



***Stargazers
do it in the***

Adirondacks

David Craig - www.neophyteastronomer.org

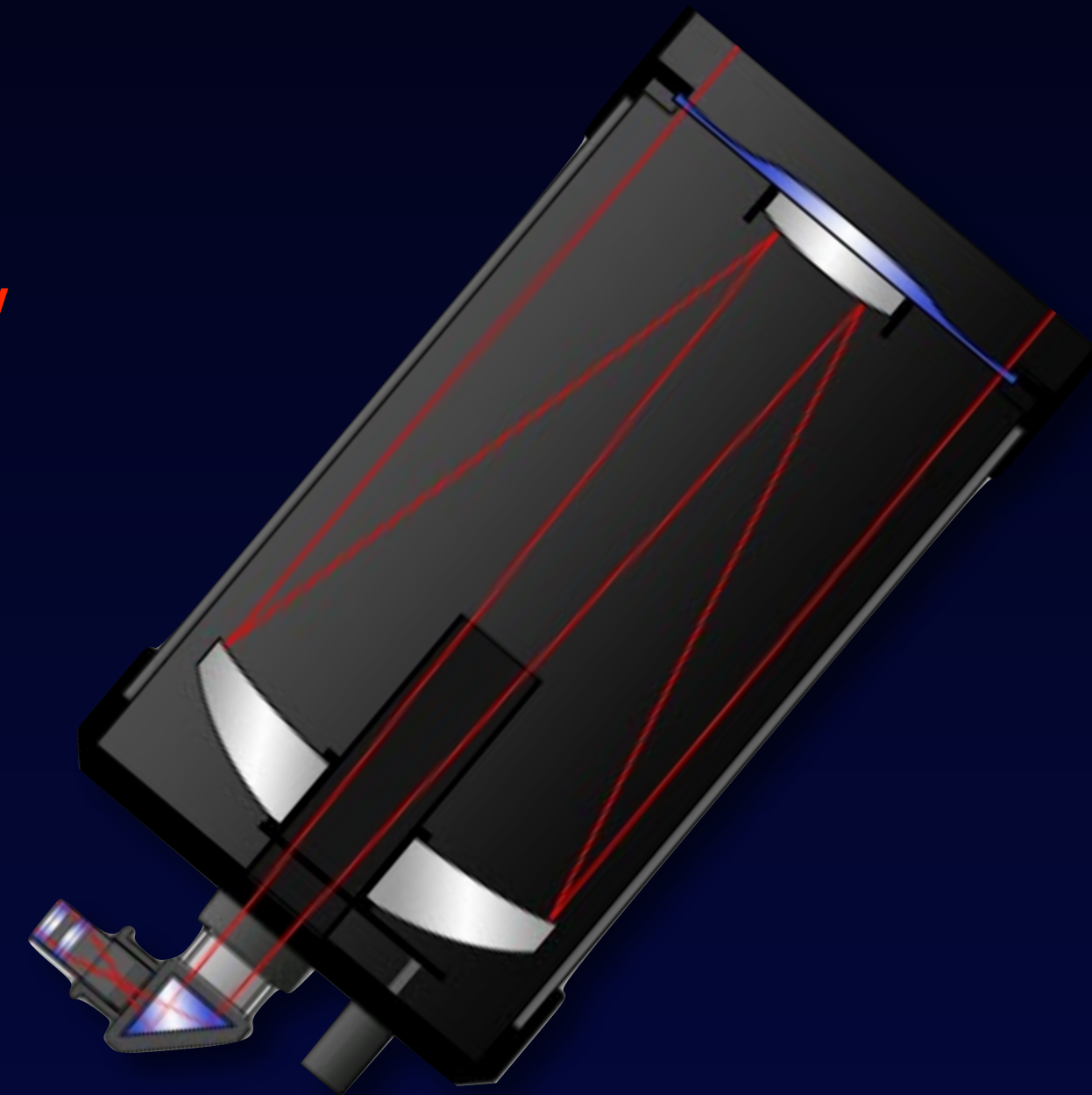
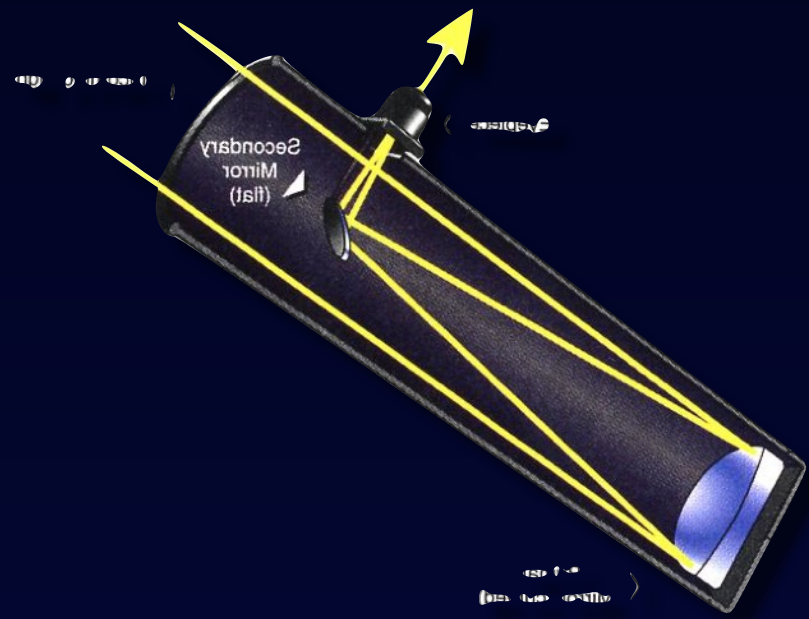
June 29, 2020

**And why in the Adirondacks,
you might ask?**

Because it's *Dark!*

And why do *I* Stargaze?

