

# ROUNDABOUT

NC STATE STUDENT MEDIA

FALL 2025



*the* OUT-OF-THIS-WORLD ISSUE

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# EDITOR'S NOTE

## ABOUT US

The newest NC State Student Media outlet, Roundabout is a glossy general interest magazine that covers student life, arts and culture.

## MAGAZINE STAFF

Editor-in-Chief	Layne Keese
Photo Editor	Lily McCabe
Copy Editor	Chase Alston
Design Editor	Marlowe Henderson
Assistant Design Editor	Autumn Tate
Promotions Director	Alannah Anderson
Adviser	Ray Black III
Business Manager	Layla Faith Batts

## CONTACT STUDENT MEDIA

Phone	(919) 515-2411
Email	Media-Sales@ncsu.edu
Office	307 Witherspoon Student Center
Director	Patrick Neal
Business Adviser	Abi Barefoot

## THE COVER

Carrie McLawhorn, a fourth-year studying fashion and textile management, and Cora Jones, a fourth-year studying media arts, design and technology, pose in front of a photo of a twin-jet Nebula from NASA's Hubble telescope in the Cyma Rubin Visualization Lab at D.H. Hill Jr. Library on Friday, October 10, 2025.

Photo by Lily McCabe

To my fellow X Files enthusiasts-

I am so beyond thrilled to present you with my first issue as Editor-in-Chief! I hope you find this to be as explosive of an entrance as the big bang, but no pressure.

To those who know me, this issue theme may seem to be a little out of left field. I don't entirely understand the on-goings of space, considering I dropped my freshman year astronomy course. I talk all the time about how I'm not the kind of science fiction enthusiast who likes space; I'm the kind interested in the pitfalls of technology and apocalyptic wastelands. Think *Blade Runner* and *Annihilation*, not *Star Wars* and *War of the Worlds*. Though, like any amateur film buff, I did enjoy *Interstellar*, and of course who could forget Jordan Peele's *Nope*? Nothing but love to my fellow nerds who do enjoy space and space-themed media, of course. We are but two branches of the same tree, my friend.

Thus, while I don't totally understand the workings of the galaxy, I do understand that NC State has a beautiful aerospace engineering program that is important to such a large portion of our student body. Not to mention, I wanted to start my Editor-in-Chiefdom with a mind as open as the vastness of the universe. And, philosophical ruminations aside, my lovely editorial team had so many awesome article ideas, I couldn't help but be excited by it too!

Speaking of my incredible team of wonder women, I'd like to take a moment to thank them for their hard work as we all have been navigating our new positions. Thank you Alannah, Chase, Lily, Marlowe, and Autumn for all your hard work, dedication, and mutual support as we forge this new chapter of Roundabout Magazine. And, of course, thank you to our all-knowing visual adviser, Ray, for answering my endless questions.

Finally, thank you, the reader, for taking a peek at our intergalactic madness. I hope you enjoy reading it as much as we enjoyed making it.

See you at the roundabout,

# MEET THE STAFF



Layney Keesee  
EDITOR-IN-CHIEF



Lily McCabe  
PHOTO EDITOR



Chase Alston  
COPY EDITOR



Marlowe Henderson  
DESIGN EDITOR



Autumn Tate  
ASSISTANT DESIGN  
EDITOR



Alannah Anderson  
PROMOTIONS  
EDITOR

Photos by Ray Black III

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Carrie McLawhorn, a fourth-year studying fashion and textile management, and Cora Jones, a fourth-year studying media arts, design and technology, pose in front of a photo of a twin-jet nebula from NASA's Hubble telescope in the Cyma Rubin Visualization Lab at D.H. Hill Jr. Library on Friday, October 10, 2025.

Photo by Lily McCabe

# Moons, Myths and Mars

From the moon to mars to our personal favorites, there's so many stellar experiences in the outermost sky.

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# Mid-Autumn Festival 中秋节

BY KATHERINE WAN  
DESIGN BY ALASIA DAWN MCCULLEY

In Chinese culture, the legend of the moon goddess tells the story of selfishness and sacrifice. Long ago, 10 suns had risen in the sky, scorching everyone on Earth, drying out the rivers and killing all the crops. An archer named Hou Yi took on the task of shooting down the nine extra suns. To reward his bravery and might, he was gifted two potions of immortality. He refused to consume the potion without his wife, Chang'e, in hopes they would gain immortality together, and left the potions with her at home. However, one of his disciples, Fengmeng, snuck into his home in an attempt to steal the potions for his own gain. In order to prevent the potions from falling into his own hands, Chang'e consumed them both herself. After drinking the potions, she floated away into the sky, becoming the moon goddess. When Hou Yi had returned and he learned of what had happened, he broke down in despair. In order to commemorate his wife, he set out his wife's favorite fruits and sweets every anniversary of her parting.

The supposed anniversary of Chang'e's departure is on the fifteenth day of the eighth month of the lunisolar calendar, which is when Chinese people celebrate the Mid-Autumn Festival. This can be anywhere from the beginning of September to the beginning of October during the Gregorian calendar year. The holiday falls on the full moon believed to be the biggest and brightest of the year.

To celebrate, families reunite to spend time together and admire the beauty of the full moon, which represents completeness and unity in Chinese culture. Lanterns, which symbolize good fortune and hope for the future are lit and displayed. People enjoy mooncakes, which are round pastries reflecting the shape of the full moon often filled with red bean or lotus root paste, as well as dried egg yolks. The shape of the pastry also reflects that of the full moon.

The holiday is also historically aligned with the fall harvest of the year, so people enjoy seasonal fruits and osmanthus wine alongside the mooncakes while giving thanks for the year and their loved ones.

The Mid-Autumn Festival originated in China over 3000 years ago during the Zhou dynasty, when moon worship was customary, as Chinese people found the moon to hold mystical properties. Through the festival, the myth of Chang'e became popularized, with several different versions of the story often told. While the holiday has evolved with time, the heart of the celebration remains the same.

Many other Asian cultures also celebrate their versions of the Mid-Autumn Festival. In Japan, a moon-viewing festival known as Tsukimi is held, and people may choose to display seasonal produce and rice cakes known as Tsukimi dango as an offering to the moon. Chuseok, which translates to Autumn eve, was traditionally celebrated in Korea to enjoy the harvest, and is now a three-day celebration involving many traditional Korean foods, folk games and visits to hometowns. In Vietnam, celebrations for Tet Trung Thu involve children's parades with paper toys, lantern making and games. Some places also do lion dances, as the lion is thought to bring luck and prosperity. These are but a fraction of the many cultures which find significance on the fifteenth day of the eighth lunisolar month.

The Mid-Autumn Festival is a meaningful and intimate holiday for many people. It is a time to honor the moon, spend time with loved ones and enjoy delicious meals and sweets. Each variant of the holiday reflects a unique and storied history of many different cultures.

Growing up, the Mid-Autumn Festival was a special time for my family and me. It may not have been the biggest or most significant Chinese holiday that we celebrated, but we still made sure to come together as a family every year to enjoy mooncakes and the beauty of the moon. I remember learning about the myth of Chang'e and thinking of her whenever I looked at the moon. Even though there are several versions of the story, I liked the version with her sacrifice the most, because of her love for Hou Yi.

