



# CONSTELLATION

*The newsletter of the Middle Atlantic Planetarium Society*



*The BIG story...*

## Over 70 planetarians gather in Mystic, CT

Last month, the 2024 MAPS Conference convened at the Mystic Seaport Museum. Over 70 MAPS members gathered for four days of networking, sharing, and connecting. The theme of our conference was, “Launching Into the Next 100 Years,” and in addition to celebrating all that we have accomplished, we also looked ahead to what is in store for planetariums over the next century of existence!

There was much to celebrate at MAPS 2024 - including the fact that 20 of our conference attendees were first-time attendees to a planetarium gathering! Read on in this issue for more about this year's conference - and other updates from planetariums in the MAPS region...

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# “Hello, MAPS Members!”

*President’s Message by Noreen Grice*

Greetings on a beautiful summer day! Our 2024 MAPS Conference recently ended and we share wonderful memories. As I think of the best words to describe my feelings about the conference, I am drawn to these five words:

1

**Reach** – Many MAPS members are located from Maine to Georgia, and west to the Great Lakes. Not only did we have representation from many of these regions, but also from the Province of Quebec!

2

**Receptive** – MAPS members are especially open and responsive to ideas, impressions and suggestions. Plus we’re a friendly group!

3

**Reconnected** – MAPS members reconnected with colleagues and made new connections. Welcome, new MAPS members!

4

**Refreshed** – We immersed ourselves in learning about new resources and new ideas. We are inspired!

5

**Resplendence** – that feeling you get when combining a dazzlingly-brilliant night sky and sharing that moment with others under the dome!

We opened the 2024 MAPS conference with an outdoor reception and a special session under the planetarium dome where we welcomed new members. A special welcome to our 28 new MAPS members!

I personally had the opportunity to participate in the college/university planetarium user group meeting, present a paper on what the future of planetarium access might look like, and facilitate a forum on MAPS vision for inclusion, diversity, equity and accessibility. There were workshops and papers on educational strategies, innovative techniques and of course, demonstrations by visiting vendors.

There is a remarkable strength in the Middle Atlantic Planetarium Society, and it began with our founder, Margaret Noble. This year’s Margaret Noble speaker was Lee Ann Hennig. No stranger to MAPS, Lee Ann has been involved with MAPS for decades and represents the characteristics that are also associated with Margaret Noble, who was a mentor, educator, planetarian, lobbyist and a dreamer. Lee Ann shared with us a variety of letters from students. You never know what effect you will have on visitors. It is YOU who might change the course of a student’s motivation and future career!

*(message continues on next page)*

# “Hello, MAPS Members!”

*President’s Message by Noreen Grice (continued from previous page)*

Of course, none of this would have happened without the hard work of Brian Koehler and the staff of the Treworgy Planetarium at Mystic Seaport Museum. Thank you  $\times 10^6$ !

It was awesome seeing everyone in person, including at the user group meetings, and we don’t want to lose this momentum. We encourage all user groups to continue meeting online and share your work in The Constellation!

Earlier this year we held two All MAPS members’ Zoom meetings, and we plan to hold another one in the fall and one in the winter.

We’ll let you know the dates of those meetings. See you soon online!

Sincerely,

Noreen Grice, MAPS President



## Connect with MAPS!



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## MAPS Executive Committee

### OFFICERS:

#### **President - Noreen Grice**

You Can Do Astronomy  
New Britain, CT

#### **President-Elect - Tony Kilgore**

Irene V. Hylton Planetarium  
Woodbridge, VA

#### **Past President - Brian Koehler**

Treworgy Planetarium  
Mystic, CT

#### **Treasurer - Mike Francis**

Stars Science Theater  
Auburndale, MA

#### **Secretary - Amie Gallagher**

RVCC Planetarium  
Branchburg, NJ

### BOARD OF DIRECTORS:

#### **Stephen Dubois**

Whitworth Ferguson Planetarium  
Williamsville Space Lab Planetarium  
Ancient Eyes Music  
Williamsville / Buffalo, NY

#### **Paul J. Krupinski**

Mr. K's Mobile Dome Planetarium  
RMSC's Strassenburgh Planetarium  
Cheektowaga, NY

#### **Patty Seaton**

Howard B. Owens Science Center  
Lanham, MD

## MAPS Standing Committees and Committee Chairs

#### **Awards Committee**

Committee Chair: Kerri Kiker

#### **Constitution Review Committee**

Committee Chair: Mark Percy

#### **Education Committee**

Committee Chair: Lee Ann Hennig

#### **Elections Committee**

Committee Chair: Kevin Williams

#### **History Committee**

Committee Chair: John Meader

#### **Membership Committee**

Committee Chair: Mike Francis

#### **Memorial Committee**

Committee Chair: Paul Krupinski

#### **Program Committee**

Committee Chair: Tony Kilgore

#### **Publications Committee**

Committee Chair: Brian Koehler

#### **Website Committee**

Committee Chair: Tim Collins



*The Constellation* is the newsletter of the Middle Atlantic Planetarium Society (MAPS). It is published four times a year near the equinoxes and solstices. To submit an article, email [publications@mapsplanetarium.org](mailto:publications@mapsplanetarium.org).



# Photos from the 2024 MAPS Conference

The steps of the Treworgy Planetarium were a popular “photo op” for conference photos!



**LEFT:** CT University planetarians Michael Kerr, Noreen Grice, Dennis Dawson, Madisyn Brooks, and Kelsey Davis (image credit: Noreen Grice).



**RIGHT:** Sponsors Unite!  
Beth Moger, Annette Sotheran-Barnett, Michael Daut, George Barnett, and Mark Webb (image credit: Kate McCallum)



**MAPS 2024 Conference Group Photo!**

(image credit: Brian Koehler)

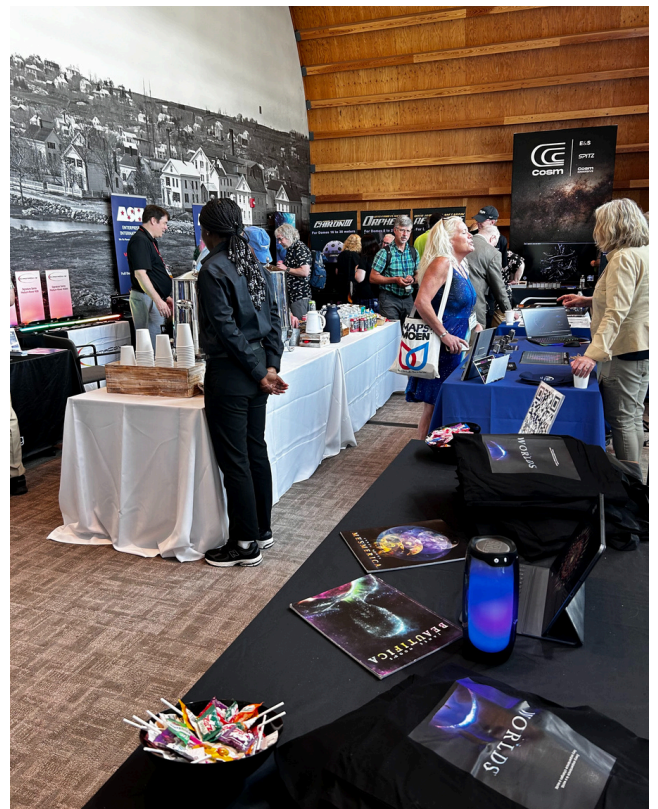


# Photos from the 2024 MAPS Conference



*The Vendor Hall, all set up and ready for visitors...*

*... and much more crowded during our “Vendor Visit” snack breaks!*



*(Image credit for all photos on this page: Kate McCallum)*



# Photos from the 2024 MAPS Conference

The need for air conditioning led to more sessions in the dome than we had originally planned. But let's be honest... that's where we wanted to be all along!



**LEFT: Kevin Kopchynski from the Seymour Planetarium at the Springfield Science Museum.**



**RIGHT: Patty Seaton from the Howard B. Owens Science Center.**



**LEFT: JT Towne from Omnidirectional Consulting.**



**RIGHT: Noreen Grice from You Can Do Astronomy LLC.**

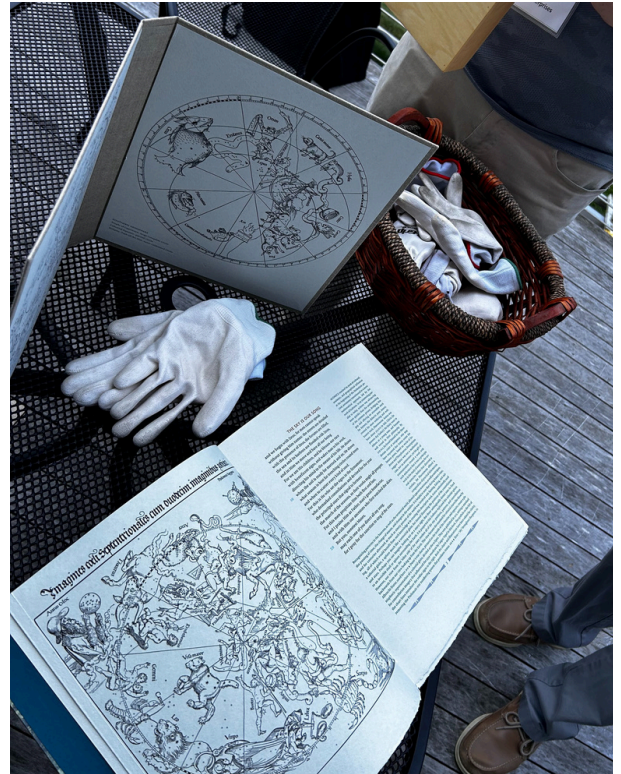
**(Image credit for all photos on this page: Noreen Grice)**



## Photos from the 2024 MAPS Conference



Mark Breen brings a little HISTORY to our maritime-history-museum-conference-host site! Attendees were able to don white gloves to handle *Phaenomena*, a didactic science poem written by Aratus in the year 350 BCE. (image credits: Christian Bradley Hubbs above, and Kate McCallum at right)



J.P. Chaffiotte leads a workshop about Spectroscopy (image credit: Kate McCallum)



Amie Gallagher leads a workshop about Moon Phases and Tracking the Moons of Jupiter (image credit: Christian Bradley Hubbs)





## Photos from the 2024 MAPS Conference



*The MAPS Banquet Dinner on Saturday night was a chance to celebrate our final night of the conference together (image credit: Christian Bradley Hubbs)*



*2024 Margaret Noble Address speaker Lee Ann Henning and MAPS President Noreen Grice (image credit: Noreen Grice)*

*The 2022-2023 MAPS Executive Committee (image credit: Noreen Grice)*





# Photos from the 2024 MAPS Conference

The 2024 MAPS Banquet saw the presentation of four awards to MAPS members.