- Saw the Milky Way - can't see that in Boston!
- Discovered our beautiful Adirondack night sky
- Light pollution, though still an issue - is quite low
- Started with 4.5" Newtonian reflector
- Graduated to 8" Celestron Schmidt–Cassegrain



- Norton Cemetery
- The Night Sky & Light pollution
- Naked Eye Objects
- Telescope/Binocular Objects
- Photographs
- Telescope Demo



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M31 - Andromeda Galaxy
(Two-minute exposure, 50mm lens - David Craig)

Amateur astronomy

amateur | 'amədər, 'amə,tər, 'aməCHər |

noun

a person who engages in a pursuit, especially a sport, on an unpaid basis.

- ~~a person considered contemptibly inept at a particular activity: *that bunch of stumbling amateurs.*~~

adjective

engaging or engaged in without payment; nonprofessional: *an amateur astronomer* | *amateur athletics.*

- ~~inept or unskillful: *it's all so amateur!*~~

DERIVATIVES

amateurism | 'amədə,rizəm, 'amə,t(y)oo,rizəm, 'amə,CHoo,rizəm | noun

ORIGIN

late 18th century: from French, from Italian **amatore**, from Latin **amator** 'lover', from **amare** 'to love'.

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**Therefore,
Astronomy is for... lovers?**

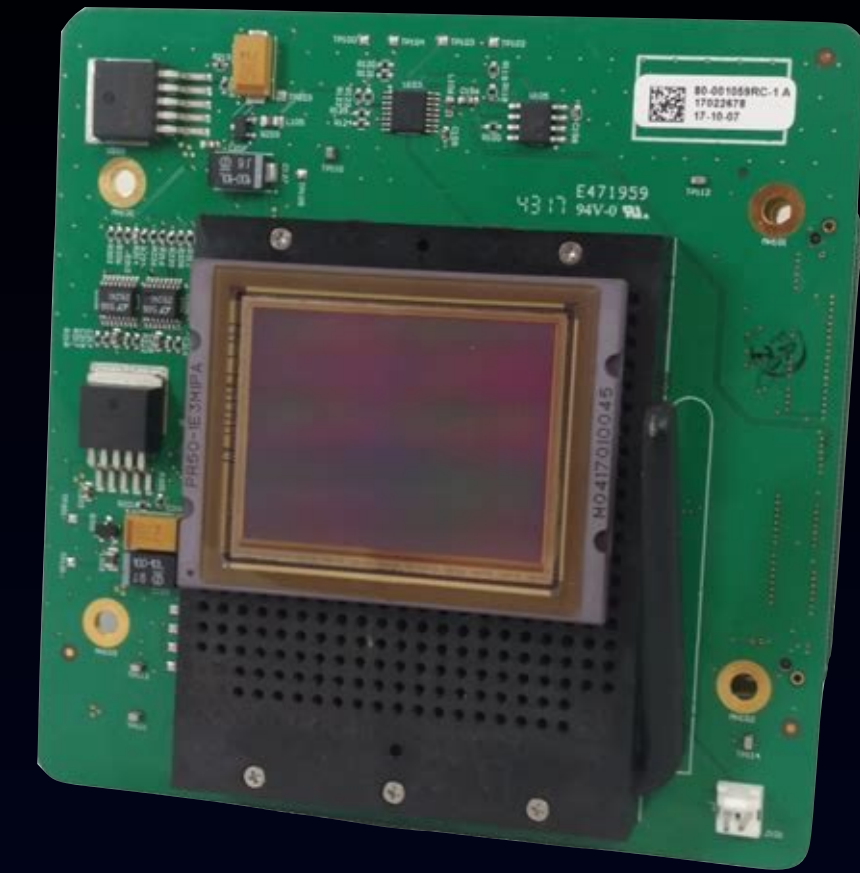
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- Electronics Engineer - work with image sensors



