

# The Mason-Dixon Astronomer



## St\*r Points

### The Last Man on the Moon

February 2016 – Curt Roelle

A documentary film highlighting Capt. Gene Cernan, commander of the last of the Apollo lunar missions, is coming to theaters. Although released in 2014, “The Last Man on the Moon” has primarily been viewed in Europe and at special screenings at private venues. In January I attended a special screening with two members of the Westminster Astronomical Society (WAS) at the Charles Theater in Baltimore. The movie was very entertaining and factual in its content.

In December, 1972 the last Apollo lunar mission returned from the Taurus-Littrow valley. While there Cernan and lunar module pilot Harrison Schmitt spent more than three days living on the moon while traveling 22 miles in a dune buggy like electric lunar roving vehicle. As he took mankind’s last step on the moon, mission Commander Eugene Cernan said, “...we leave as we came and, God willing, as we shall return, with peace and hope for all mankind.” For many the end of that mission signified the end of an era for this country and the world.

Seeing the movie brought back the memory of the first time I met the Apollo 17 astronauts while a high school student living in the great plains. My best friend Steve and I attended a press conference for the three astronauts at a university campus in our home town. It was 43 years ago this month and only weeks after their return from the moon. Ronald Evans, the third member of crew, was the command module pilot and had remained in lunar orbit while the Cernan and Schmitt landed on the moon’s surface.

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## Pre-Meeting Dinner

- Wed., February 10th – 6pm.
- Harry's Main Street Grill  
65 W Main Street  
Westminster, MD 21157

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## Editor's Message

February 2016 – Dave Gede

This month the club goes through its annual transition of leadership. I want to personally thank the out-going officers for their service and congratulate the incoming officers on their election. As editor of the newsletter I have had a unique view into the workings of the club.

- The successes and the struggles.
- The projects and the programs.
- The various personalities that guide the club through the day to day process necessary to keep this proud organization running.
- I have witnessed firsthand the sacrifices that were made to ensure that the goals of the organization were met.

Again, thanks to all those who have taken the time to lead, who remain leaders, and who will lead this club in the future. May you continue to do great things!

Finally, this will be the last issue that I publish. Beginning next month Christian Ready will be taking over as editor and I am excited to see what he will do with the newsletter. It has been my pleasure to serve as editor for the last few years. As always...Clear Skies!

## February Meeting – Tech Talk



### Star Adventurer Astro Package – Curt Roelle

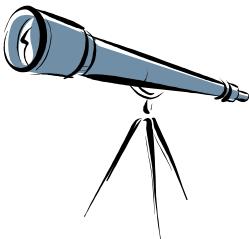
Curt Roelle is giving a tech talk about the Star Adventurer motorized mini mount Astro Package by Sky Watcher. It's a light, compact and sturdy German Equatorial mount intended for small telescopes and cameras.

### Weather Cancellation Policy:

With possible bad weather predicted for the meeting this month, please remember the club's inclement weather policy.

If the Carroll County school system is closed, closes early, or cancels after school activities, then all WASI activities at the Bear Branch Nature Center will be cancelled. This includes our monthly meeting.

## Upcoming Events From Our Calendars



- ❖ **Monthly Meeting** February 10<sup>th</sup>, 7:30 p.m., at Bear Branch Nature Center (BBNC)
- ❖ **Soldiers Delight Public Stargazing** February 13<sup>th</sup>, 8 p.m., at Soldiers Delight Natural Environment Area in Owings Mills
- ❖ **Planetarium Show** February 13<sup>st</sup>, 7:30 p.m., at Bear Branch Nature Center (BBNC)

## Join The Westminster Astronomical Society...

Joining WASI gives you a great opportunity to meet fellow astronomers and provides group memberships to the [Astronomical League](#) and the [International Dark-Sky Association](#). Additionally, benefits include access to our [Library](#) (over 500 astronomy-related books), the ability to borrow [club scopes](#), a subscription to the Astronomical League's *Reflector*, access to members-only observing sessions and sites, and club discounts on astronomical magazine subscriptions.