*Tim Collins and Tony Kilgore each received a MAPS Fellow Award, given in recognition of seven consecutive years of membership in MAPS while making a significant contribution to the organization during that time.*



*Jordan Ecker received a MAPS Award of Recognition, given by Brian Koehler, for her tireless work to keep the Treworgy Planetarium moving forward during Brian's parental leave earlier in the spring of 2024.*



*Brian Koehler received a MAPS Award of Recognition, given by Noreen Grice, for his work as Chair of the Publications Committee to assume management of the MAPS Constellation newsletter.*



## Photos from the 2024 MAPS Conference

*The host staff was honored to welcome everyone, and humbled by the compliments and the recognition that they received (image credit: Patty Seaton)*



*Following our Banquet, our generous conference sponsors hosted a Hospitality Suite at the Conference Hotel, which featured, among other things, an INTENSE game of Bananagrams! (image credit: Amie Gallagher)*

*For the send-off lunch, conference attendees enjoyed lunch a la carte from the Mystic Seaport Museum's Anchor Cafe (image credit: Noreen Grice)*



# Québec Immersive Films



## -22.7°C

Directors: **Molécule, Dirty Monitor**  
Duration: **37 minutes**  
Companies: **fig55, Poolpio, Zorba Production**  
Distributor: **Hubblo**

Synopsis: This film is an immersive experience in the Arctic Circle inspired by the adventure of the musician Molécule. The viewer will experience the musical creation of the artist in an extreme environment and explore the Arctic, a hostile world made of mystical sounds and vibrations.



## ONCE UPON... MY STORY

Director: **Francis Gélinas**  
Duration: **22 minutes, 30 seconds**  
Company: **Maki Media**  
Distributor: **Hubblo**

Synopsis: *Once upon a time...* children telling tales from their own imagination in their own words. Brought to life in glorious animation, these stories brimming with charm, humour, and adventure blend reality and fantasy and plunge us into the unbridled imaginings of children.



## BÉBÉ SYMPHONIQUE

Director: **Noisy Head**  
Duration: **33 minutes**  
Company: **GSI Musique**  
Distributor: **Hubblo**

Synopsis: Combining 2D, 3D and frame-by-frame animation, this multimedia show transports children from birth to 18 months and their parents into a marvelous universe of shapes, colors and textures, designed to capture their attention.



## ONE SKY

Director: **Sébastien Gauthier & al.**  
Duration: **43 minutes, 38 seconds**  
Company: **Sébastien Gauthier 360 Productions**  
Distributor: **NOIRLab**

Synopsis: Award-winning movie *One Sky* is a collection of beautiful short films about constellations, astronomical instruments and scientific knowledge from various cultures around the world. Each chapter is presented in an original and engaging way with its own artistic style featuring the work of international artists.



## LANDS OF THE AMERICAS

Director: **Patrick Bossé**  
Duration: **45 minutes**  
Company: **fig55**  
Distributor: **Hubblo**

Synopsis: Like a travel diary, *Lands of the Americas* journeys through the works of René Derouin and the lands he has explored. Experienced in an immersive dome or through virtual reality glasses, this 360° film revolves around the artist's quest for identity, which spanned his 60-year career.



## UNTOUCHED

Director: **Michel Lemieux**  
Duration: **4 minutes, 50 seconds**  
Company: **4D ART**  
Distributor: **4D ART**

Synopsis: *Untouched* is an artistic look at life during the pandemic. Bonds between people crumble as society drifts. There's a powerful urge to touch and be touched. Everything seems so out of reach. *Untouched* is an experimental film by director Michel Lemieux. It is a short and immersive film imagined by the artist while living in isolation due to the pandemic in 2020.



## INTRODUCTORY ECONOMETRICS

Director: **Lydia Yakonowsky**  
Duration: **3 minutes, 45 seconds**  
Company: **Lydia Yakonowsky**  
Distributor: **SAS DIVRSION**

Synopsis: *Introduction to Econometrics* is an animated film that explores how various aspects of economic modelling can be creatively visualized. Taking an off-kilter approach to the subject, it frees curves from the bounds of theory and allows them to roam in a living and complex data universe, where graphical grid-like surfaces evolve to create new spaces, vast walls, and ceilings like a canopy of stars.



## WORLDS OF ICE

Director: **Philippe Baylaucq**  
Duration: **34 minutes**  
Company: **NFB (National Film Board of Canada)**  
Distributor: **Hubblo**

Synopsis: *Worlds of Ice* is a 360° contemporary full-dome film that envelops the spectator within worlds of ice that oscillate between the deeply familiar, the unconventional and the transformative. 34 minutes in length, *Worlds of Ice* is an immersive unravelling that reveals the many universes of ice.

## ABOUT L'EFFET QUÉBEC:

Québec-based companies, creators, and artists are global leaders within the field of digital creativity, including interactive installations; virtual, augmented and mixed reality; immersive films and exhibitions; architectural mapping; and AI entertainment. They are renowned worldwide for their creativity, innovation, storytelling, agility, and willingness to embrace risk.

## L'EFFET QUÉBEC:

The Export expertise cluster endows companies in Québec and elsewhere with shared and sustainable tools to facilitate discovery and networking among the industry's various players, sectors of activity, and markets.





# HUBBLO



# MAPS 2024 Business Meeting Minutes

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## MAPS Business Meeting Minutes --- Mystic, CT --- June 22, 2024

Meeting called to order at 1:22 pm.

Noreen Grice asked new members to raise their hands. We have lots of new members attending the meeting.

### **Secretary's Report (given by Amie Gallagher):**

- QR Code was passed around to share last year's Minutes.
- Paul Krupinski motioned to approve, Mike Francis seconded, Membership approved.

### **(Noreen Grice addressed the group prior to the Treasurer's Report)**

- How often do you visit the MAPS website?
- Before the Treasurer's report is given, we wanted to let you know that we used to have an outside consultant. Then our MAPS Website Committee updated it.
- Now we have moved into a multi-year agreement with PIXEL to do a complete revamp of the website. There will be training on it next year.

### **Treasurer's Report (given by Mike Francis):**

- We are in good standing.
- Balance Sheet and Profit & Loss docs can be found on page 18 of this newsletter.
- We have \$11,199 in checking account. \$42,730 in PayPal account.
- We've spent \$21,000 so far on this conference, and \$12,000 so far on the website.

### **(Question from the membership)**

- Will this be listed in the newsletter? **Yes**.

### **President's Report (given by Noreen Grice):**

- It is an honor to serve as President, along with the Board for collaboration.
- Last year, we created MAPS User Groups.
- Most conference attendees attended one of those meetings yesterday.
- Please see a Board member and we'll get you in touch with one or more of those groups.
- Yesterday's groups, please send your notes to the Publications Committee so they can include them in future issues of the *Constellation*.
- Last year we also increased collaboration by hosting two virtual meetings. We plan to host 3-4 virtual meetings each year, in addition to the annual conference.
- It takes a lot to run an organization like MAPS. Being on a committee is a great way to be involved.

# MAPS 2024 Business Meeting Minutes

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## COMMITTEE REPORTS:

### **Awards Committee (report sent in advance of the meeting by Kerri Kiker):**

- 2 people are receiving MAPS Fellow Awards.
- 2 people are receiving MAPS Certificates of Recognition.

### **Constitution Review Committee (report given by committee member Jordan Ecker):**

- The Constitution Review Committee (CRC) has not met since our recommendations for changes in the MAPS Constitution and Bylaws were reported to the Executive Committee (EC) in September of 2023.
- The EC presented our recommendations for fairly extensive changes to the Bylaws as 6 individual changes and 1 package of changes to the MAPS membership for online voting in the late fall of 2023. All changes were approved by the MAPS membership. The Audit Committee has been replaced by a periodic review by a CPA. All election related business is now the purview of the Elections Committee, and polling guidelines have been modified for online voting. The IPS Representative has been eliminated so as to align with the new IPS governance structure. Other committee duties were also realigned and clarified.
- The EC presented one of our recommendations for changes to the Constitution by email in May of 2024 for a planned in-person vote at the annual conference in June 2024. The EC included our recommendation for inclusive language in Article IV, and they added a proposed change allowing online voting for future constitution changes.
- The EC did not include our recommendation for clarifying language in Article V, nor was our recommendation for an additional Article VII that would specifically state that Bylaws shall be maintained, reviewed and updated.
- Results of the vote for the Constitution updates are still pending. We thank you for this opportunity to contribute to this organization's management.

### **Education Committee (report given by Lee Ann Hennig):**

- We'd love to have more members to contribute to the *Constellation*.
- We have all kinds of posters and activities that we will be adding to the website.

### **Elections Committee (report sent in advance of the meeting by Kevin Williams):**

- We just had a vote last January for Board of Directors. Thanks to all five candidates.
- In January 2025, we are voting for President-Elect, Secretary, Treasurer.
- Nominations and Seconds are due by November 1, 2024.

### **History Committee (report sent in advance of the meeting by John Meader):**

- John Meader had a meeting on Jan 4 with Steve Russo and Sam Storch.
- They discussed having something that could be mailed around to members.



# MAPS 2024 Business Meeting Minutes

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## **Membership Committee (report given by Mike Francis):**

- Mike Francis is the only one in the group.
- 95 members (paid and Life). Includes 28 new members.
- 41 members did not renew from 2023 to 2024. Some people forget about us.
- We want one Membership Committee member per state. They will try to organize their local members and find new members.
- Tim Collins: Can we split NY, since it's a large state?
- JT Towne: Can we put Delaware with PA?
- Still need: VT, PA
- Do you have a database of people? Loch Ness Compendium is old, but has a list. Mike has a partial (possibly incomplete) database.
- Noreen: we want to find lost planetariums and planetarians.
- At this conference, we have 5 members who received scholarships. One scholarship was donated by GOTO.

