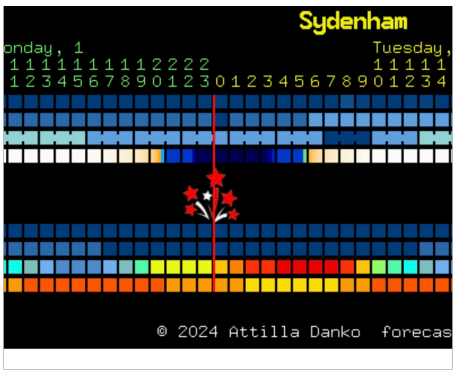
July 2024

Skyletter

RASC Kingston Centre

Monday, July 1

Malcolm (11:53): Ready Steve?



Stephen (14:28): I'm all ready. My target list is set. It should be a good night!
MarK (22:22): I turn on the camera and the first thing that goes by is a bunch of Starlink satellites.
Stephen (22:33): I'm all set up and imaging. No Satellites so far.
Malcolm (23:04): Completely by coincidence—I'm shooting the Fireworks Galaxy (NGC 6946) tonight.
MarK (00:10): That is where I am now imaging!
MarK (00:32): Well, I was. Turns out it goes right behind our Internet antenna shortly after I get it centred and ready to image!
Susan (01:49): Have a good night everyone. I am slewing to the Pillow Nebula.
Kevin (08:21): Good to hear the lot of you out and about. Me...I am <raging at the weather>. I was up at 04:00 on Monday to try another imaging run and the overcast was complete.

Today however is back to work so there is no more imaging past 9 p.m. and nothing earlier than 5 a.m. which if you look outside at those times...are still pretty freakin' bright!
Rose–Marie: We're past the solstice, so we are losing the "bright," albeit slowly.

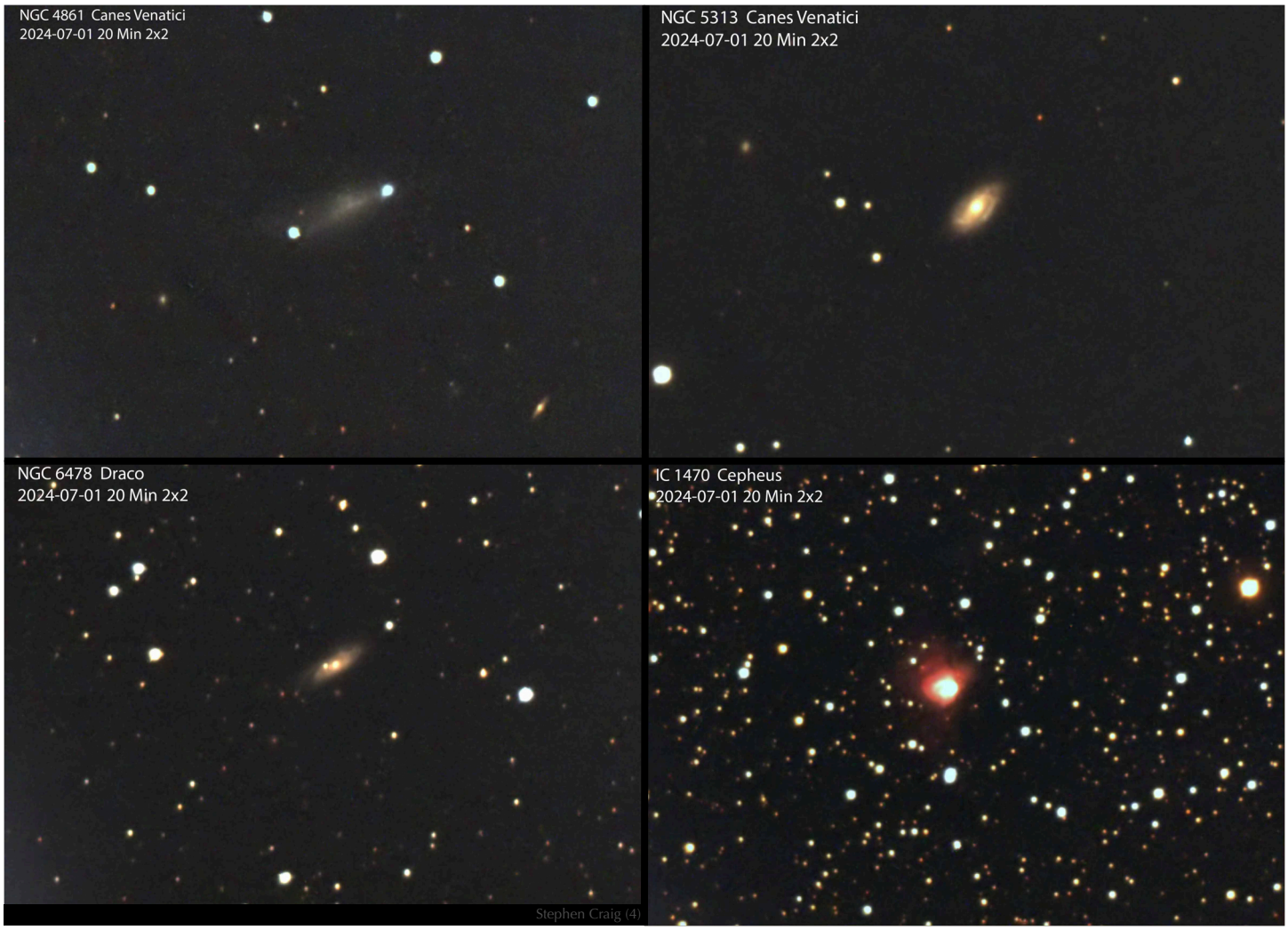
I was working outdoors yesterday and up and down that darned hill about 11 times, so by the time we were past "bright" I barely had enough energy to turn on the moth lights. I was cursing my exhaustion when I walked Kerrie before bed and saw how nice the sky was.