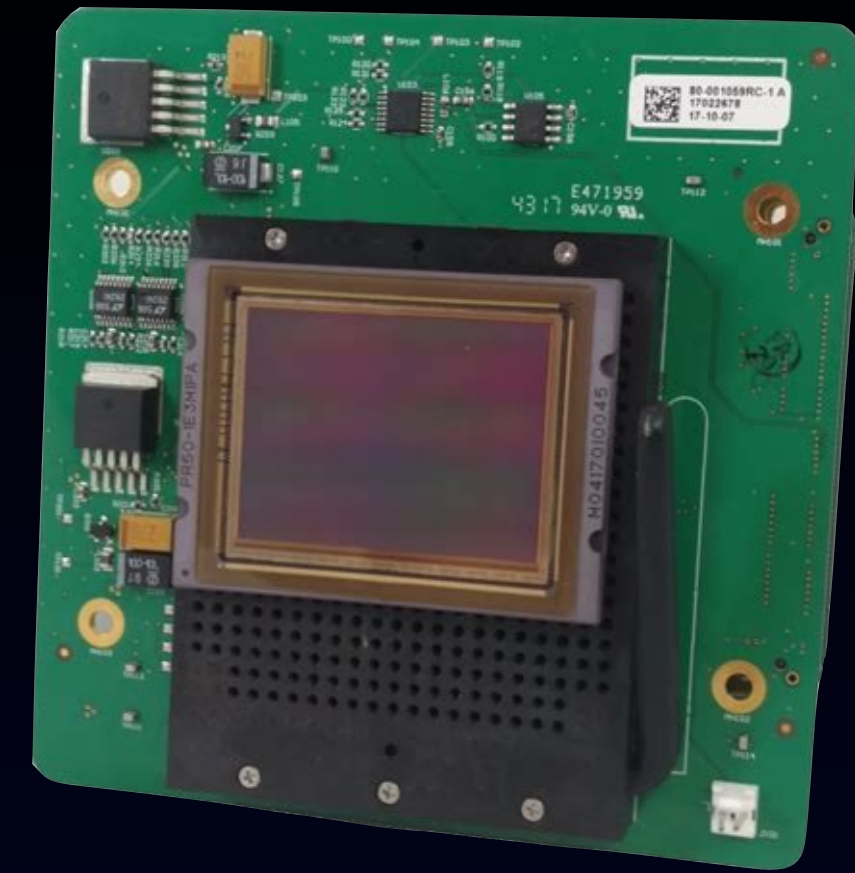
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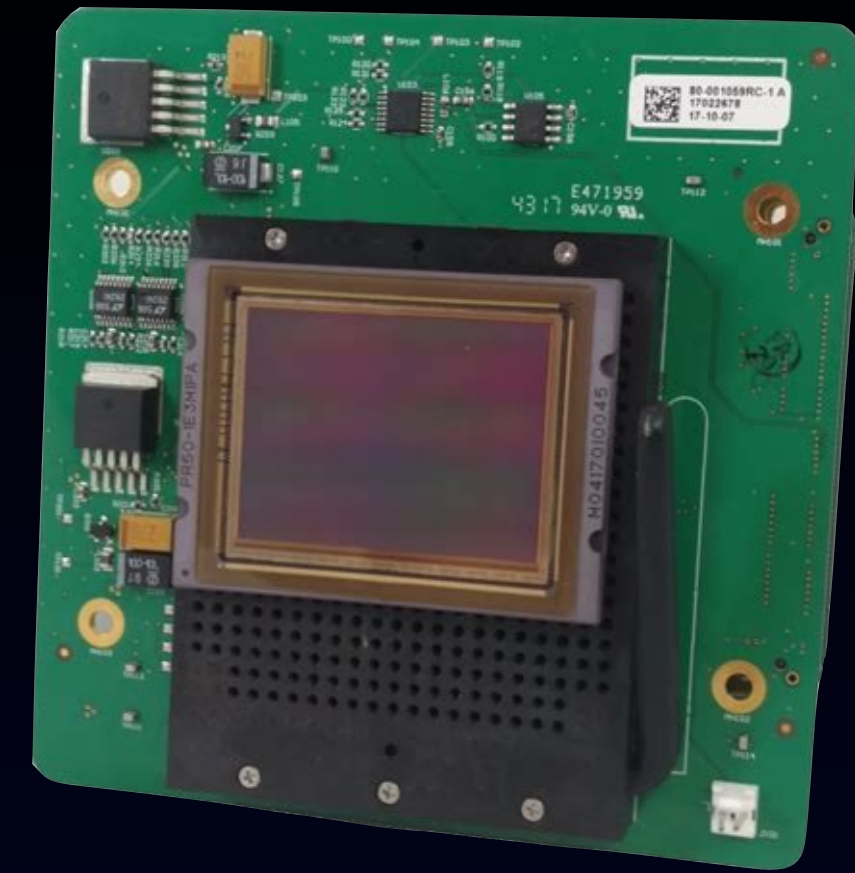
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- For now - I use what I have...an inexpensive DSLR camera (Digital Single-Lens Reflex) = moving mirror flips out of the way



