

**\* CAS \***

# **Charlottesville Astronomical Society Monthly Meeting**



**March 2, 2016**

# Agenda

- **Welcome ~ New Members and Guests**
- **Guest Speaker, Edward Preston – The Cosmic Distance Ladder**
- **Club Business**
- **Member Activities**
- **Outreach Activities**
- **Club/Member Recognition and Awards**
- **Door Prize Drawing**
- **Closing Thoughts**





# *WELCOME!*

## *NEW MEMBERS AND GUESTS*

- New Members?
- Guests?

# Guest Speaker Edward Preston

## The Cosmic Distance Ladder



- Born and Raised in Atlanta, Georgia
- Georgia Tech: Bachelor of Mechanical Engineering, Masters in Industrial Management
- USAF, Missile Site Civil Engineer
- Allied Chemical, Adolph Coors, Celanese Chemical Corp: Project Manager, Project Engineer, Design Engineer, Mechanical Engineer
- 30 Year Interest in Amateur Astronomy
- Houston Astronomical Society Member 1986 – 2008, Served Two Years as Society's Treasurer, 18 Years as Observatory Treasurer
- Regularly Attends the Texas Star Party
- Joined the Charlottesville Astronomical Society 2008; Served as Treasurer, currently serving as Director, Club Equipment Assets
- Active in Outreach, Solar, Lunar, and Night Sky Observing, Public Presentations, and Laser Night Sky Tours
- **Current Ambitions:**
  - ***Become Proficient with Astro-Imaging***
  - ***Setup, Operate, and Observe with my 10", f/4.7 EP (Ed Preston) Dobsonian in < 60 Seconds***



# Club Business



# Financial and Membership Status

a/o February 29, 2016

- CAS Checking Account Balance : \$5310.40
- Uncleared Checks : \$0.00
- Net Balance : \$5,310.40
- Petty Cash : \$109.00
- **Total CAS Cash Assets :** **\$5,419.40**
- **New Members:** **2** Patricia Hommel and Eric Walder
- CAS Memberships:
  - Individual 17
  - Family 9
  - Senior 23
  - Student/Military 0
  - Educators 6
  - # of Memberships 55
  - **Total Members\*** **64** (\* Includes one additional person per family membership)

Michael Hegedus, CAS Treasurer

March 1, 2016



# Membership Benefits

- ***Club Observing at Private and Restricted Dark Sky Sites***
- ***Club Retreats and Special Events (e.g. 8/21/2017 solar eclipse)***
- ***Club Field Trips***
- ***Club Social Events***
  - *Family Day: Monthly Mtg at JMU's John C. Wells Planetarium (Sun. June 5<sup>th</sup> at 2 PM)*
  - *Picnic (tentative, July – August timeframe, tbd)*
  - *Christmas Party (December tbd)*
- ***Club Mentoring, Training, and Certification Program***
  - *26" Clark Refractor Operator Training & Certification*
  - *New/Novice Member Mentoring Program (e.g., the purchase and use of astronomical telescopes, celestial navigation, how to read star charts, how to locate/identify galaxies, nebulae, and star clusters generally not visible to the naked eye, etc.)*
- ***Club Loaner Equipment***
- ***Club Monthly Meetings and Guest Speakers***
- ***Membership in the Astronomical League***
- ***Membership in the International Dark Sky Association***
- ***Discounts***
  - *Astronomy and Sky and Telescope Magazine Subscriptionss*
  - *Equipment at Selected Manufacturers and Retailers*



# Club Logo Shirts and Hats

*(Minimum Order is Six of Any One Item)*

Item (Royal Blue or Orange)	Member Price
Men's Polo Shirts: S, M, L, XL	\$20.00
Men's Polo Shirts: 2XL, 3XL, 4XL, 5XL, 6XL	\$25.00
Ladies' Polo Shirts: S, M, L, XL, 2XL, 3XL	\$20.00
Watch Cap/Beanie	\$15.00
Baseball Cap	\$20.00



# Equipment Discounts

- **OPT (Oceanside Photo and Telescope)** (Call 800-483-6287 - Mention Charlottesville Astronomical Society) Club Discounts are:
  - 2% - Mounts
  - 10% - TPO Accessories
  - 5% - Everything Else
- **iOptron** <http://www.ioptron.com/> - Club members can save 5% off the regular price for a limited time (US and Canada only) when five (5) or more members make purchases in the same week. Just type “Charlottesville Astronomical Society” club name in the notes when ordering.