And, as is usual, there's supposed to be auroras tomorrow night just as we come back into the rain. The only sparklies I'm seeing these days are the fireflies.
Malcolm: The fireflies have been stupendous though!
Brian M: That's wonderful if there are lots of fireflies. I'd read that the firefly population has been dropping and I haven't noticed many fireflies in our backyard, which backs on to a woods. We used to see a lot of fireflies but I haven't noticed that many lately.
Susan: We have noticed an uptick in firefly activities as well. I even spotted one resting on the rosebush in the afternoon.

I am not that far from you Brian. Last year there were not as many here in Amherstview.
Susan: Rose-Marie, you need to have your scope set up outside permanently and a good observing chair.
Rose–Marie: Yes I do. I'm wanting to build some kind of box on wheels to house the telescope and just move it across the patio as needed. Since I rarely ever get clear skies anymore the motivation has diminished.

Mon/Tue July 1/2

Stephen: I had a pretty good night last night. The air was crisp and clear all night with no Moon. I wasted some time trying to acquire some targets that were too faint. But I still managed to get five good images.
MarK: I did try doing 20 minutes on C/2021 S3 (PANSTARRS), but I have not yet figured out how to properly stack and process static



images, I have yet to try the process of stacking a comet. It was about magnitude 11 or so.

Sat/Sun, July 6/7

John: Peggy and I got some great news yesterday for our 27th wedding anniversary: our new Observatory will be ready for pickup any time after next Tuesday. One problem has cropped up though, the trailer I was going to use is not fit for the road right now. Does anyone know of a 7 or 8 foot wide by 12 foot long trailer that we could borrow for a couple of days?

MarK: That is a very large and unusual trailer. Are you sure you need one that wide? The dome does come in pieces.

U–Haul has very reasonable rates for one–day rentals with the same return site. Check them out. I rented from them a couple of weeks ago rather than hauling our trailer all the way to Guelph to do a short haul. The number of klicks on the trailer does not matter, just the length of time of the rental.

Stephen (22:04): The last patch of cloud is evaporating and moving off. It should be clear by 11. It will be a good night!

Rose–Marie: 'Twas clear but hazy here, not good viewing. I was out checking the moths at 2:00 a.m. and could hardly see the stars.

Sun/Mon, July 7/8

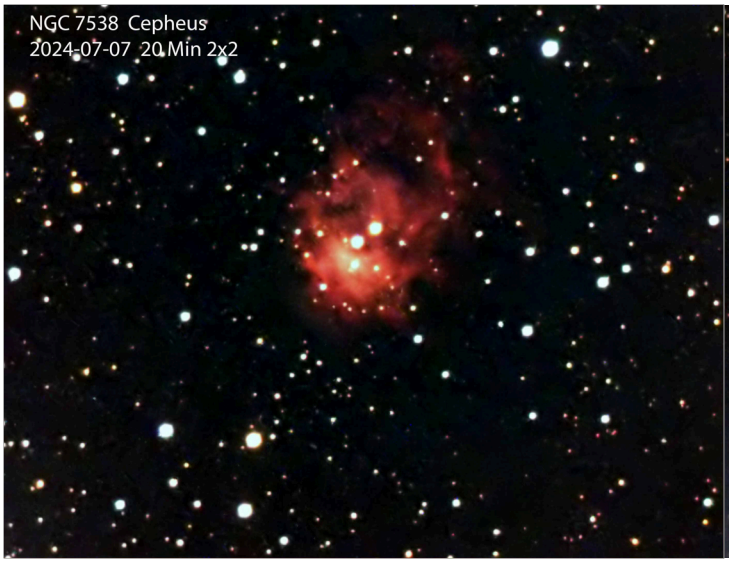
Cathy (16:04): Spaceweather for Sunday, July 7 has an amazing photo of Comet Olbers doing a corkscrew.

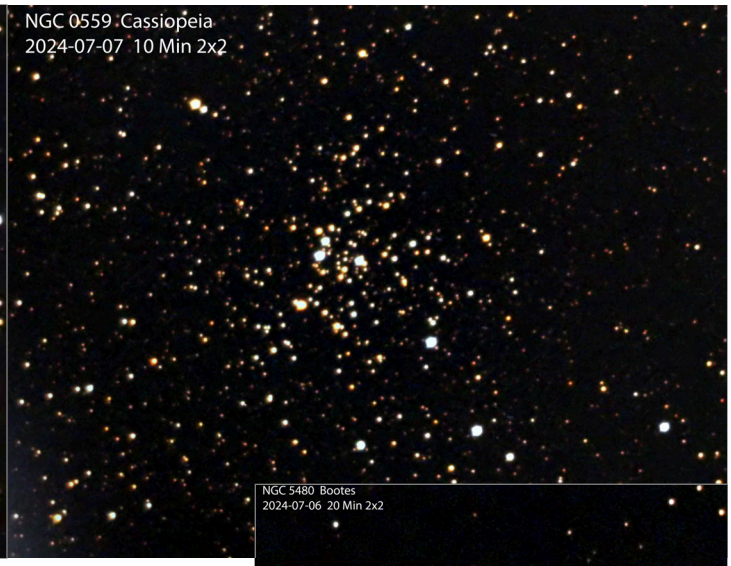
Susan (17:34): Thanks Cathy, I'm not sure my horizon will work but I may try that.