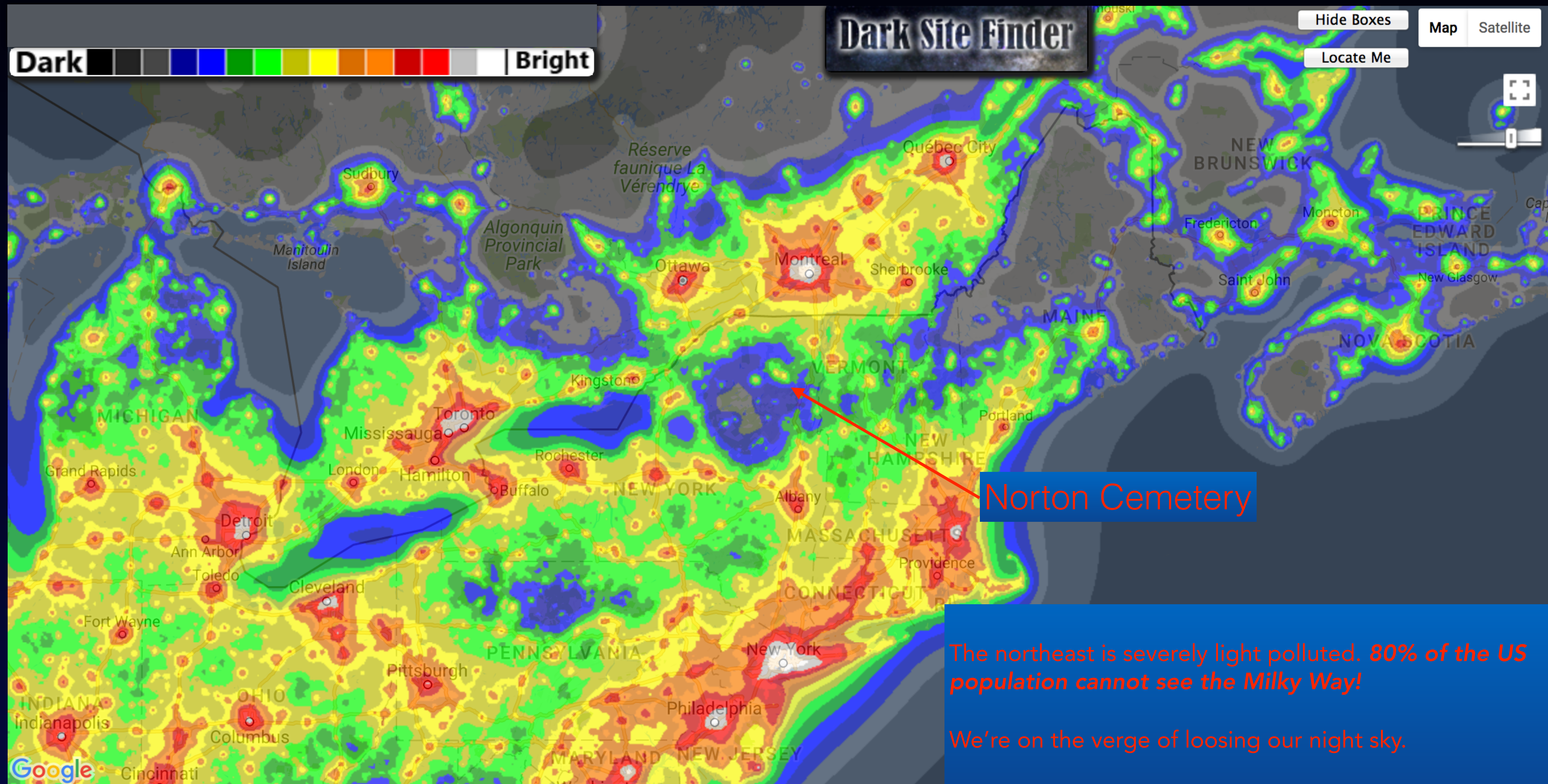
NASA - Cities at Night



Norton Cemetery

A satellite image of the Earth at night, showing city lights across the continents. A red arrow points from a blue rectangular label 'Norton Cemetery' to a specific location in New York City, USA.

Northeastern US Light Pollution



Skyglow

as seen from Norton Cemetery

Keene - 1 mile

Lake Placid - 10 miles



North

East

South

West

28 mm F3.5, 60 seconds, ISO 800

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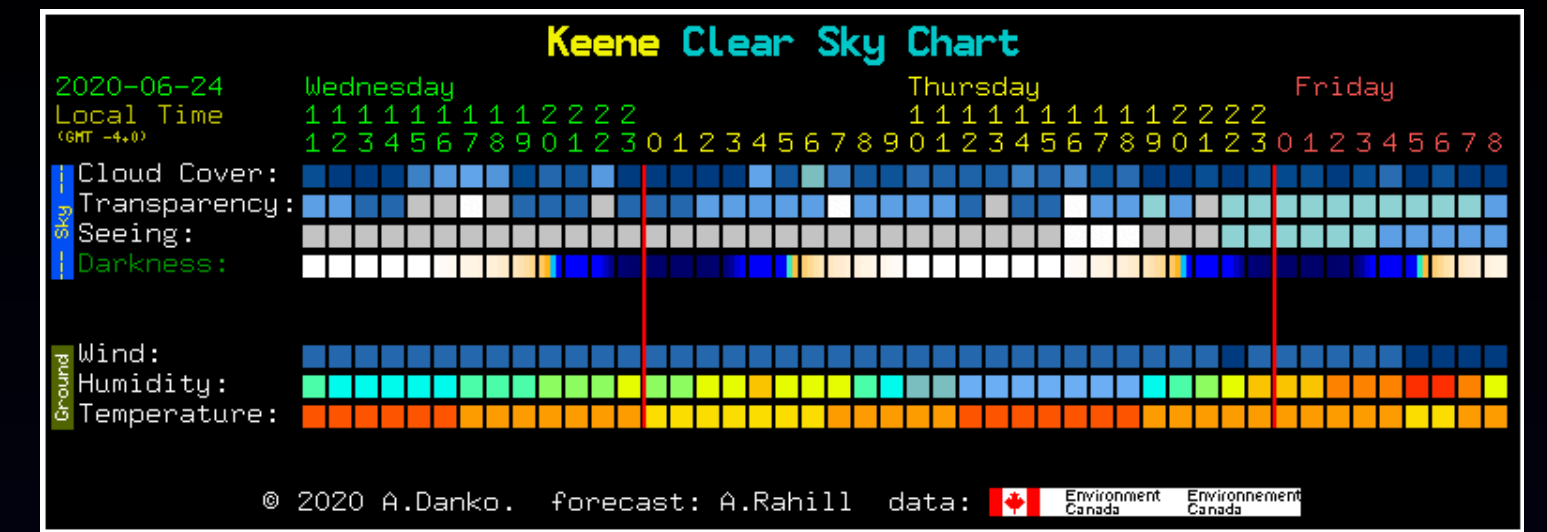
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- Just me, the telescope, the night sky, and...
- Coyotes and owls - but I get lonely! Join me!

