

19:11 - meeting started (Kirk Severson)

### **Meeting Attendees**

22 present:

Kirk Severson, Rick Murray, Mike Curlin, Ron Purdue, Josef Chlachula, Noel Taylor, Jay McLaren, Bill Davidson, Dennis Robertson, Dean M. Johnson, Jeff Newland, Luka Bajzer, Aaron Johnson, Ben Joslin, Alan Cameron, Robert Ayerhart, James Benthall, Jerome Taubel, Julie Gawarecki, John Attewell, Mike Quirk, and Brandon Wyman.

### **Treasurer's Report**

All look, make sure you are listed as a member. Three new memberships and a donation. Discounted sale of a 2016 calendar. Income \$85. Expenses \$0. Balance of \$3847.58 on June 30th.

Quark eyepieces on order, not in the treasurer's report, yet.

### **News**

- Bill talked about the Northern Lights Newsletter. They are trying to get each organization to write an article. It is brand new to him, he is still trying to figure it out. Bill needs articles, send him an e-mail, his address is listed in the older newsletters ([RochesterSkies@outlook.com](mailto:RochesterSkies@outlook.com)).
- There was an outreach event at Keller Wildlife Management area. Jerome and Jeff were there along with 5 adults and 6 kids. The clouds rolled in right about the time Randy rolled in. The homeowner from about 2 miles away also stopped by to figure out what was going on. He seemed really interested, but had to pack for a trip to Bemidji (potential new member?). One of the parents was also really interested, a second potential new member. There was a slow moving, approximately magnitude 2 meteor in the east, which exploded into about 8 to 12 pieces which Randy saw the shadow to, but otherwise missed (again). People packed up and left around 1 a.m. After the families left, Jerome, Jeff, and Randy found Pluto in Randy's scope, at 300 power, but they needed to use peripheral vision to see it.
- NCRAL 2017. Club planning, checked groups close by, but they all backed out. The goal is to get something organized for the spring of 2017, to elect officers. Kirk's proposal is to take over Eagle Bluff. We could use the dormitory for housing, cheap. However, there are not a lot of dates available. Jerome asked about the renting. We need to commit to 25, two nights at \$110/head plus \$5/head for betting, if it is wanted. One night would be \$75/head. This comes with the facilities, programs, and our observing and presentations. Jerome mentioned that there is also a bed and breakfast nearby in Lanesboro, if someone were to desire better lodging. April 28th - 30th, 2017 is looking like the best date, any later in the year will get harder to draw interest due to the solar eclipse. We would bet at a \$2500 commitment, to get the 25 person minimum. Kirk asked for anyone interested in helping to organize. Dean volunteered to organize door prizes, but indicated he may need to send a 6-pack of Spring Grove pop first, and send another if we get something good. Jon was also willing to help organize.

### **Observing Notes**

- Dean was out Saturday night, the first clear Saturday all year. 8:15 p.m., low humidity. Dave Trazinsky. Stucco showed up around 9 p.m. Light crescent moon, crater on the terminator, a perfect circle with a tiny dot. Jupiter and all four Galilean moons. First opposition of Mars seen since 2003, but could not see the

polar ice cap. Dean was thinking it must be the vernal or autumnal equinox on Mars (No, not global warming). 2018 is to be the best until 2032. Mars really looks good. Saturn was the best, 3 moons, 1 below, 2 above, Titan far above to the right. Deep sky objects included M52, M57, M5 in Serpens... Ellen Vega has the best guide posts to M5 of anyone Dean knows. M5 was fantastic. Beta-Cygni, Polaris, ... 56-Cygni (Dean's favorite double star).

