

Southeastern Planetarium Association Presents

# ***Southern • Skies***



June 2025

Volume 45, Number 2

[sepadomes.org](http://sepadomes.org)



# Southern • Skies

June 2025   Volume 45   No. 2



*Front cover: March 6, 2025. Outreach Volunteer and VBAS Vice President Todd Anderson showing off the sun at the Girls Exploring Math and Science (GEMS) event at the Huntsville Botanical Garden. Photo by Beth Bero*

*Back cover: The Moon and the Pleiades over a lonesome pine. Photo by Robin Byrne*

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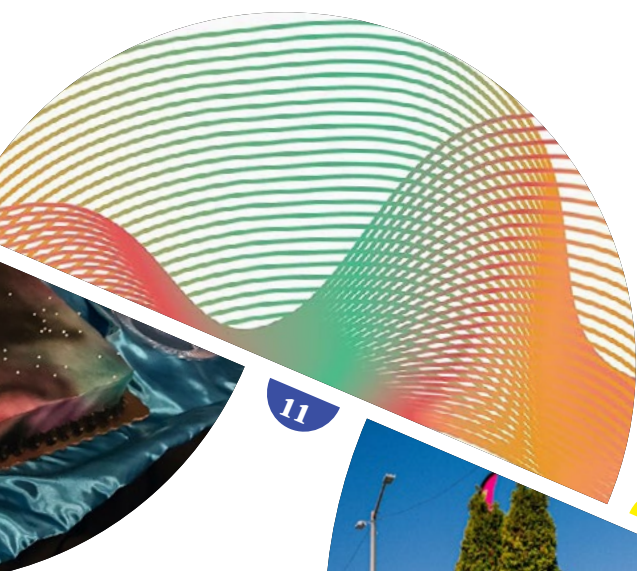
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Impressions  
**Ariel Galan**

State News Coordinators:  
**Beth Bero**, Alabama  
[eberob@vbas.org](mailto:eberob@vbas.org)

**Brett Jacobs**, Florida  
[laserfuzz@gmail.com](mailto:laserfuzz@gmail.com)

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[karisaz@tellusmuseum.org](mailto:karisaz@tellusmuseum.org)

**Steven L.J. Russo**, Kentucky  
[srltts@suddenlink.net](mailto:srltts@suddenlink.net)

**Dave Hostetter**, Louisiana  
[dehostetter@cox.net](mailto:dehostetter@cox.net)

**Maria A. Weber**, Mississippi  
[mweber@deltastate.edu](mailto:mweber@deltastate.edu)

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**Adam Thanz**, Tennessee  
[adamthanz@kingsporttn.gov](mailto:adamthanz@kingsporttn.gov)

**Ken Moore**, Virginia &  
West Virginia  
[viriniageek@gmail.com](mailto:viriniageek@gmail.com)

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**Southeastern Planetarium  
Association (SEPA)**  
[sepadomes.org](http://sepadomes.org)  
[southernskies@sepadomes.org](mailto:southernskies@sepadomes.org)



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# Editor's Letter

by Woodrow W. Grizzle III



Welcome, friends to another issue of Southern Skies. Spring is here and summer is just around the corner. May joy ever await us as we continue our meanderance upon this weird and wonderful blue globe.

If you read the table of contents, you already know that this issue is light. Your contributions are needed now more than ever for the next issue. Thanks to everyone who submitted their written work and news stories for this issue. We may be few, but we are mighty!

Before I address the substance of this quarterly, I'd like to say a few words about it's form. I designed Southern Skies to appear like a traditional print journal or magazine. That's two pages up at a time, which is called a spread. I maintained the spread design so that, should we elect in the future to return to print, the transition would be as seamless as a Spitz NanoSeam dome. While that format looks best on a large monitor that can display both pages side by side in a nice, large size, it's not great for phones. A one-up, or single page view is best when reading Southern Skies on a phone or small tablet. Thus, I'd like you to tell me which format you prefer: spreads or pages. We could potentially post both formats on the website, so that's a third choice. [Send me an e-mail](#) and let me know your thoughts and preferences.

**Robin Byrne** brings us another excellent book review. **Jon Bell** conducted an awesome interview with Kevin Krisciunas, a fellow space bard, in his Space Songs column.

The **News from SEPA States** section this time contains news from planetaria in **Alabama, Georgia, Louisiana, North and South Carolinas,** and **Tennessee.** I'd love to see every SEPA state represented in the news and one day see every facility represented there, too. My dream can only come true with your help. Our state news coordinators are listed in the Masthead on page 4. They are listed again on page 15. Take a few minutes

to write to them. Write about your show schedule, a memorable experience you had, troubles or triumphs at your facility, or whatever you wish to report. News from SEPA States is an important way that we stay connected to one another throughout the year. **Make the most of your SEPA membership by participating and letting us know what you are up to.**

For all submissions, please send photos—the more the merrier—and be sure to include captions. I can interpret the photos myself, but I'm not a mind reader, so please caption your photos to ensure accuracy.

There are a few other things I'd like to you consider. **Please send me relevant visual art pieces** to be considered for publication: astrophotos, paintings, drawings, anything visual that fits the theme of astronomy or astronomy education. **Aural or musical art** is welcome, too. Just about anything is fair game, if it's relevant to our work in planetaria or science education, and so long as you hold the rights to the work. There are some other details, but I'll go over those with you when you submit.

There's always room for more written pieces. Send me your ideas. Also, **I would love to recieve letters from you for a Letters section** in upcoming issues.

As always, it's a pleasure to put together the journal for you. It is my sincerest hope that you enjoy reading it. I wish you happy reading and a happy spring.

Ever your obedient servant,



# ***President's Message***

*by Katherine Hunt  
Ingram Planetarium*

**A**s warm weather returns to our lands I have found myself reflecting on the growth we experience from within. Sometimes the fruits of our labor are not immediately apparent, but rather are found underneath the soil. For every good strong plant must first lay down its roots, else it will topple from the weight of its foliage.

It is in this spirit that this Council has moved forward in honoring Betty's legacy.

It cannot be overstated just how blessed we are. The seeds this organization planted in her life, she has gifted back to us on a scale that we could not have predicted and will not likely see again...at least for a long while.

In that, I know, many of you continue to ask how this endowment is being utilized. Perhaps you may even feel like it has not been utilized yet at all. I am pleased to share that in quarter one of this year we finally have some forward momentum.

Part of growing up as an organization in such a big way requires a lot of new knowledge that most, if not all of us, simply do not have. For all our collective talents, we are all educators. We were essentially given a car before taking driver's education. It goes without saying, that the responsible thing for us to do before even turning the car on is to at least read the driver's handbook. This is why our actions with her endowment have been slow and intentional.

Even without leveraging her fund, just the fact that it exists at all has enabled us to work for our membership in ways we have not been able to do before. The security it has provided to our scholarship program has allowed us to greatly expand what we are able to award each year. From the founding of the original scholarship fund in 2011 to receiving Betty's donation in 2022, we allocated \$19,446.25 to a total of 57 members. From the 2023 Stars for All conference to now, we have awarded \$14,147.50 to a total of 18 members. Awarding a small number of larger scholarships which include enough to cover most if not all travel expenses is also now a routine practice and not a passing anomaly.