There is another version of the story where Chang'e steals the potion of immortality for herself and now suffers the consequences of eternal solitude on the moon. One famous poem in China is based off this version:

**To the Moon Goddess**  
By: Li Shangyin

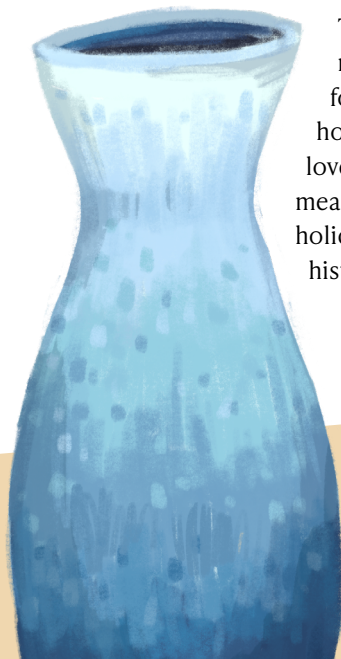
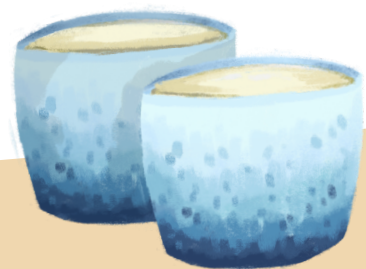
*Translation by Witter Bynner*

Now that a candle-shadow stands on the screen of carven marble  
And the River of Heaven slants and the morning stars are low,  
Are you sorry for having stolen the potion that has set you  
Over purple seas and blue skies, to brood through the long nights?

嫦娥  
李商隱  
雲母屏風燭影深·長河漸落曉星沉·  
嫦娥應悔偷靈藥·碧海青天夜夜心·

The poem captures the melancholic feelings of Chang'e and seems to reflect the writer's own sorrow and regret. There is a haunting atmosphere in the imagery of the poem, as the passing hand of eternity sharply contrasts the fallible human nature of Chang'e. Although this poem is based on a more cruel version of Chang'e, who must now deal with the consequences of her actions, I find comfort in the way Li Shangyin humanizes the moon goddess.

*It is a reminder of  
our own humanity; we all  
see the same moon in the  
night sky.*



# From State to the Skies:

## Insight into NC State's Aerospace Engineering

BY ALANNAH ANDERSON  
PHOTOS BY LILY MCCABE

If you've ever heard that NC State University is an engineering school, but don't quite know your chemical engineering from mechanical engineering, welcome – *let's talk space*. Maybe you've dreamt of going to the moon or perhaps you're besotted with airplanes but might be lost on how to get there? Let's get you from NC State to the skies.

The Department of Mechanical and Aerospace Engineering outlines the aerospace engineering degree program as "preparation for working with aircrafts in addition to space systems design, analysis and manufacturing." Aerospace engineering is where science and engineering conjoin to make vehicles fit for survival of the harsh environments beyond earth's atmosphere.

You will learn all aspects of what it takes to get a rocket into space: design, manufacturing, control and operation are all essential to the degree program. What's more, is that aerospace engineering is one of the majors at NC State that offers the Accelerated Bachelor's/Master's Program. One student, Braeden Coughlin graduated from this program in 2024, and received both his Bachelor's of Science and Master's of Science in just five years.

"The program prepares [you] for the types of problem solving that you're going to experience," Coughlin said. "I apply the analysis skills and problem solving skills day in and day out."

Once you receive your thorough overview of aerospace engineering as an undergraduate, you can pursue specifics, such as robot mechanics or fluid dynamics, at the graduate level.



Miniature aircraft on display in the MAE student fabrication shop on Monday, Oct. 6, 2025. Students, including the Aerial Robotics Club, use the shop to work on design and construction projects.

"It's a great opportunity to become specialized in what you liked during undergrad," Coughlin said.

Frequently, aerospace engineering is labeled as a niche field, but that's just not true. This degree program here at NC State is designed to survey the distinct pathways you can pursue once you graduate and it's a unique and personal experience for each student.

Here's a look into some of the classes you can take:

### MAE 251 - AEROSPACE VEHICLE PERFORMANCE

This course analyzes aircraft performance through design, looking at factors like endurance and landing distance. It begins to introduce what space flight looks like.

### MAE 315 - FUNDAMENTALS OF VIBRATIONS

This course discusses the vibrations within systems and how every particle is capable of movement.

### MAE 459 - ROCKET PROPULSION

You'll learn about system analysis and design through the use of chemical rockets.

### MAE 467 - INTRODUCTION TO SPACE FLIGHT

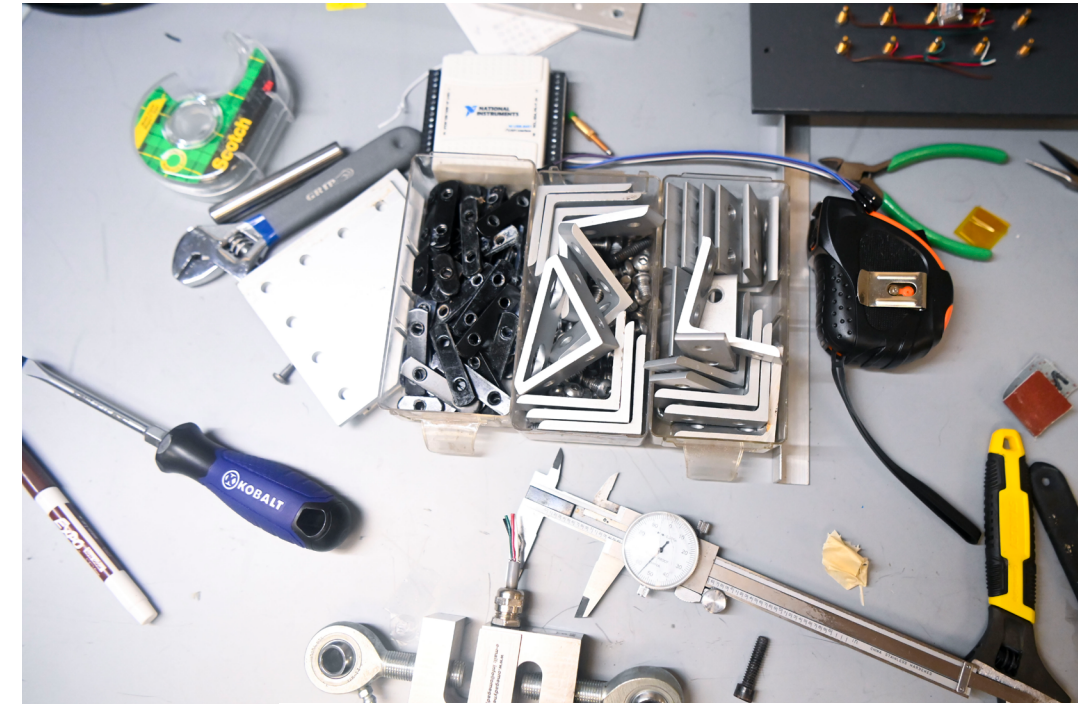
After your MAE 251 course, you'll study earth satellites, how to enter the atmosphere and other spacecraft characteristics.