## **Memorial Committee (report given by Paul Krupinski):**

- Robert Neil Nicholson passed away August 6, 2023. Bob taught for more than forty years in the Alexandria City Public Schools. Bob's passion for space science led to his legacy at the Alexandria City Planetarium.

## **Program Committee (report given by Tony Kilgore):**

- Tony gave a presentation on MAPS - SEPA 2025.
- It will be at his planetarium, Hylton Planetarium in northern Virginia.
- Tuesday, June 24 - Saturday, June 28, 2025. Starts Tuesday morning, not evening.
- Lots of field trip ideas, to Udvar-Hazy, Spirit of Washington lunch cruise on Potomac, dinner at Washington Nationals baseball game.
- Noreen: we encourage mini-meetings in your states to provide collaboration. Armand Spitz mini-grant to host a local meeting.

## **Publications Committee (report given by Brian Koehler):**

- Brian became chair just over a year ago.
- There's a 2-week extension for the Summer Constellation.
- Pictures and articles due July 5.
- Francine Jackson, April Whitt, Jim Stepp, Elliot Severn, Mike Francis are all on the committee.
- Having more editorial eyes, and content contributors has made our newsletter move from a catalog of advertisers to a magazine.
- Summer Publication will be mid-July. Fall will be near the September Equinox.

## **Website Committee (report given by Tim Collins):**

- Last year we transitioned from an outside person to MAPS members having control of the website. Now we are working on a grand rebuild of the site with a company called PIXEL. They will be giving us a first look soon.
- Committee chairs will be able to do their own content updates in the future.



# MAPS 2024 Business Meeting Minutes

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## Strategic Planning Committee (report given by Patty Seaton):

- Steve Mitch is the chair. Paul Krupinski, and Susan Button are also on the SPC.
- The group looks at strengths, weaknesses, and threats for the organization. They've created an executive handbook, a summary of job descriptions, and Board responsibilities. They make recommendations, work alongside the Constitution Review Committee.
- This group is activated about every five years. One recommendation was to change the fact that the Board only met twice a year. SRC suggested quarterly. Board now meets monthly.
- Members... please feel free to call us out if something hasn't happened.

## Old or Unfinished Business

- None to report

## New Business

- Voting on updates to the MAPS Constitution. Mike Francis sent email to all members and Amie Gallagher posted to Groups.io. A number of people are not on that listserv. A number of people don't know about the MAPS Facebook page. Most people find out about MAPS business through direct emails.
- Noreen read the current wording and proposed wording, and rationale for the proposed changes. 44 members are present for the voting...

## AMENDMENT #1: Article IV, Section 1, Sub-section 2

Current wording: The President shall serve as chairman of the Executive Committee.

Proposed wording: The President shall serve as chairperson of the Executive Committee.

Rationale for Change: This change will match the inclusive language in our By-Laws.

Vote yes: 35

Vote no: 0

Abstain: 9

**PASSED**

## AMENDMENT #2: Article VI, Section 1

Current wording: The constitution may be amended by a two-thirds vote of the members present at any regular business meeting provided that a copy of the proposed amendment has been sent to each member at least thirty days prior to its being voted upon.

Proposed wording: The constitution may be amended by a two-thirds vote of the members present at any regular business meeting, or by mail and/or electronically, provided that a copy of the proposed amendment has been sent to each member at least thirty days prior to its being voted upon.

Rationale for Change: Updating how the constitution shall be maintained, updated, and followed.

Vote yes: 38

Vote no: 0

Abstain: 6

**PASSED**

# MAPS 2024 Business Meeting Minutes

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## Report from the IPS (report given by Patty Seaton):

- There is a conference in Berlin in a few weeks in Germany. Celebrating the Centennial of Planetariums.
- If you'd like to be a North American rep, one position is being voted for this year. If you'd like to run, please contact Patty or another IPS Board member.

## For the Good of the Order

- The MAPS Executive Board presented gifts for Brian's children. He and his wife had a new baby on May 8, 2024.

Meeting adjourned at 2:35 pm.

Respectfully submitted,  
Amie Gallagher  
MAPS Secretary

### Middle Atlantic Planetarium Society Balance Sheet 06/19/2024

#### Assets

<u>Assets</u>		\$0.00
<u>Current Assets</u>		\$0.00
Petty Cash	\$0.00	
Checking Account	\$11,199.36	
Paypal	\$42,730.44	
Accounts Receivable	\$860.00	
Imbalance-USD		\$0.00
Orphan-USD		\$0.00
<b>Total Assets</b>		<b>\$54,789.80</b>

#### Liabilities

<u>Liabilities</u>		\$0.00
Credit Card	\$0.00	
Accounts Payable	\$0.00	
<b>Total Liabilities</b>		<b>\$0.00</b>

#### Equity

<u>Equity</u>		\$0.00
Opening Balances	\$47,056.54	
Retained Earnings	\$0.00	
<b>Retained Earnings</b>		<b>\$7,733.26</b>
<b>Total Equity</b>		<b>\$54,789.80</b>
<b>Total Liabilities &amp; Equity</b>		<b>\$54,789.80</b>

### Middle Atlantic Planetarium Society Profit & Loss For Period Covering 06/19/2023 to 06/19/2024

#### Revenues

##### Income

Ads	\$2,500.00
Conference Registration	\$13,334.90
Conference Sponsorship	\$17,500.00
Interest Income	\$25.00
Membership	\$2,499.25
Reimbursed Expenses	\$2.95

#### Total Revenue

**\$37,862.10**

#### Expenses

##### Expenses

Bank Service Charges	\$641.90
Charity	\$500
Conference	\$21,143.25
Miscellaneous	\$127.00
Outside Services	\$58.00
Printing and reproduction	\$22.10
Legal Fees	\$150.00
Taxes	\$25.00
Internet	\$189.85
Website	\$11,948.99

#### Total Expenses

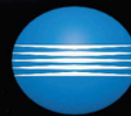
**\$34,806.09**

##### Net income for period

**\$3,056.01**

#WEARERSACOSMOS

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KONICA MINOLTA



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[ssiatechnologies.com](http://ssiatechnologies.com)





# Stories from the MAPS Region

## Eclipse Stories from the P-TECH Planetarium

by Dr. Carlos Miranda

Hi all,

Carlos over at P-Tech again. I hope you all had a great eclipse experience. I wanted to share a bit from our experience. We were selected as one of the 35 Citizen CATE 2024 teams. We traveled to Tupper Lake, NY to an event titled "Totality in Tupper," and who would have guessed clear skies in early April in the Adirondacks?

The project was a wonderful introduction to my first ever total eclipse experience, added with the flair of completing citizen science work, and at the end of the research, our planetarium program and local community get to keep the instrumentation for further outreach activities and events.





# Stories from the MAPS Region

## Eclipse Stories from the P-TECH Planetarium

*(continued from previous page)*

Meanwhile, back at P-Tech High School...



# Stories from the MAPS Region

## Perfection: A Look Back at the Great North American Total Solar Eclipse of Monday, April 8, 2024

by Paul Krupinski

The total solar eclipse of April 8, 2024, really began in August of 2017, after my first experience with the Moon's umbral shadow. My brother Pat lives in Beavercreek, Ohio, a suburb of Dayton, and summer's a great time to visit family, and what better weekend for a visit than the Monday before August 21st? We made our way to Louisville, KY Sunday evening, August 20th, for a stay overnight, so bright and early Monday morning we could make our way to the path of totality. Our final stopping place was a Walmart Supercenter in Franklin, KY where we experienced 2 minutes and 29 seconds of nature's perfect alignment of the Sun, Moon and Earth. It was perfect! What I didn't plan was our exit strategy, and we were now 4 hours from the Dayton region. As I now know, anyone attempting to witness a total solar eclipse arrives at their destination at their leisure; a few days or sometimes hours before the event, as we did. However, EVERYONE leaves at the same time, and gridlock was the recipe for our ride back to my brother's residence, which by the way, took over ten hours; some of my family members weren't happy about the return trip home and I didn't care, to a degree, but I was hooked and couldn't wait to see the next perfect alignment of the Earth-Moon-Sun system!

Eclipse withdrawal ensued. I needed to see daytime slowly darken into deep dusk again and soon. When was the next syzygy? It turned out to be July 2, 2019, over the South Pacific Ocean, as well as Chile and Argentina; however, it was winter in South America, so I passed and decided to patiently wait seven years for the next eclipse to cross the continental USA that would obscure the Sun completely.

I guess I've become an eclipse chaser of sorts, and took advantage of another path crossing six states, but this path was the path of annularity. I had been clouded out of an annular eclipse on the campus of Buffalo State College on Tuesday, May 10, 1994, so I never actually saw a "ring of fire" eclipse. Road trip! My sister Rose and brother-in-law Kevin live in the DFW area, so I drew a line from Keller, TX to the path of annularity and found Midland, my destination for Saturday, October 14, 2023. This was West Texas and a two-day drive, but it was a great excuse to add another type of solar eclipse to my list, and visit my sister, too! At a magnitude of 0.97 (the fraction of the Sun's diameter eclipsed) and obscuration of 0.898 (the fraction of the Sun's area eclipsed), the bright sunny Saturday morning dimmed slightly, but not enough for me...what a tease. Those in the Frisbee-golf tournament in the park that morning never noticed the eclipse even happened.

Where did I plan to go for the Great North American Eclipse in April of 2024 you may ask? Buffalo hasn't been in the path of totality for 99 years, and my backyard in Cheektowaga was scheduled for 3 minutes and 45 seconds of darkness...pause...but it's BUFFALO IN APRIL. Did you know that Buffalo's the third cloudiest city in the country? Problem? Potentially! Remember my brother Pat and sister Rose? Both Dayton and DFW lie in the path of totality, it's a family eclipse replay seven years later! After careful research of the weather for over a fifty-year period, I determined Dallas was the place to be historically, since "Big D" has a much better chance of clear skies. Bonus: a dear friend of the planetarium

## Stories from the MAPS Region

### Perfection: A Look Back at the Great North American Total Solar Eclipse of Monday, April 8, 2024

*(continued from previous page)*

community was going to be speaking at the Cotton Bowl Stadium in Dallas that day! You might know her, doesn't everyone? You guessed it, "Planetarium Patty" Seaton would be in the Lone Star State on eclipse day!