That said, every president who has served in the nearly four years since we received Betty's gift, have been hyper-aware of its existence and the need to responsibly put it to use for this organization. As of April 1, 2025 we have separated the fund into two accounts. The original savings account has been converted to a money market account with a 2% interest rate and half the endowment, in an amount of nearly \$123,000, has been invested into a 12 month CD with an interest rate of 4%. Over the course of this year Betty's endowment will accrue roughly an additional \$7,000. For context, after over 20 years in existence, the original scholarship fund has a typical balance of around \$8,000.

As we look forward to the future, being able to actually generate revenue through the responsible investment of this endowment will allow us to honor Betty's legacy and the legacy of our founders, such as Jim Hooks, in even more creative and robust ways. It is certainly within reason and reach that we can institute programs for our membership beyond the conference scholarship. However, as we will likely never have this opportunity come again, it is imperative that we don't overharvest our orchard.

As we gather together this year in Virginia, I humbly ask that you fellowship with your colleagues and friends. Ask yourselves and each other what you feel this organization can do to support its members. What critical needs does our profession have that remain largely unmet. Indeed, it can be said that in the next several years we may need to lean on each other even more as the resources in our communities are spread thin. I plan to open up a formal proposal period after the conference where members can submit plans within reasonable parameters that can put this endowment in action. Unlike the Mini-Grants which are facility-focused, these proposals should be organization focused and facilitate broad impact across our region and perhaps even across the country.

I wish you all safe travels as we undergo our yearly pilgrimage and reunion with one another and as always, keep looking up.



*Photo by the author*







## SEPA Observatory Group

Shortly before the pandemic, SEPA experimented with a special group for members with observatories associated with their facilities. The group met for an hour or so during the SEPA conference to discuss common problems and possible projects.

Now that conferences are back, it's time to start again. Mel Blake and Dave Hostetter would like to reorganize the observatory group, possibly meeting at the conference, possibly by Zoom or Facebook, or by other means. Are there common problems we can address? Could we do simultaneous public outreach? What about joint or individual research projects? As robotic telescopes become more common, would it be possible to have some designated telescopes around SEPA-land that members might use for their own programs?

If you operate an observatory—or are building one—and would like to participate in the observatory group, please send your name, phone number, and e-mail to Dave Hostetter at [dehostetter@cox.net](mailto:dehostetter@cox.net).



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# Writer's Tips for Southern Skies

by Woodrow W. Grizzle III

Here is the perennial checklist to help ensure your writing is best formatted for Southern Skies. Since it's probably been a while since any of us have had a writing course, I think you will find this list handy. These items are some of the more common snafus. Thanks so much for your effort in making Southern Skies the pre-eminent planetarium journal.

- 1. Do not double space after sentences.** This was necessary on a typewriter, but computerized word processors since the early 1980s have automatically adjusted spacing following a period to make sentence transition clear. Double spaces cause formatting problems for me and are incredibly time-intensive to remove.
- 2. Please do not use third person when speaking about yourself,** particularly in the News section. Southern Skies is a primary source, so you should always refer to yourself in the first person.
- 3. The words "internet" and "web" should no longer be capitalized.**
- 4. Almost always use words to denote numbers less than 10.** Exceptions include dates, addresses, and any number that is part of a proper noun, such as Apollo 8.
- 5. Almost never use the word "very".**
- 6. Avoid bangs (exclamation points)** unless they follow an actual, usually one-word, exclamation, such as "Wow!" The other exception is if the bang is part of a proper noun, such as a show title.
- 7. Avoid passive voice in most cases.**
- 8. Learn the difference between a hyphen, an en dash, and an em dash and use them.** There should be no space between any kind of dash and the words that precede or proceed it. Here's how to use dashes, generally. An en dash is shorter and used like parentheses inside a sentence for an aside. It also is used to denote a range of values, e.g. 1941–1945. (Note this is not a hyphen.) Em dash is used in similar fashion to a colon—but it gives a different stylistic effect. For more details, just ask.
- 9. These common abbreviations should be written as a.m.; p.m.; B.C.; and A.D.**
- 10. Avoid using Common Era and its associated abbreviations, B.C.E. and C.E. when using the Gregorian Calendar.** To do so is to use one thing while calling it something else, which is dishonest.
- 11. Stops (periods) should only be placed inside end quotation marks in actual quotations.**
- 12. The word "sun" should be capitalized when referring to the star proper.** When referring to the daytime light in the sky, never capitalize, unless it is somehow at the beginning of a sentence.
- 13. The word "earth" should be capitalized when referring to the planet.** When referring to the ground, soil, or if preceeded by the article "the", never capitalize, unless it starts a sentence.
- 14. The word "universe" should never be capitalized,** unless it is the first word of a sentence or if it is part of a proper noun, such as a show title.
- 15. The names of seasons should never be capitalized,** unless the word starts a sentence or is part of a proper noun.
- 16. Days of the week and holidays should always be capitalized.**
- 17. Please do not use italics.** When I use them in the final design, it is almost always to create visual interest or separation. In AP style, which is most appropriate for this publication, many things that would otherwise be italicized are either left alone or are placed in quotation marks. Generally, only capitalization is needed. For instance, the name of this journal should appear simply as Southern Skies. It is obvious from context that it is a title, and either italics or quotation marks would just be clutter. There is some gray area here.
- 18. If you have a question, just ask me. I'm always happy to help.**





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*Forces of Nature*  
by Anna Reser & Leila McNeill

As a lover of the history of science, and of the contributions made by women, I couldn't resist a book titled *Forces of Nature: The Women Who Changed Science*. The authors, Anna Reser and Leila McNeill, are both professors of the history of science, so the book does have an academic feel to the writing style, but it is still very much an easy, enjoyable read.

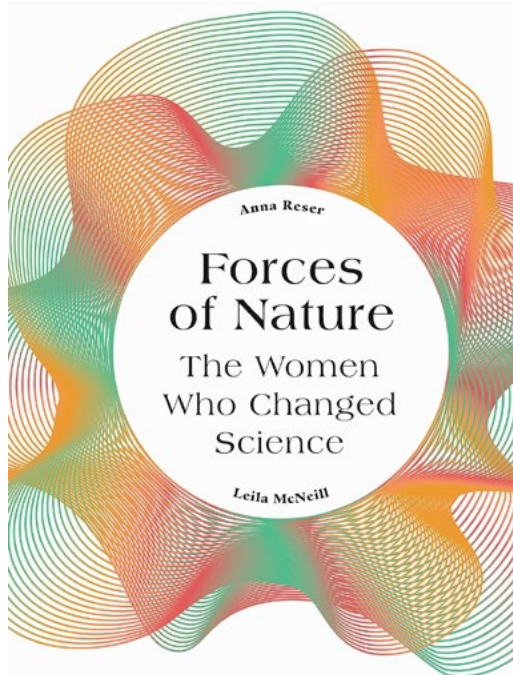
I went into this book expecting to read stories of most of the women in science that we are familiar with, so I was surprised to encounter a number of individuals, and groups of women, who are far less known. The book is arranged, roughly, in a chronological order, beginning with women in antiquity through the Middle Ages. This section largely focused on the contributions women made out of necessity, such as assisting in childbirth as midwives, and administering home remedies to the sick. The authors made a point of including women whose names are not known, because of the fact that men were the ones writing the histories, so the contributions of women were not given the same respect as those made by men. This will be a recurring theme throughout the book.

