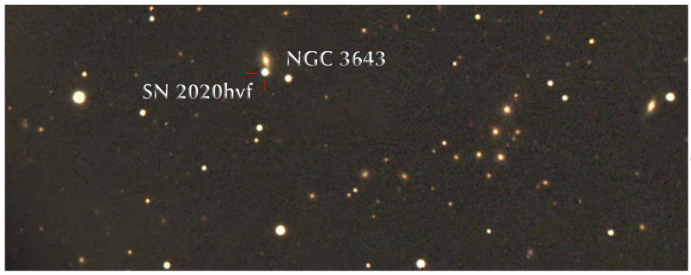
Skyletter

May 2020

RASC Kingston Centre



Stephen Craig — SN 2020hvf

Fri/Sat, May 1/2

Stephen (01:02): I was on a roll when cloud formed right over us. I had developed techniques to effectively subtract the moonlight. I'll just have to wait for the cloud to dissipate.
Hank (01:13): OK, you do that, I am going to bed!
Graeme (01:17): I too am heading to bed, I have another time-lapse going on a tripod but I did not sleep well yesterday so I'm not going to push it.
Stephen (02:53): Clear again at 02:30. I'm back on track!
Malcolm (03:40): I'm getting up to shoot Comet Swan now.

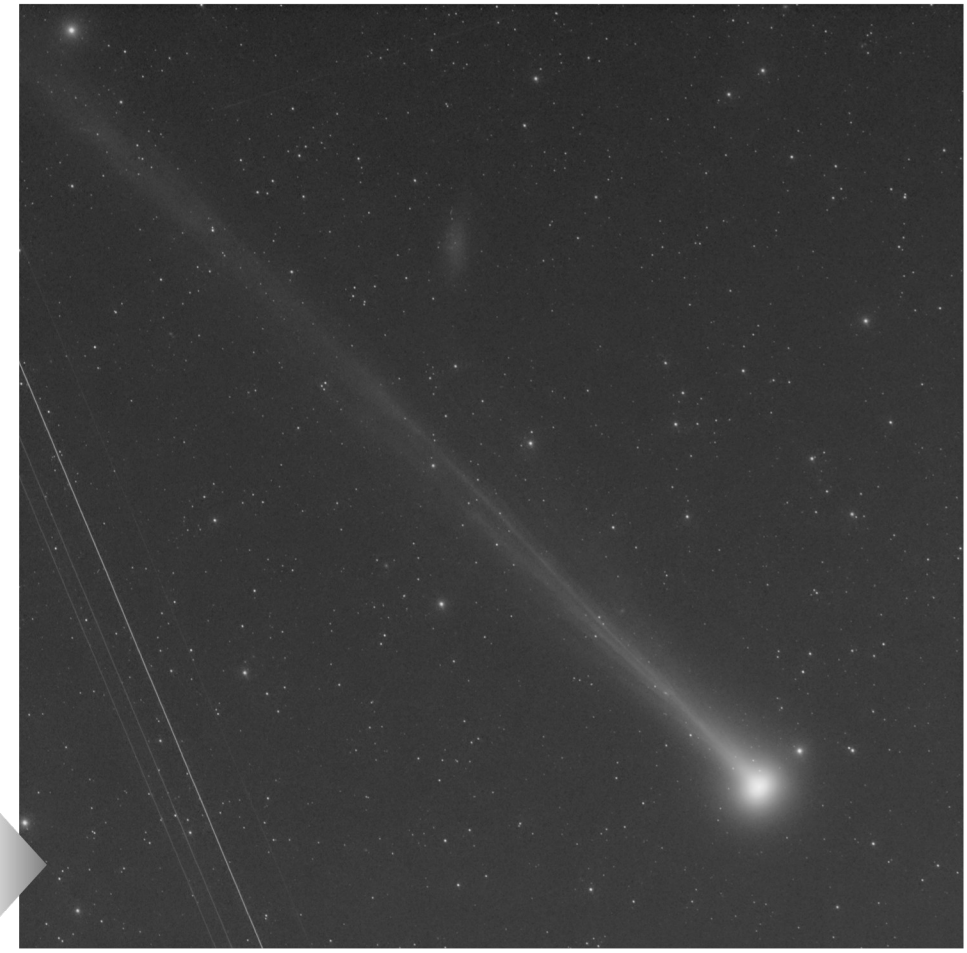
Rick: Wow, it's so nice to be able to join the elite group (*i.e.* Malcolm) of those with fantastic telescopes in distant nearly-always-clear locations. I (well, technically 'we' = the science team) got ~7 hours of photometry images from the RASC remote telescope in California. It spent the whole night on two cataclysmic variables that the Center for Backyard Astrophysics is watching. Just finished downloading the images: well over 200 plus 60 flats. Also managed to get a few hours with my own scope around the midnight cloud event.

I hope the remote telescope images of HP Lib show really interesting brightness changes, so I'll share some charts later today if I get time.
Malcolm: I have nothing but envy for your Boltwood scope. You have the best optics in the club.

I think I got my first Starlink photobomb today...

Rick: Yeah, Paul (Boltwood, hence the scope's name) designed a great scope. And the mirror is a Ceravolo AstroSitall with ~1/10 wave figure. I am so lucky—I could never have begun to afford to buy anything this nice. Part of the reason I drive so hard to use it all the time, all the time, all the time is to honour Paul's memory and his giving it to me.

I'm going to see if I can stack my dawn twilight Starstink images into a single shot. Did you hear that NASA is asking the public to get out and shoot Starlink pictures and upload them as a citizen science program? It was on *Quirks and Quarks* today.
Susan: I was an early observer doing some lunar. The Clear Sky Chart said seeing was not so hot but I found it pretty good. My last lunar obs session really gave me a headache with the on-again off-again seeing. I always start out thinking I can out-focus it, stupid I know, but it is the optimistic streak in me. Overall I had some great detail with very fine lines inside crater sides where they had slumped. At the terminator, Eratosthenes' crater rim was casting shadows onto the opposite inner wall. I find this kind of detail mesmerizing. It had some fine



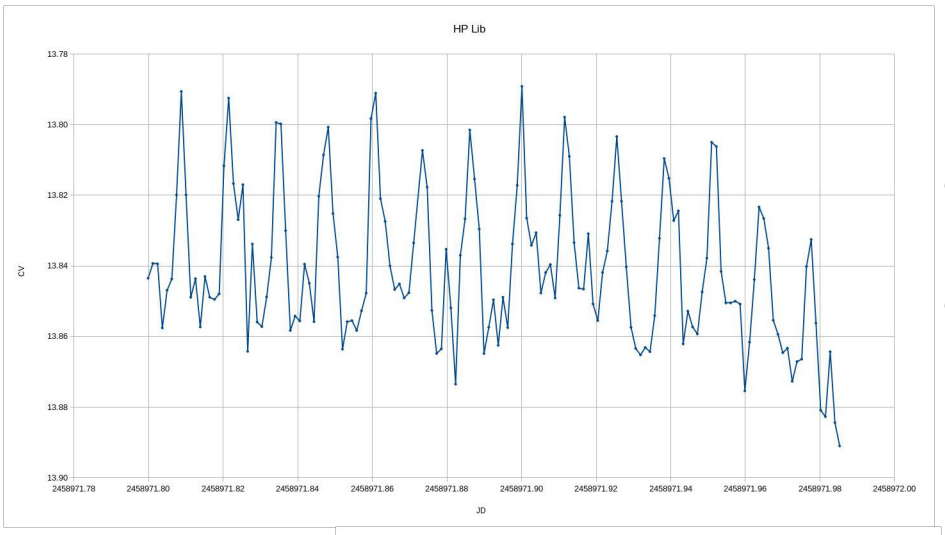
Malcolm Park — Comet & Starlink

structure I've yet to research for names, *etc*.

