

* CAS *

Charlottesville Astronomical Society



February 2014



Welcome New Member(s)

Janice Wood

Leonard Soika

Charles Murphy

Ruth Douglas

&

GUESTS



Tonight's Speaker

Mars Foundation



Hillside Settlement

Club Business

- Dues are DUE – See Ed Tonight!
- 66 members (dues paid)
- Checking account and Cash on Hand: \$ \$3,760.98
- See Ed Preston for information on discounted subscriptions to Astronomy and Sky and Telescope



Club Business

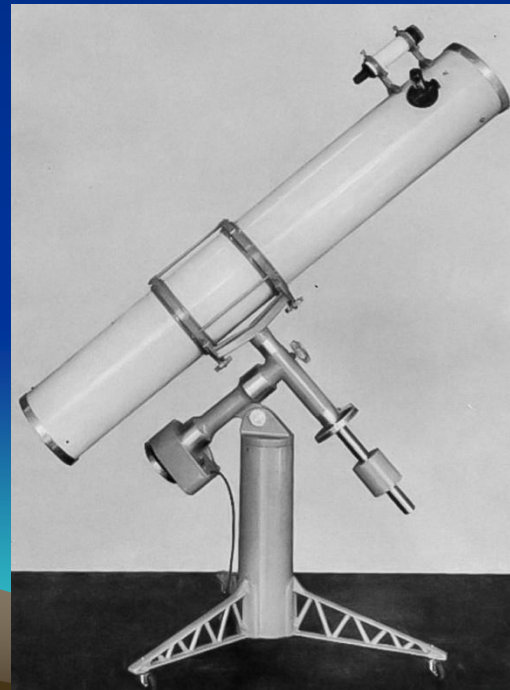
Board approved a 2014 budget that spends \$2590.00

- Astronomical League Dues \$385
- Web Site Hosting \$72
- Liability Insurance \$350
- IDA Donation/dues \$100
- Donation (Heidi Winter Fund) \$250
- Supplies (admin.) \$34
- Equipment \$200
- Library items \$0
- Science Fair prizes \$230
- Science Fair Sponsorship \$500
- Door prizes (books, calendars) \$59
- Educational & Astro-OP \$300
- Speakers \$50
- Fan Mountain concession \$60



Donated to Club

- Former Club President Ken Harker has donated a 10" Astrola Newtonian to the club which will be re-furbished and donated locally



Club Scopes

- Club Scopes available for use by members <http://cvilleastro.com/club-telescopes-available-for-club-member-use/>
 - See Rich for information richard@drummdigital.com



Future Club Events



McCormick Group Night

2/14, 7 to 9 pm, Group Night at McCormick Observatory, Girl Scout Troop 184, 6 nine year olds and 4 adults. Rich to present, Ed Preston to work telescope

Future Club Events



McCormick Group Night

2/28, 7 to 9 pm, Cub Scout Pack 19, 10 children from 7 to 10 years old with about 10 adults, plus Girls Scout Troop #427 with 22 children from 5 to 9 years old with 10 adults. Larry to present, **telescope operator ?**, Steve in Doghouse

Future Club Events



McCormick Group Night

3/14. 9 to 11 pm, Project Discovery (MACAA),
20 children (14 to 17) with 10 adults. **Presenter**
?, telescope Operator ?

Future Club Events



Saturday, February 22, 2014

10:00am - 3:00 pm

Key Recreation Center

Downtown Charlottesville

**Need HELP w/ Solar Viewing
and**

Passing out Materials

Future Club Events

Saturday, February 22

Astro OP Star Party



Blue Ridge School

Rain / Clouds Cancel

Future Club Events

Friday, March 21



The poster features a cosmic background with a bright sun or star in the upper left, a comet streaking across the sky, and a mountain range at the bottom. The text is arranged in a central column, with logos at the top right and bottom corners.

PVCC 2014

Family Starry Night

Friday, March 21st, 2014
8:15 PM - 10:15 PM
North Mall Meeting Room, Main Building
Piedmont Virginia Community College

Grand Prize for Kids
A Celestron AstroMaster 76EQ Telescope
For Kids Ages 12 and Under