As we move into the Renaissance, we meet lesser known women who made contributions to mathematics and astronomy, such as Maria Gaetana Agnesi, who wrote the first calculus book in Italian, and Nicole-Reine Lepaute, who helped calculate the orbit of Halley's Comet in order to predict its return in 1757. It was in this era that we encounter several women who were either the wife or sister of a scientist, and who worked as an assistant. While officially mere helpers, many of these women made their own contributions to science, as well. In astronomy, the most famous example would be Caroline Herschel, who assisted both her brother, William, and then his son, John, but who also discovered comets on her own.

An interesting section of the book was devoted to women who contributed to science through their art. The science of studying human anatomy was largely pursued by male doctors, but women contributed by illustrating texts with detailed diagrams of the human body, the organs, and

bones. One woman, Anna Morandi, sculpted human bodies out of wax, to be used by medical students. Similarly, the field of botany was advanced by women who pursued the "accepted" pastime of gardening. Tending to flowers and plants was something refined women could do without raising eyebrows, but, at the same time, some of the women took this "hobby" farther by making detailed drawings of the parts of plants, and noting the behavior of insects.

By the nineteenth century, women were contributing to science by writing articles for magazines that popularized science, becoming some of the first to share scientific discoveries with the masses through popular media.



During World War I, with the majority of the male population engaged in the war, women were recruited to assist in medical care. This ultimately led to the development of formal training to become nurses, which had not existed prior to this time. Women were at the forefront of both creating the nursing school curricula, as well as teaching the classes. This even led to women becoming doctors, though they had to attend women-only schools.

The early twentieth century also saw women gaining employment as "computers" - literally, women who made mathematical calculations. In astronomy, we are most familiar with the women computers at Harvard Observatory, such as Annie Cannon, Henrietta Leavitt, and Williamina Fleming. But other observatories, including Greenwich, had their own cadre of women making calculations, as well. This role of women computers would continue into the 1960's, up to the point when mechanical computers would replace them.



A subject area that I would not have thought of as a scientific field is home economics. However, the development of ways to efficiently run a home, lay out a kitchen to minimize the number of steps taken, and a focus on cooking nutritious meals all had to be studied and tested to see what worked best. And since this dealt with raising children, cleaning the house, and cooking, it was women who made the most significant advances in this subject area.

World War II saw women moving into many roles previously reserved for men, but the book primarily focused on women who contributed to the development of the atomic bomb. Women worked in a wide variety of capacities in this endeavor, from technicians running equipment to chemists and physicists designing and analyzing the experiments.

Post World War II saw a push to return women to the role of homemaker, but one area that was still accepted was related to gardening – caring for the environment. Women conservationists made the analogy between caring for their own home and the need to care for the entire planet. While Rachel Carson is best known among the early female conservationists, she was not alone.

As we near the end of the book, we see the first women to go to space, and some notable female astronomers, such

as Vera Rubin and Jocelyn Bell. An interesting point made is that the women who were “first” to do something are the ones we hear about, while the women who continue to make significant contributions in their fields are often overlooked. The last few pages of the book highlight a wide variety of women who are lesser known, but who are equally deserving to be recognized for the work they have done.

*Forces of Nature: The Women Who Changed Science* by Anna Reser and Leila McNeill was a very interesting and thought-provoking book. It expanded my thinking in regard to what constitutes science and what can be considered a contribution to the scientific world. If those ideas interest you, then I would highly recommend reading this book. –RB

**Reference:**

*Forces of Nature: The Women Who Changed Science* by Anna Reser and Leila McNeill, 2021, Frances Lincoln Publishing



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[dehostetter@cox.net](mailto:dehostetter@cox.net)

**Maria A. Weber**, Mississippi  
[mweber@deltastate.edu](mailto:mweber@deltastate.edu)

**Neil A. Pifer**, North Carolina  
[piferana@rss.k12.nc.us](mailto:piferana@rss.k12.nc.us)

**Gary J. Senn**, South Carolina  
[senng@usca.edu](mailto:senng@usca.edu)

**Adam Thanz**, Tennessee  
[adamthanz@kingsporttn.gov](mailto:adamthanz@kingsporttn.gov)

**Ken Moore**, Virginia & West Virginia  
[virginiageek@gmail.com](mailto:virginiageek@gmail.com)

**Woodrow W. Grizzle III**, Editor-in-Chief  
[southernskies@sepadomes.org](mailto:southernskies@sepadomes.org)



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# News from SEPA States

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### **Von Braun Astronomical Society Planetarium by Alex Hall**

HUNTSVILLE—The Von Braun Astronomical Society began celebrating our 70th anniversary in the fall of 2024 with our annual Astronomy Day, for which we painted, cleaned and acquired new (to us) seating for our planetarium. We continued to celebrate as we reached a fundraising goal establishing the VBAS Stars for All Endowment Fund; ensuring VBAS will continue strong for another seventy years. In November, the Astronomical Society of the Pacific awarded past president and current outreach educator Beth Bero the Las Cumbres Amateur Outreach award. Bero is the fourth such awardee from VBAS. In March we were honored to receive a Moon Tree from NASA, a Loblolly Pine that we planted with due ceremony in the Monte Sano State Park that surrounds our grounds.

The VBAS Observatory offers a Night at the Observatory program, an Astronomy 101 short course, and (new this spring) Astrophotography 101. We added a radio telescope, an All-Sky camera and a NASA Global Meteor Network camera to our facilities. Our outreach team has been busy supporting local school STEM evenings, scout programs and sidewalk astronomy at locations around north Alabama. We support the Alabama Science Festival, SteamFest and the Madison Street Festival, among others. Our free monthly newsletter goes out to more than 1000 recipients. We also have an active social media presence, augmented by our Student Director, Greyden Kutner, who creates and posts videos for VBAS on [Instagram](#) and on [YouTube](#). You can also catch us on [Facebook](#) and at our [website](#).

