

19:01 - meeting started (Randy Hemann)

Meeting Attendees

27 present (2 non-members):

Randy Hemann, Ron Purdue, John Attewell, Mike Carlin, Don Schlosnagle, Jan Schlosnagle, Michael Currie, Rebecca Bomgaars, Robert Ayerhart, Luka Bajzer, Bill Davidson, Chris Gawarecki, Joe Gawarecki, Julie Gawarecki, Jack Wiltsie, Jay McLaren, Noel Taylor, Patty Galbraith, Jeff Newland, Bob Fealey, Mike Quirk, Kirk Severson, Jerome Taubel, Jonathan Thoreson, Christopher Kruger, Josef Chlachula, and Brandon Wyman

Treasurer's Report

Income: 10 members renewed, dues \$200. Donation(s) \$246.46. ??? \$210.00. Account #2 \$500. Account #3 \$200. Amazon Smile \$11.59. Orion XT8 \$250.00.

Expenses: Insurance \$320.00

Balance \$1298.05.

Calendar sales: \$15/piece (5 calendars left).

2016 donations ...

Observing Notes

- Mike Quirk - Clouds rolled out as heading in. A couple of nice nights.
- Randy Hemann - iPad to look up classics, planets. Test period. Lock function on iPad, keeps object in view longer. Hoping ready for NCRAL.
- Kirk Severson - Small crew at Eagle Bluff after last meeting: Dean, Mike (#2), and Ellen Vega. Sombrero, ... triplet Packed in after Sombrero.

News

- Julie brought in the StarBlast Telescope that is being made for the Rochester Public Library checkout program. Chris has been making the modifications. The collimation knobs are off, replaced the thumbscrews to minimize fiddling. The eyepiece is replaced with a Celestron ...???.... There is a red dot finder, but the CR2032 battery that would run out quick has been replaced with an adaptation to AA batteries. The telescope is set up with a modification for lunar viewing, a stop aperture was made with a hole in the lens cap, no filter needed. A waste pack is attached to the side with extra batteries, an instruction manual will also be included (laminated, spiral bound), along with a constellation book. It still needs some stickers: "DO NOT LOOK AT THE SUN", moon map, nameplate, and a chart on magnification. The library staff will also get a checklist and chart along with a guide for borrowers on how to safely secure the telescope for travel. Bob Fealey thought there should maybe be a duffle bag with blankets, to carry it around. Chris thought a case would be nice, but the options would seem to be too heavy or too flimsy. Julie mentioned a possible event to show it off, maybe contact the TV stations, with a lottery for who is the first to check it out. Jay, Julie, and others discussed taking the best of various modifications, some from a Sky & Telescope article, Julie mentioned that the Astronomical League did a good job on the information for the modifications. Chris mentioned that this could also be an opportunity for the library, by including references to the various astronomy related books in the library collection. Bob Fealey pointed out that the instructions

need to stress brighter objects, as things like M16 are virtually impossible to locate in a finder. Julie pointed out that this will be a good opportunity to get those with some interest on track, then possibly get them to attend our meetings for advice, etc. Noel asked about how we would handle possible bad ramifications, such as some 10 year old looking at the sun. How would we handle that? Julie indicated that she would look into how the New Hampshire club dealt with that. She pointed out that there are over 200 telescopes out in similar programs across the country, and there is always a big waiting list. Noel also asked how long the check out time would be. Julie indicated that the librarians here in Rochester were talking to the ones in New Hampshire, but the thought is less than a week. Bob Fealey pointed out that a moon filter with that scope reduces to 13%, asked why the hole was not centered. Chris indicated something about the secondary. Luka asked about a cap to cover the back, with a hole for air, to hide the screws. Julie mentioned one groups modification had a juice box end cut down to cover the screws, Chris thinks that looks bad. Chris also mentioned that there was a lot of Loctite used on the telescope. Randy asked how much the modifications cost, so far. Julie indicated \$330 to \$340 plus \$10 to \$15 in some local purchases. Julie will keep everyone posted and let the club know when the telescope is ready for a reveal.