ARMAN (434) 270 - 2010 MAT@PVCC.EDU

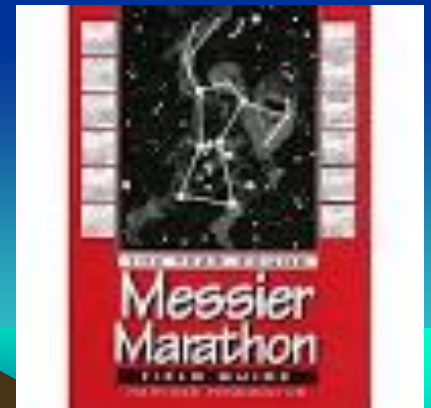
Future Club Events

March 29/30

Messier Marathon

Fan Mountain Observatory

Rain / Clouds Cancel



Future Club Events

Friday, April 4

Ivy Creek Star Party

7:00 – 10:00

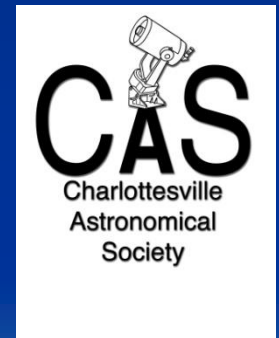


Future Club Events

Friday, April 25

Fan Mountain Open House

7:00 – 10:00





Outreach Awards

John Avellone

Rich Drumm

Chris Nichols

Bill Phillips

Ed Preston

Fritz Repich

Larry Saunders



Astronomical League Awards

Have you participated in any of the following?

- Fall Fan Mountain
- Hollymead Star Party
- Ivy Creek
- Rockfish Valley Star Gaze
- Open Doors session
- McCormick Group Nights

If so.....



Astronomical League Awards

The Astronomical League
Outreach Award



Some of you are getting close.....

Astronomical League Awards

Lunar Observing Award

- * observe 100 objects on the moon

- * log your observations

- *



<http://www.astroleague.org/al/obsclubs/lunar/lunar2.html>



Library Project

The Library is READY!

Check it out before you
leave tonight! Follow the
Signs

Upcoming Speakers

March

Building the New Horizons LORRI Imager: A 20
cm Ritchey-Chretien for Pluto

Steve Conard, Applied Physic Lab



Upcoming Speakers

April

Teaching Astronomy at the High School Level
Jamie Bourland, Blue Ridge School



Upcoming Speakers

May

Working on Dark Sky Program

or

NRAO guest



Upcoming Speakers

June

Sunday, June 1

2:00 pm

James Madison University



Member of the Month

- Born in Hackensack, NJ
- Boy Scouts through 10th grade – spent most camping nights with head outside of tent looking up
- Worked in UVA Physics Dept. darkroom in High School
- Got into police work after High School instead of going to Rochester Tech
- 1990 purchased a small telescope so he could show his son the night sky – spent more time than son looking through telescope
- Early astro-photo attempts involved holding a film camera to the eyepiece of a telescope that did not track

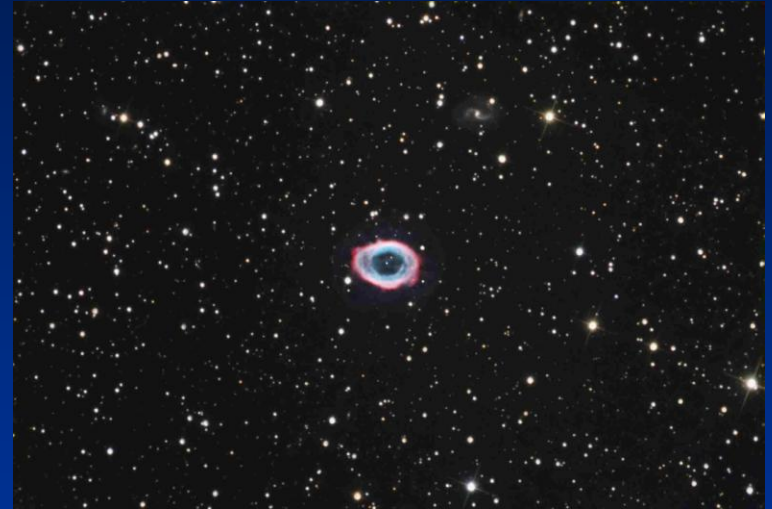


Member of the Month

- First REAL scope a Celestron Ultima w/ Nagler EP – thought it would last a lifetime.....
- First Visual and Imaging target – M57
- Moved to dark sky site in Fluvanna County in 2002 and built roll off observatory
- Started Imaging with ST-7 – now using STL11002M w/ filter wheel and adaptive optics
- Now using OGS 10” carbon fiber scope and AP1200GTO
- Website: <http://www.astral-imaging.com/>
-



Steve Reilly



My Favorite Object

Ed Preston

Charlottesville Astronomical Society

February 3, 2014



- Obsession 20" f/5
- 2500mm FL
- Used
- 2/3 list price
- Would I get my money's worth?



M51 - The Whirlpool Galaxy

- NGC5194, with companion galaxy NGC 5195.
- In constellation Canes Venetici, close to Big Dipper handle end star, Alkaid.
- Thanks to SN2005cs distance is now refined to 23 ± 4 MLY away.
- Red shift recession 463 ± 3 km/sec.
- The bright disk is 43,000 LY across.
- Mass is about 160 billion solar masses.