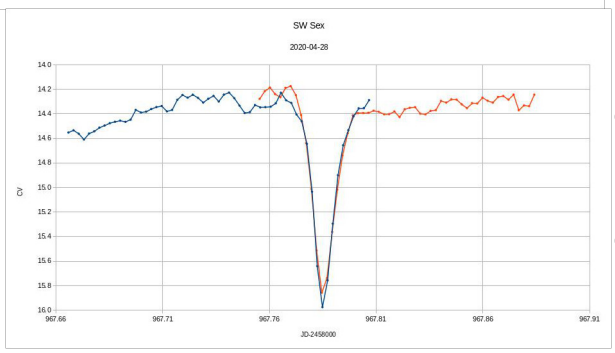
It was not a cold night, but I still needed long johns and a winter coat for sitting so still, but I had no frozen fingers!

Walter: I had the observatory pumping variable star images from dark until the clouds came in at 2 a.m. (just like CSC said they would!). It was a very pleasant night, not too cold or windy. I watched the Ottawa meeting as I multitasked from the control room, then did some YouTubing, then slept in the attic from midnight to 2 a.m. before finally shutting everything down.

Stephen: I had a good night in spite of bright moonlight and clouds. I imaged the moon, three star clusters, and a galaxy. I've improved my processing techniques and effectively removed the moon fog, at least as long as the target is bright enough and isn't too close to the moon. Full Moon is probably still going to be too bright, but at least I can image with a Gibbous Moon in the sky.



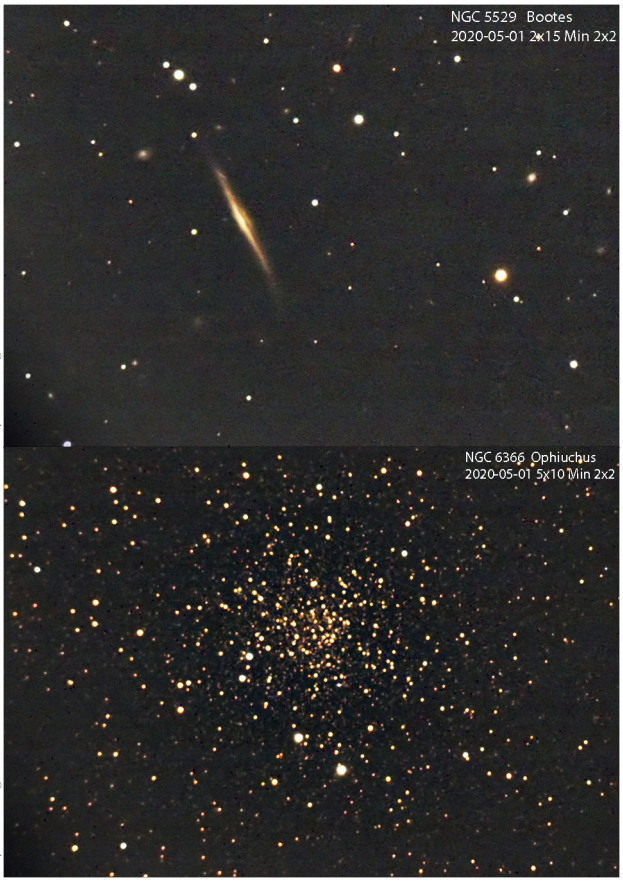
Rick Wagner — HP Lib Light Curve



Rick Wagner — SW Sex Light Curve

Rick: I got through all my photometry from the remote telescope this afternoon while watching some of Ottawa's virtual Astronomy Day. I've attached a couple of graphs. HP Lib you can see has a short period: 18.8 minutes! It's so tight that when I first plotted the data without the connecting lines I thought I just had a mess. With the lines the regular flashes show up perfectly. In the SW Sex graph you can see the nice deep eclipses. There are two night's data plotted—the blue from Apr 28 and the red is last night but with 29 times the 3.2385238^{h} period subtracted from the times. Beautiful how nicely the two eclipses overlap each other.

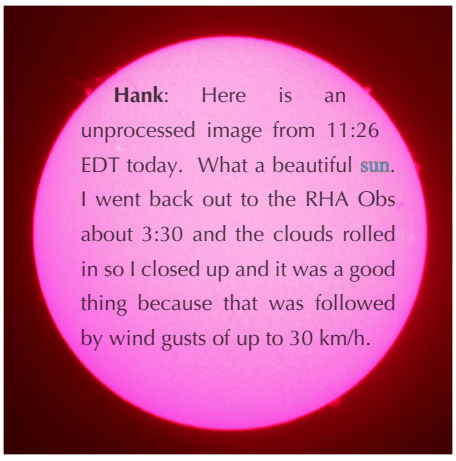
These are both cataclysmic variables—a white dwarf being orbited by a normal star which is feeding material to the white dwarf through their mutual Lagrange point. The material forms an accretion disk around the WD usually with a hot spot where the stream of matter from the other star hits it, the disk heats up to spectacular temperatures from viscosity, the disk feeds matter to the surface of the WD potentially to cause a nova, everything is orbiting, precessing, occulting, flaring, flickering and occasionally exploding.



Stephen Craig — NGC 5529

Stephen Craig — NGC 6366

Sunday, May 3



Hank Bartlett — Sun, May 3

Sun/Mon, May 3/4

Susan (22:18): As per my 'report' from the 1st of May:

First of all there are way too many syllables in some of these crater names. Eratosthenes was what I was trying to say.

Second...do not report without notes in front of you. It was Copernicus that was on the terminator.

I'm going for a bit more moon tonight although when I came out there were clouds starting.

Stephen (00:25): I couldn't resist a clear night in spite of the moonlight. I had to experiment with various exposures to find one that gave decent results without overfogging. I'm doing edge-on galaxies in Draco. This will probably be my last night until after Full Moon.

Stephen (01:50): Cloud at 1:45. I quit.

Susan: It was beautiful here last night. There was thin cloud at 10:30 that I thought would take over, but then it kind of got itself together and avoided the moon. Packed up at midnight and took a few minutes in the lounge chair just watching and listening to frogs *etc*. No bugs of any kind here at night for now.

Mon/Tue, May 4/5

Walter: Another great night of variable star imaging. I just managed to get 100 variables. It's helpful that the Full Moon is getting lower on the zodiac—I only had to skip a handful of stars. (Virgo is now off limits due to super-bright LED lights on the old municipal building one block south of me.)

CSC called for skies to clear at 10 p.m. but they cleared before 9 so I got a full night! The only thing slowing me down last night was my TV antenna—I have to wait for Lyra and Cygnus to get clear of it before I can do those variables. Anyways, I'm not taking it down...