### MAE 537 - MECHANICS OF COMPOSITE STRUCTURES

"In an ever-developing field, aerospace engineering is dominated by composites and it really should be offered at an undergraduate level," Coughlin said. Simply explained, composites are a combination of two unique materials that still have their individual properties even when brought together.

In addition to these courses, you'll have semester-long projects, also known as senior design, to complete that give you hands-on experience while being supported by your peers and professors. The projects cover challenges to design and test a small satellite that gets sent beyond the earth's atmosphere, a drone, a rocket or a more traditional aerial vehicle to name a few.

It's not just about the classes though – have you ever had a class that you would have despised had it not been for the professor? Dr. Andrew Lee and Dr. Darius Cater, assistant professors in the Department of Mechanical and Aerospace Engineering, helped to make engaging learning environments for Coughlin. They took difficult courses, MAE 537 and MAE 589 respectively, and brought in their own knowledge. "The professors had personal investment and passion," Coughlin said. It's professors like these who help make the degree program successful. Even though you might not want to take their classes, they are experts in their field and could guide you in figuring out the types of



Materials are laid out on a work table in the MAE 372 Lab on Monday, Oct. 6, 2025. MAE 372 is a class focused on applying knowledge of governing equations and solutions for typical structures to the design and construction of a structural component.

research or concepts you're interested in. For example, Dr. Carter's research focuses on multirotor vehicles and their aerodynamic interactions in addition to wind energy, urban air mobility, and air vehicle performance.

While it may seem challenging or difficult from the outside, the right village behind you will make for great things to happen. "Don't be intimidated by it, not feeling like you have to do everything on your own, there's a lot of teamwork in the industry," Coughlin said. "It's perfectly ok to compare perspectives in your community." A core principle of engineering is collaboration, designing aircrafts is not something you'll need to do on your own.

If you know how to distinguish aerospace engineering from the rest, congratulations, the author has succeeded! If the author has convinced you to join the aerospace engineering program, even better! However, if you'd like to learn more, then head to the Department of Mechanical and Aerospace Engineering Webpage at



Mechanical and Aerospace Engineering, smiles during the MAE 372 Lab on Monday, Oct. 6, 2025. Students in the lab performed a stress test using metal plates.

[catalog.ncsu.edu/undergraduate/engineering/mechanical-aerospace/](https://catalog.ncsu.edu/undergraduate/engineering/mechanical-aerospace/) to see complete course requirements, or head to Engineering Building 3, Room 3002 to talk to someone in person. •

# ASTRONOMICAL OCCURRENCES:

## WHAT'S GOING ON IN SPACE?

BY CEE WELDS  
DESIGN BY AVA STEELE

There has always been interest in what goes on in the galaxy. From astronomers like Galileo Galilei, to the Space Race during the Cold War, to even now, with almanacs to detail every movement of the moon. Meteors, eclipses and black holes are just a few examples of the wonders people love to document, some of the brightest happening in 2025.

Meteor shower nights are some of the prettiest moments to grace the earth. The experience of watching bright flashes of light burn against the night sky, tucked tightly within a blanket and surrounded by peaceful silence, is something truly otherworldly. This year started off strong with the Quadrantic meteor showers, occurring between late night January 3 and early morning January 4. A common setback of astronomical sight-seeing are the multiple all-nighters one must endure for such marvels. Many events, like these meteor showers, tend to get most intriguing around the peak period, which usually occurs around midnight or later. That's the main reason I – someone who is constantly drowning in personal duties – struggle to catch these showers. Those who could, however, witnessed a total of 100 to 120 bright, white strips of light racing through the night sky. Though January nights tend to get nippy, given that the observer could only handle to do watches in 30 minute intervals, it proved to be the most

mesmerising way to start the new year. An aspect of meteor showers that I am truly fascinated by are their origins. Described by NASA's definition of meteors and meteorites, as well as Dr. Aparna Kher's "What Are Meteor Showers" article, most come from comets and constellations. There's

Halley's Comet, which serves as the origin point for the Orionids and Eta aquarius showers, or Centaurus constellation, home of the Alpha Centaurus showers. Comet Swift-Tuttle gives us the Perseids, the midsummer showers loved for their brightness and reliability, which I unfortunately also have yet to see.

Despite my continuous failures to catch a shower, I have at least been able to catch another galactic wonder: The Moon! If there's ever a struggle to find a worthwhile astronomical experience, the Moon is always there. With its many phases, shapes, and names, — Oh, so, so many names— the moon's everchanging qualities cater to many astrological spectacles. For instance, every month's full moon has its own distinct name.

From January's wolf moon, to April's pink moon and November's beaver moon, the moon never fails to reinvent itself.

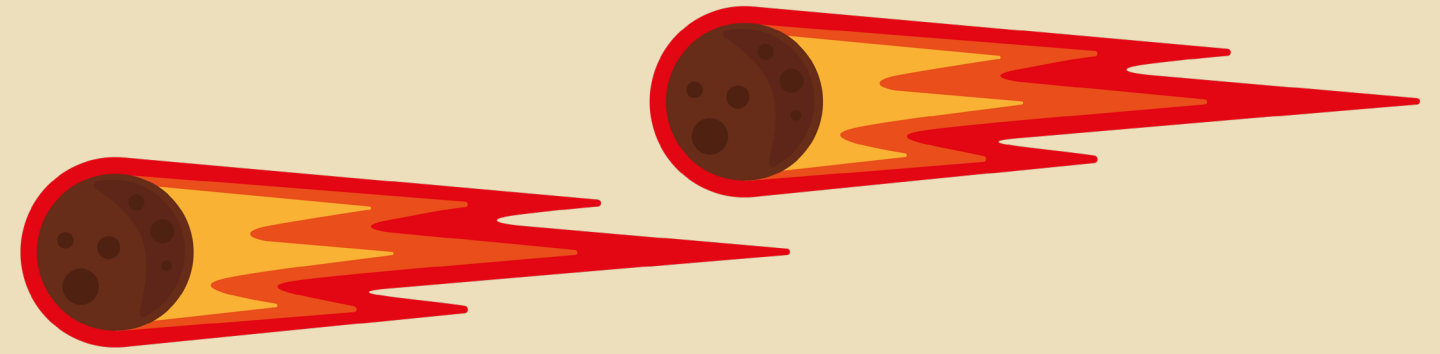
Another great way it goes about this is with my personal favorite occurrence: eclipses. There was a fair share of those this year, most notably September's partial eclipse and October's total eclipse. There's nothing more enchanting to me than the ability to see the sun engulf the world in bright orange, enshrouded in a period of mysterious darkness. A moment that stands out to me was when I was able to see a total eclipse during my art class. Our teacher gave us those special glasses to keep you from going blind as you watch the eclipse, the moment I was able to witness a rich, orange moon, against dark daylight. Occasions like those, stick with you forever. They make astronomical occurrences in our solar system all the more special.