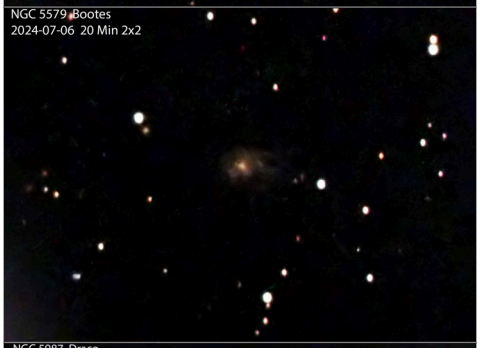
Susan (10:05): Had a look last night. Lots of haze and trees, but saw a fuzzy ball.

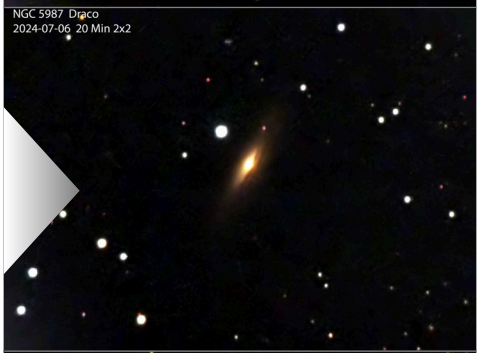
MarK (10:41): It is close to our roof, so I did a quick run of 20 images at 20 seconds. The last couple of shots were half blocked by the roof. Something had knocked the focus and it is not sharp. Boo hiss.

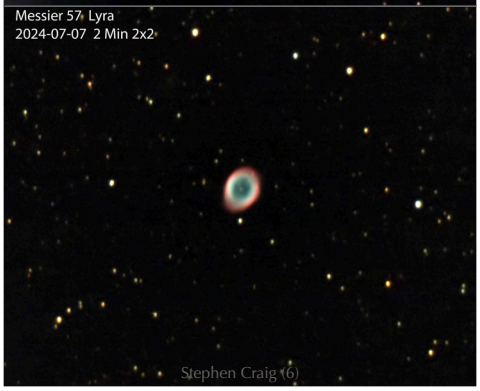
Kim (12:58): Good for you, I am planning on going out tonight (the Clear Sky Chart said it would be clear, but looking at the skies now I have my doubts), even though I was out at 3:45 a.m. this morning, testing the SeeStar after an upgrade, worked great. There had been some grumblings on the SeeStar list of issues. I did see a











string of separated Starlinks. Saturn, Mars, and Jupiter were very nice as well.

At 9:07 p.m. last night I did see the thin crescent Moon, and cloud on the horizon; Mercury would have been behind the trees for us.

Kevin: This is the best of 5 runs of Saturn taken on Monday morning (July 8). Up and outside at 04:00 EDT was an experience!

This was the best 10% of 9300 frames at 19ms each. Saturn was only 38° off the horizon and there was intermittent wispy high cloud going by as well.

I've changed my process of imaging from focusing and then doing a bunch of runs, to focusing, doing a run, then focusing again—over and over. You know about lucky imaging, this is the concept of lucky focusing. And it did work. All 5 runs I focused to the best of my ability and three of the results were bad!

Monday, July 8

Stephen: Saturday and Sunday nights were good nights. I'm having trouble with my telescope mount not tracking right when it's west of the meridian. It works fine east of the meridian so I suspect it's a balance problem. I'll get that checked out tonight. Even with the problem I got six good images. So I'll classify it as a successful weekend.

Susan: Nice collection Steve. I was not out Saturday but had a good night Sunday.

At one point I lost my WiFi. It has never happened before and I could not reconnect with the scope. I recall Mark D saying it can be a

problem in a more densely populated area.

So I thought I would just do some old–fashioned star hopping. I had pretty much ruled out the possibility of enjoying this with an EQ mount. But you know, it was great fun. It would have been easier with less haze, to allow me to see fainter stars naked eye.

My brain gave out just after 1 a.m.

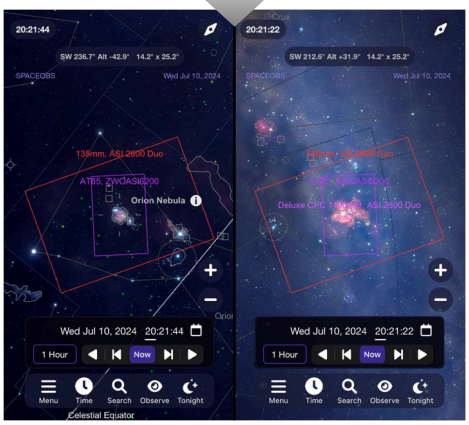
Mon/Tue, July 8/9

Stephen (23:41): I think I've solved my tracking problem. I re-balanced the mount this afternoon and exercised the RA drive by slewing back and forth between extreme east and west a few times. So far everything seems to be working well.

Stephen: Last night was pretty good. By 1 AM there was a lot of cirrus cloud and the sky transparency was deteriorating, so I quit early. But I managed to get four good galaxy images. Yesterday afternoon I spent some time balancing and adjusting the telescope mount. That worked well. No more tracking problems.