The Night Sky

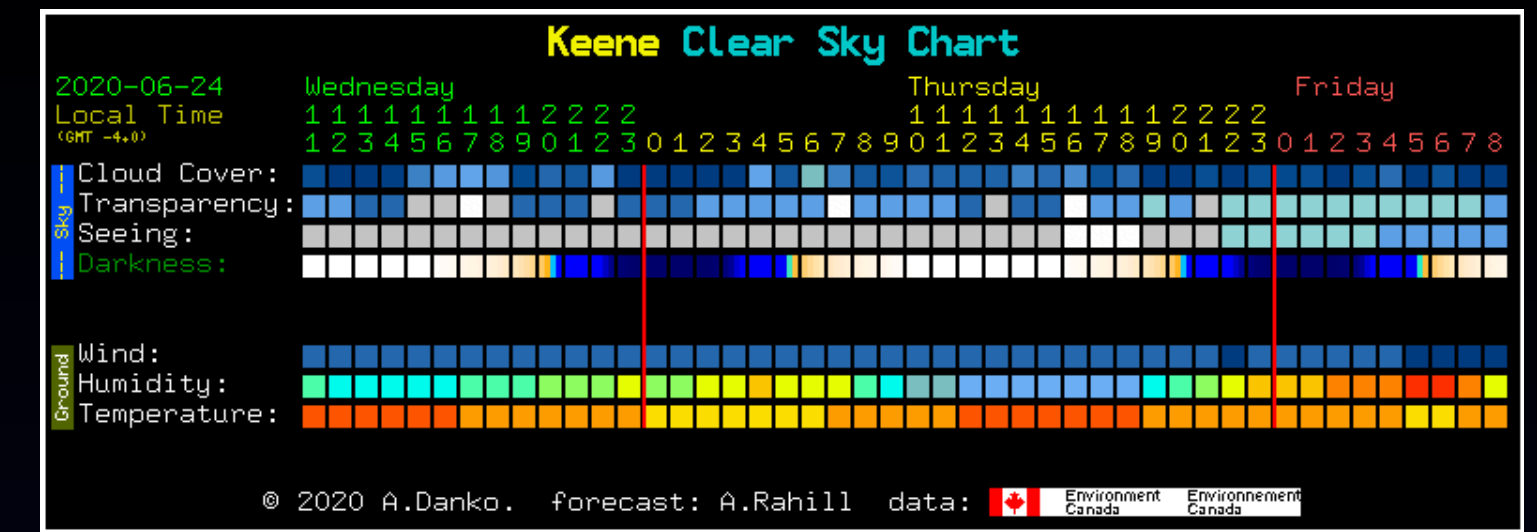
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<http://www.cleardarksky.com/c/KeeneNYkey.html>

- Lunar cycle, natural glow, starlight, Zodiacal light (interplanetary dust)