Just like a shooting star, it's magnificent while you see it but once it's gone, chances are you won't be seeing another for a while, making the biggest drawback of space observations, the low frequency. There was practically nothing for most of winter and all of summer for 2025, aside from some new, full and micro moons. However, August proved to be a surprise hub for space activity. Its full moon, the Sturgeon moon, appeared August 9 to 12, with Venus

and Jupiter falling into conjunction, becoming visible to us on Earth mere inches away from each other. As if there wasn't enough to see in the sky, the very next day, the Perseid meteor showers made an appearance between 12 a.m. - 7 a.m. August's activity began to shape the rest of the year to be full of astral excitement. September had its harvest moon, the namesake of the proximity to the Fall Equinox. November is looking to be quite sparse, but December has the potential for back-to-back meteor showers along with its Solstice.

Throughout the year, these breathtaking events go as fast as they came, but not to worry, they'll return next year. While some do have some rarer moments that take years to witness — Halley's Comet passing earth or a Meteor Procession — there's always meteor showers or eclipses happening sometime, somewhere. Space is as repetitive as it is unpredictable, which is why I say there's always a chance to see it for yourself. Try to keep an eye out for 2026's events. Stay up for a meteor shower, track down an eclipse, spot neighboring planets at elongations or conjunctions. It's surprising how much can come out of simply witnessing the universe's natural wonders!

...



# MOUNTAIN SIGHTINGS

BY SHOSANNAH DEY  
DESIGNED BY CHLOE SCHMITZ



## Exploring the History of the Brown Mountain Lights

As someone who is not a local North Carolinian, I was intrigued when I heard about the Brown Mountain Lights. The mysterious glowing orbs that hover over and around the peak of the mountain have varying theories to where they could have come from, ranging from century old indigenous legends to claims of alien sightings. With that in mind, I thought it would be interesting to do an exploration of not only the potential scientific origins of the Brown Mountain Lights, but also the myths and legends surrounding it.

### HISTORY OF BROWN MOUNTAIN LIGHTS

Brown Mountain is a ridge found in the Pisgah National Forest in North Carolina, located in the Appalachian Mountains. The national forest itself is home to many beautiful sights, from a variety of animal life to stunning waterfalls. Despite that, Brown Mountain hides a more mysterious secret.

One of the earliest documented testimonies describing the Brown Mountain Lights was mentioned in the Charlotte Daily Observer, on September 23, 1913. The report stated, "The mysterious light that is seen just above the horizon almost every night from the Battlesnake Knob, near Cold Spring, on the Morganton road is still baffling all investigators." These lights appeared round and glowing yet no one knew what they were, making way for the theories that could be.

### LEGENDS ASSOCIATED WITH BROWN MOUNTAIN

Almost a dozen potential explanations were noted down in the results of a 1922 geological survey by George Rogers Mansfield, issued as Press Notice by the US Geological Survey. This report included potential scientific explanations, spooky theories, and urban legends and myths.

### Native American Legends

One of the earliest legends surrounding the Brown Mountain lights revolves around a war in the year 1200 AD between two Native American tribes, the Catawba and the Cherokee. After the war, it is said to be believed that the lights were the spirits of the Native maidens who were out searching for their partners who had been lost to the war.

### Ghostly Activities

Aside from the famous Native American legend, there are also many ghostly theories that are rumored to be the cause of the lights. One ghost story involves a woman who disappeared around 1850, assumed to have been murdered by her husband. Strange lights appeared on the Mountain as the town searched for her, and the community assumed that it was the dead woman's spirit which had come back to haunt her murderer.



Another story revolves around a plantation owner, who had gone hunting in the mountains only to never return, and his slaves who had searched for him. Their disappearances were so famous that they even inspired a song called "Brown Mountain Lights" written by Scott Wiseman. The song was released in 1962, and as you'd expect, the lyrics were unfortunately a product of their time. The story comes across as a romanticization of slavery, with less focus on the ghost aspect of the tale.

### UFO Sightings

Aside from stories of the paranormal, many also had theories about potential alien activity that could explain the sudden increase of missing persons. This theory gained popularity during the 20th century, due to a combination of progress in space travel and the colorful, almost celestial shape of the lights themselves.

Because of this, in 1952, the Air Force created "Project Blue Book" in order to figure out whether UFOs were a threat to national security, and to debunk any signs of alien existence. However, the theories remained strong, especially with magazines such as the Argosy publishing an article by Herbert Bailey in 1968 that described a series of UFOs appearing around the Brown Mountain area.

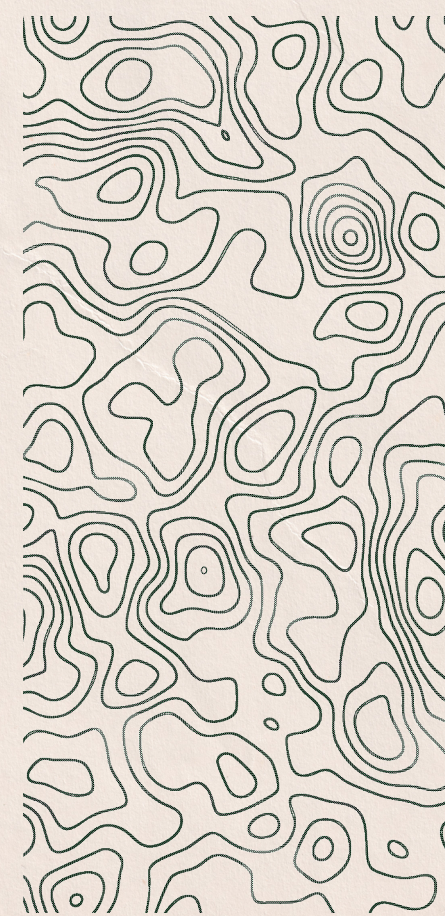
Project Blue Book was shut down in 1969, and even though supposed studies were done about the Brown Mountain

Lights, the Air Force classified the lights as unexplained. Most of the documents related to the lights are still classified, and I'll leave it to you to decide whether that is because of a lack of conclusive evidence or due to the suspected proof of alien existence.

### Automobile Lights

Due to the intense depth of the mountain range, it's highly possible that the headlights of cars and trucks contributed as a source of the light. Although it doesn't necessarily account for the spherical shape of some of the lights, during instrumental observation, it was concluded that 11 of 23 lights documented were from an automobile source.

Personally I think if this theory were to be true, it would not only be anticlimactic, but also inconclusive. It's worth noting that the lights have been reported to be mostly white in color, with occasional sights of red, blue or



yellow. Although it's easy to explain the white and yellow with this theory, it is much harder to justify the other two colors. Based on pictures of the lights available they don't match up with the blue and red hues of police car lights.

### Scientific Theories

Like with any other unexplained phenomenon, there is always a group of researchers ready to dive into scientific evidence to search for answers. The Brown Mountain Lights are no different, and there have been many ideas justifying how these naturally-occurring balls of light appeared, each with their own inconsistencies.