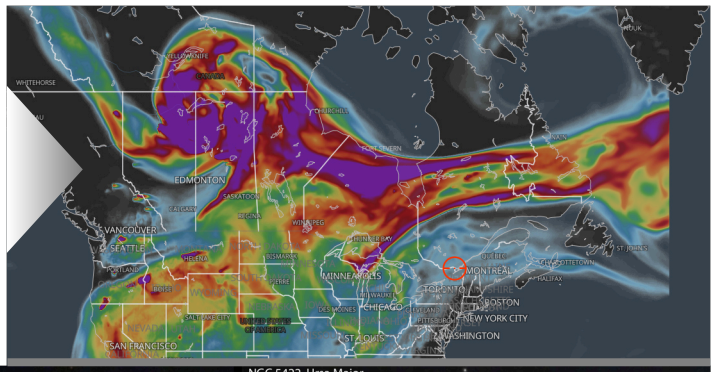
Wednesday, July 10

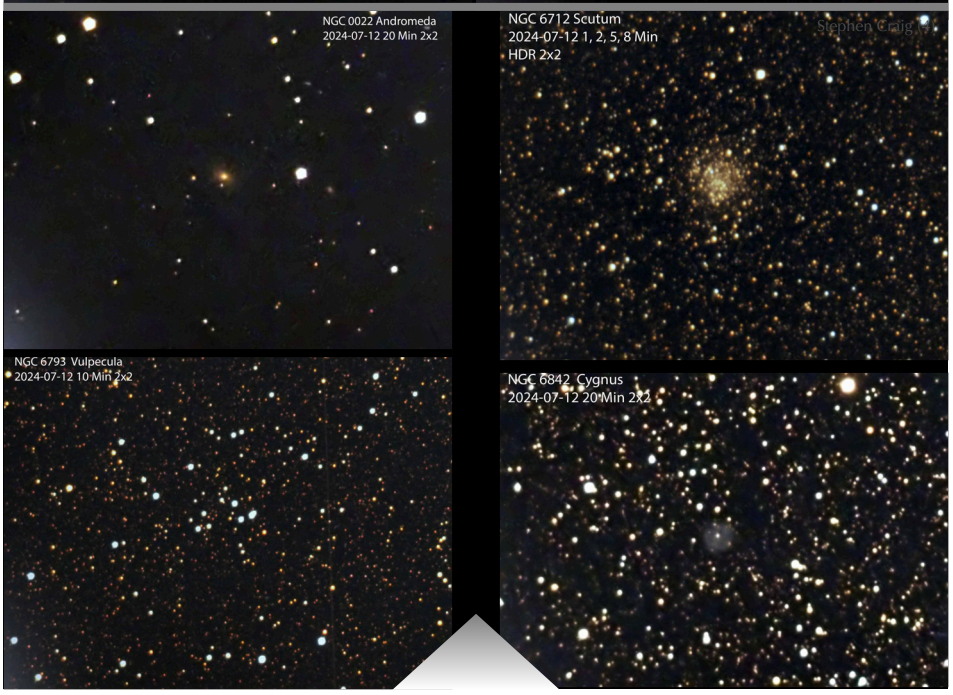
Malcolm: I heard it mentioned that the Eta Carina Nebula is bigger than the Great Orion Nebula. Here is how they compare in the same FOV.



Friday, July 12

Malcolm (18:51): Smoke anyone? This kind of snuck up on us.





Fri/Sat, July 12/13

Stephen: It was a so–so night. The sky transparency wasn't good. I was trying to get some faint targets. It didn't always work out. The clouds managed to hold off until 2:15, then I quit. I got four images,

so it wasn't too bad.
Susan: Nice show of what an old teacher of mine used to call *sticktoitiveness*.

Saturday, July 13

John: The new Observatory (POD-S) has arrived and we are starting to put it together today. This may take a few days due to the weather—it may rain today—and how many breaks Peggy and I take due to the heat.

Sat/Sun, July 13/14
Spica Occultation

Stephen (20:02): Well the clouds have evaporated nicely. Transparency is dubious. I think we have some forest fire smoke. The Clear Sky Chart says that will pass. I'll have to see. I wanted to catch the Spica occultation. The Moon is moving behind the trees now. I'm not sure if it will be clear of them in time. In any regard I have a long target list to work through.
MarK (20:36): Sadly, this is what I am realizing. The Moon will be behind the Trembling Aspen by 23:15 so I will not be able to video the event from the Observatory. I thought it happened at 21:15. My bad.
MarK (23:01): Well, I managed to get the old SP mount up and running and tracking. I was even able to jury rig the WO66 on top of it with room for the 7D.

What is the exact time of the event for our location?
Malcolm (23:33): I don't know but the Moon looks like it has been dunked in a mud bath.
MarK (23:37): Well I can answer that, about two seconds after 03:17 UT. My shortwave radio is dual power and I had it outside on batteries. The darn thing has a power saver, fortunately, it turned off at about 03:17:05 UT.
Walter (23:58): I saw Spica disappear, right on schedule from Oshawa. The murky air made the Moon rather orange, and only Vega was easily visible (I could barely make out Deneb & Altair). Good thing Spica was right next to the Moon or I would never have found it. I had to set up the scope on the wet part of the lawn (right where I'd been running the sprinkler) in order to avoid a big tree to the west. At least my C8 is easily portable.