Patty Seaton is involved with the PUNCH Outreach Program. NASA has funded a five-year outreach program in association with the Polarimeter to UNify the Corona and Heliosphere (PUNCH), a solar mission led by Southwest Research Institute. The PUNCH Outreach Program, also led by SwRI, is collaborating with five planetariums and science centers in four states, plus other multicultural partners in the southwestern United States. The program's motto is "shining a new light on diverse views of the Sun," be they scientific, artistic, cross-cultural, historic, or the result of first-person observations. The team will also use solar eclipses visible from the U.S. in 2023 and 2024 to help motivate public engagement in multicultural, arts-integrated opportunities for learning about NASA-related science, technology, engineering and mathematics (STEM).

So on November 15, 2023 Patty and I booked a flight to Dallas Love Field, the April 2024 eclipse became real. Schools started expecting eclipse content during their planetarium visits, and as the eclipse approached I presented 183 eclipse planetarium lessons over a 35-day period from March up to the day before departing for Dallas. But wait, on Monday, April 1, no April Fool's joke, I notice a weather statement online: Severe weather alters issued for Texas as thunderstorms, large hail threaten post-eclipse travel. The Texas forecast for the week up to April 8 was full

Sun Wednesday, Thursday, Friday, partly sunny Saturday, and back to full Sun on Sunday, with a chance of rain Monday, April 8. Meanwhile, Buffalo weather predictions for E-day was sunny and zero chance of rain...that forecast held for Monday, Tuesday, Wednesday and Thursday. Oh no, on Friday, April 5, the Buffalo forecast changed and not for the good.

While I'm presenting eclipse shows at the Genesee Country Village & Museum on Friday, April 5, meteorologists were tracking a warm front that threatened thicker, low altitude clouds in-lieu-of high cirrus clouds as predicted all week for Western New York. My stomach was in knots. I'm scheduled to fly out tomorrow for Dallas; should I cancel the Saturday flight? Should I stay in Buffalo and hope the warm front is stalled as some weather forecasters were predicting? Was there a better weather location on the path of totality that didn't cross my mind? What about Maine? At 11:43pm on Friday, April 5, after bowling my ninth perfect 300 game (no lie, you can't make this stuff up), I sent my friend and planetarium colleague John Meade an email:

Hello John!

I have a flight to Dallas tomorrow at 3pm and the weather is not looking good. The weather changed just TODAY for Buffalo and clouds are in the forecast, with a chance of rain. What's the weather prediction in the Maine area for Monday? Is it worth bailing on NY and TX for ME? Thoughts are appreciated as soon as you see this email! THANKS so much.

Paul K.

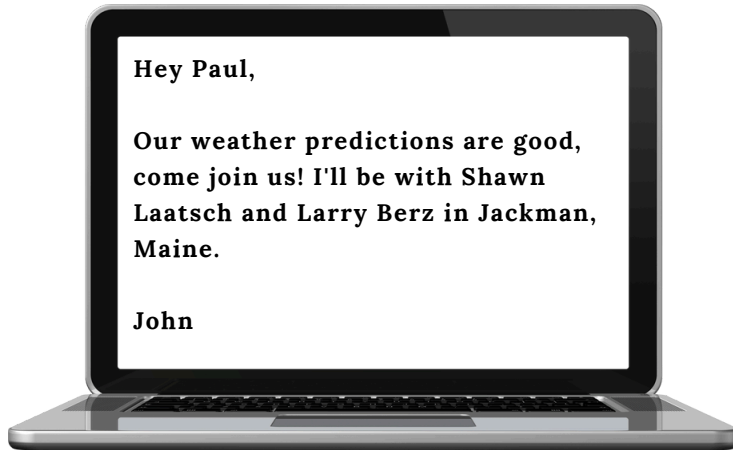


## Stories from the MAPS Region

### Perfection: A Look Back at the Great North American Total Solar Eclipse of Monday, April 8, 2024

*(continued from previous page)*

On Sat, Apr 6, 2024 at 7:20 AM John Meader wrote:



On Saturday, April 6th I cancelled my flight to Dallas, changed the oil in my car, called Patty and informed my sister I wouldn't be visiting her, as I prepped for Jackman, Maine! I departed for Maine early Sunday morning for a 600+ mile journey that took me from Buffalo to Syracuse and then north to the Canadian border. As I approached the end of New York State, I sent a text message to my sister Rose, Patty and a friend stating, "All. Going into Canada and I'm not sure about cell coverage. All is well and a beautiful Sunday! More as my adventure continues." As I suspected, I lost cell phone coverage in Canada and it wouldn't return until Tuesday, April 9th.

The ride through Canada was perfect: bright sunshine, blue skies, beautiful scenery, and I even saw Montreal for the first time from a distance. As I re-entered the states roughly 45 minutes from Jackman, I kept my eye for the return of a cell signal. I waited and waited and waited. As I approached the small town of Jackman, Maine, population 800, I was convinced a signal, even one bar,

would finally return...the signal did not return. It was now 7:30 PM and I have no way to contact John Meader or any of my planetarium colleagues as to where the sleeping accommodations were for the night. I stopped at the Bishop Hotel along Route 201, the only thoroughfare through Jackman, seeking a wifi password --- they were very kind to share it with me. I sent texts to my sister, John Meader, Patty Seaton; however, all I saw was "could not send"; I couldn't even make a phone call - 911 emergency calls only (so much for my reliable AT&T carrier). I later discovered thousands of visitors were seeking the eclipse centerline in Jackman and only ONE cell tower...not good. I was starting to worry. What if I couldn't contact anyone? What if my sister thinks I got hit by a bus? I was starting to wonder about spending the night in my car at the Bishop Hotel. The hotel owners saw me pacing outside on the porch, when a kind lady popped out of the door and asked if I contacted anyone yet? I said no. After using their restroom, the owner ask me if I knew the phone number of one of the parties and I said yes, he was so kind to call John on the hotel land line. John was just down the road doing a star party with Shawn Laatsch and Larry Berz. I joined them, took over someone's telescope who couldn't find M42, and all was well!

Monday, April 8, 2024. The weather was perfect: wall-to-wall blue skies, moderate temperatures for Maine, some snow on the ground and a buzz in the air. Departure from the River View Cottages was scheduled for 7:45 AM for telescope setup adjacent to Jackman Town Office. A crowd was growing already. Cars, trucks and SUV's of all shapes

## Stories from the MAPS Region

### Perfection: A Look Back at the Great North American Total Solar Eclipse of Monday, April 8, 2024

*(continued from previous page)*

and sizes lined Route 201; every parking lot was full up and down Jackman – this was the place to be, and it offered the longest duration of totality. I set up my 8” Orion Dobsonian telescope for direct safe solar viewing. John Meader and Larry Berz set up to my right, and I was no more than 100 feet away from Shawn Laatsch, Director of the The Versant Power Astronomy Center and Jordan Planetarium at the University of Maine, Orono, and his team of four graduate students.

Shawn is the Northeast regional coordinator for The Citizen Continental-America Telescope Eclipse (Citizen CATE) 2024, a network of volunteer teams equipped and trained to capture videos of the Sun’s corona – or atmosphere – during the April 8th total solar eclipse. Shawn Laatsch said, “The CATE2024 project will be taking polarity measurements of the corona. The project will be setting up 35 stations from Texas to Maine to measure and image the corona during the eclipse. My four grad students will be assisting with this project. We will be making public observations on April 8, and doing stargazing the night of April 7, both from the Jackman Town Offices.” It was amazing to be so close to an actual citizen science research project and to experience their excitement and enthusiasm firsthand.

As the day wore on, the anticipation of the big event mounted. The surrounding area started to look noticeably different: It wasn’t as bright as daytime and certainly not anywhere close to the darkness of night, and

the snow looked electrified, according to one bystander. Larry Berz started the countdown, “Prepare for totality,” he shouted. “One minute to totality!” was heard clearly over the crowd murmuring. “Five, Four, Three, Two, One.” And there it was, and it was perfect; an alien-looking environment, with a bleach white corona around a pitch black moon. Venus and Jupiter were incredibly easy to see to the upper left (Jupiter) and lower right (Venus), with five bright stars peeking through the darkened blue sky. Three minutes and twenty seven seconds ended in a blink of an eye – Baily’s Beads, second diamond ring, wow the Sun’s way too bright already...it was over. As the Moon uncovered the Sun once again, I ask myself how could it end so soon? Seven years of anticipation, preparation, conversations about safety, hoping and dreaming about a perfect April day, and in what seemed like a nanosecond, it was done. So, when’s the next total solar eclipse? Can’t wait for 2026, it’s Iceland or bust!





# Stories from the MAPS Region

## Prestonsburg, KY becomes “Eclipse City”

by Steven LJ Russo, retired

Prestonsburg, KY became “Eclipse City” as three different organizations had public viewings of the April 8th Solar Eclipse: The Floyd County Public Library, The East Kentucky Science Center, and Prestonsburg Tourism.

Yours truly gave out over 400 pair of eclipse glasses to the community for people to observe the eclipse on their own. It was my intention to be in Texas as totality ran through my cousin’s yard, but Prestonsburg Tourism needed someone to lead the eclipse viewing, so I stayed in Prestonsburg.

The largest of the Eclipse Observings was held by Prestonsburg Tourism. Tour buses from five different states had a week-long eclipse party. The tour groups from Maryland, Wisconsin, Iowa, Ohio, and Michigan, booked the tour three years ago as they wanted to go someplace for the eclipse but the expense was too high in areas with totality. So they booked with Prestonsburg Tourism to see the eclipse here, even though it would be 93 percent.

Week-long activities included tours to Butcher Holler (Loretta Lynn’s birthplace), Hatfield-McCoy sites, Elk tours, Music at the Kentucky Opry and moonshine tours. On Saturday evening, I led an observing session and star talk with campfires, s’mores, and observations of Jupiter through my eight inch DOB.

Eclipse morning, I did a talk for the tour groups about the eclipse, and that afternoon, even though there was a 50 percent cloud cover, I held an observing session for around 500 people from the tour groups, and the public at Jenny Wiley State Park. The Sun peeked in and out during the eclipse, and the viewing was good.