One example in the report stated that the lights could be will-o'-the-wisp, lights seen over marshy places due to the spontaneous combustion of marsh gas. A solid theory, if it weren't for the fact that the Brown Mountain doesn't host any marshy places. It was also suggested that chemical reactions create these sources of light, such as phosphorus being oxidized, or a reaction between hydrogen sulfide and lead oxide. However, due to the brightness of the lights and the low probability of occurrence, it seems more than unlikely.

### CONCLUSION

Even after reading dozens of articles and research papers about the phenomenon of the Brown Mountain Lights, I have a hard time understanding the truth behind them. It's more than possible that we simply don't have the technology to determine what they are, or that it really was just car headlights that shone too bright, maybe even that aliens chose Brown Mountain as their landing spot. Ultimately, the theories are all up to the viewer; so what do you think the Brown Mountain lights are?

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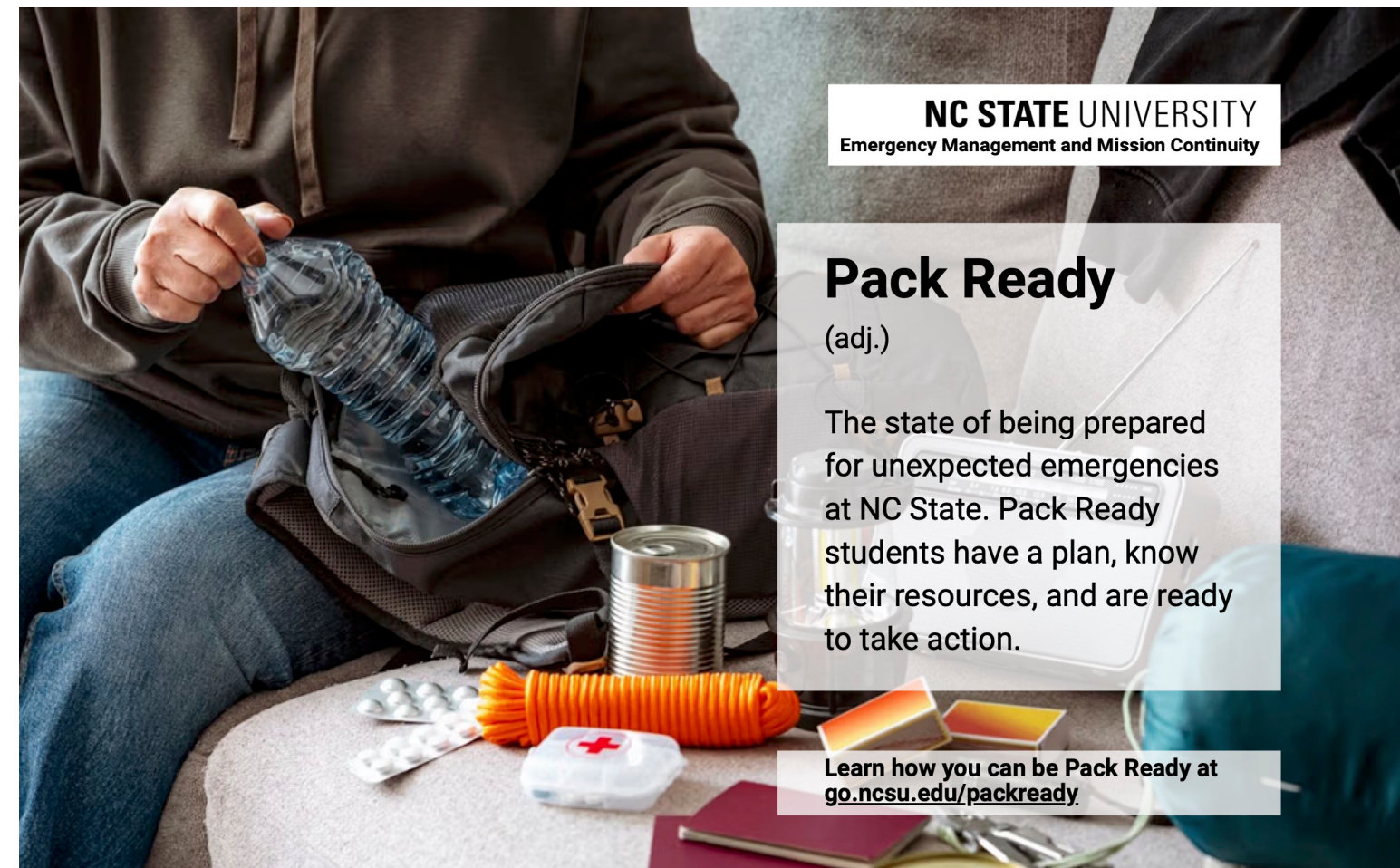
## Moons, Myths and Mars

# To Infinity and Beyond

Planets have personalities, animals float in space and you can too (just ask Christina Koch).

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## Celestial Connections



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# WHICH PLANET DO YOU GRAVITATE TOWARDS?

BY KAYLA STACKHOUSE  
DESIGN BY MARLOWE HENDERSON

**How this works:** Answer 8 questions and add up your points for each question answered. Your total points will reveal which planet you are!

A 100 points    B 200 points    C 300 points  
D 400 points    E 500 points    F 600 points  
G 700 points    H 800 points

1 How would your friends describe you?

- A Focused    B Dramatic    C Empathetic
- D Confident    E Lively    F Serious
- G Independent    H Creative

3 What colors do you gravitate towards?

- A Warm colors    B Cool colors    C Dark colors
- D Neutral colors    E Pastel colors    F Neon colors
- G All colors    H Depends on my mood

5 Pick a song quote.

- A “Mercury running amuck in my mind/Can’t tell if I’m winning or falling behind.” - “Mercury” Steve Lacy
- B “Venus plant of love was destroyed by global warming.” - “Nobody” by Mitski
- C “There’s a starman waiting in the sky.” - “Starman” by David Bowie
- D “Do you ever really wonder?/We are lost on Mars.” - “MARS” by TWICE
- E “The name is Jupiter, from the galaxy.” - “Jupiter” by Earth, Wind, and Fire
- F “Life’s better on Saturn./Got to break this pattern/Of floating away.” - “Saturn” by SZA
- G “Comin’ from Uranus to check my style/Go ahead, put my rhymes on trial.” - “Intergalactic” by Beastie Boys
- H “Neptune of the seas, an answer for me, please./The lily of the valley doesn’t know.” - “Lily of the Valley” by Queen

2 How would your family describe you?

- A Focused    B Dramatic    C Empathetic
- D Confident    E Lively    F Serious
- G Independent    H Creative

4 What’s your favorite music genre?

- A Country    B R&B    C Pop
- D International    E Rap    F Classical
- G Rock    H Jazz

6 It’s time for a group project! What’s your role?

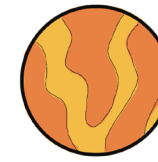
- A Take charge and start the conversations
- B Make sure everyone is following the rubric
- C Stay quiet and talk when needed
- D Make sure the group slides look super cute
- E “Nah, imma do my own thing.” - Miles Morales, 2023
- F Ask the teacher if you can work alone
- G Make sure all citations are in MLA format
- H Set up contact with the professor in case there are any questions

7 Your classes are over for the day. What do you plan to do?

- A Go to a professor’s office hours
- B Go to Talley and get work done
- C Get tutoring from the library
- D Hang out in one of the student centers/clubs
- E Go eat
- F Hit the gym
- G Hang out with friends off campus
- H Sleep

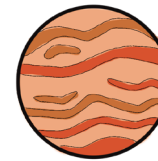
8 Time to sign up for classes! What’s your plan?