Mon/Tue, May 11/12

Rick (23:05): It cleared off here about the end of civil twilight so I started everything up in time for the end of nautical twilight. I've shot a few images of four of my usual RR Lyrae targets and have now moved on to supernovae. I was about to head over to M61 but, while checking online to see where the SN is in the galaxy, I discovered on the S&T website that there is also one in NGC 3643. This one is quite spectacular in that it actually outshines the whole rest of the galaxy by a factor of about 60—it's somewhere about mag 9.8 in a 14.1 mag galaxy! I plan to do a few subs on it and then move on to M61.

I tried imaging M61 last night with the RASC remote scope but only got one image—for some reason CCD Commander was unable to re-acquire the guide star for the second exposure, so cancelled the remainder of exposures of M61 entirely and moved on to the next target. Why it thinks it has to re-acquire a perfectly good guide star I don't know, why it couldn't acquire it the second time I don't know, and why it then just decides to move on I don't know. Unsatisfactory.

Graeme (23:36): I'm imaging M61 now after a technical malfunction.

Stephen (23:53): I also had technical malfunctions. I'm on M61 now. I'll try NGC 6443 next.

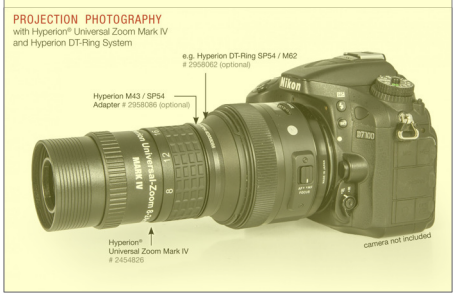
Graeme (23:57): Was your technical malfunction that you swapped out the RA motor drive with an "improved" model and it stopped working 5 minutes in? Some jiggery pokery (mostly poking) and I got it going again.

Hank (May 2): I failed to get out this morning before the haze and cloud rolled in and spoiled the day. However, yesterday (May1) I did get out and had first light with my new Baader-Hyperion Mark IV 8–24 zoom eyepiece and it is WOW!

About 20 years ago I bought a zoom eyepiece and found it disappointing and it has taken this long to try another and I am impressed. Now 20 years ago I was not in a position to afford quality and that is the main difference here.

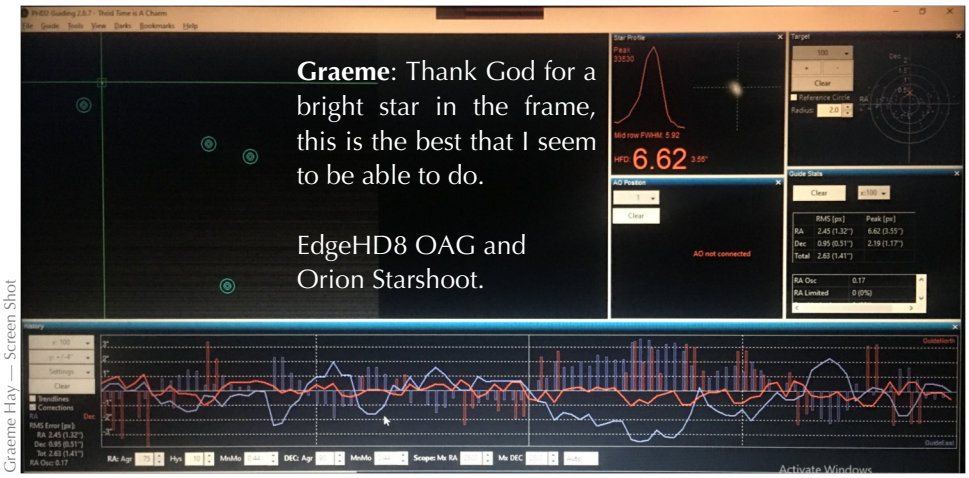
I placed this eyepiece in my Coronado and zoomed in full range and was so happy and amazed at the slight change in focus and the light level did not suffer until the 8mm level which was easily compensated by an adjustment in the scope's RichView. It has very smooth zoom with a slight click-stop at each marked setting.

I did not purchase the camera attachment, but it can be threaded directly to your DSLR. ★



Apparently the motor case and motor don't want to get along, although I may have (likely) off-set the mesh on the worm gear, so I'll have to fix that tomorrow...yay!

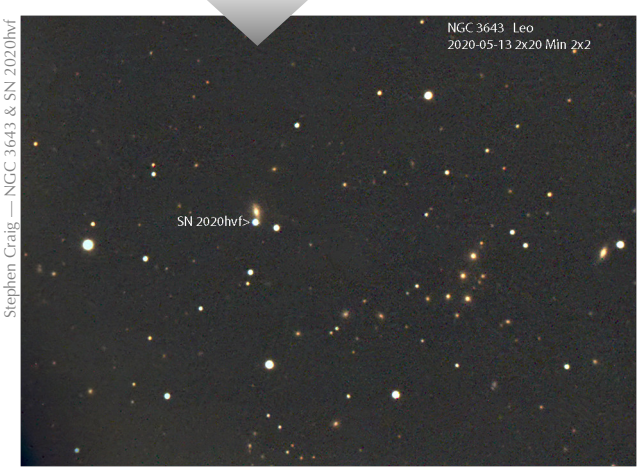
The initial imaging run is complete. I'm now going deep and hope the guiding holds out with all this nonsense.



Graeme Hay — Screen Shot

Wed/Thu, May 13/14

Stephen (22:13): I'm up and running. I'm into my image run for NGC 3643. The supernova is bright enough to use as a guide star! The galaxy is very small and faint. I'll know in a few minutes what I have.
Graeme (22:28): I'm taking it easy tonight and attempting a time-lapse with the Z6 (unguided).
Stephen (22:40): I finished my first sub and realized that I was centred on the wrong galaxy. NGC 3643 was a way off at the edge of the frame. I've recentred and started a new exposure. Again I'm guiding on what I think is the supernova.
Stephen (23:01): I definitely have the right galaxy now. I double checked the surrounding star field. NGC 3643 is a faint galaxy in a rich field of faint galaxies.



Stephen Craig — NGC 3643 & SN 2020hvf

Stephen (23:38): There is cloud coming in at 11:30, so I quit for the night. At least I have my supernova in the bag.

Fri/Sat, May 15/16

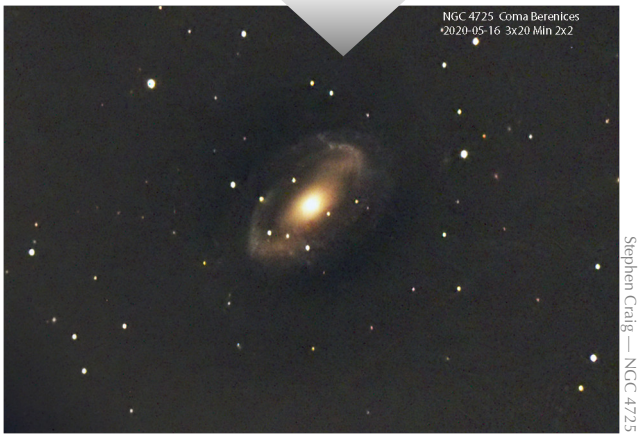
Stephen (00:25): By some miracle I got clear sky tonight! It just shows that you shouldn't rely too much on the forecast. Some experienced use of the satellite shot is in order.