- Randy mentioned that the Messier Marathon is coming up soon, a couple of chances. He asked what the record is, the thought was 100.
- NCRAL 2017 - Randy asked John to bring the club up to date. John mentioned that he is on the planning committee with Randy, Jay, Julie, Kirk, and Josef. John indicated that there was no a schedule for speakers. The private rooms are all gone. As of next meeting, 58 registrants, 48 on site, 10 off site. Some of the committee members are not registered yet. Those organizing were banking on 20 registrants, we are well over that now. Registration at the conference will start at 3 p.m. with portable outreach demos during the registration. A number of the speakers were mentioned:
 - Robert Matel
 - Carl Wenning
 - Armando Manduca
 - Steve Kowaler - Light curves from ... stars ... part of Kepler project, now K2. Part of next scope ready to go up.
 - Russ - private astronomer. Light curves of NEOs. May work with students soon.
 - Karl Yon
 - Dave Faulkner
 - Jennifer Anderson - Experimental impact cratering. Just got a 1/2-million grant.
- Breakfast and checkout on Sunday.
- Luka asked, with that many attending, about 35 need power? Kirk indicated that there is one outlet. John said it was not functional. Kirk said that there is a second one, south one, close to the telescope. Randy said that one is also not functional. Luka indicated that we should probably mention to those attending to bring power, unless the club think we should rent a 7kW generator. John indicated that could be discussed at the next committee meeting.
- So, all the pieces are coming together real nice. There were some complaints about the expense. We played our budget really close. John pointed out that at a previous meeting, someone did say that they had gone to quilting conferences that cost more.
- Randy asked about the finances, the budget. Julie deferred to Kirk, asking about Eagle Bluff giving us a preliminary calculation. Kirk said that there is a table on the website. John pointed out that the contract with Eagle Bluff is kind of complicated. There was 6 to 8 weeks spent to hammer out to get the

registration out to be not too confusing. Bob Fealey pointed out that he hit some complications on registration, PayPal was not working, but Josef figured it out. Josef pointed out that he had introduced a bug the week before, trying to close out private rooms and IMPROVE something, hopefully all fixed now. The majority of payments were by e-mail, immediately after registered. John said that he was amazed by how it has gone so smoothly. Josef said there were eight shared rooms left.

- Chris G. asked what big things are still outstanding. Need help? John pointed out that the budget and website hurdles are over, but help with registration, parking, scope setup, moderators, cleanup, and the linen check out and check in could use help. A task list will be generated. Luka suggested an online Google doc, Kirk said he already had one that needs to be published to the forum. Kirk said that we still need brochures, meal tickets, etc. Randy pointed out that there are still t-shirts to produce. Randy pointed out that if we plan on a photography contest, that information needs to be out soon, otherwise let attendees know that we do not plan on having one. Randy also pointed out that lennards will be needed, things to do before the next meeting. We also need a walk through, lay of the land, lobbies, where to put signs, etc.
- Earth Day is the same weekend. Kirk pointed out Science March as well.
- Randy went back to the rest of the agenda after the NCRAL 2017 discussion. Next meeting will be mostly for getting the NCRAL tied up. Astronomy Day planning as well. Kirk said he will start a forum thread for conference help.
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RAC Meetings/Calendar

- Mar. 24/25 Dark Sky Weekend
- Mar. 31/Apr. 1 Dark Sky Weekend
- Apr. 11 RAC meeting - presentation tbd
- Apr. 21-23 NCRAL -- Eagle Bluff
- Apr. 22 Lyrid meteor shower
- Apr. 29 National Astronomy Day
- May 9 RAC meeting - presentation tbd

Other News/Notes/Announcements

- During the treasurer's report, Randy had Julie show the second month from the one already opened: Febuary. Luka thought it might be a collectible (preferably an unopened one).
- After the NCRAL 2017 discussion, and the rest of the agenda topics, Randy opened up to discussions topics.
 - Mike Quirk mentioned that his search for the Horsehead Nebula was unsuccessful. Luka asked how he tried to find it. Mike was looking left of Orion's belt, tried for The Flame Nebula, did not find either. Randy asked about aperture. Mike said 10. Randy said that he likely should get The Flame, but likely not The Horsehead, needs a Hydrogen-beta filter, Randy can barely get with 18-inch aperture, especially if it is not a pristine sky, one would need at least 16-inches, with a Hydrogen-beta can get Horsehead and two others. Randy opened up Sky Safari, pointed out three stars next to it to get bearings, we will have to do that down at Eagle Bluff, probably at the Messier Marathon. We should also see if we can get M78, if one can not find M78, you will have trouble seeing The Flame.