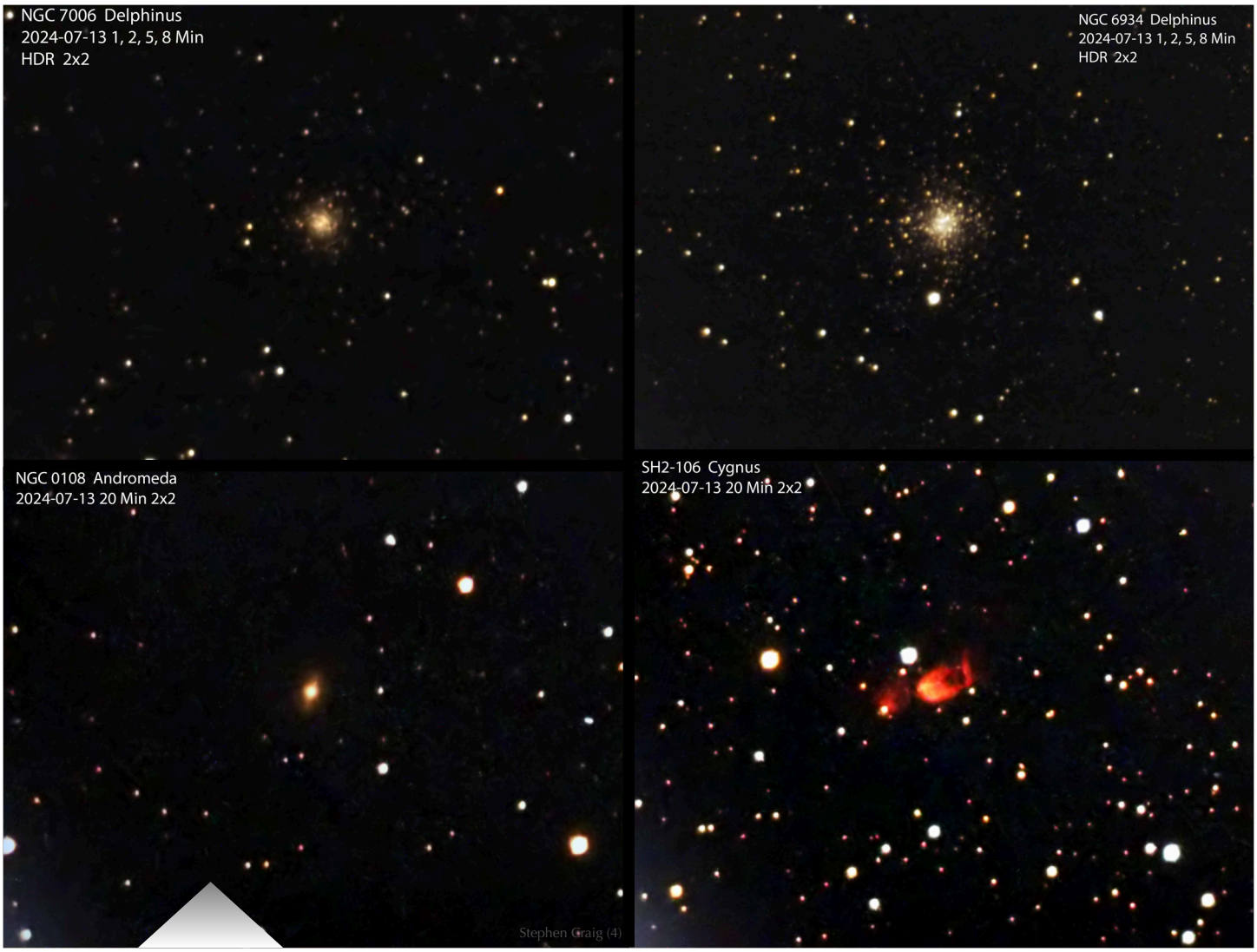
It was a good test of the new lens in my right eye—no astigmatism any more! (So it was worth the extra $100.) Now I can see that my left eye is less than optimal but I'm getting that fixed on July 30th. Then both my eyes should be nicely panchromatic again...

Wil Tirion

Wil Tirion (1943 February 19 – 2024 July 5) was a Dutch uranographer (celestial cartographer). His most famous work, *Sky Atlas 2000.0*, is renowned by astronomers for its accuracy and beauty. The second edition of his most complete work, *Uranometria 2000.0*, was published in 2001 by Willmann-Bell. He was also responsible for the sky charts found in many other publications. He was originally a graphic designer. The minor planet (asteroid) 4648 Tirion is named after him. Tirion died on 5 July 2024, at the age of 81. —*Wikipedia*

Scary night with the Americans coming within a fraction of an inch of civil war and with a bunch of police cars and helicopter right here within a couple blocks of me due to a double fatal shooting. I'm not sure if I should get out of bed tomorrow...
MarK (14:57): The video turned out much better than I expected. What I need to know is how to interpret the time signals. I have tried searching for that information and have come up empty. Spica disappears while the announcer is calling 03:17 UT. It sounds like the first beep after he says that is longer than the rest. Is that beep 03:17? If so, then the occultation happened a short time before 03:17 between second 58 and 59.

At the 30–second point (?) there are 10 beeps that sound like a modem chirping. What are they?
MarK (17:15): I found a comprehensive explanation on Wikipedia by searching for "CHU 3330." A lot of information is packed into each minute.
Susan: When do we see the video?



Stephen: Another OK night. It was clear all night though the sky transparency wasn't good. There was forest fire smoke to deal with. I have five images. Not a bad collection. [5th image on p.9]

THE BEST LAID PLANS

All that we can say about the lunar eclipse of September 25–26 is that we were better prepared for it than ever before but all our plans were of no avail because of the smokey haze from the forest fires that had settled over the city...

ONCE IN A BLUE SUN

People who were detailed to observe colour changes during the eclipse of the Moon would have been better advised to keep an eye on the Sun that day. That, you will remember, was the day of the great smog. The Sun, a pale anaemic disc suspended in the sky, was so unlike its usual robust self that people got confused and called it the Moon. Then, in mid–afternoon, many Montrealers were startled to see that it had acquired a decided blue–mauve tint.

Several persons told us later, in confidence, that they were relieved to learn that others had seen it too, that it wasn't just hallucinations.

—*Skyward*, October 1950

Orion/Meade out of Business?

July 12: *Sky & Telescope* is reporting that the parent company of Orion and Meade telescope manufacturers has closed its California offices and let go of all of its staff.

Is this the end for two well-known names in the astronomy world? The seismic shifts in today's world just keep coming.