We offer a public planetarium show to the public every Saturday night at 7:30 p.m. with telescope viewing afterwards, weather permitting. Topics are researched and presented live by our team of dedicated planetarians and range from Magic Carpet tours of the night sky with our Spitz A3P projector to Volcanoes in Space to Explorations of the Universe to Space Junk. The cost is still \$5 adults, \$3 students, and free to children under six. Attendance is free for all members. We offer private, school, and scout shows on request. This spring we hosted several marriage proposals. On the third Friday of each month we host a Members' Meeting that is open to all. Each month we host Zoom Special Interest Groups on Astrophotography, Beginning Astronomy and Advanced Projects. We encourage all to join our astronomy fun. —AH



*September 28, 2024: Astronomy Day Presentation by Special Guest Speaker Mr. Rob Landis, Program Executive of the NASA Planetary Defense Coordination Office. Photo by Alex Hall*



*March 20, 2025, Moon Tree Dedication at Monte Sano State Park. L to R: Chris Stuhlinger; Alex Hall, VBAS President; Marcia Lindstrom (NASA SLS); Huntsville Mayor Tommy Battle; Rae Ann Meyer, Deputy Director of MSFC; Chad Davis, dist. superintendent for Alabama State Parks; and Zachary Heard, park manager. Photo by Alabama State Parks*



*March 6, 2025. Outreach Volunteer and VBAS Vice President Todd Anderson showing off the sun at the Girls Exploring Math and Science (GEMS) event at the Huntsville Botanical Garden. Photo by Beth Bero*

## **INTUITIVE Planetarium** **U.S. Space & Rocket Center** **by Sophia Villamor**

HUNTSVILLE— It's been a whirl of a time at the INTUITIVE® Planetarium. Spring means the Rocket Center is flooded with field trips, and we get our first taste of the summer crowds. In fact, this past March was our biggest in the history of the INTUITIVE® Planetarium. On top of it all, we had multiple outreach events with our telescopes and portable dome. While it was certainly a lot of fun, it almost makes me miss the slower season. Almost.



*Pop-Up Solar Telescopes at Unclaimed Baggage. Taken 3/22/25 at Unclaimed Baggage by Emily Riddle.*

While we were certainly busy here in Alabama, some of our team went international. David Weigel, Brittany Kundert, Sam Pinter, and Cat Paulson journeyed to El Salvador to

support the inauguration of Instituto Key, a new science and engineering university. They brought our portable planetarium to host visualization workshops and present to all of the students in the inaugurating class. (See photo below by Key Institute staff.)

Sam recounted fondly on how enthused students swarmed the presenters with passionate and curious questions, only stopping so the presenters could take a break for lunch! The next day at the inauguration ceremony, the students ran over to ask even more questions. "It was nice to see the impact of what we did in front of my face. ...Everybody who was a part of it was interested and excited too," Sam said with a smile.

Brittany commented, "The passion, dedication, and curiosity of the students at Key was (and is) so powerful. It really made me remember the importance of what planetarians do. This stuff is literally life-changing, and the students told us as much! They are truly brilliant students. I miss them all!" Travels aside, we have also been working hard to license our most popular show *Our Place in Space*. If you would like information about it or our other program, *JWST: The Story Unfolds*, you can find those [here](#).

Wishing you clear skies and full domes from the INTUITIVE® Planetarium!

*(Opposite: Our Place in Space show with a sold-out crowd in the INTUITIVE Planetarium. Taken by Brittany Kundert, 4/1/25.)*









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# Louisiana



## **State Planetarium News by Dave Hostetter**

Our area planetariums took the first step toward forming a Louisiana and Mississippi state-level group by establishing a Facebook page, the Louisiana-Mississippi Planetariums (LAMP). There has been a delay in our first in-person meeting, but things will happen at some point.

Lafayette's planetarium remains pretty steady-state this year. Public programs are happening on the weekends in particular, and live constellation shows have returned once each on Saturdays and Sundays. School field trips are ongoing. The student employees and part-timers carrying the load are doing a fine job.

Personally I recently worked with someone who believed he had a 300 pound lunar meteorite (he did not) and have just been contacted by another gentleman who thinks he might have a 20 pound iron. His pictures look interesting and I look forward to meeting with him for direct examination of the rock. An area nature center hosted a career day in February, and I spent a pleasant day talking with people about telescopes, planets, and meteorites (although I'm not sure I talked any kids into a planetarium career!). I'm scheduled for workshops, solar viewing, and telescope nights at area parks and libraries in New Iberia, Lafayette, and Lake Charles—still showing the flag wherever I can.

Jay Lamm reports that the Irene W. Pennington Planetarium in Baton Rouge continues with a wide variety of programs and special events on several topics.

Steve Stevens' planetarium in New Orleans is now formally the "Audubon Planetarium & Nature Dome Theater," focusing a lot on terrestrial concerns and how astronomy helps us better understand and protect the one planet we all call home. He reports that guests appreciate that perspective coming from a nature center and this approach makes perfect sense with the Audubon Nature Institute's and Audubon Louisiana Nature Center's mission. The number of programs is increasing and the dome is in use every day they are open. –DH



# North Carolina



## **Margaret C. Woodson Planetarium Horizons Unlimited by Neil Pifer**

SALISBURY—May the 4th be with you! Our mostly educational dome is doing a live and interactive star talk along with the opening of the free to us show, *Always Above*. This 12-minute show is produced by Space Force and is distributed by multiple vendors. On opening weekend, we previewed this show to 3rd graders and the reception was very positive! The visuals, the commentary, and the topics are perfect for older audiences, but the 3rd graders responded better than we ever thought they would.

In our experience pairing shorter dome clips with live and interactive programming is much better than hitting play on a full dome show, so I would recommend adding this show to your library.

Have a great summer and camp season and I look forward to seeing many of you at the MAPS-SEPA conference in June! –NP



*Above: Third Graders previewing Always Above.*



**Public Schools of Robeson County**  
**Robeson Planetarium**  
**by Ken Brandt**

LUMBERTON—We are continuing with construction of the new Robeson Planetarium 3.0, which is slated to open in December of 2026. (See photos on next page)

However, "If you're resting on your laurels, you are wearing them on the wrong end of your body."—Ken Brandt  
 We've recently completed our statewide star party event, one of over 500 in NC's Science Festival—organized and carried out by our partners at the Morehead Planetarium. Kudos to them for a festival well run!  
 As we begin scheduling summer programs, I can report that we've set another attendance record for the Inflatable version of the Robeson Planetarium (2.0). We've already seen more than 4,900 students, teachers, and members of the public since the beginning of our academic year in August. By comparison, in the 23–24 school year, we didn't break that attendance peak. We will most likely break 5500 by year's end in Mid-June.



*Above: Progress continues on the new planetarium.  
 Photos by Ken Brandt*

**Planetariums for Peace Update~**

May 30th, at 5 pm EDT, 2 pm PDT; Dave Weinrich, Ryan Wyatt, Carter Emhart, and I will have presented Using the Planetarium to Teach Peace. We will have been talking about several ways that the power of the planetarium is being harnessed to assuage conflict worldwide, and here in the US. I specifically will have been talking about a dome simulcast/telecon event, the funds from which would be donated to a well-vetted gun buyback program here in the USA. If your planetarium is interested in joining the party, please email me at ken.starsabove@gmail.com .

**IPS Education Committee Update~**

I am resigning my commission as Co-Chair of the IPS Education Committee, effective December 31, 2025. It is time for newer education leadership. If you're interested in joining this committee, please email me with your request. The second \$5,000 IPS Fellowship Award was recently awarded. This award is for research in planetarium education at the undergraduate or graduate level. If you or someone you know could use some seed money to do meaningful planetarium research, please reach out.