My Astroscan was set up to project the image on a white board so that people could have their photos taken with the eclipsed Sun. It gave them an opportunity to have a “souvenir” of the eclipse to take home with them.



# Stories from the MAPS Region

## How the Moon First Came into the Sky

shared here by April Whitt

**NOTE FROM THE EDITOR:** *This is the latest in a multi-part series of stories shared by April Whitt. This story is from A Treasury of African Folklore: The Oral Literature Traditions, Myths, Legends, Epics, Tales, Recollections, Wisdom, Sayings, and Humor of Africa by Harold Courlander*

In a certain Town there lived Njomm Mbui (juju sheep). He made great friends with Etuk (antelope), whose home was in the bush.

When the two animals grew up, they went out and cut farms. Njomm planted plantains in his, while Etuk set his with coco-yams.

When the time came round for the fruits to ripen, Njomm went to his farm and cut a bunch of plantains, while Etuk dug up some of his coco.

Each cleaned his food and put it in the pot to cook. When all was ready they sat down and ate.

Next morning Etuk said: "Let us change. I saw a bunch of plantains on your farm which I would like to get. Will you go instead to mine and take some coco?"

This was arranged, and Etuk said to Njomm, "Try to beat up fu-fu." Njomm tried, and found it very good. He gave some to Etuk. The latter ate all he wanted, then took the bunch of plantains and hung it up in his house.

Next morning he found that the fruit had grown soft, so he did not care to eat it. He therefore took the plantains and threw them away in the bush.

During the day Mbui came along and smelt plantains. He looked round till he found

them, then picked up one and began to eat. They were very sweet. He ate his fill, then went on, and later met a crow of the Nshum people (apes). To them he said, "Today I found a very sweet thing in the bush."

In course of time Etuk grew hungry again, and Njomm said to him, "If you are hungry, why don't you tell me?"

He went to his farm and got four bunches of plantains. As he came back he met the monkey people. They begged for some of his fruit, so he gave it to them.

After they had eaten all there was, they in their turn went on, and met a herd of wild boars (Ngumi). To these they said, "There is very fine food to be got from Nhjomm and Etuk."

The Ngumi therefore came and questioned Etuk, "Where is coco to be had?" and Etuk answered, "The coco belongs to me."

The boars begged for some, so Etuk took a basket, filled it at his farm, and gave it to them.

After they were satisfied, they went on their way and next morning met Njokk (elephant).

To him they said, "Greetings, Lord! Last night we got very good food from the farms over there."



# Stories from the MAPS Region

## How the Moon First Came into the Sky

*continued from previous page*

Njokk at once ran and asked the two friends, "Whence do you get so much food?" They said, "Wait a little."

Njomm took his long machete and went to his farm. He cut five great bunches of plantains and carried them back. Etuk also got five baskets full of coco, which he brought to elephant. After the latter had eaten all this, he thanked them and went away.

All the bush beasts came in their turn and begged for food, and to each the two friends gave willingly of all that they had. Lastly also came Mfong (bush cow).

Now, not far from the two farms there was a great river called Akar-ram (The-One-Which-Goes-Around). In the midst of it, deep down, dwelt crocodile. One day Mfong went down into the water to drink, and from him crocodile learned that much food was to be had nearby.

On this, crocodile came out of the water and began walking towards the farms. He went to Njomm and Etuk and said, "I am dying of hunger, pray give me food,"

Etuk said, "To the beasts who are my friends I will give all I have, but to you I will give nothing, for you are no friend of mine;" but Njomm said, "I do not like you very much, yet I will give you one bunch of plantains."

Crocodile took them and said, "Do not close your door tonight when you lie down to sleep. I will come back and buy more food from you at a great price."

He then went back to the water and sought

out a python, which dwelt there. To the latter he said, "I have found two men on land, who have much food." Python said, "I too am hungry. Will you give me to eat?"

So crocodile gave him some of the plantains which he had brought. When python had tasted he said: "How sweet it is! Will you go back again and bring more?" Crocodile said, "Will you give me something with which to buy?" and python answered, "Yes. I will give you something with which you can buy the whole farm."

On this he took from within his head a shining stone and gave it to crocodile. The latter started to go back to the farm. As he went, night fell and all the road grew dark, but he held in his jaws the shining stone, and it made a light on his path, so that all the way was bright. When he neared the dwelling of the two friends he hid the stone and called, "Come out and I will show you something which I have brought."

It was very dark when they came to speak with him. Slowly the crocodile opened his claws, in which he held up the stone, and began to glimmer between them. When he held it right out, the whole place became so bright that one could see to pick up a needle or any small thing. He said, "The price of this that I bring is one whole farm."

Etuk said, "I cannot buy. If I give my farm, nothing remains to me. What is the use of this great shining stone if I starve to death?" But Njomm said: "I will buy – oh, I will buy, for my farm full of plantains, for that which you bring fills the whole earth with light. Come let us go, I will show you my farm. From here to the waterside all round is my

## Stories from the MAPS Region

### How the Moon First Came into the Sky

*continued from previous page*

farm. Take it all, and do what you choose with it, only give me the great shining stone that, when darkness falls, the whole earth may still be light."

Crocodile said, "I agree."

Then Njomm went to his house with the stone, and Etuk went to his. Njonn placed it above the lintel, that it might shine for all the world; but Etuk closed his door and lay down to sleep.

In the morning Njomm was very hungry, but he had nothing to eat, because he had sold his farm for the great white stone.

Next night and the night after he slept full of hunger, but on the third morning he went to Etuk and said, "Will you give me a single coco-yam?" Etuk answered: "I can give you nothing, for now you have nothing to give in exchange. It was not I who told you to buy the shining thing. To give something, when plenty remains, is good: but none but a fool would give his all, that a light may shine in the dark!"

Njomm was very sad. He said, "I have done nothing bad. Formerly no one could see in the nighttime. Now the python stone shines so that everyone can see to go wherever he chooses."

All that day Njomm still endured, though nearly dying of hunger, and at nighttime he crept down to the water, very weak and faint.

By the riverside he saw a palm tree, and on it a man trying to cut down a cluster of ripe kernels, but this was hard to do, because it

had grown very dark. Njomm said, "Who is there?" and the man answered, "I am Effion Obassi."

The second time Njonn called, "What are you doing?" and Effion replied, "I am trying to gather palm kernels, but I cannot do so, for it is very dark amid these great leaves."

Njomm said to him, "It is useless to try to do such a thing in the dark. Are you blind?"

Effion answered, "I am not blind. Why do you ask?"

Then Njomm said: "Good; if you are not blind, I beg you to throw me down only one or two palm kernels, and in return I will show you a thing more bright and glorious than any you have seen before."

Effion replied: "Wait a minute, and I will try to throw a few down to you. Afterwards you shall show me the shining thing as you said."

He then threw down three palm kernels, which Njomm took, and stayed his hunger a little. The latter then called, "Please try to climb down. We will go together to my house."

Effion tried hard, and after some time he stood safely at the foot of the tree by the side of Njomm.

So soon as they got to his house, Njomm said, "Will you wait here a little while I go to question the townspeople?"

First he went to Etuk and asked: "Will you not give me a single coco to eat. See, the thing which I bought at the price of all that I



## Stories from the MAPS Region

### How the Moon First Came into the Sky

*continued from previous page*

had turns darkness to light for you, but for me, I die of hunger.”

Etuk said: “I will give you nothing. Take back the thing for which you sold your all, and we will stay in our darkness as before.”

Then Njomm begged of all the townsfolk that they would give them ever so little food in return for the light he had bought for them. Yet they all refused.

So Njomm went back to his house and took the shining stone, and gave it to Effion Obassi, saying: “I love the earth folk, but they love not me. Now take the shining thing for which I gave my whole possessions. Go back to the place from whence you came, for I know that you belong to the sky people, but when you reach your home in the heavens, hang up my stone in a place where all the earth folk may see its shining, and be glad.”

Then Effion took the stone, and went back by the road he had come. He climbed up the palm tree, and the great leaves raised themselves upwards, pointing to the sky, and lifted him, till, from their points, he could climb into heaven.

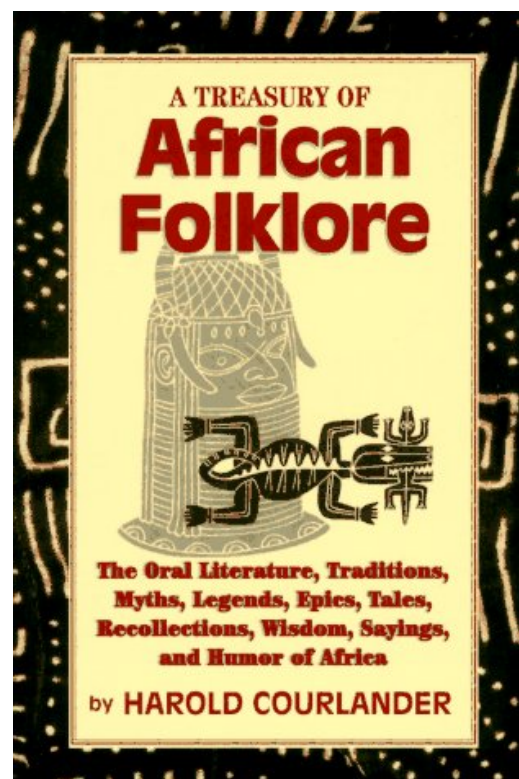
When he reached his home, he sent and called all the Lords of the Sky, and said, “I have brought back a thing today which can shine so that all the earth will be light. From now on everyone on earth or in heaven will be able to see at the darkest hour of the night.”

The chiefs looked at the stone and wondered. Then they consulted together,

and made a box. Effion said, “Make it so that the stone can shine out only from one side.”

When the box was finished, he set the globe of fire within, and said, “Behold, the stone is mine. From this time all the people must bring me food. I will no longer go to seek any for myself.”

For some time they brought him plenty, but after a while they grew tired. Then Effion covered the side of the box, so that the stone could not shine till they brought him more. That is the reason why the moon is sometimes dark, and people on earth say, “It is the end of the month. The sky people have grown weary of bringing food to Effion Obassi, and he will not let his stone shine out till they bring a fresh supply.”