It is a bit foggy, so I chose some targets high in the sky in Draco. It will probably cloud over in a couple of hours but I am happy with what I have.
Rick (07:55): I checked several times here and could often see a few stars, but it was definitely way too thick even for photometry. I was, however, on the remote scope in California where it was clear all night. I did some more images of the M61 and NGC 3643 SNe (both are decreasing in brightness slowly) along with two asteroids and 18 GAIA Cepheids. The camera has just this second completed its warm-up to ambient temperature and I'm shutting everything down.

Stephen: The fog abated here about 11:30 and I had good transparency until 3. It was a good night!

Sat/Sun, May 16/17

Stephen (23:02): It's not a bad night. There is some high cirrus cloud but it's not impacting me too much yet. I'll keep an open mind and see how it goes. I'm on a nice galaxy in Coma.
Stephen (23:41): Starlink photo-bombed my last exposure! That's alright. I was getting too much cirrus anyway. I may quit for the night. At least I got one galaxy!



Stephen Craig — NGC 4725

Graeme (01:08): I have a time-lapse going tonight for the ISS passes and I'm processing data.
Rick: I got in a whole night (if you can call less than 7 hours of nautical darkness a whole night) as the cloud never got thick enough to interfere with my photometry. However, it didn't clear off early enough to get more images of the NGC 3643 or M61 supernovae.
Paul: I watched the 9:39 p.m. (at my house) ISS pass visually. It was one of the nicest I've seen. Sky transparency was very good. I only wish I was a gun nut so I could eliminate my neighbour's monster backyard light!

Graeme: I ended up with a video and time-lapses of the various ISS passes during the night (except the last one which would be in the trees for me).

Mon/Tue, May 18/19

Stephen (21:11): By some miracle of modern meteorology we have clear sky! The truth be told, the Clear Sky Chart predicted it. It also predicts more cloud for later. I'm torn. Do I open up for an hour or two? I'll probably pass. There are much better nights coming. I'll keep my eye on it at the end of twilight though.
Rick (21:28): I opened up a half hour ago, but I'm somewhat closer to the clear areas than you are. Even at that, I expect I'll be plagued with periods of cloud for the next few hours.
Stephen (22:53): I decided I would open up. It looks like the clear sky is holding. I'll have time for one or two image runs.
Rick (23:36): Looks like I might be good for the rest of the night. Did another few images of M61 and NGC 3643 SNe.
Stephen (23:41): Yes it looks good. I'm glad I decided to open up. I'm getting some good images in Canes Venatici.
Stephen (02:58): Not a bad result for what was supposed to be a cloudy night. I got two interesting galaxies in Canes Venatici and a globular cluster in Hercules.

Stephen: This is my best shot from last night. NGC 4490 & NGC 4485. They are two interacting galaxies in Canes Venatici also known as Arp 269. I'll have to catch up on my sleep today as we have four clear nights in a row coming up. Imagine that at New Moon!
Rick: Very impressive starburst areas in both galaxies, caused by the interaction. Nice work.

Tue/Wed, May 19/20

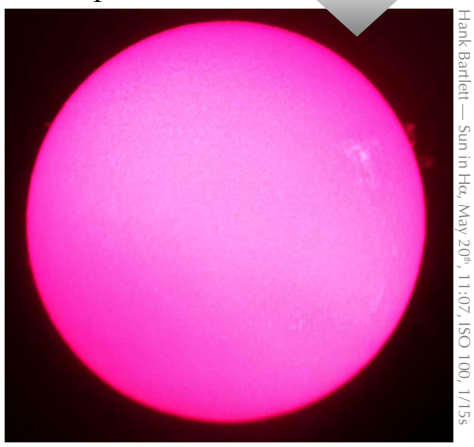
Rick (22:14): It has cleared off quite nicely here just in the past half hour so I've just started imaging SN 2020hvf in NGC 3643. Looks like another whole night of photometry.
Stephen (22:22): As of 10:20 I have clear sky and I am opening up. I may get a little bit of cirrus. But I can live with that.
Stephen (23:12): I can hardly believe our good luck. Two nights in a row that were supposed to be cloudy miraculously clear up!
Rick (23:30): So much for getting any sleep this week—not that I'm complaining.
Stephen (23:39): I'm getting good at sleeping until noon, so I will not be too badly off.

I'm on galaxies in Canes Venatici again. Right now I'm doing NGC 4618. It's an interesting galaxy with a companion, possibly interacting. It was a bit of a challenge to get both galaxies and a guide star in the same field of view. But it's looking pretty good.

Wednesday, May 20

Hank: I spent 1.5 hours in the RHA Solar Obs this morning. Here is a downsized, unprocessed Blackberry snapshot with adapter and 23mm eyepiece. I finally figured how to get focus, *etc*. I think it is pretty good and will see how it processes.

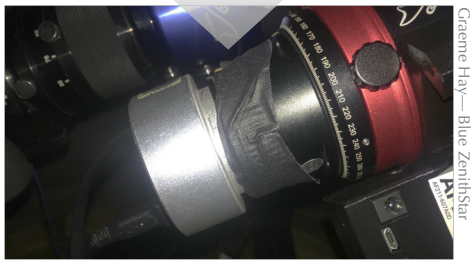
Stephen Craig — NGC 4490/85


Hank Bartlett — Sun in Hα, May 20th, 11:07, ISO 100, 1/15s

Wed/Thu, May 20/21

Stephen (00:48): I sorry that I missed the Chat Night. I fell asleep after dinner and slept through until 9! I must have needed the sleep.

I'm doing well on some galaxies tonight after a couple of technical hitches that wasted an hour. It's a beautiful night!
Graeme (00:50): Currently imaging the Blue Horsehead Nebula with my Blue ZenithStar (clever, eh?). I had a ton of technical issues tonight. Duct tape was required.

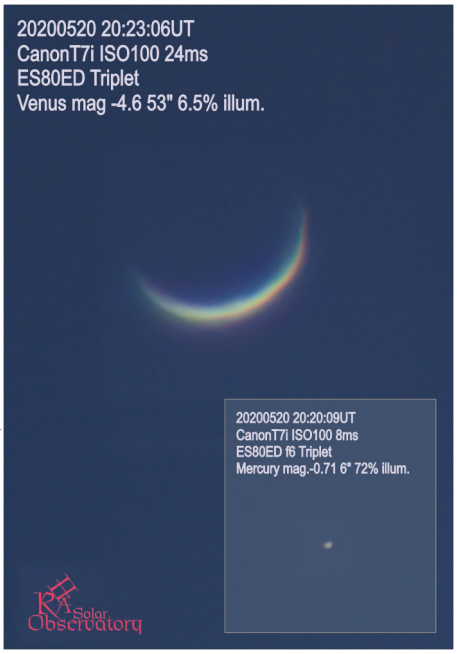

Graeme Hay — Blue ZenithStar

Susan (01:09): Calling it a night. The sky is 'bright' down here by the lake, or so it seems to me. I still enjoyed being out. The satellite thing is a bit over the top. No 'constellations' seen but plenty of stuff zipping by.

