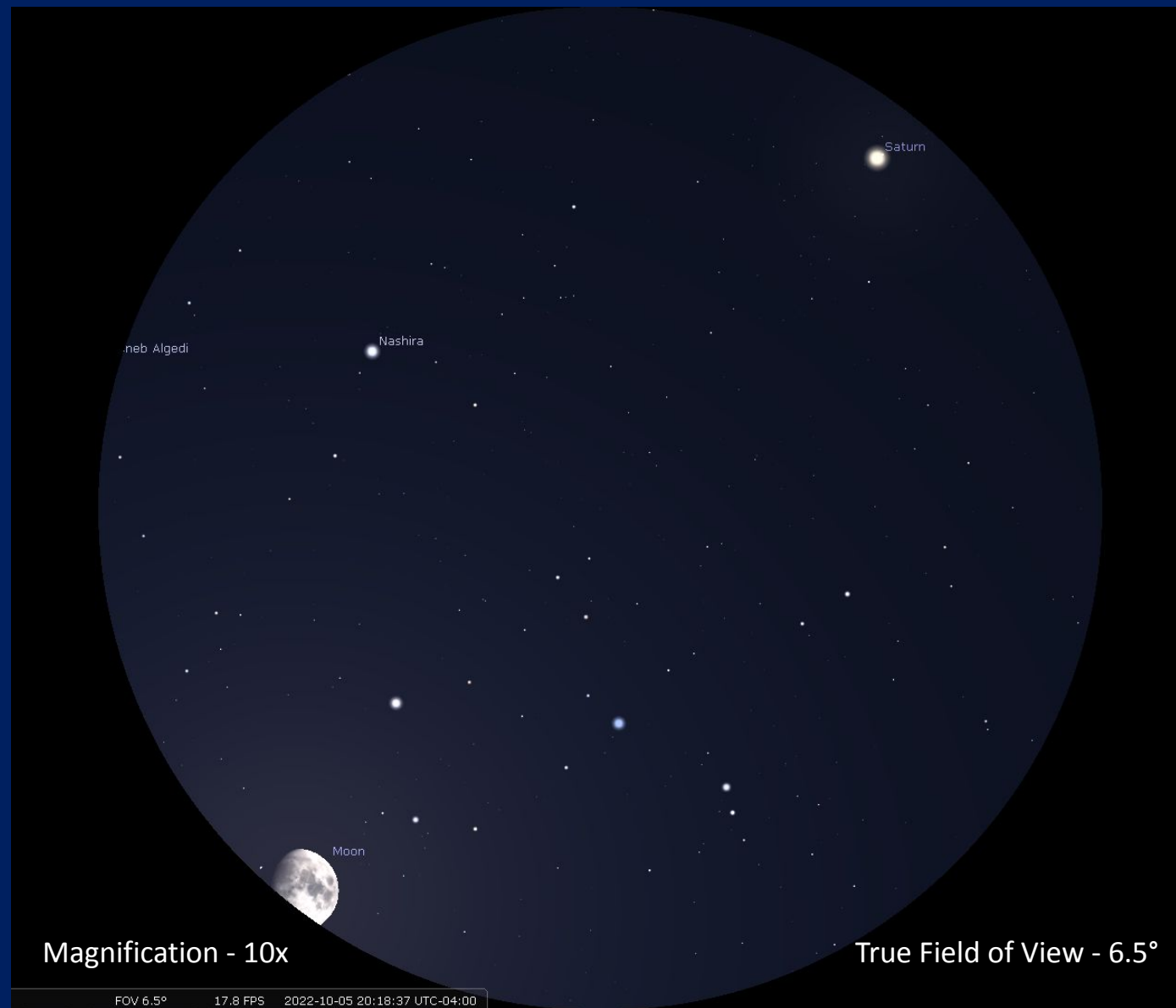
Moon & Saturn In Binoculars

Wed. Oct. 5

8:00 PM

View to SE

Sunset: 6:56 PM



Graphic created with Stellarium

Nice Sight No. 3

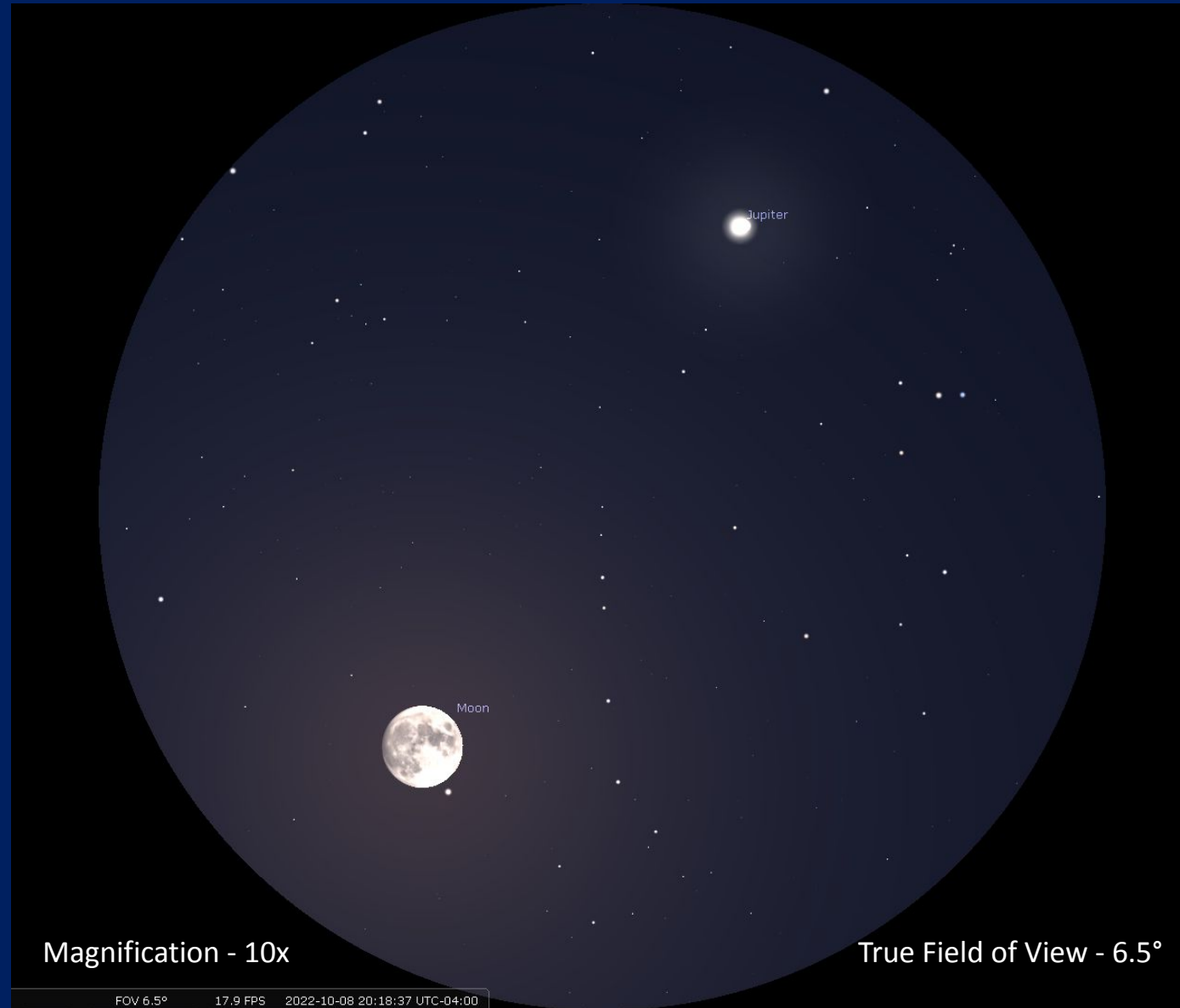
Moon & Jupiter In Binoculars

Sat. Oct. 8

8:00 PM

View to E

Sunset: 6:51 PM



Graphic created with Stellarium

Nice Sight No. 4

Moon & Uranus In Telescope

Wed. Oct. 12

1:00 AM-3:00AM

View to SE

Occultation in
Western Canada





See the zodiacal light!