# Stories from the MAPS Region

## RMSC Strassenburgh Planetarium Summer Update

by James Bader



The RMSC Strassenburgh Planetarium has had an incredible first half of the year! As so many of us got to enjoy eclipse events in some way or another, we were no different. The RMSC (Rochester Museum & Science Center) hosted roughly 10,000 guests over the eclipse weekend, and the vast majority of them stopped into the Planetarium to experience our eclipse programming.

We had fantastic interest and attendance for all of our programs that weekend! Whether it was the 'standing room only' presentation by the legendary Phil Plait, or the outdoor eclipse event that may or may not have been clouded out, it was an action packed and extremely rewarding experience for all who attended!





# Stories from the MAPS Region

## RMSC Strasenburgh Planetarium Summer Update

*(continued from previous page)*

Other happenings in the Planetarium did not disappoint either! Separate, but related, was a new experience in the dome for us here in Rochester, a silent disco! The theater put the usual astronomy programs on hold to host what we called our “Galactic Getdown.” I have hosted many ‘different’ programs in planetariums and I must say that this was by far one of the most fun events I have seen.

The awkward voices singing the lines of the songs they knew, and the sounds of people dancing filled the theater, but what you didn’t hear was music. With 3 different DJ’s running their own club, guests enjoyed the stations and music they chose. This was also an opening for us to try out a “Live Laser Program!”



May the 4th celebration in the theater was an extraordinary success for this galaxy as well! We added some ‘possibly obnoxious’ themes to our regular sky tonight programs and finished them with a world-ending

interaction with the super weapon from a galaxy...far far away. This wouldn’t have been possible without the use of the Digistar cloud items!



## Stories from the MAPS Region

### RMSC Strasenburgh Planetarium Summer Update

*(continued from previous page)*

Finally, an important addition to the Strasenburgh Planetarium was the installation of a Bell Agena engine to add to our 'Rochester's Eyes in Space' exhibit.



This object is on loan from the Buffalo Science Center—we are extremely excited to have this on view! The Agena engines were a workhorse for space missions, sending hundreds of spacecraft into orbit. The engine was also the sole provider for getting the GAMBIT missions into space, which is the cornerstone of our exhibit.

With record attendance and revenue levels for nearly every month of the year so far, the Strasenburgh Planetarium is certainly poised for a great summer!

Bright - Colorful - Controllable - Smooth - Long Life

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[www.ChromaCove.com](http://www.ChromaCove.com) - Ask Your Planetarium Systems Vendor for ChromaCove LED Cove Lighting!



## Excellence in education deserves extraordinary equipment.

When Prince George's County Schools needed to upgrade the Owens Science Center, in Lanham Maryland, quality could not be compromised. After all, the planetarium was designed by Margaret Noble and they are located, literally, across the street from NASA Goddard.

After careful consideration they chose a GOTO Orpheus Hybrid, a system that will fulfill the requirement for excellence for years to come.

GOTO, Ash Enterprises, and COSM are all honored to have been chosen to make this project a reality. Now let's see what we can do for your planetarium...

Sky by GOTO,  
photos by Patty Seaton



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# MAPS 2024 Conference Papers

*Slides and Resources for Girl Scout Space Science Badge programs (page 1 of 4)*

## Space Science Badges for Girl Scouts



Erin Bennett, Planetarium Education Coordinator  
erin.bennett@vanderbiltmuseum.org | (631) 260-1972

## Who are Girl Scouts?

### Girl Scout Mission

Girl Scouting builds girls of courage, confidence, and character, who make the world a better place.

Girls aged 5-17 (in kindergarten – 12<sup>th</sup> grade) can join the Girl Scouts.

**Fun fact:** most women astronauts at NASA are girl scout alums!



## Space Science Badges



Space Science Explorer  
Daisies (Kindergarten-1<sup>st</sup>)



Space Science Adventurer  
Brownies (2<sup>nd</sup>-3<sup>rd</sup>)



Space Science Investigator  
Juniors (4<sup>th</sup>-5<sup>th</sup>)



Space Science Researcher  
Cadettes (6<sup>th</sup>-8<sup>th</sup>)



Space Science Expert  
Seniors (9<sup>th</sup>-10<sup>th</sup>)



Space Science Master  
Ambassador (11<sup>th</sup>-12<sup>th</sup>)

## How are badges earned?

A scout must complete five badge “steps.” Each step has three activity choices.

The first four badge steps can be completed in any order. The fifth step focuses on sharing what was learned, should be completed last, and generally can't be fulfilled during one program at a planetarium.



Note: the Daisy badge has only three steps, with two choices for each.



# MAPS 2024 Conference Papers

*Slides and Resources for Girl Scout Space Science Badge programs (page 2 of 4)*

## Programs at Planetariums

### What works for us:

Over the course of one **3-hour program**, scouts can fulfil **four out of five steps** for one badge.

This includes about 45 minutes inside the planetarium theater, and 2 hours and 15 minutes of crafts, activities, and demos.

Our most popular programs are the **Space Science Adventurer** (2<sup>nd</sup>-3<sup>rd</sup> grade) and **Space Science Investigator** (4<sup>th</sup>-5<sup>th</sup> grade) badges.

## Badge Requirements

Badge Requirement PDFs can be purchased from [www.girlscoutshop.com](http://www.girlscoutshop.com) for \$3.00 each.



You do NOT need any certification to lead a badge program.



## 1 - Meet the Neighbors

### Make a Pocket Solar System

**Materials:** Receipt paper, pens, markers, and scissors

**Duration:** 45 minutes

Learn about the size of the Solar System by making a scale model!



We found young scouts have a hard time visualizing how to fold their paper and struggle to spell the names of the planets. To help them out, we created some simple visuals you can access by scanning the QR code or visiting <https://docs.google.com/presentation/d/13H1453dKXKwY5NfagleyTCu7NfSeag7TQ4uGrpDfo/eBt7usgsharng>



## Space Science Adventurer

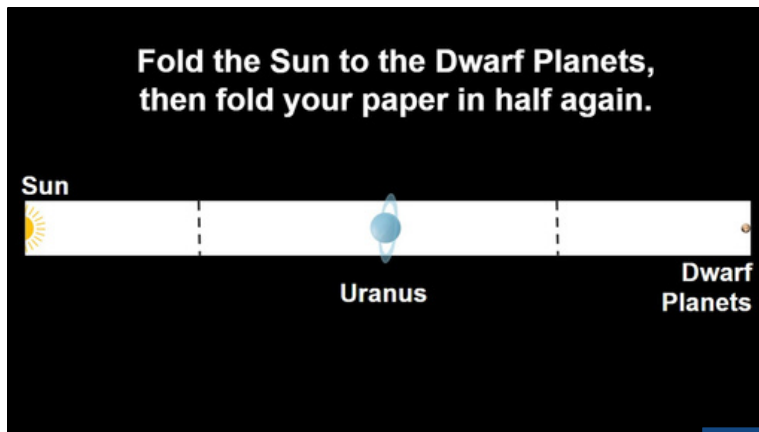
Dig into the Solar System, Moon phases, and constellations, then share your space knowledge with others.

- 1 – Meet the Neighbors
- 2 – See More than Before
- 3 – Investigate the Moon
- 4 – Be a Stargazer
- 5 – Celebrate and Share



# MAPS 2024 Conference Papers

*Slides and Resources for Girl Scout Space Science Badge programs (page 3 of 4)*



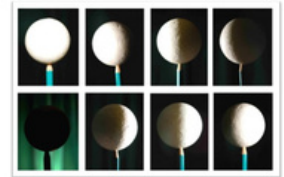
## 3 - Investigate the Moon

### Model the Moon

**Materials:** Flashlight or lamp, 3-inch Styrofoam ball, and a pencil

**Duration:** 20 minutes

Discover why the Moon has phases – the ball is the Moon, the scout is the Earth, and the flashlight is the Sun!



This pairs best with a quick exploration of the Moon's features and phases. You can access what we created by scanning the QR code or visiting

<https://drive.google.com/presentation/d/15a5FPmFafR7oohSLTdgqbyZ7hs0BQ9F5u0AA/edit?usp=sharing>



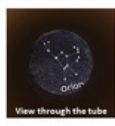
## 4 - Be a Stargazer

### Make a Constellation Viewer

**Materials:** White craft/paper towel tube, pushpins, cardboard, pre-printed constellations, scissors, markers, and stickers

**Duration:** 40 minutes

A simple paper tube becomes a tool you can use to practice identifying constellations!



You can choose whichever constellations you'd like, but if you'd like to see ours, scan the QR codes or visit:

Page 1: [https://drive.google.com/file/d/1v778u08u933ccrYvO4hN91W6\\_CK-K/view?usp=sharing](https://drive.google.com/file/d/1v778u08u933ccrYvO4hN91W6_CK-K/view?usp=sharing)

Page 2: <https://drive.google.com/file/d/1K4Z-55u5uCC-d46TPX9WvQV7Z285nf3Q0/view?usp=sharing>



## 2 - See More than Before

### See the Stars with a Computer

**Materials:** Planetarium

**Duration:** 45 minutes

A planetarium is kind of a computer, right?





# MAPS 2024 Conference Papers

Slides and Resources for Girl Scout Space Science Badge programs (page 4 of 4)

## Why bring this to my planetarium?

Studies done by the Girl Scout Research Institute show that women who were Girl Scouts at some point in their lives tend to be more outspoken and involved in their community, achieve higher educational levels and job positions, and have a better sense of satisfaction with life in all aspects.

Additionally, Girl Scout troops are always looking for opportunities to provide their scouts with fun, exciting, and unique experiences. Our badge programs are popular throughout the school year.