Mon/Tue, July 15/16

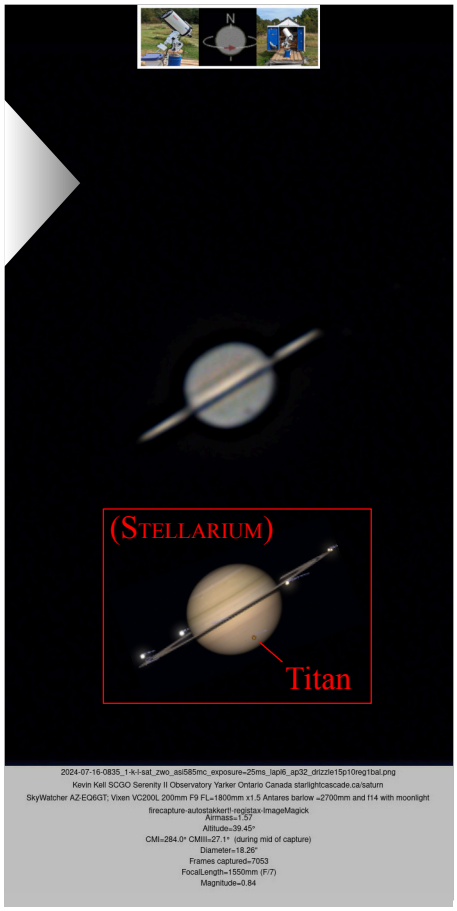
Kevin (07:32): Serendipity got us up and outside at 04:00 this morning and only then realized that it was one of the rare occasions where Titan transits Saturn (from ~02:00–06:00 EDT).

It was not forecast to be clear this morning and indeed it was not. There was quite a lot of haze (poor transparency, average seeing). I got 9 imaging runs done as the cloud rolled in along with the fog. Exposures were ~35ms in a 180 second run.

This image was the best of 10%, processed with Auto-Stakkert! v4, drizzled 1.5x and then into RegiStax for wavelet processing.

The Vixen scope continues to behave well as Saturn did in fact appear in the FOV of the primary camera after the initial slew to Saturn.

Titan appears as a dark spot near the bottom of Saturn.



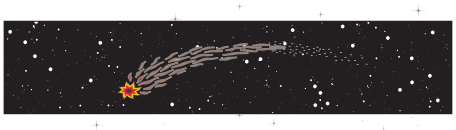
Wed/Thu, July 17/18

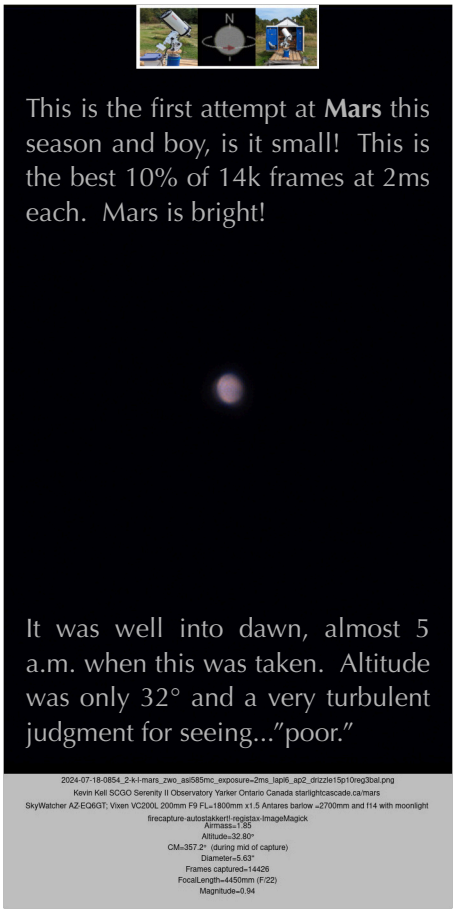
Kevin: Last evening was rather bad transparency so we packed it in, but I did in fact make it up and out at 04:00 this morning. It was a bit better. A very bright Moon, but it was very low to the horizon.

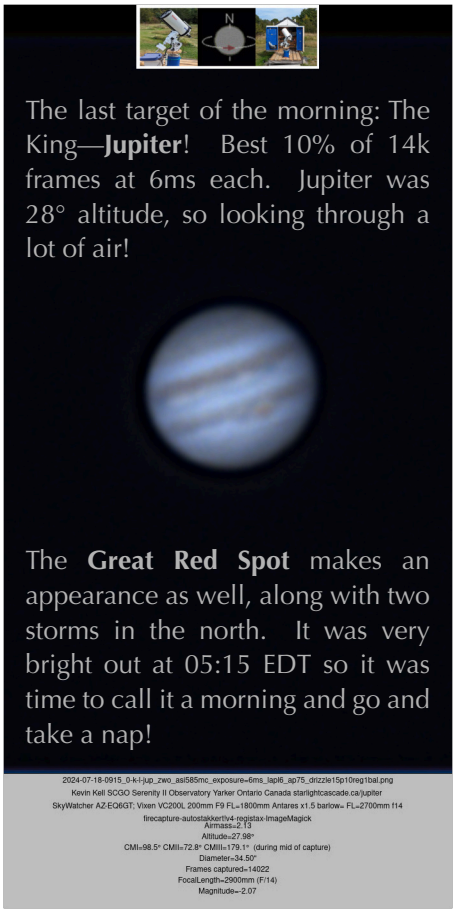
This is Saturn. It is better than some of the past efforts, but still not transiting the meridian (for highest possible altitude), though at 40° it is getting higher. This was the best 10% of 8400 frames at 21ms each.

Titan is way out of the frame. We see northern cloud bands but maybe only one in the south.

Also imaged this morning were Mars and Jupiter, both for the first time this year.







Thu/Fri, July 18/19

Kevin: We went out at 03:30 this morning...just a tad harder to do than 04:00, but it was nice and clear and a chill 9C...bonus: NO mosquitos!

Still using the tried and proven processing set of FireCapture, AutoStakkert! v4, RegiStax and ImageMagick. Will be looking at newer alternatives in the future including the dreaded WinJupObs, a program I have been trying to use for years.

After waiting at least an hour and a half after starting with Saturn, I moved over to Jupiter, still only 27° altitude. It will continuously get better all year!