**Adult Membership is still only \$25 per year.**

**Junior Membership (under 18) is just \$5 per year**

<http://www.westminsterastro.org>

## St\*r Points for February...

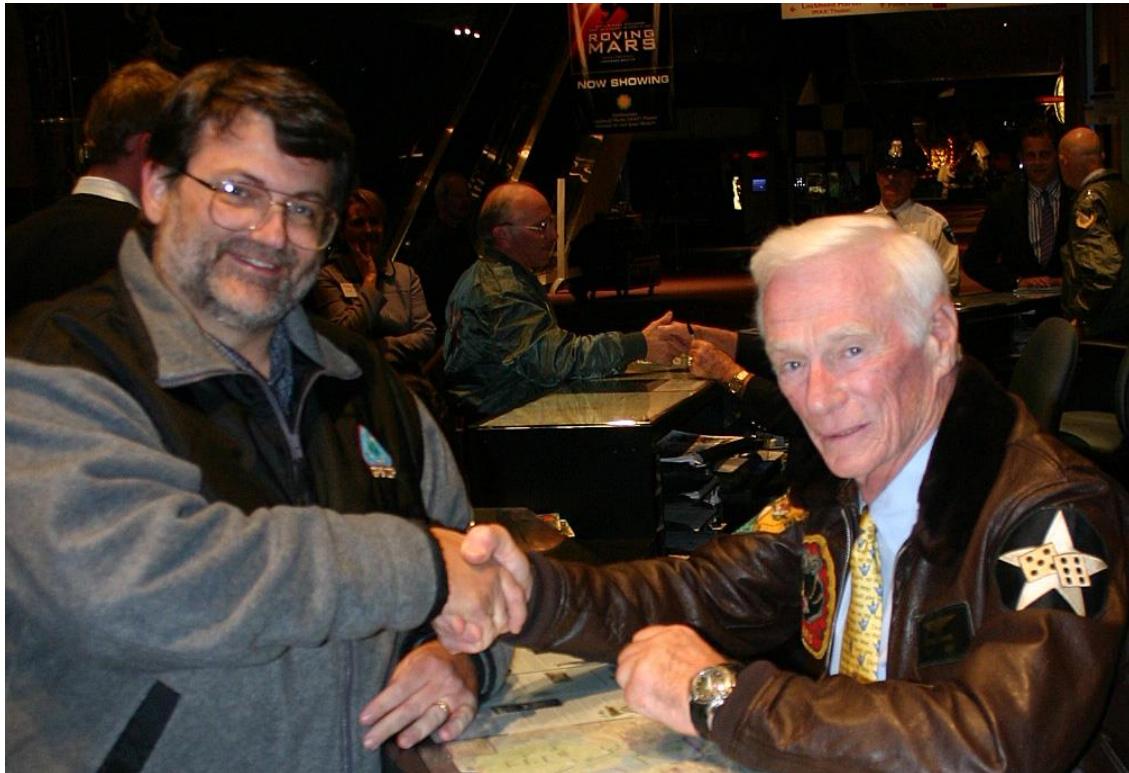
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When that 1973 press conference was over, the reporters headed to the phones. Suddenly Steve and I were alone with the astronauts were treated to a private audience with all three of them. They were each very gracious and unhurried as they answered our questions. Afterward, they asked for our addresses and later mailed both of us a signed crew photo.

It is interesting to look back at newspaper articles from that day. Cernan reflected on the turmoil in the country during the 1960s, noting "that the Apollo series, 'during this decade of strife,' has been an accomplishment of which Americans can be proud and can 'hold their heads up high.'" Likewise, future U.S. Senator Schmitt "expressed hope that the termination of the manned lunar program is temporary and that 'somewhere in the future' moon exploration will start up again and possibly lead to colonization." Who would have thought that 43 years later no other human would have walked on the moon?

The astronauts were also confronted by "criticism that space program monies could have been better spent in human welfare programs." The astronauts were quick to defend the Apollo explorations. "Cernan responded that all the Apollo funds were expended 'on earth' for jobs and in research at colleges. And, Evans noted, only 1.3 cents of each tax dollar has been spent on space research, compared to 45 cents of each dollar for social and other welfare programs."