Questions? Success stories? **Reach out!**



Erin Bennett, Planetarium Education Coordinator  
erin.bennett@vanderbiltmuseum.org | (631) 260-1972

## Additional Resources From



[www.seti.org/girlscoutstars](http://www.seti.org/girlscoutstars)

## Sources

Slide 2: <https://www.girlscouts.org/en/footer/faq/facts.html>

Slide 2: [https://www.girlscouts.org/content/dam/gsusa/forms-and-documents/discover/about-us/GSUSA\\_FactsAndFigures.pdf](https://www.girlscouts.org/content/dam/gsusa/forms-and-documents/discover/about-us/GSUSA_FactsAndFigures.pdf)

Slide 3: <https://girlscoutscsa.blog/2022/08/19/5-reasons-why-your-girl-should-join-girl-scouts/>

Slide 4: <https://www.seti.org/sites/default/files/2021-12/How%20to%20earn%20a%20Space%20Science%20badge.pdf>

Slide 13: <https://www.girlscouts.org/en/discover/about-us/research-and-data/girl-scout-alum-difference.html>

**Links to resources created for this Girl Scout program:**

**Pocket  
Solar  
System**

**Model  
the  
Moon**

**Constellation  
Viewer  
Set 1**

**Constellation  
Viewer  
Set 2**

# MAPS 2024 Conference Papers

*Notes from Open Forum Discussion about IDEA values (page 1 of 2)*

**An open forum discussion on inclusion, diversity, equity and accessibility, in collaboration with the Pacific Planetarium Association --- June 21, 2024**  
**Facilitated by Noreen Grice, MAPS President**

The Pacific Planetarium Association (PPA) has asked all regional planetarium presidents to gather information from their organizations for possible future collaborative work on inclusion, diversity, equity and accessibility (IDEA).

Many organizations, including PPA and IPS, have created specific committees to address and promote initiatives for IDEA.

- Should MAPS have an ad hoc IDEA Committee?
- What would our IDEA goals be for MAPS?
- What assistance does MAPS need in terms of reaching these goals?
- How might we collaborate with other planetarium organizations in such initiatives?

In this open forum, we will gather your thoughts, concerns and suggestions on MAPS IDEA future directions. Feedback and suggestions will be shared as part of a panel discussion with other regional planetarium presidents in two upcoming conferences with ASP and GLPA/WAC.

***The following thoughts/ideas were generated by MAPS conference attendees during this forum:***

- IPS has a toolkit with guidelines on accessibility for hosting facilities but it is way too extensive. Would like to see MAPS suggest accessibility issues.
- Is the goal for this conversation for MAPS' benefit or for the larger community?
- Maybe do some surveys.
- Let's create a committee to explore/create surveys.
- Only about 50% of emails to MAPS members are being opened. Let's also post on the MAPS Facebook page.
- Is there a resource list with contacts about helping people with disabilities?
- We don't have a lot of experience being with or working with blind people. We don't have blind planetarians.
- The Braille resource info we got at last year's conference was great.

***We mentioned three different topics:***

- Resources for blind people
- Encouraging more people with disabilities to get into the field
- Access at conferences

What assistance does MAPS need to achieve goals?

What are our goals?

What are other groups doing?

*(continued on next page)*



# MAPS 2024 Conference Papers

*Notes from Open Forum Discussion about IDEA values (page 2 of 2)*

What can MAPS do to help younger people get into the field? Smithsonian had a zero barriers group to help the Museum be accessible.

If we make our planetariums accessible, we'll naturally make the field more accessible.

Instead of different groups working separately, why not work together? (IPS, GLPA, etc.) This way we could set up an industry standard.

Caution: could this restrict a planetarium from hosting? Be transparent if your site has some challenges. Maybe you could use this document to encourage change in your facility.

The following people expressed interest in continuing the conversation and joining a new ad-hoc committee:

- Noreen Grice
- Francine Jackson
- Stoker Stoker
- Steven Bradly
- Jordan Ecker
- James Bauman

A zoom meeting is planned for July.

## GET INVOLVED! MAPS Committees

One great way to become more involved in the Middle Atlantic Planetarium Society is to join one of the MAPS Standing Committees. MAPS has 10 different committees that all provide unique services to the organization.

Committee Chairs are listed on the [MAPS website](#) on each committee page. If you are interested in joining, please contact the Committee Chair of the group in which you are interested.

### MAPS COMMITTEES:

**Awards**

**Membership**

**Constitution Review**

**Memorial**

**Education**

**Program**

**Elections**

**Publications**

**History**

**Website**

# MAPS 2024 Conference Papers

*Notes from the MAPS Museum / Science Center / Observatory User Group Meeting*

**On June 21, 2024, while at the 2024 MAPS Conference, the MAPS Museum and Science Center User Group and the Observatory User Group conducted a joint in-person meeting. This was justified by several conference attendees wishing to align with both User Groups. What follows is a summary of their discussion...**

**(Meeting notes provided by Jim Stepp)**

## Introductions

QUESTION: How do you get the word out?

- Facebook
- Community calendars
- Local TV station
- Email distribution lists
- Communication Committee
- Communication Director or Volunteer
- Word-of-mouth
- Website
- Social Media content creator(s)

QUESTION: How do you handle difficult people?

- Flashes from phones?
  - State that it was a meteor and then remind them to turn off phones.
  - Kind of shame them into compliance.
- Special requests? “Don’t mention evolution.” - “Don’t mention that the Earth is over 6,000 years old.” - Religious challenges?
  - Work with them.
  - Grin and move on.
  - Secretly want to say more, but hold off.
- Deniers? (flat-earth, moon landing hoaxers, etc)
  - Ask them to talk to you after the show.



# MAPS 2024 Conference Papers

*Notes from the MAPS College and University Planetarium User Group Meeting (page 1 of 2)*

**On June 21, 2024, while at the 2024 MAPS Conference, the MAPS College and University Planetarium User Group conducted its first in-person meeting. What follows is a summary of their discussion...**

The following 2024 MAPS conference delegates attended this user group meeting:

- Noreen Grice – facilitator, MAPS President, Adjunct Western Connecticut State University, You Can Do Astronomy LLC
- Madisyn Brooks – UCONN Planetarium
- Dennis Perlata – UCONN Planetarium
- Kelcey Davis – UCONN Planetarium
- Mike Kerr – Eastern Connecticut State University Planetarium
- Fiona Powers – Southern Connecticut State University Planetarium
- Dennis Dawson – Western Connecticut State University
- Stoker Stoker – SUNY New Paltz NY Planetarium
- Taylor Gaines – Quebec Government
- Kate McCallum – DomeFest/Words
- Steven Bradley – Fresh Air Fund, Hudson, NY

Discussion: What are your pain points? What do people need help with?

- We need to understand who are our demographics so we can tap into local groups.
- We need to know how to market the planetarium.
- We need funding for seats, carpeting and road access.

Eastern Connecticut State University typically has 3-4 shows/semester on Wed nights. We advertise through newspaper, on campus posters, radio, social media.

UCONN has an observatory located in a different part of campus from the planetarium and is interested in relaying images from the observatory and into the planetarium.

Many people in attendance are interested in cross-promoting their planetarium events through the Connecticut Office of Tourism.

We discussed if campuses have astronomy clubs.

- How can clubs be organized?
- Who will lead them through continuity so when students graduate, the club advisor continues the club?
- Can astronomy clubs be organized so they meet in the planetarium?
- Can other club majors, beyond astronomy, meet in the planetarium?
- Can we connect with outside astronomy clubs?
- Can we generate interest in creating new astronomy clubs?

*(notes continue on the next page)*

# MAPS 2024 Conference Papers

*Notes from the MAPS College and University Planetarium User Group Meeting (page 2 of 2)*

Special events like the eclipse viewing attract people and expose them to astronomy.

Should this user group have a goal of trying to increase student engagement to the community to get more people under the dome? Bringing community members will help generate funding.

Can State universities do a ticket by donation? Visitors in New Paltz, NY are making \$5 donations to see a planetarium show. Many schools have funding cuts while their mission is engagement and survival of the planetarium as an entity and a tool.

SUNY New Paltz planetarium collaborates with the music department to bring in live music under the dome. New Paltz also has a planetarium operations course for students to understand how to run the planetarium and after the course the students can be planetarium volunteers. The planetarium operations course is also required of all astronomy majors.

Eastern Connecticut State University offers a minor in planetarium performance. They currently have no students enrolled in this minor.

Everyone in attendance provided their emails so we can continue this conversation.

## GET INVOLVED! MAPS Officer Elections

Another way to get more involved in the Middle Atlantic Planetarium Society is to consider running for a position on our Executive Committee. This fall/winter, MAPS will hold elections for three officer positions:

- President-Elect (six-year term)
- Secretary (two-year term)
- Treasurer (two-year term)

Important dates regarding the election can be found to the right. For more information, or to nominate yourself or a fellow MAPS member for a position, please contact the [Chair of the Elections Committee](#).