Above all, remember that every breath is extra credit.  
 Earn it. —KB

**GeoDome Portal**  
**Asheville Museum of Science**  
**by Gary Lazich**

ASHEVILLE—On Thursday, the 17th of April in the Year of Our Lord 2025 at 7 Bells, HMS GeoDome departed from AMOS for the Caribbean Sea with Spring Break Campers, who received a Star Pirate's guide to the sky. The southerly latitude took us far from city lights and showed us such "new" stars as Canopus and The Southern Cross, the "treasure chest" we call The Milky Way, and one of the many star clusters located therein called "Pirate's Jewels." We returned to Asheville without incident.



*Stellarium View of "Pirate's Jewels" from the Caribbean Sea*

AMOS has relocated its admissions counter and gift shop to the entry hallway to make room for a new Science



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on a Sphere! Alex Morrison, Exhibits and (Interim) EDU Manager, is working with the WorldViewer app provided by The Elumenati to program sequences that will allow a live presenter to take guests on a tour of what the Sphere can show. The exhibit will beautifully complement the GeoDome Portal, looking from the outside in rather than the inside.



*Earth as Depicted in Science on a Sphere – NOAA Image*

## South Carolina

**BlueCross BlueShield of South Carolina  
Planetarium, South Carolina State Museum  
by Liz Klimek**

COLUMBIA—As is the case every spring, school-group attendance has really picked up. In terms of public shows, we have added the U.S. Space & Rocket Center's live James Webb Space Telescope: The Story Unfolds show back to our regular weekend schedule, which had taken a break for a few months to make room for our winter holiday programming. The show has done really well in its new, earlier timeslot.

As part of a broader museum effort to grow a partnership with the University of South Carolina's School of Music, this April, the planetarium hosted two unique evening programs. The first was a performance called "In the Dark" by the Orange Road Quartet. This consisted of music by Austrian composer Georg Friedrich Haas, entitled String Quartet no. 3 "in iij noct". This was an unusual and experimental event for the planetarium, as the piece was performed in near-total darkness, without any visuals. The theater was made to be as dark as legally possible, meaning that there was still some ambient light from the exit signs. Each musician sat at one of the four "corners" of the dome, as far away from each other as possible, communicating with musical phrases and interesting sounds without being able to see each other. Both shows nearly sold out.

The second performance was created by University of South Carolina music student Julia Jacobsen, who is double majoring in Violin Performance and Marketing. Entitled

"Music for Sustainable Change", Julia and her colleagues formed a student quartet that performed classical pieces accompanying fulldome imagery taken from various locations around Columbia. All of the fulldome video sequences were taken and edited by Julia herself, using both a 360 camera and a rented drone. Imagery included scenes of nature, oftentimes marred by trash, of busy intersections, and of landfills. The 30-minute immersive experience was designed to use art and music to inspire people to think about the consequences of the waste we generate and to motivate people to take whatever small steps they can to help protect the environment.

Immediately following the performance there was a 30-minute talk back session in which the audience could ask questions and share thoughts and ideas about climate change.

By chance the performance was scheduled for April 23rd, the day after Earth Day. This was a very fitting way for the planetarium to effectively do something for Earth Day, which is a day I hope we can do more to acknowledge in the future. -LK

**Hooper Planetarium  
Roper Mountain Science Center  
by Maggie Connelly**

GREENVILLE— Roper Mountain Science Center has had a busy spring! We have field-trip groups every day of the week for students in first through eighth grades (minus third and fourth). Our new second grade offering "The Stellers: Mission Green" is getting excellent reviews and I recommend it for anyone who is looking for a show geared towards younger ages that discusses what plants need to survive. The show is a bit interactive where the Stellers occasionally ask the students questions, and the students are always excited to participate. It makes the experience a little less passive, and we all know more interactivity in the planetarium is a good thing.

We also continue to have our public event, Friday Starry Nights, on most Friday evenings. I'm very excited to announce that this summer we will be debuting the U.S. Space and Rocket Center's "James Webb Space Telescope: The Story Unfolds" show as our 7:30 feature during Starry Nights. I've got the Rocket Center coming at the end of May for training and I cannot wait to present this new (to us) format to the public!

As your President-Elect, I've been managing the Scholarship Committee for the upcoming MAPS-SEPA Conference. I've also been working with President Kat Hunt on various council-related matters. Kat and I have been in many discussions with Tony Kilgore, our host for the MAPS-SEPA Conference, and it is shaping up to be a very exciting one to attend. I hope to see many of you there in June! -MC

**DuPont Planetarium**  
**Ruth Patrick Science Education Center**  
**University of South Carolina, Aiken**  
**by Gary J. Senn**

AIKEN—Sometimes technology in the planetarium does not deliver the way that you hope nor expect. Sometimes, things just malfunction. I am sure that we all have some kind of technical support that helps us when challenges with the technology occur, and I thought it would be nice to show my appreciation for that support. We have a maintenance agreement with Evans and Sutherland, a Cosm company. Recently, we were having trouble with the projection on 1/4 of our dome. Working with our customer support crew, we tried several potential solutions to address the situation. Eventually, they sent us a new graphics processor, and that was the solution we needed to correct the problem. While I know that we paid for the support, it is still good to acknowledge the good support that we received, and I extend my sincere appreciation to the Digistar support team.

We were happy to host a "Pi Day, Blood, Worm Moon" event. We promoted the event on our website and included this information, "[We] will be hosting a FREE lunar eclipse viewing on March 14, 2025. We will begin setting up for the event at about 12:45 AM and will stay at least through the maximum eclipse at about 3:00 AM." We had two different people contact us for further information and during the conversations, it became clear that they planned to come

after dark on 3/14, meaning in the evening. We thought that listing the times would be enough to direct people to us during the event, but perhaps the event time was lost with the other information on the page. We ended up putting this at the top of the webpage to help make it clearer, "Lunar Eclipse - Late-night of March 13-14, 2025." We were not expecting many people. In fact, we thought that it would be just me and three members of the local astronomy club in attendance. We ended up with 71 people, which was amazing to me considering the time. I ended up staying until the end of the partial eclipse just before 5:00 AM. Yes, I was the only one left at that time.

We have been showing Mesmerica at our planetarium since before Christmas. Moodswings does an amazing job with the marketing, and we have consistently filled or nearly filled the theater for all of the shows. While we only have 57 seats, the attendance for Mesmerica outpaced the attendance for our regular public shows.