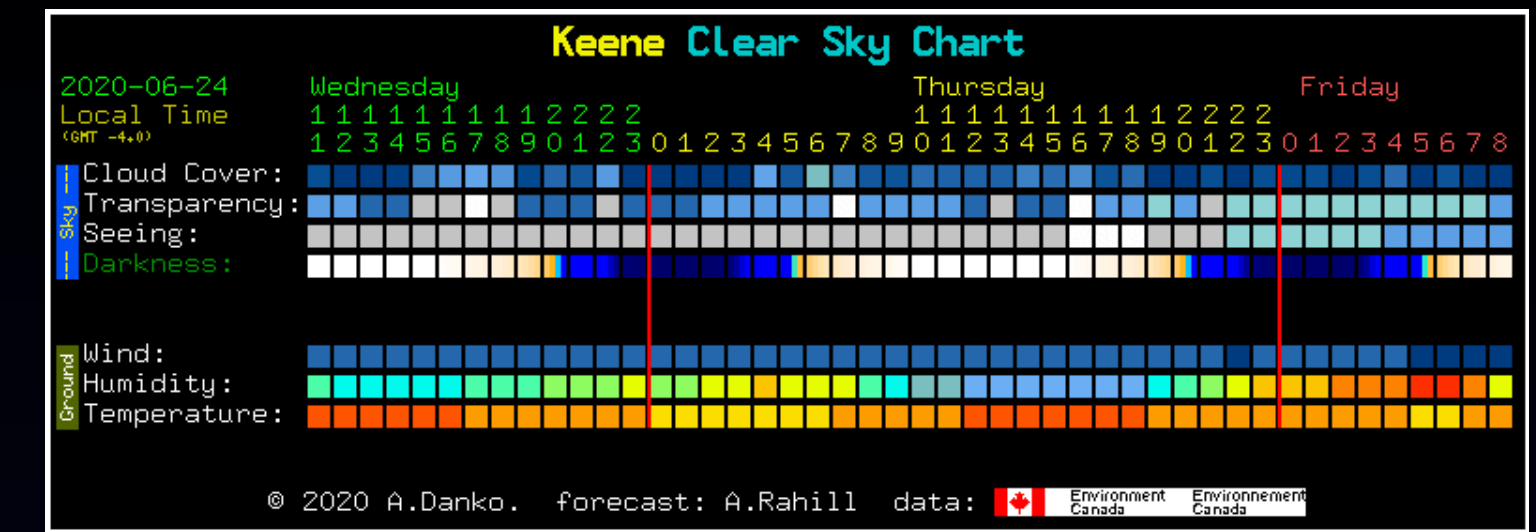
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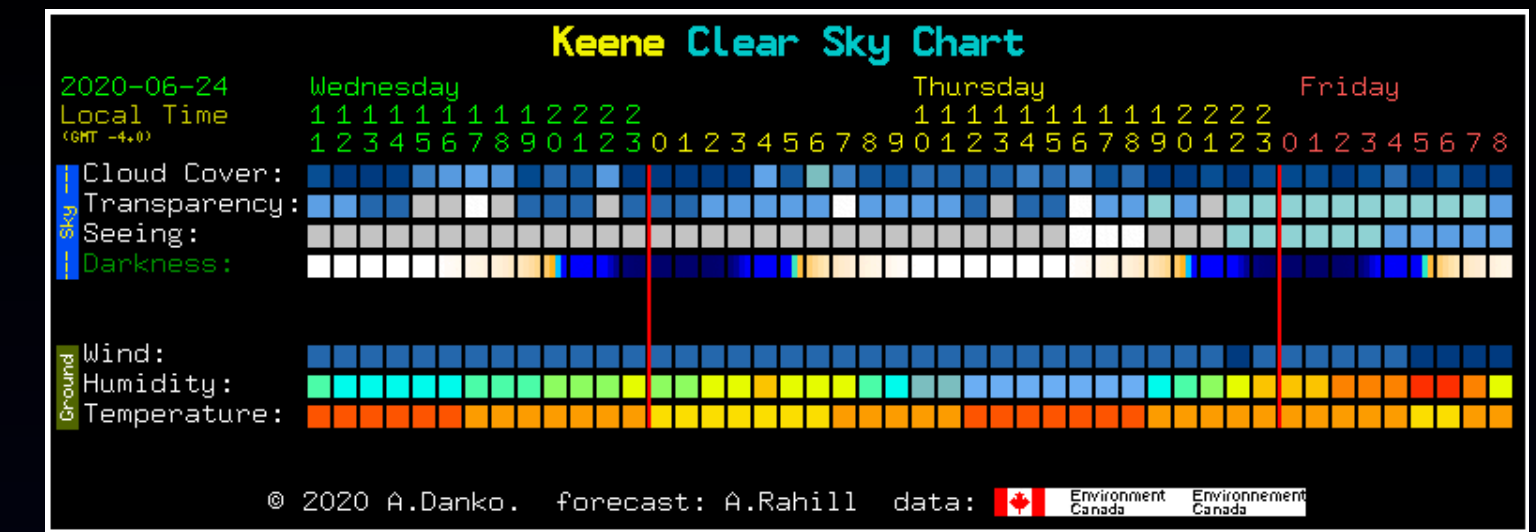
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- Light Pollution streetlights, lighting, commercialization of space

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- “Deep sky objects” (assuming night-adapted vision)
 - Orion Nebula, Pleiades
 - The Andromeda galaxy

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- Galaxies - Andromeda, Bodes

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- Photography without a telescope is also rewarding (Milky Way)