### MAPS ELECTIONS: Key Dates

Nominations due:  
**November 1, 2024**

Candidate Bios due:  
**December 1, 2024**

Election held:  
**January 2025**

New Officer terms begin:  
**June 1, 2025**



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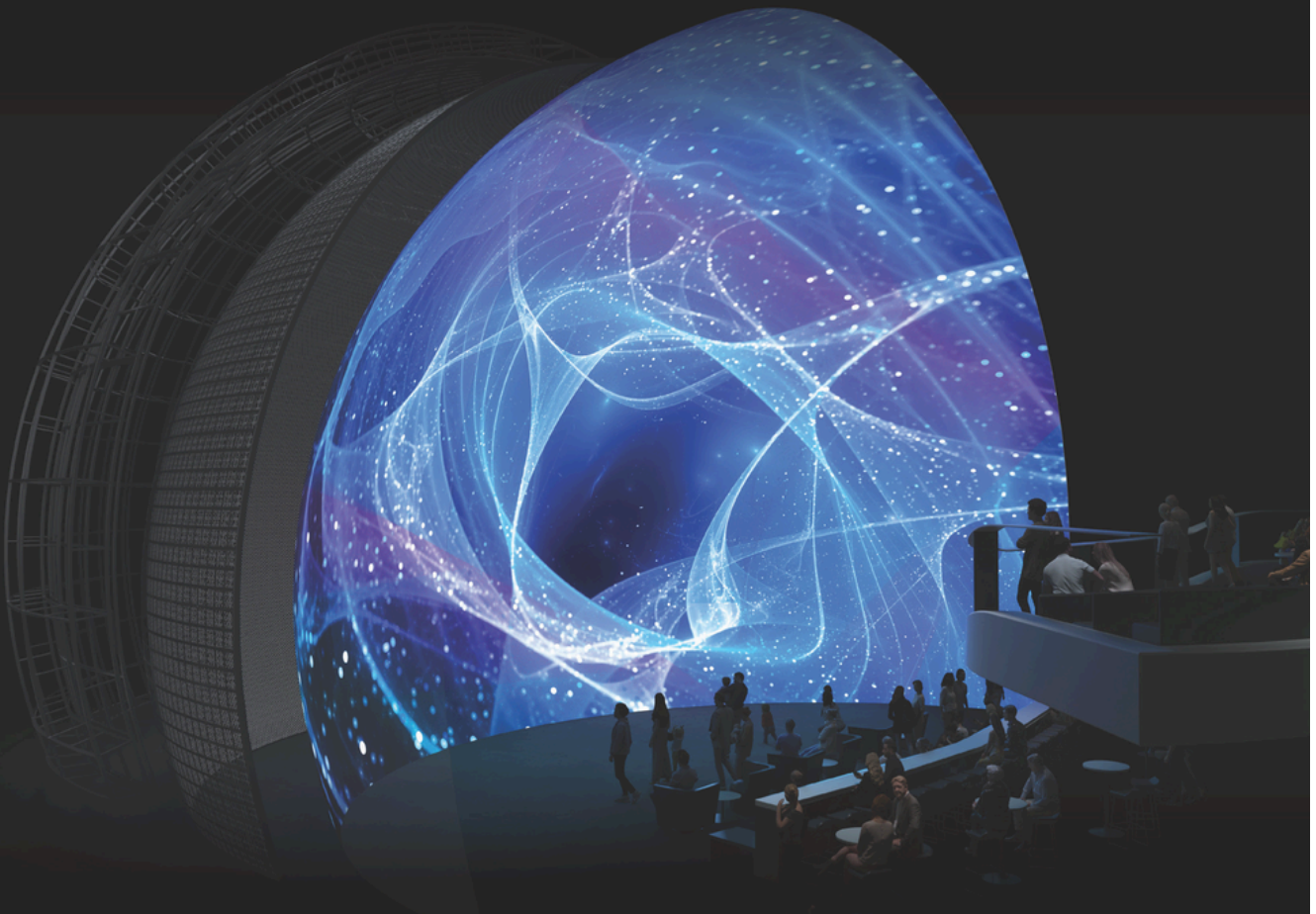


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# FUN & GAMES

## MAPS-themed Puzzles

Grab a pencil and PRINT out the last few pages of this newsletter - you'll want to make sure your print settings are set to **only print pages 48-51**, otherwise you will get 50 total pages flying out of your printer!

## PUZZLE #1: Guess the year...

\_\_\_\_\_

*While we are all getting excited about the MAPS-SEPA Conference in Virginia next year... our mystery year for this issue is the last year that a MAPS Conference took place in the state of Virginia.*

*As always, here are some hints in case you don't know the year off the top of your head...*

*The FIRST digit is the number of IAU constellations that start with the letter "G"*

*The SECOND digit is equal to the number of moons that orbit around the planet Mercury.*

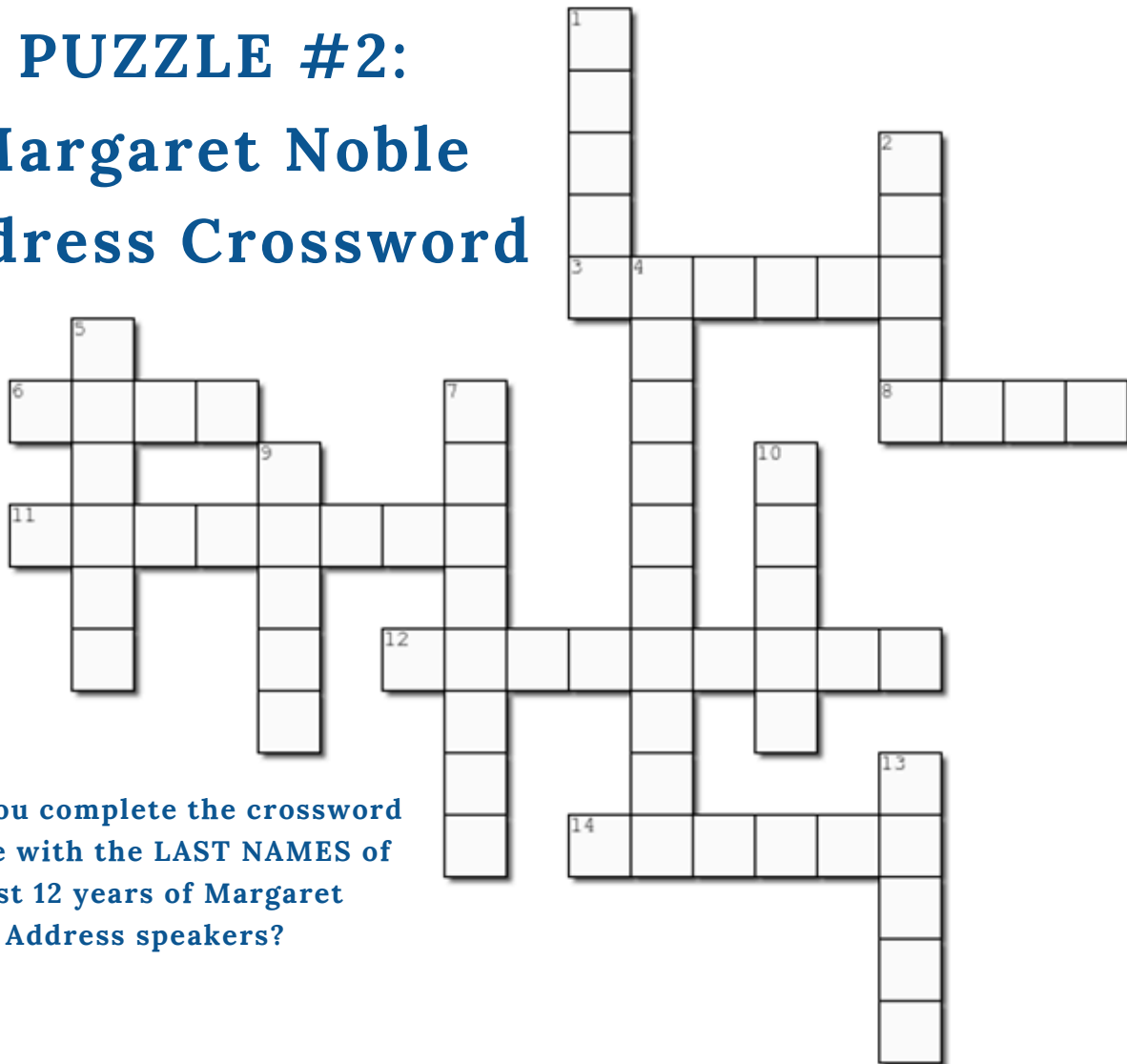
*The THIRD digit is equal to the number of successful manned missions to Mars that have happened over the history of space exploration.*

*The FOURTH digit is the same as the number of "gas giant" planets in our solar system.*

# FUN & GAMES

MAPS-themed Puzzles

## PUZZLE #2: Margaret Noble Address Crossword



Can you complete the crossword puzzle with the **LAST NAMES** of the last 12 years of Margaret Noble Address speakers?

### Across

- 3. MNA 2014 in Baltimore, MD- Carter
- 6. MNA 2021 Virtual Conference - Larry
- 8. MNA 2017 in St. Louis, MO - David
- 11. MNA 2019 in Columbia, SC - Clay
- 12. MNA 2021 Virtual Conference - Paul
- 14. MNA 2018 in Mystic, CT - Patty

### Down

- 1. MNA 2021 Virtual Conference - JT
- 2. MNA 2015 in Garden City, NY - Steve
- 4. MNA 2023 in Bays Mountain, TN - Mike
- 5. MNA 2024 in Mystic, CT - Lee Ann
- 7. MNA 2022 in Orono, ME - Steve
- 9. MNA 2021 Virtual Conference - Noreen
- 10. MNA 2016 in Waldorf, MD - Steve
- 13. MNA 2013 in Frederick, MD - Don

FUN & GAMES  
MAPS-themed Puzzles

PUZZLE #3: SPACE QUOTE PUZZLE

We offered the first of these types of puzzles in the most recent prior issue of our newsletter. For a refresher on how to complete the “Fallen Letters Puzzle,” please see the last few pages of the Spring 2024 issue of the MAPS Constellation.

F	H	A			A		K								
O	N	E			F	A	N	I	E	A	E				
S	O	E	P	G	I	N	O	N	M	D	N	A	A		
T	T	R	T	M	S	O	R	T	N	L	S	M	P	L	L

				,											
												,			
												.			

NOTE: We aren’t going to tell you who said the quote, it would be a total giveaway. But here is a hint... this is a famous quote that, due to transmission issues, may have actually been different than the exact quote we have all come to know!



# FUN & GAMES

MAPS-themed Puzzles

## PUZZLE #4: CELESTIAL JUKEBOX

Our final puzzle for this issue is a BRAND NEW one! We call it the “Celestial Jukebox” and the challenge is to complete the following SONG TITLES by filling in each of the blanks with a SPACE WORD! To complete all 14 songs, you will need to have knowledge of SEVEN different decades of popular music!

Bernard Herrmann (1951) - “The Day the \_\_\_\_\_ Stood Still”

The Beatles (1951) - “Across the \_\_\_\_\_”

Creedence Clearwater Revival (1969) - “Bad \_\_\_\_\_ Rising”

George Harrison (1969) - “Here Comes the \_\_\_\_\_”

The 5th Dimension (1969) - “\_\_\_\_\_ (Let the Sun Shine In)”

David Bowie (1971) - “Life on \_\_\_\_\_”

Elton John (1972) - “\_\_\_\_\_ Man”

Stevie Wonder (1976) - “\_\_\_\_\_”

Aretha Franklin (1981) - “There’s a \_\_\_\_\_ for Everyone”

Metallica (1986) - “\_\_\_\_\_”

Dave Matthews (1994) - “\_\_\_\_\_”

Oasis (1996) - “Chapagne \_\_\_\_\_”

Train (2001) - “Drops of \_\_\_\_\_”

Lady Gaga (2013) - “\_\_\_\_\_”

### HINTS:

5 Planets

2 Constellations

2 objects orbiting around Planets

2 stages of stellar evolution

1 anchor of our solar system

1 space vehicle

1 term for, well, everything!