- A I already scheduled my advising meeting and know exactly what to do
- B Who needs an advising meeting? I’ll just email them
- C Follow your semester sequence
- D Create your own semester sequence
- E Who needs a semester sequence?
- F I think I want to change my major
- G I think I want to add a major
- H I think I want to add a minor



0 - 800 points

Congratulations, you’re **Mercury!** Being the closest planet to the sun means you know how to shine like a star. Named after the swift Roman God, you’re capable, fast and ready to adapt to whatever life throws at you.



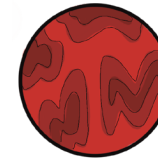
801 - 1600 points

The hottest planet in our solar system, you’re **Venus!** Named after the Roman goddess of love, the planet of love and beauty symbolizes your caring nature.



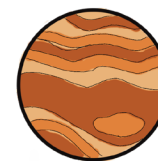
1601 - 2400 points

Everybody knows you, you’re the **Earth!** Strong, grounded, and dependable. Your lovable and supportive nature makes you a caring and social individual, full of life.



2401 - 3200 points

Strong and expressive, you’re **Mars!** Named after the Roman god of war, just like the planet we research the most, you have nothing to hide and face every challenge with confidence.



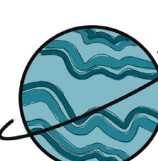
3201 - 4000 points

Congratulations, you’re **Jupiter!** Like the red dot on Jupiter, you’ve got a signature style of your own. Named after the king of the Roman gods, your liveliness and optimism light up a room.



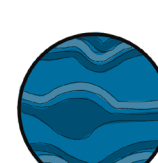
4001 - 4800 points

Go buy yourself some gold rings, cause you’re **Saturn!** Named after the Roman god of harvest, you’re hardworking and display the efforts of dedication everywhere you go.



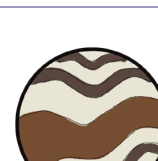
4801 - 5600 points

You’re not the butt of this joke, you’re **Uranus!** Named after the Greek god of the sky, you may come off as cold or icy as the planet, but that’s just how you show your independence.



5601 - 6400 points

Congrats, you’re **Neptune!** Named after the Roman god of the sea, you’re a creative dreamer. Just like the furthest planet from the sun, you’re always on a scenic route of self-discovery.



6401 + points

So you found out there were 9 planets but only 8 questions. Maybe you picked the answers with the highest scores or maybe you picked multiple answers in one question, either way you’re **Pluto.** Whether others think you’re a planet or not, you’re loved.



BY AVA GONSIEWSKI  
PHOTO CONTRIBUTED BY NASA

**H**AVE YOU EVER dreamt of going to space? Maybe as a child your dream job was to be an astronaut, but you thought that it wasn't realistic. Think again.

NC State's very own Christina Hammock Koch is an engineer, explorer and astronaut. Not only is she an astronaut, but she has an impressive career marked by impressive records and empowering women in science and engineering.

#### NORTH CAROLINA AND KOCH

According to NASA's bibliography of Koch, she was born in 1979 in Grand Rapids Michigan, but grew up in Jacksonville, North Carolina. Koch went to The North Carolina School of Science and Math in Durham, North Carolina and White Oak High School in Jacksonville, North Carolina. At State, she received her B.S. in Physics and Electrical Engineering along with her Masters in Electrical Engineering. Additionally, NC State awarded her an Honorary PhD.

According to an interview by Brilliant Star Magazine, living in North Carolina impacted Koch greatly as Koch stated, "...I was a little kid who wanted to be an astronaut [and] I loved things that made me feel small." Her initial inspiration for the pursuit of a career as an astronaut started at a young age and was inspired by how her coastal living made her curious about the world. "I love the ocean. I grew up in coastal North Carolina and I just love contemplating the vastness of the universe and our place in it," Koch exclaimed. Being by the ocean made her think about the limitless world and influenced her outlook on space – proving that she too is limitless.

In the same interview, Koch noted how North Carolina impacted her views on civil rights saying, "...growing up in

North Carolina, the people that fought for everyone to have equal rights and were so brave...Those people really, really inspired me." Koch has now defied such stereotypes and taken the historically male-dominated field by storm.

#### KOCH IS LIMITLESS

Two of Koch's biggest accomplishments within NASA, includes setting a record for the longest single spaceflight by a woman, and being a participant of the first all-female spacewalk.

She took such inspiration and was dedicated to making a long-lasting impact on the future of Women in STEM. Her record of longest spaceflight by a woman was done in March 2019 to February 2020, lasting a total of 328 days to which she studied the effects of long-duration spaceflight. She was on the International Space Station for Expeditions 59, 60 and 61, which took place in 2019. Her success demonstrates the strength and resilience of women in STEM as she proved that she was capable of long-term

space missions and all the physical and mental demands that come with such a flight. The first all-female spacewalk took place on October 18, 2019, in which Koch and Jessica Meir performed a spacewalk together to replace a battery-charge and discharge unit on the international space station. Such a walk was symbolic of women's capability in a male-centric field and impacted women's history in space. Women tend to fall under stereotypes and biases of what they can and can't do. Christina spoke regarding the challenge of being a woman in her field saying, "...I learned about this thing called stereotype threat, which means

that people actually do worse when they think that they are being judged based on a stereotype. So I would tell myself, 'Christina, you are awesome.'" Her dedication is a testament to the power of pursuing dreams, regardless of the obstacles.

#### UPCOMING MISSIONS

Koch is currently focusing on training and preparation for NASA's Artemis II mission. She is the only female part of the four person crew and continues to make space for women in STEM. She is the first woman in history to be assigned by NASA to do a lunar fly-by. The mission is set to launch in April 2026 and lasts 10 days. The spacecraft will send the astronauts into lunar orbit, which is the furthest humans have traveled away from Earth in over

**“I JUST LOVE CONTEMPLATING THE VASTNESS OF THE UNIVERSE AND OUR PLACE IN IT.”**

50 years. The purpose of the mission is to be a flight test around the moon to ensure the spacecraft, Orion's ability to support a crew and carry out missions. This mission will be the first time that the Space Launch System (SLS) is used. It is an important mission for NASA to reach the goals of Artemis missions such as returning to the Moon and establishing a lasting presence as well as progression towards missions to Mars.

Christina Koch walked State's very campus and took similar classes as many students are now. Although she

has done incredible things, she lived a life and had hobbies similar to any NC State student. She loves to rock climb, run and travel. From classroom to space, Christiana represents State's "Think and Do" mantra.