***Where do you shop and what manufacturers and retailers would you like to see included on this list?***



# **Member Activities**

*Club Observing and Other Events*



# UVA Department of Astronomy Events

- **Friday, March 4<sup>th</sup>, McCormick Observatory Public Night, 9 – 11pm**
- **Friday, March 18<sup>th</sup>, McCormick Observatory Public Night, 9 – 11pm**
- **Friday, April 8<sup>th</sup>, Fan Mountain Observatory Public Night, 7 – 11pm**



# UVA/NRAO Colloquia

Date	Time and Location	Host	Name and Institution	Title
Thur, Mar 3, 2016	4 PM NRAO Aud	UVA	<a href="#">Jo Bovy</a>	Stellar Populations and Dynamics in the Milky Way
Thur, Mar 17, 2016	4 PM NRAO Aud	NRAO	<a href="#">Peter Capak, IPAC</a>	Oceans Of Data And Rosetta Stones: Combining Large Data Sets And Detailed Observations To Understand The High Redshift Universe
Thur, Mar 24, 2016	4 PM NRAO Aud	NRAO	<a href="#">Tom Essinger-Hileman, JHU</a>	Searching for the Signature of Inflation in CMB Polarization: the ABS and CLASS Experiments
Thur, Mar 31, 2016	4 PM NRAO Aud	UVA	Aleks Diamond-Stanic	Ejective Feedback and the Gas Around Galaxies
Thur, Apr 7, 2016	4 PM NRAO Aud	UVA	<a href="#">Sarah Horst, JHU</a>	Understanding Planetary Haze Formation: Lessons from the Lab
Thur, Apr 14, 2016	4 PM NRAO Aud	NRAO	<a href="#">Tessa Baker, Oxford</a>	Testing Gravity on Cosmological Scales
Thur, Apr 28, 2016	4 PM NRAO Aud	UVA	Zeljko Ivezic	LSST: the greatest movie of all time
Thur, May 5, 2016	4 PM NRAO Aud	UVA	<a href="#">Hilke Schlichting</a>	Crash, Boom, Bang: Giant Impacts & the Formation of Planets at home and abroad
Thur, May 12, 2016	4 PM NRAO Aud	NRAO	Michael Rowan-Robinson	Far infrared and submillimetre surveys, from IRAS to Spitzer-SWIRE and Herschel: A Tribute to Carol Lonsdale





# “What’s Up”

~ March 2016 ~

- <http://www.jpl.nasa.gov/video/details.php?id=1417>



# 7 Club Observing Sites

- **Three Residential**
  - Susan Bender's Farm
  - Rich Drumm's Farm
  - John Avellone's Spontaneous Skyline Drive Sites
- **Two Restricted**
  - Leander McCormick Observatory – *Rich Drumm*
  - Fan Mountain Observatory – *Rich Drumm*
- **Two Overnight Retreat**
  - Fan Mountain - *Rich Drumm*
  - Bear Mountain (Pending) – *Scott Duresky*



# Upcoming Club Observing

***Observe/Cancel Decision: Susan Bender or Rich Drumm***

**Saturday, April 2, 2016, 7-11PM**

***Messier Stroll/Walk and Member Observing at Rich's Farm – Lombardi Observatory, 3140 Burnley Station Road, Barboursville, VA*** *Directions: Coming from Charlottesville, North on US 29, turn right at Burnley Station Road (shortly after Proffit Road), 3140 will be on the left – Leo's trailer (Lombardi Observatory will be in the field*

**Saturday, April 30, 2016, 7-11PM**

***Member Observing at Susan's Farm - 3129 Old Lynchburg Road, North Garden, VA*** *Directions: Coming from Charlottesville, South on US 29, turn left at Rt 708, turn right at 4-way stop, go 1.9 miles and turn left into the driveway and pick your place in the field*