- Exoplanets & Trappist 7. Bob Fealey pointed out that a red dwarf was found to have seven planets, three of the in the habitable zone, 40 light years away. Trappist-1e. Randy said that it within the orbit of Mercury, possibly in a locked orbit, tidally locked. Luka said that x-rays were high, might tear off the atmosphere, kill or sterilize life. Someone mentioned a brown dwarf at 12 parsecs, really dim.
- Randy mentioned subscribing to the Planetary Society Group. Yuri has plans to send probes to Proxima Centauri, nanorobots. It will take about 20 years to develop, and another 20 years to get there (1/10th the speed of light, with collisions....), four years later, information will get back. So, 60 years later, who is going to be alive? There was a several minute video to show, Yuri Milner jointing up with Stephen Hawking (Youtube: "USA: Stephen Hawking and Yuri Milner Starshot space exploration project"). Jay asked how they were powered to send data back, Randy said it was not mentioned. The guy is dropping \$100 million to fund the project.
- "Radiosphere" 10 light years away, maybe catch a buzzing noise, otherwise background radiation. China radio telescope?
- Randy mentioned that he still was not sure if it was known that we are using this room (RCTC EA 121). He still needs to check into that. We will either be in EA 121 or EA 1113
- Jerome asked Josef about using PayPal on the website to pay dues. John and Julie commented on how that would be kind of expensive. Jerome suggested bumping dues from \$15 to \$16, Julie asked if he meant \$20 to \$21. Josef did say that there are some clubs that use PayPal to pay their dues, he found out when he asked around when he was getting our website going for NCRAL 2017. There was a 2.5% savings if registrants chose to pay by check. Jerome pointed out that a check itself costs about 15 cents.
- Jerome asked if there was a post-convention survey planned. John sad that yes, that was planned.
- Josef mentioned that we should think about teaming up with other organizations close by to Rochester, to have some kind of sleepover. We could plan day activities for kids and then some evening activities. Randy said that was a good point, we could possibly pull some people in for some kind of regional star party, as we do have the best facilities by far in this area. We should get a photometer out there to check the sky. Jerome said it (Eagle Bluff) has to be better than Kansas City.
- Patty Galbraith asked about a top floor observation hous build. John mentioned seeing some homes he toured in Mexico that had an observation deck, a gazebo type roof. Jack said that one of the former club members had built something. Bob Fealey pointed out that there would be a problem with heat off of the house distorting images and that a pad outside the house for a couple thousand might be better. Patty mentioned that the key thing was protection from the elements and bugs. Bab said that he has one (a pod), the electronics are protected. Randy said that having one on top of the house would look cool, but there are two things to keep in mind: 1. Heat rising, and 2. Stability (need a pier). Bob mentioned that an attachment to the house with a slide off roof would be good, unheated. Randy said that the cheapest way is to move the scope, not the house. Randy also mentioned a platform with wheels, and a lift lever, to jack things up for moving, like a drill press (\$70). Randy has already targeted two of his trees that have to go. Noel said that a good thing about a permanent setup is that there is no realignment needed.
- On that note, Josef asked if there were any thoughts about a permanent place in Rochester for a public observatory. Randy asked if anyone had been to the children's' learning center out by Lourde's. Jerome mentioned that the path to the observatory behind RCTC might be a good Eagle Scout project. Josef

said that as soon as we have a permanent place, there would need to be someone to maintain it, etc. Bob Fealey mentioned that there is the ??? Observatory west of the Twin Cities, with a 12-inch refractor, a bunch of reflectors, with a program in the summer. Luka asked if that was the one from the Minnesota Astronomical Society, Bob said yes.

- After all the open discussion topics, Randy mentioned that we should get through the NCRAL convention first. Randy said that Dean did get letters sent out last week for vendors to send stuff. Josef asked about someone to loan a generator, Randy said that he would encourage battery use.

Featured Presentation

- NONE. NCRAL 2017 and open discussions.

20:37 – meeting adjourned.

Submitted by Brandon Wyman - Rochester Astronomy Club secretary

NCRAL 2017 Conference

21-23 April 2017

Eagle Bluff

Lanesboro, MN

Friday April 21
1:00 PM 3:00 PM NCRAL staff setup
3:00 PM 4:30 PM Open registration, welcome package, map included
4:00 PM 4:30 PM Portable out-reach planetarium demonstration #1
4:30 PM 4:45 PM Break
4:45 PM 5:15 PM Portable out-reach planetarium demonstration #1
5:15 PM 5:30 PM Break
5:30 PM 6:30 PM Dinner
6:30 PM 7:00 PM Welcome
7:00 PM 7:45 PM Robert Mutel - The Iowa Robotic Telescope
8:00 PM Sun rise Observing

Saturday April 22
8:00 AM 9:00 AM Breakfast
9:00 AM 9:45 AM Carl Wenning - Astronomical Bucket List
9:45 AM 10:30 AM Armando Manduca - The Most Productive Scientific Instrument Ever Built - The History and Discoveries of the Mt. Wilson Telescope
10:30 AM 10:45 AM Break
10:45 AM 11:00 AM Group photo
11:00 AM 11:45 AM Steve Kawaler - Architecture of Planetary Systems Through Host Star Variability
11:45 AM 12:45 PM Lunch
12:45 PM 1:00 PM Break
1:00 PM 1:45 PM Russ Durkee - Equipment and Projects to Include More Student Work

1:45 PM	2:30 PM	Karl Young - Measuring the Cosmic Microwave Background with Balloon-borne Telescopes
2:30 PM	2:45 PM	Break
2:45 PM	3:00 PM	Bingo
3:00 PM	3:45 PM	Dave Falkner - 500 Years of Astronomy - How the Giants of Astronomy Changed Our View of the Universe
3:45 PM	4:45 PM	Business Meeting
4:45 PM	5:30 PM	Break
5:30 PM	6:15 PM	Banquet
6:15 PM	7:15 PM	Jennifer Anderson - Experimental Impact Cratering
7:15 PM	7:45 PM	Awards and wrap-up
7:45 PM	Sun rise	Observing

Sunday April 23

8:00 AM	9:00 AM	Breakfast
9:00 AM	11:00 AM	Check out