Walter: Have you tried a few long exposures on Saturn? With the rings almost edge–on it is a good time to see how many satellites you can identify.

Susan: These Saturn shots are looking pretty good Kevin.

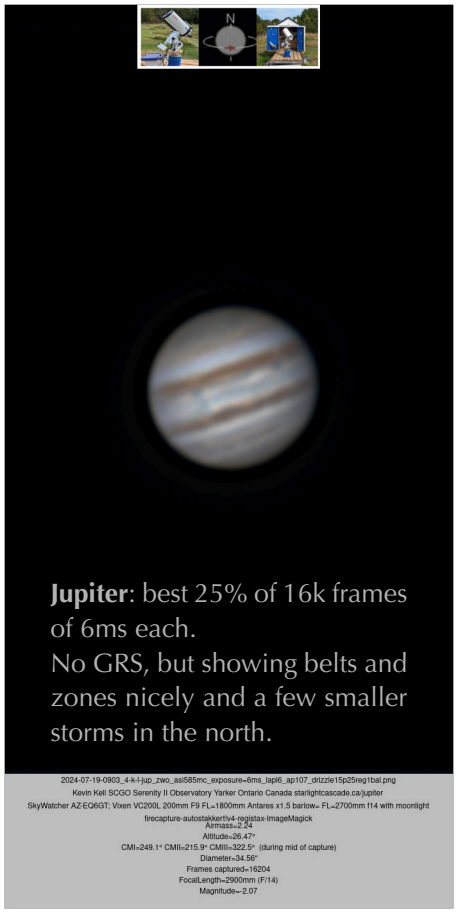
Yes I was up at 4; nice change in the weather/sky.

Walter: I dragged myself out of bed at 4 a.m. also (don't know how you guys do it). I'm pretty sure I saw four moons: Rhea, Tethys, Dione, Titan. If I hadn't been so tired, I would have dug out a higher power eyepiece and an online plot to get a few more. Still time this Saturn season, thank goodness. How many can we see?

It was a nice cool night, so no bugs and a nice break from the warm weather—I even had the house windows open. Saw Mars and Jupiter naked eye as well.

When I first got my C8 in June 1980, Saturn had no rings! I did not return the scope to the store, lol. (If Microsoft had been making telescopes they would have just told me the problem was on my end!)

MarK: Microsoft would have told you to take the scope apart and set



it up again. Then repeat until it works.

Kevin W: Also, "Is it plugged in?" was usually the first question.

I am inspired to look up tonight.

Kevin: I've done higher gain/ longer exposure shots before (last apparition?) and got moons at the cost of a completely blown out Saturn.

I think the relative brightness between Saturn and its moons do not allow for both in the same exposure.

Then I see a facebook post Kim showed me of Tim Trentadue out at the L&A Dark Sky site this morning around 3 a.m.: fantastic Saturn shot WITH the moons. So I just don't know anymore.

Then a shot by Damian Peach today as well...geeze...what does that guy have? His own orbital space telescope?!

Walter: That's right, it would have to be a composite of short and long exposures. In the olden days of film photography an occulting bar was used to block the planet to get the faint moons closer in.

Friday, July 19

Roger (23:29): Malcolm, there was a mag 7.4 earthquake Thursday evening, 45 km outside of San Pedro de Atacama. Is your telescope OK? Will you have to have a polar alignment re–done?

Malcolm (06:14): Yes. Alain sent me a note in the moment: "like your legs are moving and your body has to follow."

He said it was quite strong, but there is no damage on the property that he has found.

Fri/Sat, July 19/20

Kim: I was out tonight, hoping to get the Moon in the Dob from the observatory, but it was too low on the ecliptic to clear the walls. So I

used the 80mm and the ASI174mm to image the Moon.

I had also set up the Dob (Starbuck) and did some drift scan spectroscopy on Vega. There is a steep learning curve there.

The SS50 was set up also; I took some images of M57, M52, M81, M19. A couple of nebulas, 2 Pallas, and the area of T CrB, before the Moon interfered too much. Packed it in after midnight.

The temps were good, the mosquitoes very annoying, and a few wire tangle issues but in all a good night.

Tonight if the skies cooperate, 13P/Olbers while the Moon is low.

Susan: Nice shot Kim. Nice assortment of targets and equipment.

I was able to get at the Moon over the roof but almost didn't try when I saw it so low from inside.

I made a start on the Williamson list, a lame start, but a good experiment in organizing resources and recording. I found the seeing was such that higher magnification was not possible for challenge targets.

So far I find the Rükl substitute atlas that National provides the link for is not better than Virtual Moon, even though I did use it a bit in the past.

Kim: Thanks. I have not gone that route yet as I am trying to complete the lunar program, both the telescope and binocular. I spent 20 mins looking for a sheet for Day 6, but there does not seem to be anything to view. I need to pull all the observations into one area.

The Williamson will need more planning for sure.

Sat/Sun, July 20/21

Susan (22:05): Moon tonight: a beautiful sight, but alas, not for observation. Very little else visible.

Kim (05:51): We went out about 9:45 p.m., lots of broken cloud, neighbours having a fire and lots of backyard lighting.

The Moon was coming up behind the cloud, very orange. Astrospheric showed us in the major band of smoke. No observing was to be done. No comet, closest to Earth.

This morning a blanket of cloud, some hints of the sunrise with peach colours showing through.

Sun/Mon, July 21/2

Stephen: So, I set my alarm and got up at 3 AM to image Saturn. The seeing was terrible and cloud came over at 3:25. The cloud didn't show up on the satellite shot! I didn't get a usable image. Weather for the weekend looks good. I'll try again then.

July 19–22
New POD-S Observatory!

John (July 19): Things are coming together and no major problems so far. I have most of the dome put together, I just have to get the plates that it rolls along on later today, then Peggy and I will put the walls together, and hopefully everything comes together next week.