# **Member Activities**

*Monthly Meetings, Field Trips, Retreats,  
and Special Events*



# Upcoming Member Activities

- **Thursday, March 24, 2016, 9 AM - 6 PM**, VPRSF at JPJ Arena, Judges Needed ~ Register at <http://vprsf.org/judge-or-volunteer/>
- **Saturday, April 2, 2016, 7-11PM**, Messier Stroll/Walk and Member Observing at Rich's Farm
- **Wednesday, April 6, 2016, 7-10PM**, CAS Monthly Meeting at LMO
- **Thursday- Friday, April 7-8, 2016**, Northeast Astro-Imaging Conference, at Crowne Plaza Conference Center, Suffern, NY
- **Friday-Sunday, April 8-10, 2016**, Northeast Astronomy Forum, at SUNY Rockland Community College, Suffern, NY
- **Saturday, April 30, 2016, 7-11PM**, Member Observing at Susan's Farm



# 2016 Monthly Meetings

- **Apr 6, 2016, LMO** – Trey Wenger, UVA Graduate Student, “Structure in the Milky Way”
- **May 4, 2016, LMO** – Nicholas Troup, 4th Yr, UVA Grad Student, “Combing the Brown Dwarf Desert with APOGEE”
- **Jun 5, 2016, JMU** – CAS Family Day, Sunday - 2 PM, JMU’s John C. Wells Planetarium
- **July 6, 2016, LMO** – Sabrina Stierwalt, Astrophysicist, UVA, NRAO “ALMA Telescope, Chile” or “About Galaxy Mergers”
- **Aug 3, 2016, LMO** - Open
- **Sep 7, 2016, LMO** – Robin Garrod, Ph.D, UVA Assistant Professor of Chemistry”

*Guest Speakers for the August, October - December 2016 Monthly Meetings are being sought, if you know of potential speakers please see or contact me.*



# Field Trips ~ Pending

- **NASA Goddard (via Dave Rossetter's contact)**
- **NASA Wallops Island (via Dave Rossetter's contact)**
- **Green Bank, WV, NRAO – Combine with Club Retreat (?) at Bear Mountain**



# Club Retreats (Pending)

- **Weekend (Friday dusk to Sunday morning)**
  - Early Fall (September or October)
  - Fan Mountain - Rich Drumm
  - **Bear Mountain – Scott Duresky** *(Combine with Field Trip to Green Bank – NRAO)*





# 2016-17 Special Events

- JMU Planetarium Family Day 2-5 PM, Sunday, June 5, 2016
- Family Picnic-Star Party – to be scheduled for July or Aug 2016, 7-11 PM
- Christmas Party, Friday ??, 7-9 PM, to be scheduled for early December 2016