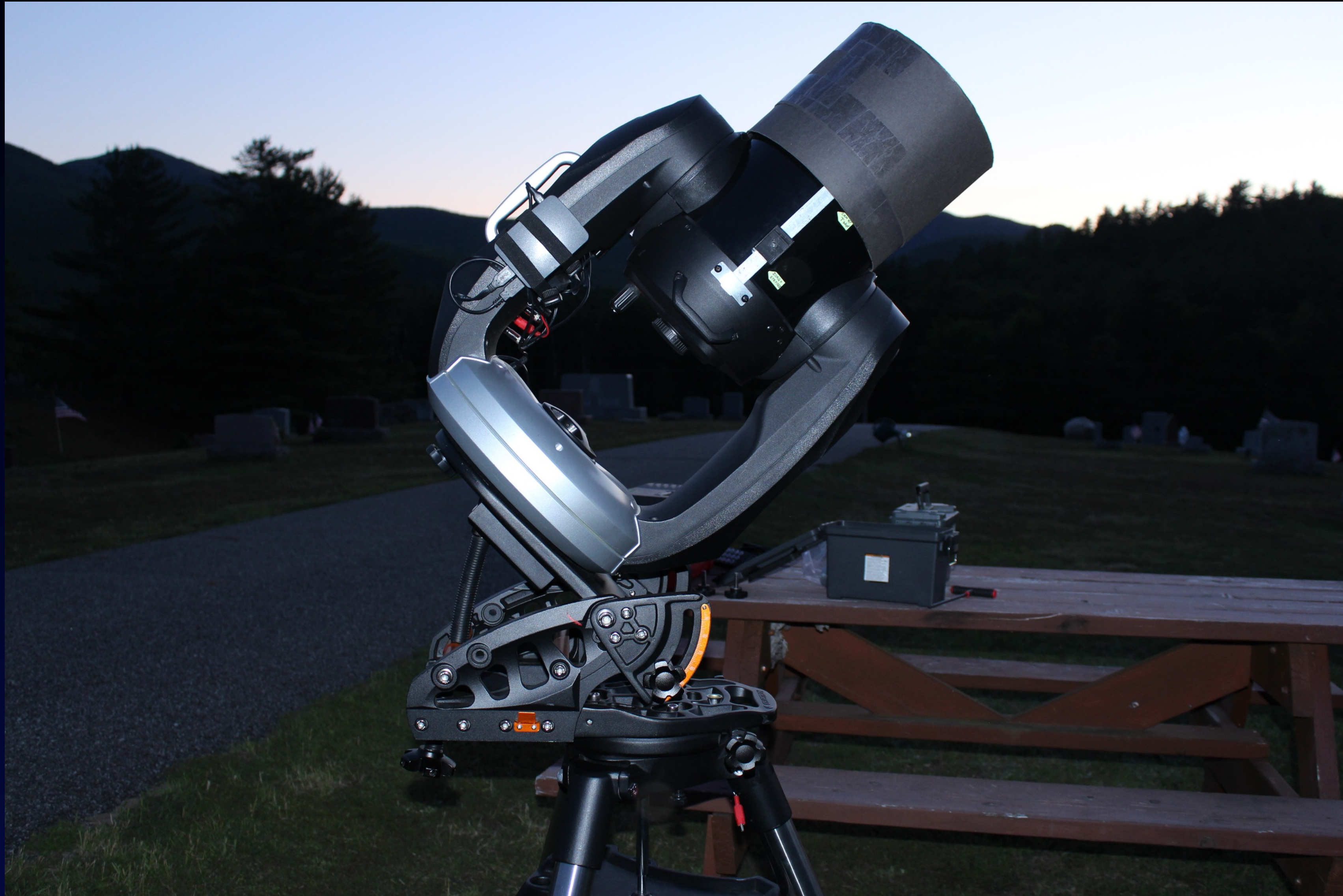
CPC-800 Telescope



CPC-800 Telescope



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CPC-800 Telescope



Auto-guider Web Interface



A deep space photograph showing a vast field of stars against a black background. The stars vary in brightness and color, with some appearing as distinct points of light and others as faint, diffuse clouds. The word "Photos" is overlaid in the center in a bold, red, sans-serif font.

Photos



Moon/Venus Conjunction May 17, 2018
(1/13th Second exposure - Canon 40D, EF 18-55mm - David Craig)



Moon/Venus Conjunction July 15, 2018
(1/13th Second exposure - Canon 40D, EF 18-55mm - David Craig)



A high-contrast photograph of a crescent moon. The moon is positioned on the right side of the frame, with its illuminated edge facing right. The surface of the moon is covered in numerous craters of various sizes, which are more visible on the lit portion. The background is a solid, deep black, making the bright, yellowish-white crescent stand out prominently. The overall composition is minimalist and focuses on the celestial body's shape and texture.

The Moon





Jupiter with imperfect "seeing"
(30 fps second exposure CPC800, Canon T5i - David Craig)



Jupiter
(1/20th second exposure CPC800, Canon 40D - David Craig)




Saturn

(1863.IMG. 1/20th second exposure CPC800, Canon 40D - David Craig)



neophyteAstronomer.org

Comet C/2019 Y4 (Atlas) - March 27, 2020
(Thirty, five-minute exposures CPC800, Canon T5i - David Craig)



Alberio - double star
(400 *light-years* distant — *David Craig*)



Dumbbell Nebula (M27) - 1,227 Light Years in Vulpecula
(Five Minute exposure CPC800, Canon T5i - David Craig)



Owl Nebula (M97) - 2,030 Light Years in Ursa Major
(11, Ten Minute exposures CPC800, Canon T5i - David Craig)



Great Ring Nebula (M57) - 2,567 Light Years in Lyra
(Four-minute exposure, CPC800, Canon 40D - David Craig)