Several club members observed this challenging sight in 2021 and 2022

Best dates: September 23 to October 7 2022
When moon will not interfere

Best time: *Before* astronomical dawn (~5:00 AM)

Best place: Far from city lights. The closer to Lake Huron or on the Bruce Peninsula, the better

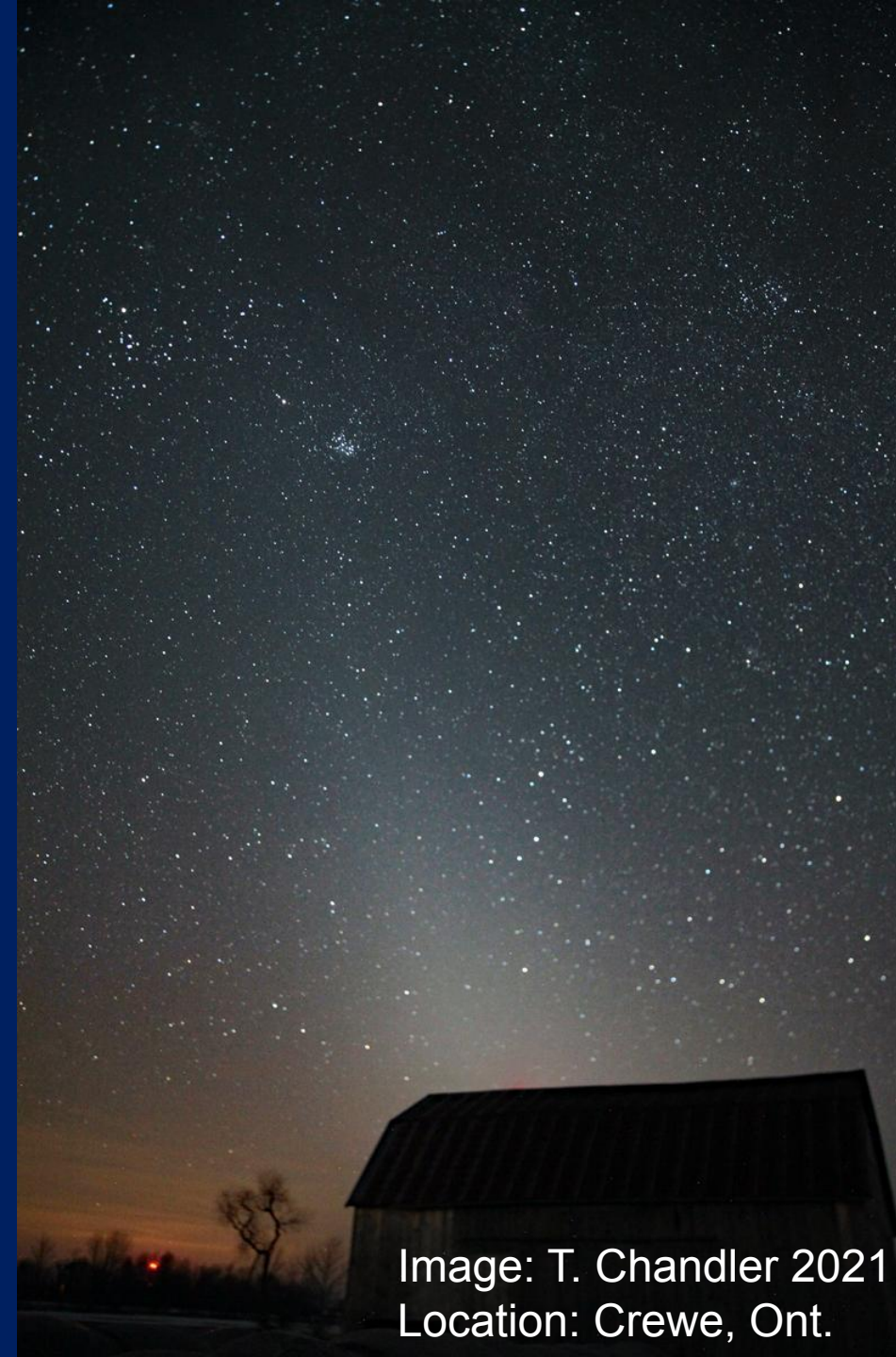


Image: T. Chandler 2021
Location: Crewe, Ont.



See the zodiacal light!

A COUPLE OF PLACES...