**\*\*\*\*\**LATE BREAKING NEWS*\*\*\*\*\***

***New Solar Eclipse Observing Location!***

***~ Camp Nakanawa, near Crossville, TN***

***(Steve Layman, Dave Miller and John Lynch coordinators)***



# **August 21, 2017 Solar Eclipse**

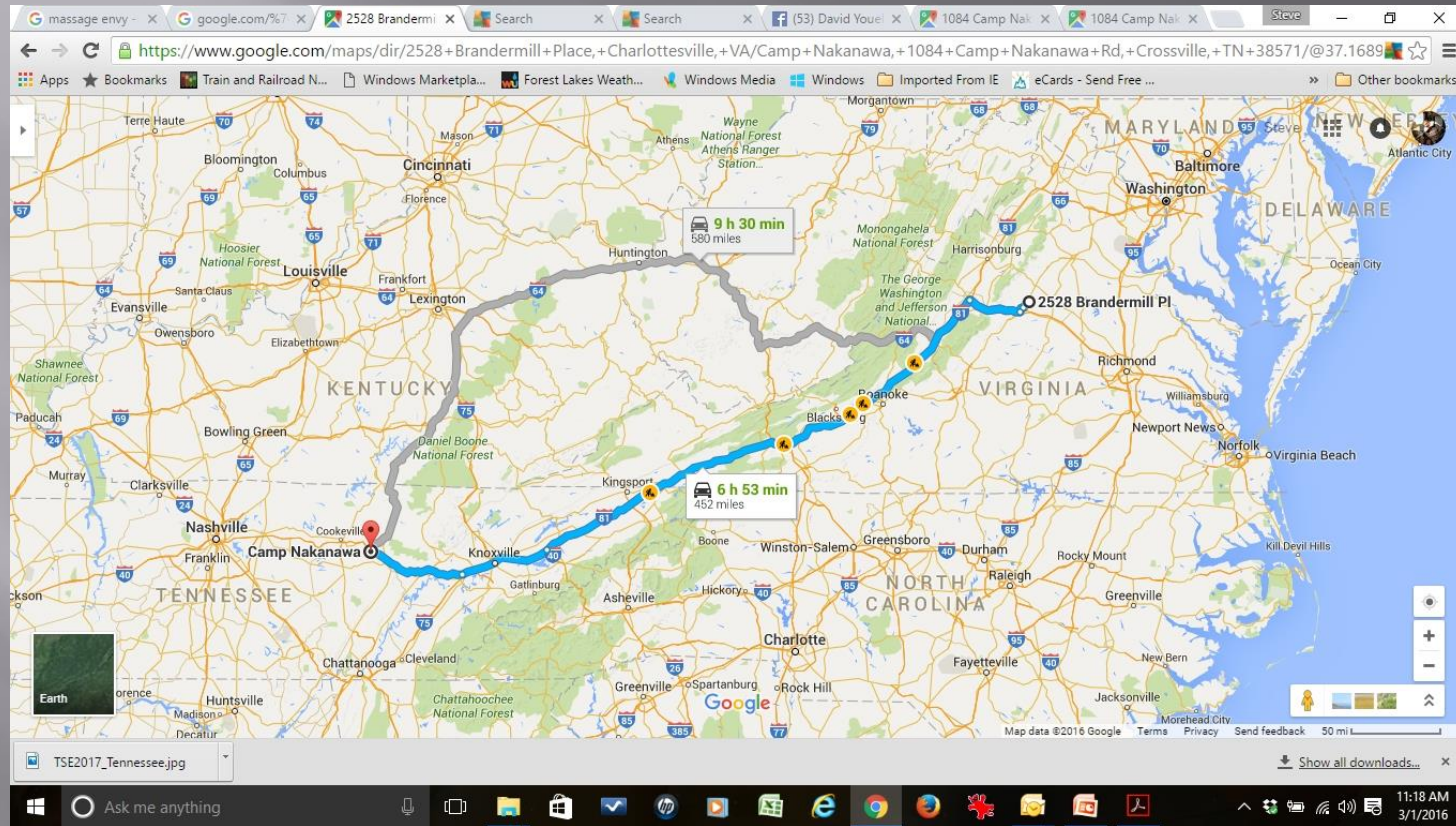
## **Camp Nakanawa, near Crossville, TN**