NC State truly has so much to offer and boundless opportunities – even ones that can bring you out of this world. In 2022, North Carolina State was recognized to be ranked sixth in the nation as a top college of minorities and women in STEM. The university offers specialized Women and Minority Engineering Programs and Women in Science and Engineering (WISE) Village, which provides a residential community to such women. Since 2006, the number of women in engineering has tripled and currently continues on a positive trajectory to reaching

a 50-50 women to male ratio, therefore rewriting the history of engineering, just as Koch has intended. Nothing is stopping you from accomplishing and achieving your goals here. If you have always wanted to go to space, what's stopping you?

*So, go from State to Space. Start now. Start Here.*



# Christina Koch:

## From NC State to Space

# PLUTO'S POINT-OF-VIEW

BY CHASE ALSTON  
DESIGN BY CORNELIA KNIGHT

**P** OOR PLUTO. Cast out and abandoned. All because he was too small. But he's always been small. That doesn't discredit the countless moons in his orbital vicinity and his very similar makeup of all the other planets amongst the higher planes. But according to the International Astronomical Union, Pluto is officially out due to a new "criteria". I didn't even know you had to place a criteria on solid moving objects in the outermost sky, but hey, what do I know? I'm no STEM major. But I've always wondered, if Pluto had feelings like all of us down here on Earth, how would he feel? What actions would he take? Would he plead to the International Astronomical Union or take it on the chin? Would he have seen it coming or would he be in great shock? Luckily I have a stellar imagination – no pun intended – and have created a couple scenarios that I believe could have occurred if Pluto had the capacity to react to such horrible news.

## HIGHLY UPSET - "I'M BEEFING WITH MUCH OLDER GUYS"

This is seriously unfair. If Pluto could produce earthquakes like its distant cousin Earth, he would from the anger he felt based on the news from the International Astronomical Union. Criteria!? Criteria to float in the sky? Pluto is outraged and immediately contacts the IAU to get this straightened out. Pluto is only met with scientific details that he couldn't care less about – Pluto has yet to complete an orbit, Pluto isn't on the same orbital plane as other planets and is entirely composed of ice and rock – and is still agitated at this decision that was not consulted with him first. How can he be rejected from the only identity he knows? Cast away due to information that ultimately shouldn't matter. He was the ninth planet to be discovered after all, there has to be a founder's law in this matter somewhere. But even after listening to the pleas from Pluto, the IAU is not moved and is

determined to stick to their judgement as they claim "...Pluto falls into the dwarf planet category because it is located in the part of our solar system known as the Trans-Neptunian region...where other objects might cross Pluto's orbital path." Although these events occurred in 2006, we hear Pluto is still icy to this day.

## NOT A SURPRISE - "LIFE IS GOING JUST HOW I PREDICTED"

It was no shock to Pluto the morning of. There were many meetings over the years that went on for hours and hours about why he couldn't be a true planet. The IAU had the ultimate call and presented a compelling case. Pluto recalls the IAU Resolution in 2006 stating, "a dwarf planet is an object in orbit around the Sun that is large enough to pull itself into a nearly round shape but has not been able to clear its orbit of debris." And one that stuck out the most of all, which stung a tad when first mentioned, "Pluto is only about half the width of the United States". Talk about embarrassing. Pluto's distant cousin Earth does it once again. Pluto's many

qualities were not quite enough to measure up to the bigger and stronger planets, but at least he can now be comfortable in his true identity. Pluto remains happily rotating the Kuiper Belt, still never having the urge to complete a full orbit. Not everyone is meant for bigger and better things, and our dear friend Pluto is a testament to that.

## SOLITUDE ATLAS - "I BEEN OUT THE WAY IN A CUT, IT'S BEEN A MINUTE"

Pluto could only feel a sense of relief at the news that spread to this side of the orbit. He no longer had to be grouped with a group of planets who always made sure to point out his differences. "Oh you're just too small Pluto". "You don't even make as many trips as us Pluto, how can you even be considered a planet?" Pluto had grown tired, and honestly pretty annoyed, with all the white noise surrounding his sizable difference. He had grown apart from the other planets – comical considering he's already in the most distant realm – as he couldn't deal with the passive aggressive comments every time they orbited too close to his personal moons. But now that he no longer has to be grouped with planets with enlarged egos out of this world, he can finally be a planet in peace. But at that realization, he wonders, "Can I even call myself a planet at this point?" The dread quickly vanishes as his title doesn't matter, but only that he can finally be his small, icy self.



And after all, he's never truly alone with his five moons who would never switch up on their day one.

Obviously these scenarios are more on the extreme ends but I feel they're pretty on brand. What do you think would be his reaction and most importantly, what would be your own reaction if you were in Pluto's position?

If you'd like to know more information about the varying differences between Pluto and all other classified planets, NASA has great information which really shines light on why his dwarfism was such an imperative decision to be determined.

Thank you for joining me on this incredibly unserious journey – kudos to you if you caught the Drake references – and hope you enjoy the more serious and informative articles my fellow writers have worked tirelessly on. Happy learning!



# Zoology in the Final Frontier: The Unsung Heroes of Space Exploration

BY LAYNEY KEESEE  
DESIGN BY CORNELIA KNIGHT

We've all heard of Laika and Ham, fearless leaders of the exploration of the final frontier. And while their accomplishments should never be diminished, there are many living organisms that soared amongst the stars long before man. Both sides of the famous Space Race would launch everything from algae to mice to apes in the name of science.

In the United States, the first few test flights of the Aerobee missile would become the intragalactic sarcophagi for three rhesus monkeys creatively named Albert I, Albert II and Albert IV. These monkeys' test flights were not widely known by the general public at the time, and they are still largely forgotten today.

Albert II and Albert IV would survive their launches and their space explorations, but would die on the impact of their return trips.

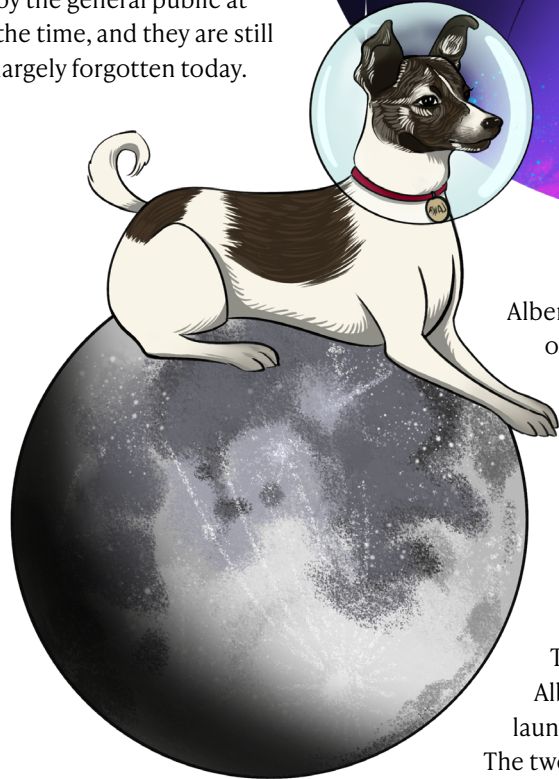
later die of natural causes in a zoo, but there is no record of Mildred and Albert's fates. From April through September of 1958, a grand total of 17 mice would die across four launches, three out of which would be lost at sea.