M51 - The Whirlpool Galaxy

- Recent computer simulations indicate that about 500 to 600 MY ago, the companion galaxy passed very close, moving from far side to near side, causing the kink in arm on north side. About 50 to 100 MY ago, the companion passed from near side to far side, causing the kink in arm at the SW edge.
- Eventually the two galaxies will merge to form an elliptical galaxy.



CAS Astro-OP Activity/Status ~ 12/5/13 – 1/8/14

- **Activities/Events/Meetings**

- 1/16 – 1/17/2014 Madison HS, Ms. Alecia Mullins Earth Science classes, approximately 50 students: Ed Preston & Fritz Repich
 - Presentation: The Cosmic Distance Ladder – Ed
- 1/8/14 – 2/4/14 - Coordinated upcoming CAS Astro-OP activities and events for the Feb – Mar 2014 timeframe: Steve, Ed, Fritz
- CAS Astro-OP E-News issue published and distributed on Jan 23rd
- 1/30/14 - Attended “Pluto, Planet or Pretender” lecture at JMU; met with Shanil Verani to discuss CAS support for JMU’s (Mar 23rd-29th) “Starry Nights Harrisonburg” initiative (see separate charts on events & activities)
- 2/3/14 – Greene County Branch, JMRL Presentation and Star Party for approximately 20 students, parents, and grandparents: Steve Layman, Ed Preston, Rich Drumm, Fritz Repich
 - Presentation: Finding Things in the Night Sky – Ed
 - Night Sky Observations: Steve, Rich



Starry Nights Harrisonburg (1 of 2)

March 23-29, 2014

- Purpose: Weeklong series of free, public events to increase awareness and the steps needed to eliminate/minimize light pollution (*the overuse and misuse of artificial light at night*)
 - *Light Pollution:*
 - *wastes money and energy,*
 - *endangers human physical, mental, and spiritual health,*
 - *takes a tremendous environmental toll,*
 - *erases the stars from our skies*
 - *And, it's almost entirely unnecessary - we can have responsible lighting that ensures safety and security without light pollution*
 - Pre-Starry Nights Harrisonburg Events
 - *Saturday, Feb 22 - STEM Day at the Valley Mall, Light Pollution education & awareness*
 - *Tuesday, February 25 - local environmental groups meet at the JMU Planetarium to learn more about Light Pollution*
 - *Monday, March 10 - Starry Nights Harrisonburg website goes live. JMU video available*
- 

Starry Nights Harrisonburg (2 of 2)

March 23-29, 2014

- **Pre-Event Contests** - Poetry/Essay, Photography, Short Film (Winning films shown at Court Square Theatre on 3/29 and shared world-wide on the International Dark-Sky Association website)
- **Schedule** (Tentative; *Bold indicates possible CAS support/participation*)
 - Sunday, March 23 - Light pollution education/engineering competition at the ExploreMore Museum 1-5pm)
 - Monday, March 24 - “The City Dark,” award-winning documentary on the dangers of light pollution at the Court Square Theatre (plus Panel discussion?) 7:00-9:00 pm.
 - **Star Party. Telescope viewing from the Square. 9:00-10:00 pm.**
 - Tuesday, March 25 “The End of Night: Searching for Natural Darkness in an Age of Artificial Light,” a reading and presentation by author Paul Bogard. JMU Miller Hall 7:00-8:00 pm.
 - **Star Party. Telescope viewing from JMU quad. 8:30-9:00 pm.**
 - Wednesday, March 26 “What Can We Do About Light Pollution and Why Should We?” Public forum/workshop on light pollution solutions Harrisonburg City Hall 7pm
 - Thursday, March 27 “The Campus at Night: Controlling Light Pollution at JMU while saving money and maintaining safety.” Wilson Hall JMU Auditorium, 7:00-9:00 pm. Announce winners of photography & writing contests
 - **Star Party. Telescope viewing from JMU campus. 9:00-10:00 pm**
 - Friday, March 28 Night walks led by Sierra Club, Master Naturalists. Downtown, Purcell Park, etc;
 - **Astrophotography workshops at Reddish Knob/SNP;** Night bike rides led by local bike shops; Other events in downtown Harrisonburg.
 - Saturday, March 29 Film Awards show at Court Square Theatre. 5:00-6:00pm. Earth Hour. JMU campus. 8:00-10:00pm. **Star Party. Observing from JMU’s Astronomy Park. 8:00-10:00 pm**

Locust Grove Middle School
6368 Flat Run Road
Locust Grove, Virginia 22508
540.661.4480
Home of the Mustangs