# 2017 ECLIPSE

Lodging at Camp Nakanawa  
Crossville, TN

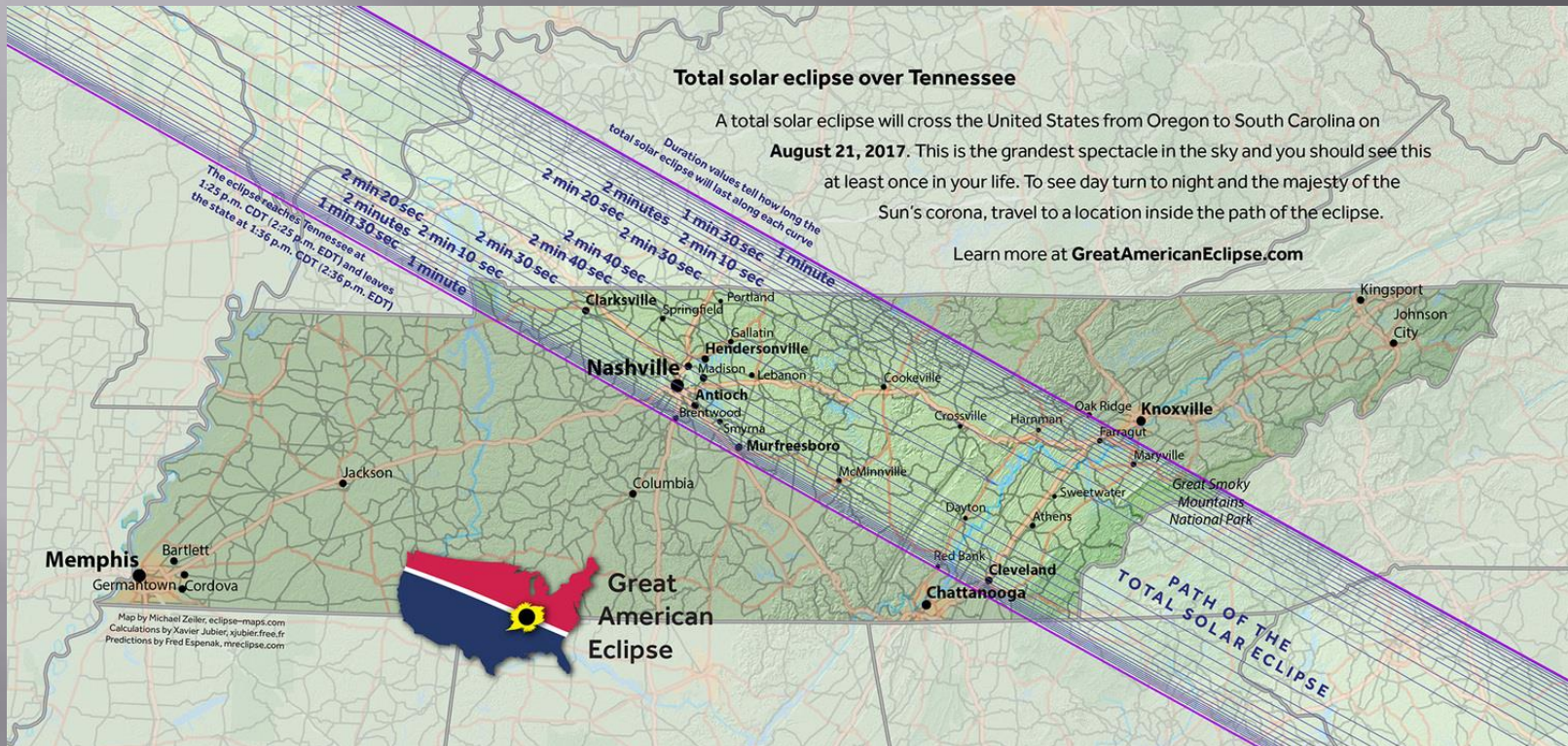
# Travel from Charlottesville



6 hr. and 53 min. from Charlottesville  
By way of Interstate Highways I-64, I-81 and I-40



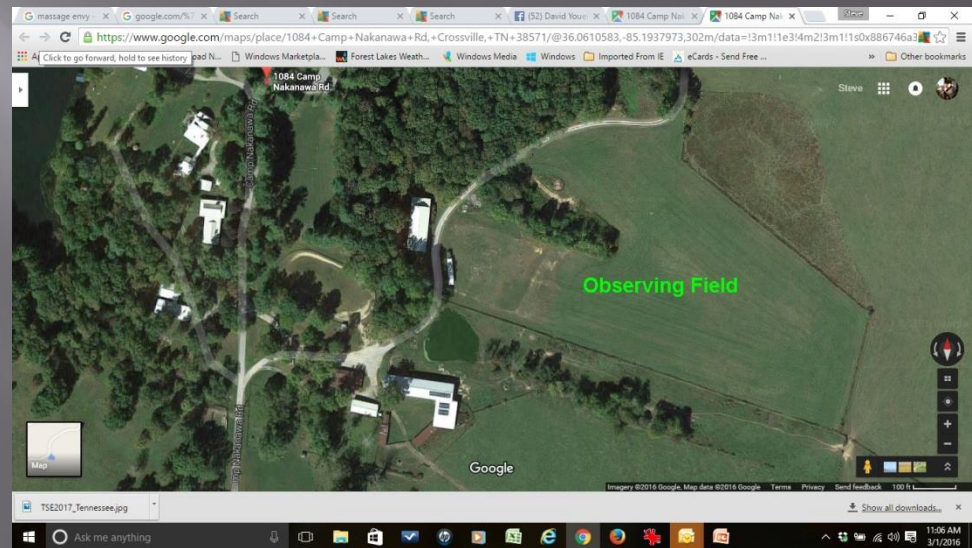
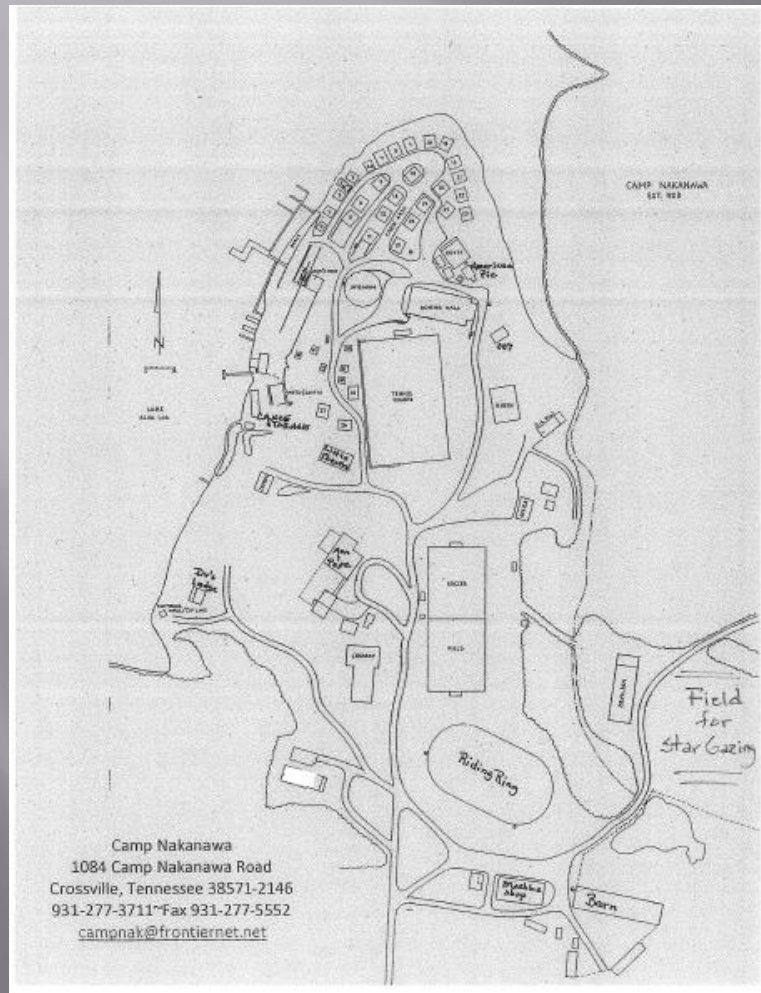
# Eclipse Track