- ??? was out at a campground with about 40 people, about half were kids. The week before, he went in half on a telescope with his soon to be relative. M22 and ????. They were out a couple of times. It is a 4-½ inch Newtonian, he was going to get a \$75 scope, but ??? found something online that was better, convinced him to go in half with the option to buy him out later (about \$200).
- Julie indicated that she and a bunch of others were out at Eagle Bluff July 3rd. M51 was awesome in Randy's scope, 12.5x, 92 degrees, Explore Scientific. Julie packed up to head home around 4 a.m. Dean left around 2:30 a.m. Jerome ... Mike was there (trying to) take pictures. Mike K\_\_\_ from LaCrosse was there as well as ????? Julie indicated it was kind of confusing with three Mikes there.
- Mike Curlin - Lagoon Nebula, stacked with RegiStax, with some troubles. 8 photos. 8 stacks of stacks. He had some tracking issues. Adobe Bridge, layers, align, stack, then Photoshop to adjust colors. Layering could be seen in his photo of M31. He was using a Canon 70D. Mike also had a lightning photo to share, and another of Andromeda, and an M51 stack attempt with 40 raw photos. His telescope was an 8-½ inch ET on Advance \_\_?\_ mount. He believes the tracking issue may have been due to not telling it the new location, Rochester versus Eagle Bluff.
- Josef was out in Oronoco Saturday with some friends. It was a great night of looking at planets. He indicated that no polar cap could be seen on Mars. Josef also mentioned that at the last meeting he had pointed out a website for ISS passes. There was pass at 7:10 a.m. in front of the Sun. He went out on Salem Road about 15 minutes before with his 4-½ inch scope. He was not able to take pictures, for what would have lasted about 2 seconds. He saw nothing, but now he knows what needs to be done. The morning passes are small/short, the best ones are around noon.
- Kirk was out for a couple hours on Saturday.
- Jon mentioned his chance at updating his equipment. He had had a car battery for the scope, which was not working the greatest. He went out to Fleet Farm, bought a fish finder battery, took a chance and snipped and rewired things. It worked, he is happy with the results.
- ??? was out north with his red dot finder scope, showing things to his relatives. They were all impressed. One old gentleman said it was the first time he had looked through a telescope. 4-½ inch Newtonian, compact, F4.0.
- ??? mentioned going to a place called Kinstone, over by Fountain City, Wisconsin. It is kind of an archaeoastronomy place with stones aligned to look at the north star, solstices, etc. Some of the stones are 18 foot tall ones of granite. There is a labyrinth to walk around in, a chapel with illuminated bottles, and interesting day outing. A brochure was passed around. \$5 cost for the tour. Josef was familiar with the place, it is close to Winona. Go online to find directions ([kinstonecircle.com](http://kinstonecircle.com)). It is a 4th generation farm.
- Dean forgot to bring the mystery telescope. He said it would be at Betty's benefit Saturday night, at the Fest Building, starting at 5 p.m. It is about half a block north of the Legion.

### Featured Presentation

- Kirk Severson -- "Outreach Spectroscopy".
- Kirk made a spectroscope with a box that had one of those free AOL CDs for the diffraction grating. He

passed it around at the beginning of his presentation.

- Hubble has had a spectrograph.
- MSL -- Curiosity rover. Four spectrographs: ABXS, ChemCam, ChemMin, and \_???.
- New Horizons -- Alice & PEPSSI
- Hitomi -- Lost. :( SXS (Soft X-ray Spectrograph). Found H<sub>2</sub>O.
- JUNO -- UVS (UV) & JIRAM (IR)
- James Webb Space Telescope
- STAR. Class G white-yellow star. Absorption spectra: Night Sky Network (NSN) indicated to talk pretty colors, not technical jargon.
- A DVD will have the lines closer together, requiring more light.
- Common examples of things to look at: Indirect light (cloudy), direct sun, GE CFL, CREE (brand of LED light).
- Moonshine spectrograph. Meade ETX90, Televue 32mm PLOSSL, AOL CD-ROM, Samsung S6 Edge+.
- John Anderson's spectroscope -- Okie Tex 2015. Inspiration for Kirk's spectroscope. It tracked the sun via a guide mirror. This was an outreach and retirement project of John's.
- Video from Okie Tex showing the diffraction grid (something from a surplus shop), Eurostat (mirror), etc. Saturday, April 16, 2015 (Astronomy Day).
- Dean mentioned that when he first joined the club, there was a member that took spectrographs of stars, Bill Perkins. Jay indicated that he still does this, but mostly does it remotely now, over the internet.
- Mike Curlin asked about JUNO data. It is not turned on yet. Dean mentioned that they are still fixing the orbit, he had seen a video of the moons from the approach, sped up. It is quite fascinating. He had seen it on the Science Channel, on an hour long program about Jupiter that had a follow-up on the JUNO project. Josef found the video, 2 minutes 57 seconds.

20:30 – meeting adjourned. Gathering to talk about NCRAL 2017 planning afterwards.

Submitted by Brandon Wyman - Rochester Astronomy Club secretary