Kimberly Crandall
Principal

Emily Dooley
Assistant Principal

January 29, 2014

Mr. Ed Preston, Treasurer
Charlottesville Astronomical Society
4269 Stony Point Road
Keswick, Virginia 22947

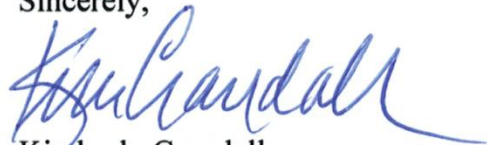
Dear Mr. Preston,

I am writing on behalf of the students and staff of Locust Grove Middle School. We were greatly surprised and moved by your generous gift of a hand-crafted telescope for our students to use in Astronomy Club. It has opened the door for yet another awesome learning opportunity for our students.

Our Astronomy club advisor and sixth grade science teacher, Ms. Dara Carter, is so grateful and very excited to be able to offer her students the first-hand experience of gazing at stars and planets that they otherwise would have never had.

Thank you again for visiting and giving such a wonderful gift from your community to ours.

Sincerely,



Kimberly Crandall

Upcoming Activities and Events

- **The Fluvanna Middle School Astronomy Club** meets on **February 10th and 24th** - the 2nd and 4th Monday of each month from approximately 3:15 PM to 5:00 PM. Speakers are needed to make presentations at club meetings and telescopes are also needed for solar and/or night sky observations
- **The Locust Grove Middle School Astronomy Club** (Orange County) meets on the third Wednesday (**February 19, 2014**) of the month from approximately 2:40 PM to 4:00 PM. Speakers are needed to make presentations at club meetings and telescopes are also needed for daytime solar and/or night sky observations
CAS Astro-OP will be coordinating with the Jefferson-Madison Regional Library to establish an Astronomy Outreach Roadshow that rotates among the library branches (8) throughout the year. Speakers are needed to make presentations and member telescopes are needed for night sky observations
- **The Blue Ridge School, Dyke, VA** will be hosting a **CAS Star Party** on **February 22, 2014** on the athletic fields abutting the main road to the school. No presentations will be necessary however we need members to setup their telescopes for observing by the students and faculty.
- **An editor is needed for the CAS Astro-OP E-News** – see Fritz Repich if you are interested
- **A volunteer is needed to create take home astronomy exercises** that would be handed out to students at presentations. For example, after a presentation on “Finding Things in the Night Sky”, the handout might be a complete listing, with an actual image, of the Messier objects along with a daily/monthly star map. The object would be to find the appropriate Messier object in the night sky then log its details including a rough sketch of what is seen. We are also open to your thoughts, ideas, and concepts on suitable take-home exercises for students in grades 4 - 12.
- *We welcome any support that you are able to provide ~ contact Steve Layman or Fritz Repich for info*

CAS Astro-OP Support Needs

- **Astro-OP County School System Coordinators (a/o 2/4/14)**
 - Albemarle/Charlottesville: Steve Layman
 - Greene: Fritz Repich
 - Orange: Ed Preston
 - PVCC: Armand Mottaghi
- **Coordinators Needed:**
 - *Fluvanna:*
 - *Madison:*
- **CAS Speakers & Repertoire of Topics (a/o 2/4/14)**
 - Ed Preston – “Finding Things in the Night Sky”, “The Cosmic Distance Ladder”, and the “10-Minute Moon”
 - Steve Layman – “Solar System and Night Sky”
 - Fritz Repich – “Our Sun”
- **Topic Speakers Needed:**
 - *Black Holes.....(3rd - 12th Grade Audiences)*
 - *Night Sky Cosmology(3rd - 12th Grade Outdoor Audiences)*
 - *History of Astronomy(3rd – 12th Grade Audiences)*
 - *How to Build A Telescope.....(5th - 12th Grade Audiences)*
 - *Moon and Planets.....(K – 5th Grade Audiences)*
 - *Other Topics ????.(K - 12th Grade Audiences)*
- **An editor is needed for the CAS Astro-OP E-News – see Fritz Repich**
- **CAS needs someone to create take home astronomy exercises** that would be handed out to students at presentations. For example, after a presentation on “Finding Things in the Night Sky”, the handout might be a complete listing , with an actual image, of the Messier objects along with a daily/monthly star map. The object would be to find the appropriate Messier object in the night sky then log its details including a rough sketch of what is seen. We are also open to your thoughts, ideas, and concepts on suitable take-home exercises for students in grades 4 - 12. – **See Fritz or Ed for details.**



What's Up This Month

In the Night Sky

<http://www.jpl.nasa.gov/video/>



Website of the Month

<https://nightsky.jpl.nasa.gov/>



10 Minute Topic

WEB SITE UPDATES



Larry Saunders, Web Master

Door Prize Drawing