A little more than 2 minutes and 30 seconds of totality



# Camp Map



# Camp Background

- ▣ Camp Nakanawa is a Girls Camp established in 1920. The season runs mid- June through the end of July
- ▣ Located on 1,000 acres on the Cumberland Plateau, 13 miles west of Crossville, TN and just south of I-40
- ▣ Camp centers on a lake and has a variety of trails, courts and activities
- ▣ The camp has hosted astronomy events and star parties in the past
- ▣ My wife has been associated with the camp for more than 50 years as camper and counselor and my daughter is Junior Camp Director in 2016

# Weather Statistics

- ▣ The weather for the area on August 21 for the last 10 years has been
- ▣ Low 64°F (18°C)
- ▣ High 84°F (29°C)
- ▣ Dew Point ranges between 56°F and 68°F (13°C and 20°C)
- ▣ Sky conditions at approximately 1:30 pm 4/9 clear and 5/9 partly cloudy



# Details for Summer 2017 Eclipse Event

- ▣ We can check in on Saturday, August 19<sup>th</sup> and check out Tuesday, August 22<sup>nd</sup>
- ▣ There is no minimum number of participants required
- ▣ The cost is \$50 per night per person. This includes 3 meals. If we decided to do a brunch and dinner the cost would be \$45.
- ▣ There are a variety of accommodations available including bunk houses and small cabins

# Details Continued

- ▣ There are male and female bathhouses for restroom and showers
- ▣ Camping may be available but cost would be the same
- ▣ Dogs must be on a leash at all times and cleaned up after
- ▣ We would be required to have a Red Cross certified lifeguard if using the lake
- ▣ Meals would be served at a set time in the dining hall and they would work with us on a menu

# Details Continued

- ▣ We would need to bring bed linens or could sleep on bunks using sleeping bags
- ▣ We would be required to do basic cleanup when leaving (sweeping cabin and taking trash to dumpster)
- ▣ The Camp is a smoke-free area
- ▣ Alcoholic beverages are allowed in moderation
- ▣ No hair dryers or high wattage appliances
- ▣ Campfires only in approved areas

# What's Next

- ▣ They would like a preliminary number from our club by the end of March so that they can determine if there is room to open this up for any other interested astronomy clubs
- ▣ Final payment would be due July 1, 2017

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Camp staff and locals would very much appreciate being able to look through our scopes if we were to have a star party one evening.