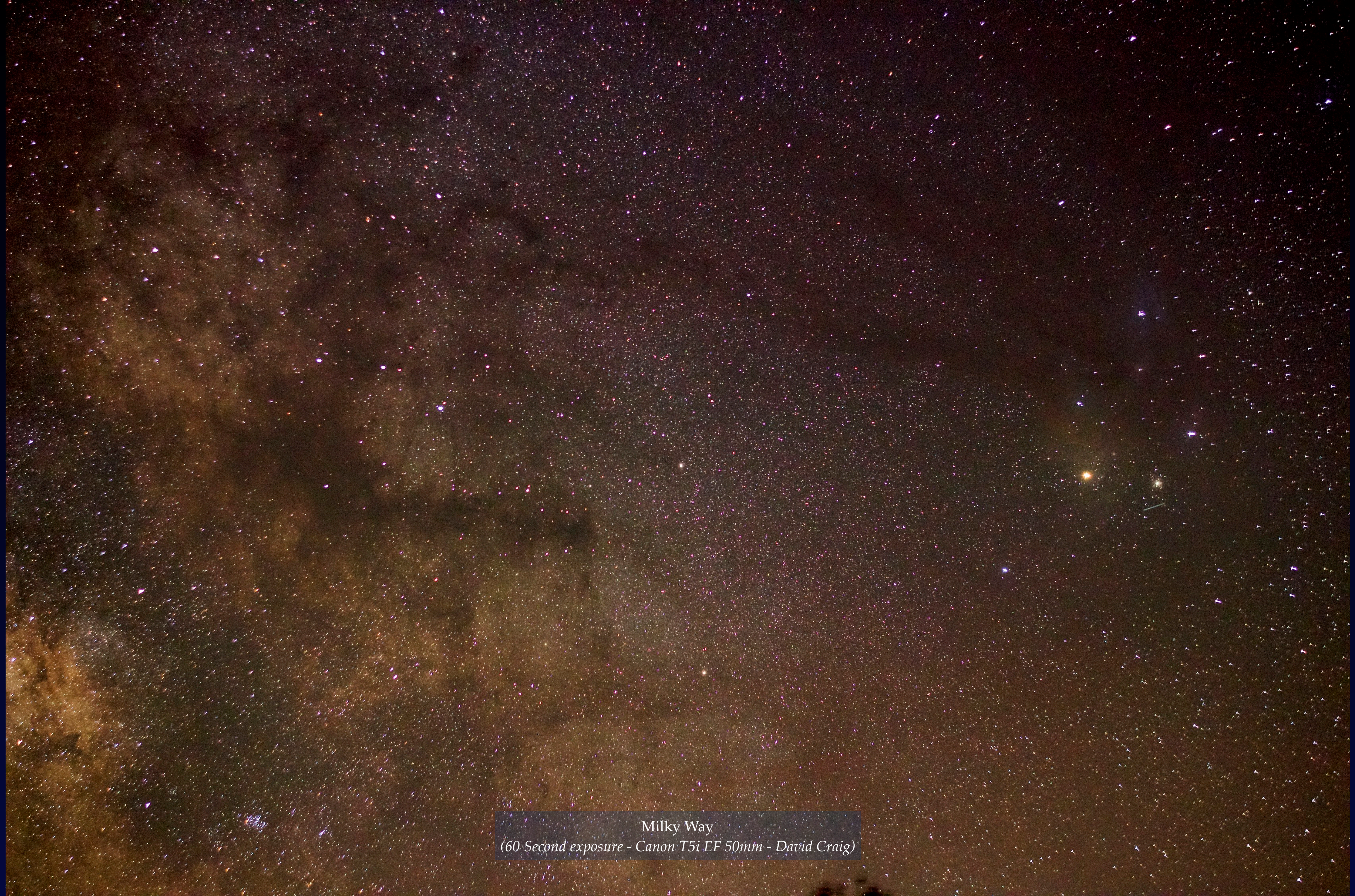
Aircraft

Small Sagittarius Star Cloud

Triffid Nebula

Lagoon Nebula

Sagittarius Wide-Field through Canon "Nifty Fifty" lens
(Five-Minute exposure 50mm lens - Canon T5i - David Craig)



Milky Way
(60 Second exposure - Canon T5i EF 50mm - David Craig)



Lagoon Nebula (M8) - 4,100 Light Years in Sagittarius
(Three, Five-Minute exposures CPC800, Canon T5i - David Craig)



Wild Duck Cluster (M11) - 6,120 Light Years in Scutum
(One Minute exposure CPC800, Canon T5i - David Craig)



Andromeda Galaxy (M31 and M110) - 2.5 Million Light Years
(Five-minute exposure, 50mm lens - Canon T5i - David Craig)



Bodes Galaxy, Cigar Galaxy (M81 and M82) - 12 Million Light Years, 90,000 Light Years Diameter
(Five-minute exposure, CPC800 & F6.3 focal reducer, Canon T5i - David Craig)



Whirlpool Galaxy (M51) - 23 Million Light Years in Canes Venatici
(A Five Minute exposure @ 800 ISO - Canon T5i - David Craig)



Galaxies M106 and others - May 24, 2020
(Ten-minute exposures CPC800, Canon T5i - David Craig)



Galaxies M106 and others - May 24, 2020
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Location of M106

<http://stellarium.org/>



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