Nice bat close pass and some

ducks through the FOV!
Michael (01:39): Decent night in the city. Lots of satellites like you said Susan. I just closed up for the night; morning alarm is going to come early.
Graeme (01:40): I have ~1 hour before the Blue Horsehead Nebula hits the western tree line.
Graeme (02:14): I'm now imaging the Eagle and Omega Nebulae.
Kevin (05:11): It's good to see a bunch of folks out and about through the night. I went out at 04:00 and just came back in.

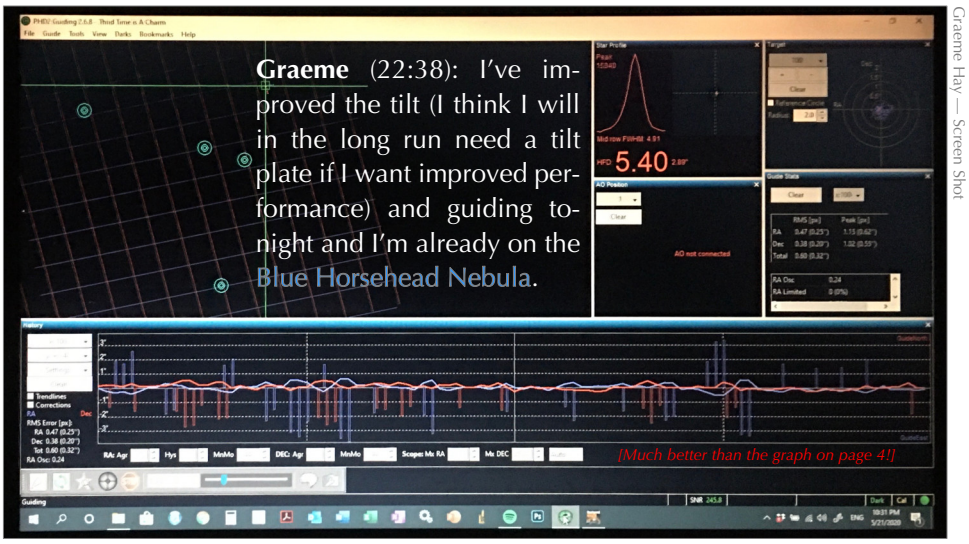
The 30s landscape images of the south totally washed out around 04:30. One interesting event was during the Saturn run. I have a video camera finder with a 135mm lens on it feeding into a portable composite video display:
A satellite went by just off Saturn. 20s later another went by...a little closer to Saturn. 20s later another went right through Saturn. All in all, another 10 went by in the field of view...Starlink!



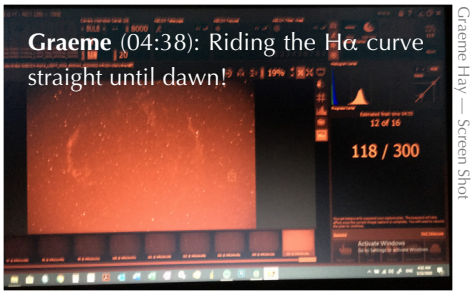
Hank Bartlett — Venus, Mercury

Thu/Fri, May 21/22

Stephen (22:26): Tonight is my 4th night in a row! Fantastic! All my equipment is running smooth as silk and I'm on my first galaxy of the night. Transparency seems pretty good and seeing is not bad. I think this will be the best night of the 4.
Graeme (23:18): I have a thin layer of clouds/haze that I'm shooting through (and that damn tower)—but I can remove that in post processing as it's not constant, but it's reducing the SNR of the faint nebula.
Stephen (00:22): The haze must be down by the lake. Transparency has been pretty good here.
Graeme (00:23): My Observatory isn't called "North Shore Observatory" for nothing.
Stephen (01:43): I'm noticing some haze now. My SNR has dropped a bit. It's not posing much of a problem yet. It should be OK.
Graeme (01:46): Now imaging the Veil Nebula. Looking E, away from the lake, the seeing is better in this direction. When I notice the blue rising I'm going to pop in the Hα filter and ride it until dawn/battery death, or dome roof occultation (whatever comes first).
Michael (02:05): My computer battery just ran out. I've packed up and am off to bed. A great night overall, even for being in the city.



Graeme Hay — Screen Shot



Graeme Hay — Screen Shot

Keith: You guys are lucky just to have a little haze. For the last 3 days I had to put up with honey pot wagons going by every 10–15 minutes from 8 a.m. to after 12 a.m. and the dust they kick up is unreal, but with the breeze it does ease a bit. So last night there was no wind at all; the dust just hung there. I could not see a thing, plus the dust was settling on all things exposed. So much for doing any viewing!
Susan: Last night was much nicer here. I still did not last much beyond 1 a.m. as days have been busy. I still have not had a chance to review my notes but Clear Sky Chart says I will not be busy in the observatory tonight. Everyone can get some sleep in prep for Sat p.m.
Rick: Yeah, I was observing but I've been so sleep deprived the past week and working hard enough during the day that last night I slept like the dead when I was sleeping (every alarm ring was like a smack with a 2x4) and when I was awake I just did my target changes and