Our public shows in April included, In My Backyard, Defying Gravity, and Two Small Pieces of Glass. In May we showed, Magic Tree House: Space Mission, Seven Wonders, and our local production, To the Moon and Beyond. For National Astronomy Day on May 3, we presented the May shows and then added, Backyard Wilderness. We also debuted the new show from the US Space Force, Always Above. In June we will present, Grossology and You, Cosmic Colors, and our local production, Digistar Special Effects Extravaganza.-GJS

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**Dooley Planetarium**  
**Francis Marion University**  
**by Jeanette Meyers**

FLORENCE – Dooley Planetarium at Francis Marion University was pleased to host the 2025 Meeting of Astronomers of South Carolina. (Photo below) Our last in-person meeting was held in 2019, and we thought it would be good to bring everyone back together and reconnect. We hosted 42 faculty, post-docs, graduate students, undergraduate students, and amateur astronomers for our one-day event on 12 April 2025. Attending the meeting this year were representatives from Clemson University, the College of Charleston, Francis Marion University, Furman University, Midlands Astronomy Club, South Carolina State University, Trident Technical College, and the University of South Carolina. We had 19 presentations covering topics from radio astronomy to binary star systems to black holes to quasars and 7 research posters. It was good to catch up with the other institutions in the state and hear about the research projects our students and faculty are working on. Our next meeting will be held in spring 2026 at Furman University. –JM

**Charleston Planetarium**  
**Citadel Mall**  
**by Paul Gangarosa**

CHARLESTON—The Charleston Planetarium opened on March 1. Our founder, Paul Gangarosa, dreamed of opening a Planetarium in Charleston for years and we have finally been able to make this dream come to life. We are happy to introduce our planetarium director, Thomas Martinez. We currently feature an inflatable dome, spanning 23 feet in diameter and accommodating 40 chairs. Constructed with commercial level materials and industry leading

technology, the inflatable dome offers an uninterrupted hemispherical projection surface. Seating for the dome includes 40 padded, non-reclining chairs. The planetarium dome theatre is installed in the Citadel Mall in Charleston. We offer shows for the public, field trips, summer camps, birthday parties, and rentals for special events. We are a 501c3 non-profit. For more information, to purchase tickets or make donations, readers are encouraged to visit our [website](#). –PG

**The Planetarium**  
**Spartanburg County Public Libraries**  
**by Andy Flynt**

SPARTANBURG—The Planetarium at Spartanburg County Public Libraries hopes to open mid to late September 2025. We continue to make progress with dome installation that began at the end of April and should finish about the time you read this! After that, our cove lighting and seating will be installed. We will hire our two instructors in July and our Digistar system will be installed in August.

We are acquiring rights to eight different shows from two different vendors and will begin working on live sky shows once we have learned more about the Digistar system. To keep up with our latest news check out our Construction Updates page at [Spartanburg County Public Libraries](#) or follow us on Facebook. As the summer progresses, we'll be posting information more frequently regarding completion and our programs.

Also, we are hiring for The Planetarium so please take a look at our job listings page and tell anyone looking for a job in the field to visit Spartanburg County Public Libraries [online](#).

Thanks to all of my new friends for the words of guidance and encouragement. We're almost here! –AF





# Tennessee

## **Bays Mountain Park & Planetarium City of Kingsport by Adam Thanz**

KINGSPORT— Greetings Fellow Planetarians!

### **Planetarium Theater ~**

Our main feature for May-August should be "Beyond the Sun." A good family program about exoplanets. Should, as we are days away from a signed lease. We'll follow it with a brief tour of our current night sky.

Our alternate program will be "Appalachian Skies." It is our live tour of the night sky. Having it fully modular has really helped make the program even better. It allows each of us in the theater to provide a unique show and keeps it fresh since we're not stuck to a strict script. (Say that five times fast!)

We've been expanding some special programming, too. Laser program weekends thrice a year and also offering Mesmerica. The first offerings will be April 18.

### **Observatory ~ SunWatch**

We view the Sun safely every weekend, March-October, 3 to 3:30 p.m., but we cancel it if the weather's cloudy.

### **Astronomy Day 2025~**

As I write this article, Astronomy Day is approaching very soon. As in last year's summer BMP TN News submission, we'll be combining Astronomy Day with the Park Association's "Kids to Bays Day." This is an all-day event that is providing kid-centric activities related to nature and the environment. It is in conjunction with Kids to Parks Day, the third Saturday of May. We'll be providing some astro activities as well as demonstrations.

### **Nature Center & Park~**

By mid May, we should have new nature exhibits in our gallery space that circles the planetarium theater. The exhibits staff have been super busy creating a crawl-through beaver lodge and much more.

The park has been continuing its transformation to the desired master plan for all of the animal exhibit habitats outside. Right now, a large children's playground is being made with a nature theme. The kids will love it. —AT



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# Georgia

## ***Tellus Science Museum Bentley Planetarium by Karisa Zdanky***

CARTERSVILLE— As I am sure you can all relate, Spring is one of the busiest seasons at Tellus. In the past three months, we hosted events for Winter Break and Spring Break and welcomed guests from across the Southeast and beyond.

Following the somewhat overwhelming success of 2024's Dino Day, we expanded the fun into an entire week of festivities. We had special guests each day: Prehistoric Nation, a creative puppetry group focusing on audience interaction, Buddy the Dinosaur from PBS' Dinosaur Train, and the Georgia Reptile Society—along with two aptly themed dinosaur planetarium shows, Dinosaurs: Giants of Patagonia and Dinosaurs: A Story of Survival. The week of President's Day, over 7,000 people visited the and 2,975 of those guests decided to see a planetarium show as part of their experience.



*Dino Day 2025*

April kicked off with our Spring Break event—STEAM Break! Due to our local counties' school schedules, we had higher-than-average attendance across two weeks, March 31–April 4 and April 7–11. The first week, we took advantage of a week-long license agreement with RSA, and showed the brand-new animated show, Voyage of the Stars: A Sea and Space Adventure. We also decided to rent a laser projector from Laser Fantasy for the occasion. We started with Laser Taylor Swift and Movie Magic for the entire two weeks, and then added Laser Jukebox and Laser Elton John to the schedule for the heavier week. It was a hit! Over 1,900 guests saw a laser show during their visit.

Finally, we have some bittersweet news for the planetarium community. On April 15, David Dundee officially retired from Tellus Science Museum. After almost 50 years in the informal science industry and countless positions

at museums, planetariums, and universities across the country, David decided it was time to move on to his next adventure: exploring the world with his wife Betty and tending to his ever-growing train and stamp collections. Staff from Tellus—both past and present—friends from our sister museums, and former colleagues all turned out to wish him well. In true Dundee style, the party included funny anecdotes, a space-themed sheet cake, presents, maybe a few tears, and one final “Joke of the Day.”

We'll definitely miss having David here at Tellus. I know I wouldn't have found my way to Cartersville if it weren't for him. Please send him a “Congrats!” message as he begins his retirement journey. —KZ

## ***A Few Words in Tribute to David Dundee by Phil Groce***

CARTERSVILLE— On April 15th 2025, after 50 years in the planetarium business, David Dundee hung up his stars. David began his career in Tucson, Arizona at the Flandrau Planetarium, as night manager and show presenter. He later interned at the Hayden Planetarium in New York, and went on to spend the next 30 years at Atlanta's Fernbank Science Center Planetarium serving as astronomer and planetarium chairman.



At Fernbank he hosted two SEPA conferences (1991 and 2005). After retiring from Fernbank, David went on to serve as Astronomer of the planetarium and observatory at the Tellus Science Museum in Cartersville, Georgia. For more than 15 years, he made it one of the highest attended planetariums in the Southeast. During his tenure at TELLUS, he served as SEPA President and hosted his third SEPA conference in 2015.

During retirement, David looks forward to spending more time with his wife Betty and family, and tinkering with model trains.