John (July 22): The dome is on the walls this morning, pictures to follow later today. The door is almost shoulder high—we have the taller bays, so no trouble at all.

I do have to get the pier ready and figure out how to mount the EQ8 to the pier.

John Hurley (all)

Brian M: Wow! That looks like the site of some serious stargazing. Well done!
Walter: Looks to me like there's room for a second observatory on that platform!
Malcolm: Or a BBQ...
John: There was some discussion of a her/his setup but due to reality this is what we went with for now. Now all I have to do is finish running power and networking cables into the POD-S, finish the pier and top plate and then I can start to mount a telescope. I am thinking of moving my 10–inch LX–200 on its iOptron mount with tripod into it just for now, for working with an eyepiece (not a four letter word, lol). The deck should be stable enough for that.

July 26
183 Amp Glow

Rick: A few of us were talking about amp glow in the 183 cameras. I said that I didn't remember my QHY183 having any. I just checked some 20min darks I shot with the camera at –15C and there is some amp glow, but it is extremely subtle, only barely visible at really extreme stretch. And that's in a 20min dark.
MarK: If you have a circuit with 183 amps flowing through it, you are bound to get a bit of a glow.
Kevin W: Sounds like a pretty inefficient camera, and you must have to turn off a few things in the house if you only have 200 amp service. We only have 100 amp service still, so I guess I'll never be getting that kind of camera.

Maybe put in a few resistors just before the camera to dissipate some heat?

Sat/Sun, July 27/28

Susan (08:26): Did anyone have sky last night?

I went out anticipating the clearing of smoke after midnight but at 12:15 the glow suggested that it would not really happen for me.

I did not have enough stars for alignment, so made a tricky hop to T CrB for an estimate and that was it.

Thanks Rick, for pointing out that there were new charts available; much quicker estimate.
Rose–Marie: Kerrie had to go out at 1:00 a.m. and it was HAZY. I was hoping to sit for a bit in front of my shiny new windows and watch for sporadic meteors but there may as well have been clouds. And clouds are coming, just in time for a CME headed our way.
Stephen: I was up last night and found the sky not too bad. There was smoke and cirrus cloud to start but that gradually cleared out after midnight. Even with a quarter Moon in the sky I got some good results.
Susan: Not a total surprise Steve, I saw on the smoke map that you were in for more clearing than I was closer to the lake.
Kim: I was out to look, but the transparency was not good, so I did not go out [evening].

Being out yesterday morning (which was good for Moon, but only saw Jupiter and Capella), I was out for a few hours this morning as well. It was clearer this morning than yesterday. I saw Mars, Saturn, and Jupiter and did some work on the Explore the Moon program.

(Afocal Moon image: 20 cm Dob, 24mm Hyperion eyepiece.)
Malcolm: The pod is offline. I'm back to banging my head against a wall (collimating the 11" RC). I do have the Howie Glatter laser with the holographic attachment this time, so maybe results will improve.

Susan: That shore sounds fancy cowboy!

Monday, July 29
Blue Flash Nebula (July 16)

Mark D: An attempt at a small object: NGC 6905, a planetary nebula (mag 10.9) discovered by William Herschel in 1784. This stacked image is 88 frames of 8s each.

Mark D: Also, M27 (The Dumbbell Nebula); this one is 150 frames at 8 seconds each.
Brian M: Nice images Mark! I like the colours captured.

Mon/Tue, July 29/30

Kim (09:15): Did anyone get any aurora last night? It was pretty murky out. Kp 5 after 8:30 p.m. Lots of reports of aurora, down east, mid US states.

I was out this morning, yes, observing more Moon. It was a very nice scene with the Moon, Mars, Jupiter and Aldebaran.

Still smoky haze in the sky. Astrospheric showed we were in a red narrowing band.
Rose–Marie: Looks like it was west of us and only Kp 5 so not very strong. I was out at 11:00 p.m. and at 3:30 a.m.: murky haze, no sign of aurora.
John: Took a look outside a couple of times before 23:30 and saw no sky glow so went to bed.

Wed/Thu, July 31/Aug 1

Stephen (22:52): It took a while for the scattered clouds to clear out. But finally I have clear sky. Transparency isn't great but without the Moon in the sky it is acceptable. I'm hoping that the seeing will be good. I'll be on galaxies until 4. I may try Saturn at 4. It depends on how I feel then.
Susan (22:57): It is so thick here. I am off to bed. Good luck Steve, and anyone checking aurora.
Stan (00:52): Down here in Philadelphia, PA the last few nights have been awful both to clouds and smoke. While no smell, the AQI is rising.
John (07:44): Went outside a few times to look for any aurora and did not see any. It was very humid and the air was dead calm and the seeing was not great. The stars

were just a bit fuzzy so I went off to bed by 23:30. Hope Kevin had some good luck.
Rose–Marie: I kept checking spaceweather and it didn't look promising. Kp only reached a 5.0 and the oval was to the west. A few clouds at 11:00 and hazy at 4:00 a.m. I saw a few stars to the north between clouds, but nothing through the haze in the south.

Stephen: I basically wasted my night. The transparency was too poor for faint galaxies. And the seeing was terrible. I only got one useful image. I tried Saturn. But again the seeing was poor. I'll try again tonight.
Rose–Marie: Now...if Steve says the seeing was poor you know that it was REALLY poor all around! ★

The Moon Illusion— for Domes?

A couple of pictures of the Hurleys' new POD-S observatory suggest that the Moon Illusion may also apply to domes:
On the ground the dome looks small (left), yet once it is put on top of walls (below) the dome looks much larger! This is the inverse of the Moon Illusion, where the Moon looks larger when it is low (*i.e.* near the horizon) and smaller when it is higher. ★