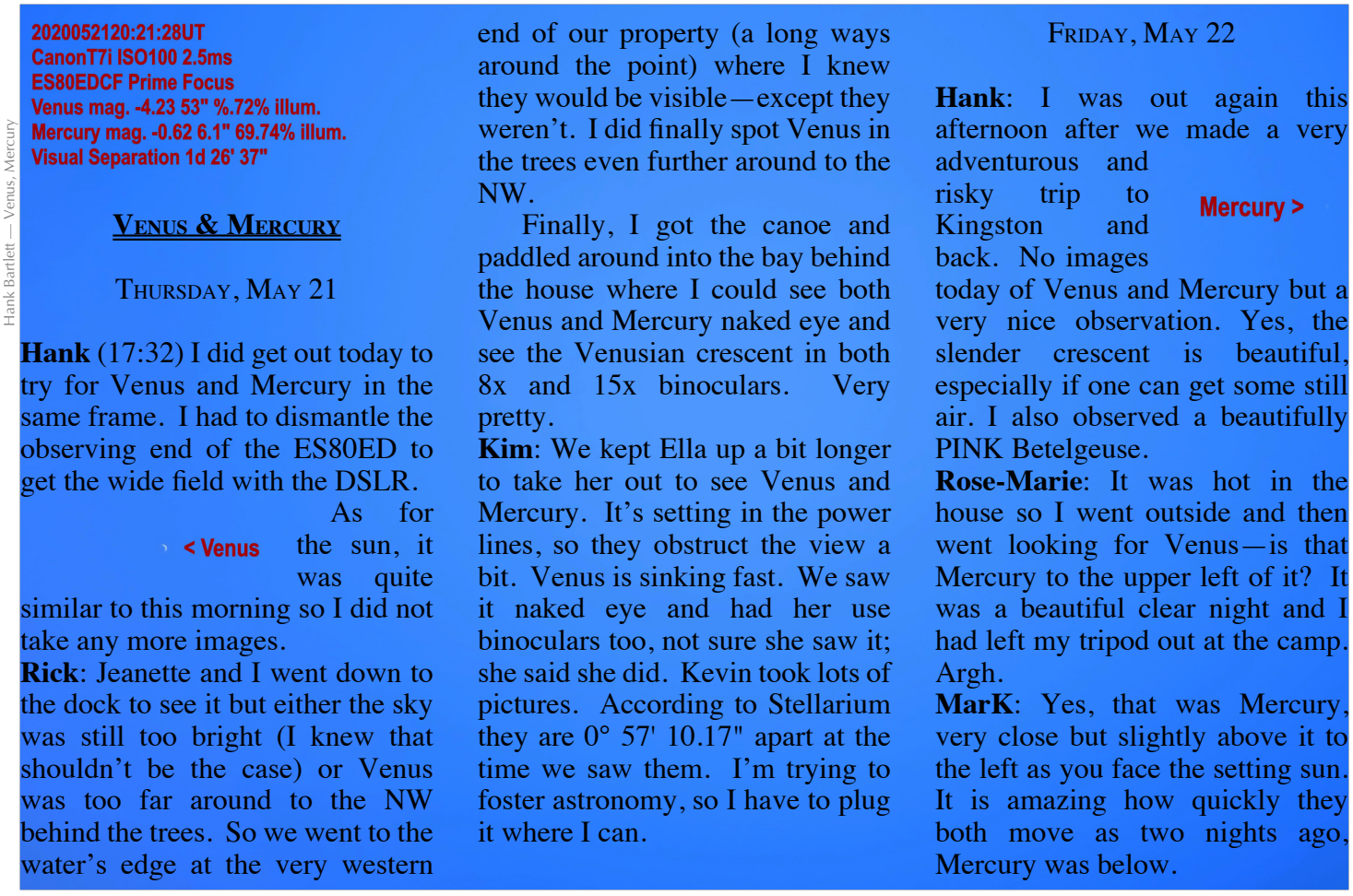
> **"If heat death is the outcome of the Universe, it really is all about the journey."** —Elon Musk

headed back to bed. No email.

The last two nights I had to up the camera temp to –10C as I couldn't quite reach –20 by the end of nautical twilight and even more-so by sunset yesterday to shoot my twilight flats. So I need to shoot a new collection of –10C bias and dark frames—I'm waiting for a cloudy night (Sunday?) for that.

Fri/Sat, May 22/23

Rick (17:43): Tonight for me will be my 5th all-nighter in a row (same as for Steve I believe) and 6th in the past 7 nights (I missed the 18th due to cloud). If the weather holds for tomorrow night this will be only the second 6-night run of my life.
Stephen (18:59): Judging by the Clear Sky Chart and the satellite images we will get a night off tonight. Saturday looks good though.
Rick (19:28): I'm hoping that cloud deck won't get this far north...
Keith (19:33): I was just outside Steve, and I have a cloud bank moving in slowly. Above is quite hazy, so between the dust, the smell, and now the cloud it's not good.
Susan (19:48): Seeing the sky right now it is hard to believe we won't see anything.
Graeme (20:21): I have clouds in the S up to the zenith right now, so I'm going to regroup and plan for tomorrow.
Paul (20:53): Hazy and clouds here. Pretty pink sky. So it looks like tomorrow's the charm.
Stephen (21:04): It's still clear here but I see cloud on the S horizon. I think the Clear Sky Chart is accurate for tonight. Lets hope it's good for tomorrow. We had a pretty good run. I have results for 6 out of the past 7 nights!
Susan (21:09): Yeah...I think my inspirational patch of sky has packed up and moved out! Plan for tomorrow!
Rick (21:55): I don't want to gloat but it's still clear here (except ~25° high in the S). I've just started my first exposure of NGC 3643 and SN 2020hvf. I will also be observing tonight with the remote telescope in California.
Hank (22:10): I did some solar this aft and a little Venus/Mercury also. Solar was blah but V/M was a nice apparition.
Stephen (22:45): Cloud here is up to 40° in the S. I doubt that it will get better. It is already obscuring my main targets. I'll take a pass on tonight and get a good sleep.
Rick (23:09): Oh sure, make me envious while I sit here working away!
Rick (23:43): Actually it is a great



Hank Bartlett — Venus, Mercury

Venus & Mercury

Thursday, May 21

Hank (17:32) I did get out today to try for Venus and Mercury in the same frame. I had to dismantle the observing end of the ES80ED to get the wide field with the DSLR. As for the sun, it was quite similar to this morning so I did not take any more images.
Rick: Jeanette and I went down to the dock to see it but either the sky was still too bright (I knew that shouldn't be the case) or Venus was too far around to the NW behind the trees. So we went to the water's edge at the very western end of our property (a long ways around the point) where I knew they would be visible—except they weren't. I did finally spot Venus in the trees even further around to the NW.

Finally, I got the canoe and paddled around into the bay behind the house where I could see both Venus and Mercury naked eye and see the Venusian crescent in both 8x and 15x binoculars. Very pretty.
Kim: We kept Ella up a bit longer to take her out to see Venus and Mercury. It's setting in the power lines, so they obstruct the view a bit. Venus is sinking fast. We saw it naked eye and had her use binoculars too, not sure she saw it; she said she did. Kevin took lots of pictures. According to Stellarium they are 0° 57' 10.17" apart at the time we saw them. I'm trying to foster astronomy, so I have to plug it where I can.

Friday, May 22

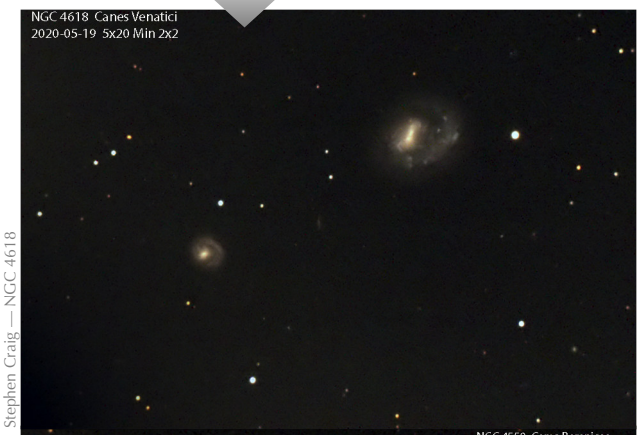
Hank: I was out again this afternoon after we made a very adventurous and risky trip to Kingston and back. No images today of Venus and Mercury but a very nice observation. Yes, the slender crescent is beautiful, especially if one can get some still air. I also observed a beautifully PINK Betelgeuse.
Rose-Marie: It was hot in the house so I went outside and then went looking for Venus—is that Mercury to the upper left of it? It was a beautiful clear night and I had left my tripod out at the camp. Argh.
MarK: Yes, that was Mercury, very close but slightly above it to the left as you face the setting sun. It is amazing how quickly they both move as two nights ago, Mercury was below.

night here. There is a single band of cloud about 12° high in the S (almost looks like an auroral arc, except lumpy like cumulus cloud, so not like the cirrus I expected it would be from the satellite images). It is clear above and below the cloud as far as I can see. From the observatory the cloud is behind the house. Above, the sky is wonderfully clear and dark—22.12 on the SQM so far, but still dropping very slowly.