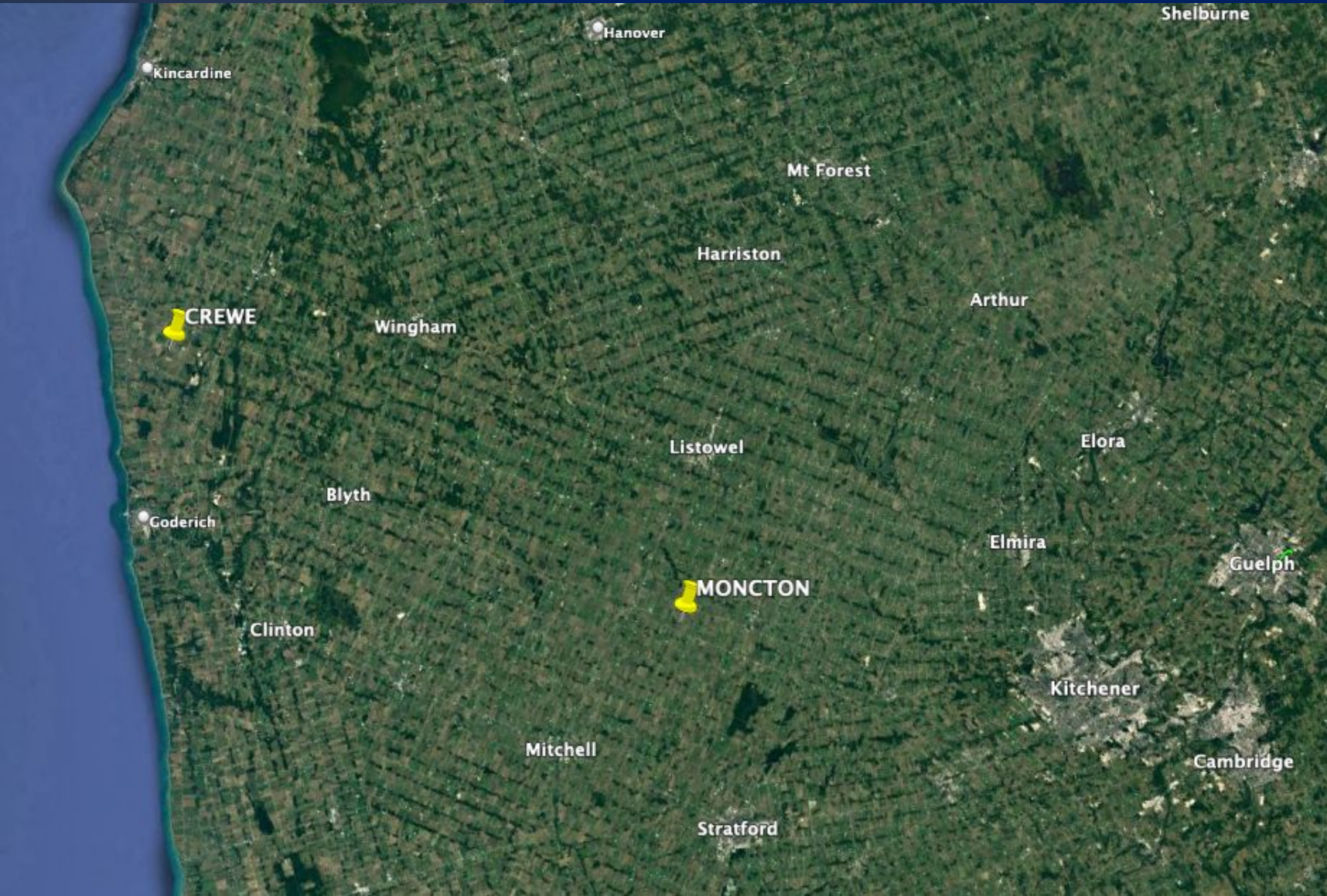
Monkton:

- At end of gravel road between farmer's fields on cement culvert
- Some lights 1km or more away on houses/barns
- 1 hour from KW
- KW light dome may interfere

Crewe:

- Many wind turbines with blinking red lights
- 2 hrs from KW

If skies are clear and moonless, stay tuned for an excursion.