It is difficult to measure how much David has done for SEPA and the planetarium profession. I know that for me and hundreds of other planetarians, David has gladly given his time to open the planetarium doors and share his universe. I often brought prospective planetarium donors to see his program magic at TELLUS. His programs show what planetariums can do when they participate in their community. He is a living example of what it means to be a joyful, good, and gracious planetarian. —PG

(Photos on next page by Karisa Zdanky and Phil Groce.)







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# SPACE SONGS

## with Jon Underwood Bell

*Hallstrom Planetarium  
Fort Pierce, Florida*



*The constellations in the sky were not put there to bore us.  
There's Antlia, Andromeda, Aquarius, and Taurus...  
- Kevin Krisciunas, from "The Constellation Song"*

### **Interview with Professor Kevin Krisciunas~**



*Above: Professor Kevin Krisciunas as Galileo*

About thirty years ago, (1991 actually,) a PBS video series called, "The Astronomers," was released. Episode 1 dealt with the search for dark matter, even including an interview with Dr. Vera Rubin. Also featured was the "sidewalk astronomy" efforts of John Dobson, creator of the Dobsonian telescope mount and a great popularizer of sky watching. And toward the end of this video we get to meet Professor Kevin Krisciunas of Texas A&M University, who while driving to the Mauna Kea observatory in Hawaii, began to sing his "Constellation Song," which I referenced in the last issue's column. It's at the 38 minute mark in [this video](#).

I promised to see if I could contact and interview Professor Krisciunas, and so here it is. Here also is a link to [his home page](#).

Bell: Thanks so much for doing this interview. What got you started writing space songs? Who or what were your inspirations?

Krisciunas: I was inspired by Alan Sherman\*, Tom Lehrer, and musicals by Gilbert and Sullivan. When Comet Halley was around in 1985/6 I gave a lot of talks about the comet. Twice I did a show in costume called "Edmund Halley Rides Again." That was at the University of Hawaii-Hilo, and at a community college on Maui. That got me interested in musicals, taking voice lessons, and singing in a chorus in Hilo.

B: How did the "Constellations Song" and some of your other space songs come about?

K: In one of the Comet Halley talks three women and I did "The Elements" by Tom Lehrer. I use the same piano music for my version of "The Constellation Song" (which has the 88 constellations in it). You know about that from "The Astronomers" series on PBS.

I took "Give my regards to Broadway" and rewrote it to be about a supernova explosion. I took the trio from "The Mikado" known as "I am so proud" and rewrote it to be about star formation, stellar evolution, and cosmology. The refrain is "Red giants are distended with a hot white core / less than Chandrasekhar's limit which is 1.4 / but a supergiant has a very different goal like a neutron star or pulsar or a big black hole."

The last song I rewrote was to take a melancholy love song from Irving Berlin ("What'll I do...") and now it's about trying to make sense of evidence for being visited by aliens visiting in UFO's.

\*Sherman wrote the [Camp Grenada](#) spoof song.

K: There's a Canadian guy named Peter Jedicke who used to make astronomy songs. He took "When Johnny comes marching home again" and it became "The stars go nova





Above: Coyote's Flying Saucer Retrievals and Repair Service In-Ko-Pah Road, near Jacumba Hot Springs in Southern California. Image by Seauton, 2019, on Wikimedia Commons.

one by one, kaboom, kaboom, nucleosynthesis is done, kaboom." A google search reveals a whole bunch of links. He rewrote "Edelweiss" from "The Sound of Music" to be about Betelgeuse.

B: Speaking of which – I'm familiar with Peter Jedicke's "Betelgeuse," song, and I like it a lot. But I had mentioned it to my choir director and he told me that there's a church hymn out there that set new words to Richard Rogers' "Edelweiss," and that the Rogers and Hammerstein estates came after them. Apparently these legendary musicals creators have a provision that says that nobody can sing this song with different words than those created by Oscar Hammerstein, and even if you want to sing the song in the original form, you have to get all kinds of permission. Have you run into this or any similar problems with your work?

K: It's curious you mention Rogers and Hammerstein rights. In 1991 when we performed the eclipse opera.... Well, our finale used a rewrite of the theme from Oklahoma! I talked to a lawyer that dealt with the rights to R and H music. She said to me, "You cannot perform it. You cannot record it with video or audio. But I suggest you talk to a lawyer." So I called a friend who is an astronomer and a lawyer. He explained that there is a grey zone when it comes to 1st amendment rights. And said that if I had a legitimate artistic or education purpose, I could write and perform a parody of somebody else's song, and it would be very unlikely that someone would sue me.

B: Yes, I know that as educators we can invoke the Fair Use doctrine, which allows us to present normally copyrighted material for classes and not-for-profit educational purposes, particularly if we're not charging any admission price. I also know that there are exceptions for when you are either providing parody or some kind of commentary or development of the original work so long as there's no confusion about which is which.

So what have you got about eclipses?

K: Here's the best thing I can show you, a duet from a musical called "[Total Eclipse](#)", which was performed in Hilo, Hawaii, in 1991 shortly before we had a total eclipse there.

Here are the lyrics:

Mariposa: The Sun in the sky will soon be hidden.  
The Moon will transform the day into night.

D. J.: The steeds of Apollo are cautiously driven.  
The stars come out. What a glorious sight!

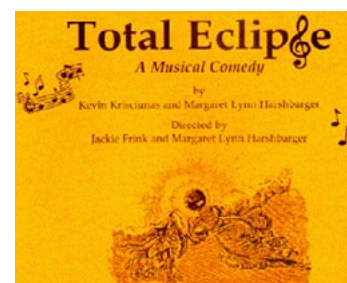
Both: The orb of night is crowned above.  
We shall behold celestial love.  
We shall behold celestial love.

Mariposa: Astronomer, dear, my senses are  
heightened.  
But won't it cause the people alarm?

D. J.: The darkening sky leaves many frightened.  
But no one will come to harm.

Both: The grand event takes place at noon.  
No greater sight than Sun and Moon.  
No greater sight than Sun and Moon.  
Moon and Sun, and Sun and Moon.  
Moon and Sun, and Sun and Moon.  
Bring the joys of night at noon.  
Moon and Sun, and Sun and Moon.  
Bring the joys of night at noon.  
Bring such joys at noon.  
Bring such joys at noon.

And here's a [link](#) to the program and some photos!







Above, left: Don Vaselino (John Kooistra) & the Cardinal's cleaning lady (Marlene Valeriani); right, the people of Barcelona



Above, left: Archduchess Palomara (Joan Hiromasa) & Archduke Charles III (Carl Johnson); right: Don Juan Capistrano (Kevin Krisciunas) & Senorita Mariposa (Margaret Lynn Harshbarger)



Above: Gypsy girl (Kelly Hamora)

## IT'S LONG BEEN MY DUTY

By Kevin Krisciunas, 1991

Sung to "Finch' han del vino" from "Don Giovanni," by W. A. Mozart, 1787

(Not familiar with the tune? [Here it is](#) in its original form:)  
The lines are numbered to abbreviate the repeat in the last third.