I should be out with a visual telescope but I'm not. I just started a group of targets that will go til 02:15 so I'll start up the RASC remote telescope and then head to bed.

Oops, now down to 22.13—a best-ever reading for me.

Stephen: I finally got around to processing my images from the past few nights. These two are my favourites. It's a hard choice. I have a lot of galaxies to choose from! If the forecast holds I'll have some more tonight.



Stephen Craig — NGC 4618

Stephen Craig — NGC 4559

Sat/Sun, May 23/24

Stephen (19:44): It looks like the cloud is coming in faster than forecast. It may be OK if the first band of cirrus passes by before nightfall. I can handle some cirrus as long as it isn't too heavy. I'm well rested, so I will give it a go.

Rick (22:06): The first band seems mostly to be going south of us. Maybe the next bands will too. The first couple of images of NGC 3643 already in the can.

Stephen (22:28): Yes it seems quite clear here. I think tonight will be OK. I'm on my first galaxy NGC 5985 in Draco.

Graeme (22:40): A large cloud band just cleared here. I'm starting an imaging run. It's moving slowly E towards you guys.

Stephen (23:39): The clouds seem to be staying south of Rick and I. No problems here.

Malcolm (00:34): Well, it didn't miss me. I've been in and out of the muck all night. Each of my subframes is a new shade of puke. Interesting target though: M81/M82 and Comet C/2017 T2 (PANSTARRS) at upper right.

Stephen (00:43): I just picked up a little bit of cloud. My SNR dropped for a few minutes, but that didn't last long. I'm imaging the Draco Trio. NGC 5981/82/85. I can't get them all in one frame so I'm doing a mosaic.

Stephen Craig — Draco Trio

Graeme (00:48): I'm getting thin haze/clouds coming and going. Fortunately I'm imaging in Hα so the effect is on SNR and not star bloat. I'm continuing on for now.

Susan: I gave in shortly after 1 a.m. At that point there were clear areas, but a thin layer of cloud was constantly shifting.

One thing that I did look up was NGC 4618 from Stephen's last photo post. It is a faint target for the suburbs, but doable along with several other faint fellows. I've yet to check to see if I had covered them before.

I'm reconsidering my close-up routine. I've been closing the roof and then getting a drink to have in the lounge chair, where I find the sky has greatly improved. And I am usually just drinking H_2O!

I may take a break in the chair to give the sky a chance to improve before giving up. I am pretty sure I would have had some sky later Friday night.

Malcolm Park — M81/82 & Comet

The June bugs are coming out; they were whacking into the walls and underside of the roof as well as buzzing me. Pretty sure there is at least one well fed bat this a.m. At least they do not bite.

Malcolm: Haha, the June bugs were quite abundant here also. When I turned on my cyclops flashlight I got dive-bombed a few times.

Mon/Tue, May 25/26

Stephen (22:29): I'm off to a good start. The weather is holding well. I'm on my first galaxy, NGC 5300 in Virgo. I have a really good guide star! Next I'll be on to NGC 5746 and then NGC 5669.

Rick (23:14): It's looking quite murky here—had to up my guiding exposures to 10s in B to keep a guide star. Guiding is absolute garbage—oscillating ±2.5px in RA with ~65s period. I'm going to have to look over my drivetrain to measure the periods of the various gears—might help me diagnose problems.

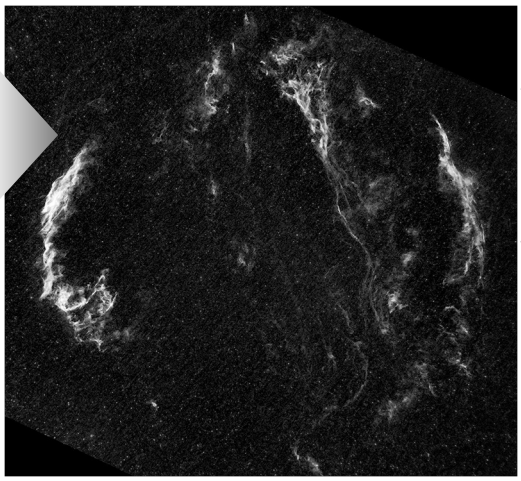
No cloud is showing on the satellite, but I think there must be some (not so) thin cloud out there.

Graeme (00:41): Its a mess here, I didn't even bother.

Stephen (00:52): I must be in the weather sweet spot. I'm having a good night!

Rick (02:03): Things are looking very clear here too now.

Graeme (02:13): I'm not looking outside as its zzz for me. I used tonight to start processing all the data I collected. Here is the Veil in Hα.



Graeme Hay — Veil Nebula Complex

Keith: You are always in a weather sweet spot, you lucky #$%&.

Susan: I have to say that when I did my sky check at 11 p.m. and there were stars missing from the Big Dipper...well I thought the photo gang may get something but the visual deep sky was not going to happen so I headed off to bed. It may have cleared later but I'll never know.

Rick: I discovered when I was looking at the folder of calibration files that a slight change in my exposure times had also added a space into the name of all my flats. So I wrote a script to correct the names of all 180 (50 bias, 50 dark, 80 flat) files. And now they work with my master cal frame builder script. All this because of the sudden arrival of summer and my camera can no longer reach –20C in the evening so I had to up it to –10C.

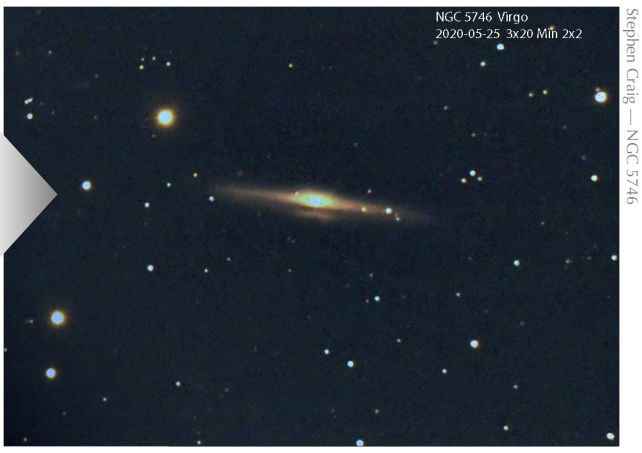
I actually lost about a dozen images last night to cloud, in some the stars disappeared, in some the guide star disappeared and they trailed badly. When Maxim loses the guide star it starts guiding off in a straight line, sometimes up to a degree total movement if I'm doing a 1–2 hour sequence of images on a single target. It isn't supposed to do that—the claim is that when it loses the guide star it will stop making any corrections, but that's not what happens.

Malcolm: What version of Maxim?

Rick: 5.07, so yeah, it's a little old. But the upgrade is so expensive.

Walter: I'm still on 4.11. Ditto.

Stephen: I had a good night in spite of hazy skies. I had no clouds to speak of other than a few minutes of low SNR. This is my best photo of the night, NGC 5746 in Virgo.