# **Member Training, Certification, and Mentoring**



# Member Training, Certification, and Mentoring

- **Clark 26" Refractor Operator Training & Certification – completed 2/13/16**
- **Member Mentoring – in process, mentors have been assigned to each interested member**
  - **Volunteer Mentors (7)**
    - Steve Layman
    - Wes Epperly
    - Bill Phillips
    - Allan Mayer
    - Rich Drumm
    - Ed Preston
    - Karl Stein
  - **New/Novice Members**
    - Jane and Bill Clarke
    - Carolyn Chionchio
    - Ed Tourangeau
    - And any member with an unused telescope in a closet or garage

***Assigned Mentor and New/Novice Member get together at a club observing activity for Astronomy 101 training and hands-on OJT sessions***

# **Member Activities**

## *Club Loaner Equipment*



# Club Equipment

- Club Equipment Status as of Feb 1, 2016
- What's Available for Member Check-out?

<http://cvilleastro.com/club-telescopes-available-for-club-member-use/>

- Contact Ed Preston to Checkout Club Equipment or for additional information





# Member Activities

## *Web Site*



# CAS Web Site Status

- **Larry Saunders conducted Course on Website Management 101 on 2/13/16, possible advanced course at tbd date**
- **Calendar Updates**
  - **Member Activities**
  - **CAS Outreach Activities**
  - **NRAO and UVA Colloquium – Live and Video**
  - **UVA and JMU Lecture Schedules**



# CAS Outreach Activities



# Upcoming Outreach Activities

- **March 5, 2016, 1-4PM**, Ruckersville, Elementary School Science Exposition - **Rich**
- **March 24, 2015, 9AM-3PM**, Virginia Piedmont Regional Science Fair, JPJ Arena (Judge Physics and Astronomy category exhibits) - **Steve**
- **April, 1, 2016, 7-10PM**, 1<sup>st</sup> Fridays at Ivy Creek - **Steve**
- **April 8, 2016, 6-11PM**, UVA Public Night at Fan Mt - **Rich**
- **April 29, 2016, 7-10PM**, Heidi's Night at LMO - **Steve**
- **Late April – Early May**, Palmyra Girl Scout Troop Night Sky Observing - **Rich**
- **May 12, 2016, 7-10PM**, Astronomy Night at JMRL, Northside Branch - **Fritz**
- **May 14, 2016, 10AM-10PM**, Astronomy Day at Leander McCormick Observatory - **Steve**



# **Club/Member Recognition and Awards**



# Letter of Appreciation

- **Rob Capon**
- **Mike Hegedus**
- **Plus . . . ?**

To the Charlottesville Astronomical Society

I wish that I had had everyone "sign in" when members who volunteered came to help retire our Free Union Observatory in 2015. Unfortunately, I did not.

Therefore:

To the CAS through whose organization the project was put forth and directed by Rob Capon and to those of the CAS who volunteered their time and labor, I and my family send our sincere thanks. We are forever indebted to your kindness.

John passed away 9/26/2015, less than a month after the dome made its way to CA with its new owner.

The observatory pad remains and it and the field are available to CAS members should you wish to use it. Just please call/e-mail ahead.

Sincerely,



Mrs. John T. Yates, Jr.

[kerinyates@hotmail.com](mailto:kerinyates@hotmail.com)

434 964 1840



# Member Awards

## Astronomical League and Night Sky Network

- **Astronomical League Messier Object Observing Award**

see: <https://www.astroleague.org/al/obsclubs/messier/mess.html>

**Jack Mellott**

- **Night Sky Network Outreach Award Pins:**

**Larry Saunders**

**Steve Layman**

**Ed Preston**

**Michael Hegedus**

**Richard Drumm**

**Marianne Kish**

**Wes Epperly**

**Scott Duresky**

**Chuck Murphy**



# Door Prize Drawing

*Did you enter  
your name for  
the door prize  
drawing?*



# Closing Thoughts

- *“People who think they know everything are a great annoyance to those of us who do.”*  
~ Isaac Asimov



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- *“People who think they know everything are a great annoyance to those of us who do.”*  
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- *“I'm sorry, if you were right, I'd agree with you.”* ~ Robin Williams



# Closing Thoughts

- *“People who think they know everything are a great annoyance to those of us who do.”*  
~ Isaac Asimov
- *“I'm sorry, if you were right, I'd agree with you.”*  
~ Robin Williams
- *“Roses are red, violets are blue, I'm schizophrenic, and so am I.”*  
~ Oscar Levant



# Closing Thoughts

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