Evening Sky Highlights



10:00pm EDT September 25, 2022

Facing South

Evening Sky Highlights



10:00pm EDT September 25, 2022

Facing South/Overhead



September Deep Sky Highlights 1

Globulars, Galaxies & Planetary! * = RASC Finest NGC

Catalogue #	Type	Cons	Details	Difficulty
M30	gcl	Cap	Moderately condensed glow, well defined bright 'fingers' on north side	easy
M2	gcl	Aqr	Superb. Tight core, resolution at 72x, dark bar through northeast part	easy
M72	gcl	Aqr	Faintest Messier globular, small and not resolvable with small apertures	moderate
M73	asterism	Aqr	Y-shaped asterism of four stars, a few nearby faint stars	moderate
C55/NGC7009*	pn	Aqr	Saturn Nebula - Tight inner ring, pale green-blue halo, faint extensions, cool	moderate
NGC7184	g(SB(r)c)	Aqr	Very elongated galaxy between Helix and M30, bright core	moderate
C63/NGC7293*	pn	Aqr	Helix Nebula - Ashen ring of light, edges sharp with averted vision, wonderful	moderate
NGC7377	g(SA)	Aqr	Oval core, substellar nucleus, faint halo.	difficult
NGC7492	gcl	Aqr	Round, dim haze. Brightest stars mag15.5. Requires at least 20" to resolve.	difficult
NGC7314	g(SAB(rs)cb)	PsA	Elongated galaxy, difficult due to southern location	difficult
M15	gcl	Peg	Thrilling. Hazy, spider-like arms, brightens rapidly towards centre	easy
NGC7332	g(S0)	Peg	Edge-on lenticular system interacting with faint NGC7339	difficult
NGC7217	g((R)SA(r)ab)	Peg	Challenging galaxy to glimpse in small scopes, large scopes show ring structure	difficult
C30/NGC7331*	g(Sbc)	Peg	Deer Lick Galaxy - Diaphanous glow, tight lens shaped core, dust lane in W	moderate
HCG92	galaxy group	Peg	Stephan's Quintet, need large aperture, NGC7320 unrelated to other 4	difficult
C42/NGC7006	gcl	Del	Faint glow with hinted core and faint breath-like extensions	difficult
C47/NGC6934	gcl	Del	Dim core dappled with clumps of hazy starlight, symmetrical	moderate
NGC6891	pn	Del	Tiny, star-like, at high magnification creamy disk with faint collar	difficult
NGC6905	pn	Del	Blue Flash Nebula - Rim with clumpy brightenings, less bright centre.	moderate
NGC7209	ocl	Lac	Star Lizard Cluster - Loose, no central concentration, best at low mag	moderate
C16/NGC7243	ocl	Lac	Central triangle of stars surrounded by graceful arcs, best at med mag	moderate

September Deep Sky Highlights 2

Cygnus Clusters & Nebulae!

* = RASC Finest NGC

Catalogue #	Type	Cons	Details	Difficulty
Albireo	double star	Cyg	Beautiful contrast of topaz and sapphire, may be a chance alignment	easy
C27/NGC6888*	en	Cyg	Crescent Nebula - requires dark skies and patience in 4 inch scopes	difficult
NGC6894	pn	Cyg	Diamond Ring - Dim, annular, similar size to Jupiter, use OIII filter	difficult
C34/NGC6960*	snr	Cyg	Western Veil/Witches Broom - Dim, wispy arc touching 52 Cygni	difficult
C33/NGC6992*	snr	Cyg	Eastern Veil/Network Nebula - Patchy wisp, use UHC/H Beta for both	difficult
M29	ocl	Cyg	More than a dozen stars, brightest six form two opposing arcs	easy
NGC6819*	ocl	Cyg	Foxhead Cluster - granular globe of starlight with streams and clumps	easy
NGC6866	ocl	Cyg	Frigate Bird Cluster - best around 100x, forms outline of sea bird	moderate
NGC6811	ocl	Cyg	Hole in A Cluster - Ring shaped cluster with 'hole' in centre	easy
C15/NGC6826*	pn	Cyg	Blinking Planetary - Aqua hued disk, 'blinks' in/out with averted vision	moderate
NGC6910	ocl	Cyg	Inchworm Cluster - crisp crescent of stars between two golden gems	easy
NGC7027*	pn	Cyg	Sugar Pops Nebula - Very bright but small! Requires very high mag!	moderate
C20/NGC7000*	en	Cyg	North America Nebula - binocular target in dark skies, use low mag	moderate
NGC7026	pn	Cyg	Cheeseburger Nebula - butterfly shaped at high magnification	moderate
NGC7048	pn	Cyg	Peek-A-Boo Nebula - Very difficult in small scopes - use OIII filter!	difficult
M39	ocl	Cyg	Tac Cluster - Shaped like a thumb tac! At least 20 stars visible.	easy
C19/IC5146	en	Cyg	Cocoon Nebula - dim emission near end of dark nebula Barnard 168	difficult
NGC7008	pn	Cyg	Coat Button Nebula - Kissing a 9th mag double star, mottled ellipse	moderate



What's Up? Resources

RASC Observer's Handbook - The Sky By Month

NASA SVS Moon Viewer: <https://svs.gsfc.nasa.gov/4955>

Stellarium: <https://www.stellarium.org>

The Sky Live: <https://theskylive.com/>

Time and Date: <https://www.timeanddate.com/>

Thank you!