Stephen Craig — NGC 5746

Tue/Wed, May 26/27

Stephen (20:28): Just woke up from my nap. I see that sky transparency should be a lot better than last night. I'm taking note of a cloud bank over Georgian Bay. I trust that it will dissipate and pass to the N of us. I hope it proves to be a good night.

Rick (22:59): Yeah, they were calling for partly cloudy or clouding over about midnight, *etc*., depending on who you follow, until not too long ago. I don't see anything coming our way, so unless something pops up... Looks pretty good right now.

Graeme (23:34): No clouds here but plenty of haze. Zzz for me.

Graeme (23:52): I did grab some wide static shots for my YT channel, and I think an ISS pass right overhead (bright and slow moving...) and got that as a video.

Stephen (00:03): I have nice clear sky here. The haze must be lake effect.

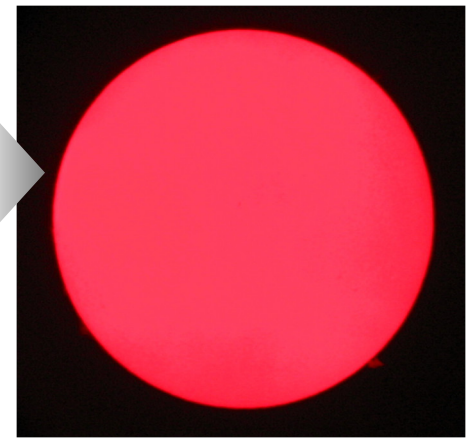
Stephen (00:45): As I expected the cloud over Georgian Bay is dissipating and heading N. The cloud forecast to come from the S never formed. It's a good night!

Susan (01:50): Not bad down this way. I got some NGC sketching done including part of Steve's triplet. I have to check tomorrow what part was the brightest as I am sure that is the one I would get. Done in now.

Wednesday, May 27

Hank: This is an image of the observation that got me hooked on solar Hα back on 2005 July 9. It was a hot and clear Saturday and we had volunteered to help Terry Bridges with outreach at Queen's. It took me until 2007 to buy my first Coronado, a SolarMax 40. I am now on my third scope and may be stopping there.

Kim: Not sure I will ever get a double stacked scope. I would like to do calcium.

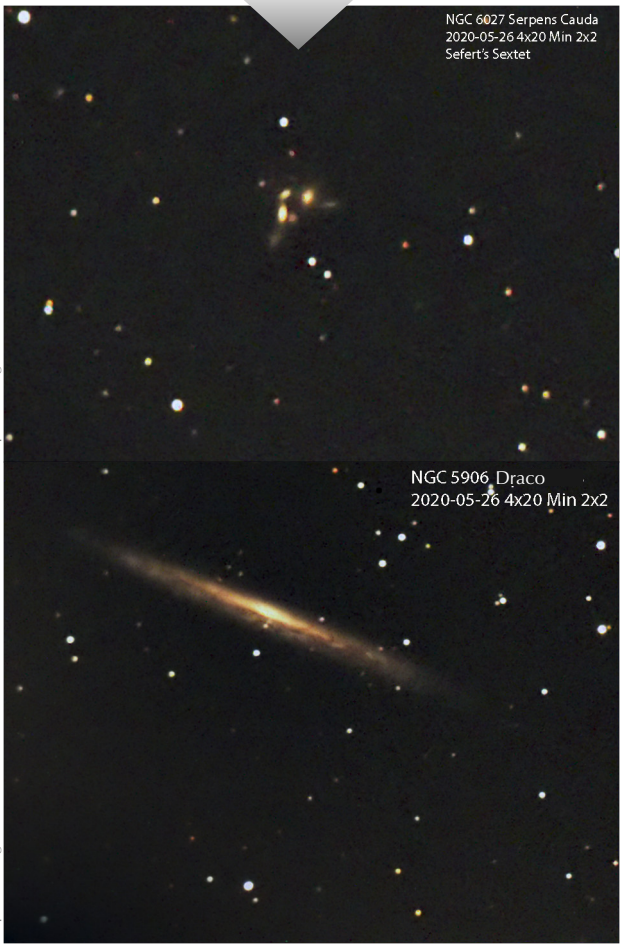


Hank Bartlett — Sun 2005-07-09

Thursday, May 28

Stephen: I finally got my images from Tuesday night processed. I had to take some warm weather dark frames first, as my last ones were taken at 10C and Tuesday night was 20C. I'm glad I did. My images turned out rather well.

My favourite is NGC 6027. It is known as Seyfert's Sextet. It is a group of interacting galaxies in Serpens Cauda. NGC 5906 is an edge-on galaxy in Draco.



Stephen Craig — NGC 6027

Stephen Craig — NGC 5906

Saturday, May 30
Crew Dragon Demo 2

Susan (14:12): Do you think Bob and Doug will "take off, eh?"

Kevin (15:50): Yay, success! Crew in orbit!

Malcolm (21:42): Lots of bats in the twilight.

Graeme (21:52): ISS passing overhead; did not see the Crew Dragon capsule.

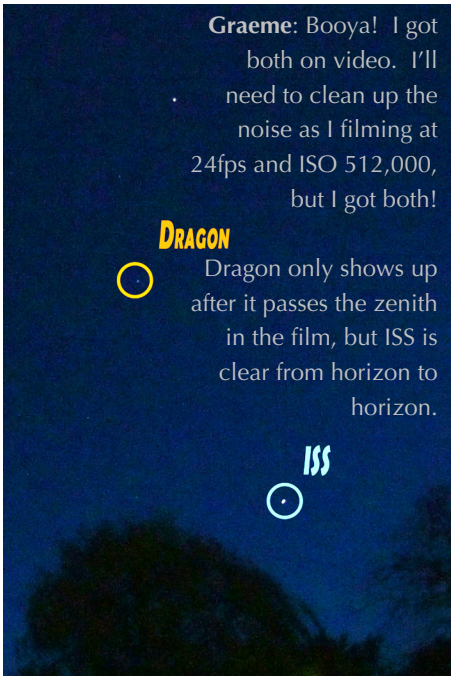
Hank (21:55): Yes, same here.

Keith (21:57): Just watched them both go by!

Graeme (21:58): I'll have to check the footage but I only saw one bright dot visually.

Kim (22:02): Lots of cloud. We saw the ISS very bright. Then we saw a small dot following the same path. I need to check the paths for confirmation, but I think we saw the Crew Dragon capsule.

Graeme (22:08): I hear you on that Kim. This is right after the ISS finished its pass, I turned around, and bam!



Graeme Hay — ISS & Crew Dragon

Malcolm: Apparently Heavens Above was wrong. CD was behind ISS by 5 minutes, per Randy Attwood.

Graeme: Yeah, Dragon was tailing ISS so I guess I saw it after all.

Hank: Waited until the ISS was ¾ done, should have stayed out, DAMN!

Susan: I also saw the ISS and thought the show was over. I think my past experience with the timing of these things being so spot on that I assumed...

Rick: I feel hard-done by! It was totally overcast the whole evening here. Seems like I'm the only one who didn't see anything. And then I slept through the whole ~5 hours of clear skies starting about midnight. Overcast when I went to bed, overcast when I got up at 6.

Walter: It was cloudy here too.

Cathy: Yes, I missed it too. ★

Graeme Hay — Clouds