"The Last Man on the Moon" is coming to U.S. theaters on February 26<sup>th</sup>.



Curtis Roelle with Apollo 17 commander Eugene Cernan in 2006. Photo by Tom Renn.

## 2016 Officers, Committees, and Board

The following are the 2016 Officers (elected), Committees (Appointed), and Board. (Changes noted with \*)

### Elected Officers:

<b>President:</b>	Jim Reynolds*
<b>1<sup>st</sup> Vice President:</b>	Christian Ready
<b>2<sup>nd</sup> Vice President:</b>	Steve Conard*
<b>Treasurer:</b>	Vanessa Thomas
<b>Secretary:</b>	Eric Fultz*

### Offices and Committees:

<b>Newsletter Editor:</b>	Christian Ready*
<b>Webmaster</b>	Jim Reynolds
<b>Bear Branch</b>	
<b>    Planetarium Director:</b>	Jim Reynolds
<b>Blaine F. Roelke Memorial Observatory Director:</b>	Steve Conard
<b>Charlotte's Quest Observatory Director:</b>	Bob Clark
<b>Observing Chairman:</b>	Steve Conard
<b>Librarian:</b>	Curt Roelle
<b>ALCOR:</b>	Bob Clark

### Board of Directors:

<b>Chairman:</b>	Curt Roelle
<b>Member:</b>	Brian Eney
<b>Member:</b>	Tony Falletta*



## The Loneliest Galaxy In The Universe

By Ethan Siegel

One greatest, largest-scale surveys of the universe have given us an unprecedented view of cosmic structure extending for tens of billions of light years. With the combined effects of normal matter, dark matter, dark energy, neutrinos and radiation all affecting how matter clumps, collapses and separates over time, the great cosmic web we see is in tremendous agreement with our best theories: the Big Bang and General Relativity. Yet this understanding was only possible because of the pioneering work of Edwin Hubble, who identified a large number of galaxies outside of our own, correctly measured their distance (following the work of Vesto Slipher's work measuring their redshifts), and discovered the expanding universe.

But what if the Milky Way weren't located in one of the "strands" of the great cosmic web, where galaxies are plentiful and ubiquitous in many different directions? What if, instead, we were located in one of the great "voids" separating the vast majority of galaxies? It would've taken telescopes and imaging technology far more advanced than Hubble had at his disposal to even detect a single galaxy beyond our own, much less dozens, hundreds or millions, like we have today. While the nearest galaxies to us are only a few million light years distant, there are voids so large that a galaxy located at the center of one might not see another for a hundred times that distance.

While we've readily learned about our place in the universe from observing what's around us, not everyone is as fortunate. In particular, the galaxy MCG+01-02-015 has not a single known galaxy around it for a hundred million light years in all directions. Were you to draw a sphere around the Milky Way with a radius of 100 million light years, we'd find hundreds of thousands of galaxies. But not MCG+01-02-015; it's the loneliest galaxy ever discovered. Our Milky Way, like most galaxies, has been built up by mergers and accretions of many other galaxies over billions of years, having acquired stars and gas from a slew of our former neighbors. But an isolated galaxy like this one has only the matter it was born with to call its own.

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Edwin Hubble made his universe-changing discovery using telescope technology from 1917, yet he would have found absolutely zero other galaxies at all were we situated at MCG+01-02-015's location. The first visible galaxy wouldn't have shown up until we had 1960s-level technology, and who knows if we'd have continued looking? If we were such a lonely galaxy, would we have given up the search, and concluded that our galaxy encompassed all of existence? Or would we have continued peering deeper into the void, eventually discovering our unusual location in a vast, expanding universe? For the inhabitants of the loneliest galaxy, we can only hope that they didn't give up the search, and discovered the entire universe.



*Image credit: ESA/Hubble & NASA and N. Gorin (STScI); Acknowledgement: Judy Schmidt, of the loneliest void galaxy in the known: MCG+01-02-015.*