1 It's long been my duty  
2 To contemplate beauty  
3 Hence constellations  
4 And planets delight.

5 Few sights terrestrial  
6 Match those celestial:  
7 Stars like the eyes of a  
8 Goddess at night.  
Stars like the eyes of a  
Goddess at night  
Goddess at night  
Sparkling so bright.

9 Large moons of Jupiter  
10 Gold rings of Saturn  
11 (A) lunar eclipse  
12 Of hue like the lips  
13 Of golden-tressed Venus  
14 With skin lily-white.  
Lunar eclipse of hue like the lips  
Of golden-tressed Venus with skin lily-white.  
Golden-tressed Venus who visits every night.

15 The stars are my mania  
16 My muse is Urania  
17 Bewitched by Titania  
18 I can't sleep at night  
Can't sleep at night  
I'm up all night.

19 Ah, but what pleasure  
20 I get full measure  
21 Heavenly bodies  
22 Mine for delight.

19, 21, 22

5-8

19-22

9-14

19-22

Heavenly bodies

Mine for delight

All seven Pleiades

Mine for delight

Mine for delight

Mine for delight

Mine for delight!

B: Another song that you wrote from this production proclaims the wonders of being an astronomer in 1706:



## **THE UNIVERSE, FOR GOOD OR WORSE**

Written by Kevin Krisciunas, 1987

A re-write of "I am So Proud" from The Mikado," by Gilbert and Sullivan

*This was performed at the All Star Revue, University of Hawaii at Hilo, November 20, 1987*



*M81 image by Rob Martin, Treasure Coast Astronomical Society, used with permission*

B: You seem to have a penchant for the classical composers, but also for late 1800's Gilbert and Sullivan patter songs. You sent me this one which you'd mentioned earlier, modeled on their "I Am So Proud," from "The Mikado," and I gotta say, it's really, really hard to sing! <https://www.youtube.com/watch?v=o957lzsQDec>

K: You will see that this is a pretty complex piece of music. In this performance I flubbed at least one word ("coagulates"). Earnest Morgan made a few mistakes, but Dante Carpenter, Jr. (the guy with the rich, velvety voice) was spot on. To pay homage to the original, if one can, I think it's a good thing to have the new lyrics use some of the original rhyme scheme. I borrowed some phrases verbatim and used similar rhymes in The Mikado trio.

If we hadn't learned this trio doing "The Mikado" in the spring of 1987, we could not have attempted singing this.

I sent a video tape of our November 1987 performance of the Mikado Trio to Professor Chandrasekhar, whom I had interviewed at his office that year. I was writing a biographical memoir about the man who hired Chandra to work at the University of Chicago. Anyway, he wrote back to say that he liked our song.

B: That is amazingly cool, thanks for sharing!

Baritone number 1:

The universe for good or worse  
Most ev-er-y place is empty space.  
Ten billion years or more ago  
Apart it flew in an instant or two.  
The Big Bang's light once lit up the night.  
It now behaves at mi-cro-waves.  
At microwaves.

Baritone number 2:

A cloud of gas of proper mass, if dense enough,  
Becomes star stuff, becomes star stuff.  
The cloud oblates, coagulates.  
The knots diffuse, some gas we lose.  
Now every star both near and far  
Is born this way, the experts say.

Baritone number 3:

I heard one a physicist say  
As if he cared,  $E$  is  $m c$  squared.  
The stellar cores perform their chores  
And so they gain, they gain a helium strain.  
If this is true, it's jolly for you.  
Hot stars are blue and soon they are through.

[Now these three verses are sung in a round.]

[Now one at a time]

Baritone 2:

And so, although, all stars they must go  
Yet recollect this death effect  
We can't correct by intellect  
Their ends direct, we thus detect.

Baritone 1:

And so, although some stars they must blow  
They greatly pine to brightly shine and  
Take the line of a hero fine  
Ere they decline, they're not benign.

Baritone 3:

A hot white dwarf, this endomorph  
Throughout will get degenerate  
Its course is set, yet don't forget.  
I'll make my bet which I won't regret.

[Together] We thus detect/they're not benign/I'll make by  
bet  
which I won't regret.

[In unison] I won't regret/I won't regret/I won't regret.

[Refrain] Red giants are distended with a hot white core  
Less than Chandrasekhar's limit, which is one-point-four.  
But a supergiant has a very different goal  
Like a neutron star, or pulsar, or a big black hole.



*The Flame and the Horsehead Nebulae, photo by Rob Martin, TCAS,  
used with permission*

B: And finally, here's "The Constellation Song" once  
again! Except for that quick vocal excerpt from "The  
Astronomers," I can't find a recording of you singing the  
entire piece.

K: There used to be a video on YouTube, but Texas A&M  
removed it some time ago.

B: Well, this certainly sounds like a challenge: which of you  
"singing astronomers" is up to the task of performing this  
simply stellar song?

### **THE CONSTELLATION SONG**

Kevin Krisciunas, 1987

(to the tune of "The Modern Major General" from "The  
Pirates of Penzance," by Gilbert & Sullivan, 1879)

The constellations in the sky were not put there to bore us.  
There's Antlia, Andromeda, Aquarius, and Taurus,  
And Apus, Leo, Lepus, Ara, Aries, and Centaurus,  
Carina, Crater, Cancer, Canis Major/Minor, Corvus,

And Aquila, Auriga, Leo Minor, and Monoceros,  
Columba, Libra, Lyra, Lynx, and Caelum, Cygnus, Circinus,  
Corona Borealis, Cetus, Crux, Oh! do not scorn us  
When you learn we fondly love the likes of Capricornus.

Horologium and Hydra, Hydrus, Indus, Microscopium,  
And Cepheus, Bootes, Eridanus, Telescopium,  
Chameleon and Hercules, Dorado, Draco, Delphinus,  
Norma, Octans, Lupus, Musca, Pyxis, Grus, and Scorpius.

There's Coma Berenices, Fornax, Pavo, Puppis, Perseus,  
Corona Australis, Tucana, places like Equuleus,  
Sagittarius and Sagitta, both north and south Triangulum,  
And Scutum, Sculptor, Sextens, Serpens, Mensa and  
Reticulum.

Lacerta, Ophiuchus, Pictor, Gemini and Pisces  
Is where we hope to find a cloud of interstellar ices.  
Orion, Piscis Austrinus, in Phoenix, and in Pegasus is  
Where the clouds are dense enough and each then  
coalesces.

\*Towards Cassiopeia, towards the Giraffe, and also towards  
the Hunting Dogs

We find the stars and galaxies and scribble in our nightly  
logs.

Ursa Major/Minor, Vela, Virgo, Volans, and Vulpecula  
Is where we plan to aim tonight with million dollar specula.  
To lofty mountains off we go in confident reliance,  
In hot pursuit of photons there and world beating science.

[Alternate last two lines: The constellations in the sky, they  
number eight and eighty.

They're up there every dark, clear night. I hope you've seen  
them lately. ]

\* Camelopardus = the Giraffe. Canes Venatici = the Hunting  
Dogs.

(These two just don't rhyme with anything that would fit  
into the space allotted in the song!)

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