Animal test flights wouldn't end with the success of the Apollo 11 mission. While these experiments didn't carry the same importance as they had before 1969, the range of species launched would broaden to include rabbits, insects and even jellyfish, though if these subjects were named, there's no easily-available public record of it or their individual successes.

While the Soviet Union would launch plenty of primates of their own, they were infamous for utilizing canine test subjects. Many are familiar with Laika's unfortunate fate, but three out of nine Soviet astro-dogs would not only survive their first flights, but be sent for more than one test. The first of these to become a two-time flyer would be Dezik, a fearless little stray pup. Though he would not survive his second flight, his strength and bravery in the face of the unknown is greatly admirable.

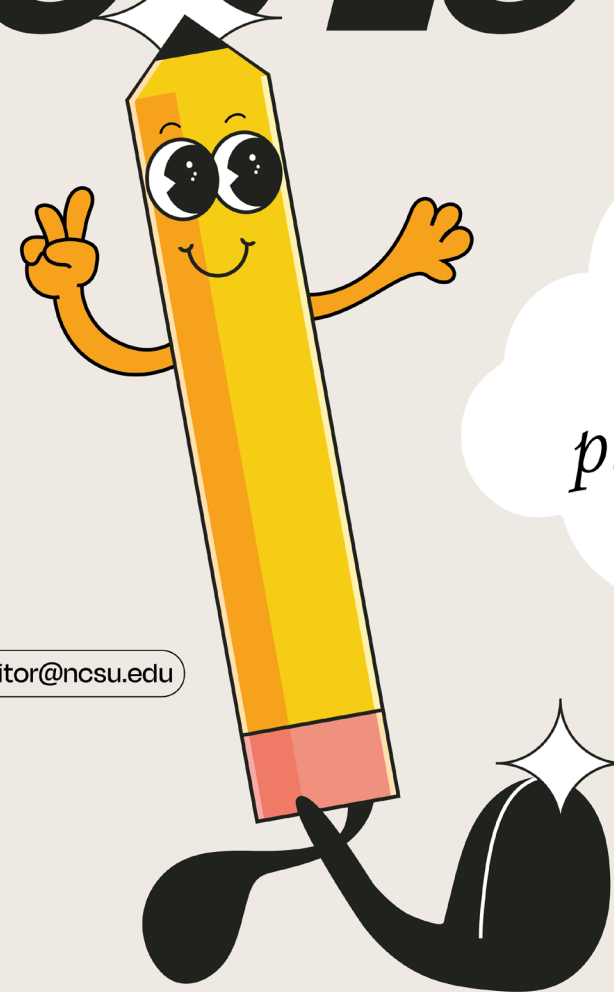
Albert I, due to a potential failure of biometric systems, would be little documented, further adding to his obscurity. It is impossible to know when he died, but he did not survive his travels.

Several American-born mice would also become pioneers. Two mice, named Mildred and Albert, would be sent with a later launch of two Philippine monkeys. The two primates would survive and



it's time

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EST. 2017

**ROUNDABOUT**  
MAGAZINE

# THE LIFE AND DEATH OF OPPORTUNITY

BY ANNA PETRIE  
DESIGN BY AVA GONSIEWSKI

The National Aeronautics and Space Administration's (NASA) most successful interplanetary mission came in the form of a two-thousand-pound exploratory rover, the size of a golf cart.

Despite its mechanical appearance, it was clear from the beginning that this rover was going to be more than just a hunk of metal. From the very beginning, this explorer stole the hearts of both the engineering team, who spent three long years designing and constructing the two twin rovers, and those of the individuals around the world who stayed tuned in to the

expedition that lasted more than 14 years. After all, it's in our nature to anthropomorphize the inanimate objects around us. Almost everyone has named their car or motorcycle or boat and given the literary and film world of talking teapots and suave singing, it's not a surprise that such a cute rover was likewise personified and adored. But what was it about this particular rover that made him so sensationalized and celebrated? To get an idea, we must rewind just over 20 years ago to the beginning of his adventure on Mars.

On July 7, 2003, the NASA Mars Exploration Rover-B – designated "Opportunity" and nicknamed "Oppy" – launched from Cape Canaveral, Florida and began his six month journey to the famous Red Planet. Opportunity, along with his twin, Spirit, which was launched about three weeks earlier, was designed to act as a geologist. Tasked with studying the rugged, dusty terrain of the seventh largest planet in our solar system, Opportunity's mission was to determine if Mars had once been capable of sustaining life, mainly by searching for evidence of the former presence of water and characterizing both the planet's climate and geology.

Oppy had a safe flight, landing soundly on Jan. 24, 2004, in the Meridiani Planum, a large plain along the equator of Mars that resides atop large bodies of sediment, which has since been named the Challenger Memorial Station. The landing created a large crater that was Oppy's first site of research where the rover put his instruments to the test and performed his first analysis of Mars – and his engineers must have been so proud. At the site

and throughout his expedition, Oppy demonstrated his skill set and analyzed samples of soil and rocks, captured both panoramic and microscopic images of its surroundings, and monitored weather and atmospheric patterns.

After exiting his crater, our metallic fellow made his very first discovery, which came in the form of a basketball-sized meteorite made up of iron and nickel. This was the very first meteorite found on another planet and was dubbed the "Heat Shield Rock," named creatively after the equipment it was found nearby. However, while this was Opportunity's first discovery, it was not his most significant. Instead, that honor was given to the findings made almost three months later in April 2004.

While passing an area of Mars known as Fram Crater, Opportunity discovered small, round objects that were about three centimeters in length. Upon further investigation, the rover was able to make an incredible discovery. One that embodied the driving force behind Opportunity and Spirit's creation – the realization the small rocks were rich in hematite, mineral that forms from rising, acidic groundwater.

That's right, Opportunity discovered that there was once a watery environment on Mars. These small rocks were dubbed "Blueberries" by the NASA science team and were one of the discoveries that crowned Opportunity's mission a success.

But while this was Opportunity's biggest achievement, it wasn't the only reason he was the golden child of the twins. During his research, Opportunity also discovered gypsum, another mineral formed by the presence of water, and upon analysis of the Endeavor Crater, Opportunity concluded that the location might have held conditions that could've sustained microbial life at one point.

And when Opportunity wasn't making pivotal discoveries, the rover was breaking records and setting records like no-bot before.

In 2014, Opportunity broke his first record for farthest distance driven on another planet. In 2015, Opportunity went as far to be the first rover to complete the equivalent distance of a marathon race by traveling 26.2 miles and went on to travel a total of over 28 miles by the end of his mission. In 2020, Opportunity set a distance record by traveling approximately 721 feet in one day.

Sadly, all good things must come to an end and at the old age of 14, Opportunity hit a snag he couldn't drive away from. On Feb.13, 2018, tragedy struck in the form of a powerful planet-wide sandstorm. These strong winds upheaved sand and dust that coated Oppy's solar panels, preventing their ability to recharge his batteries or maintain power. For about a year, Opportunity was in a state of hibernation, before finally being declared as a completed mission in February of 2019. However, even in death, Opportunity broke a final new record for longest lifespan, far surpassing the lifespan of Spirit, who died at the age of six in 2011.

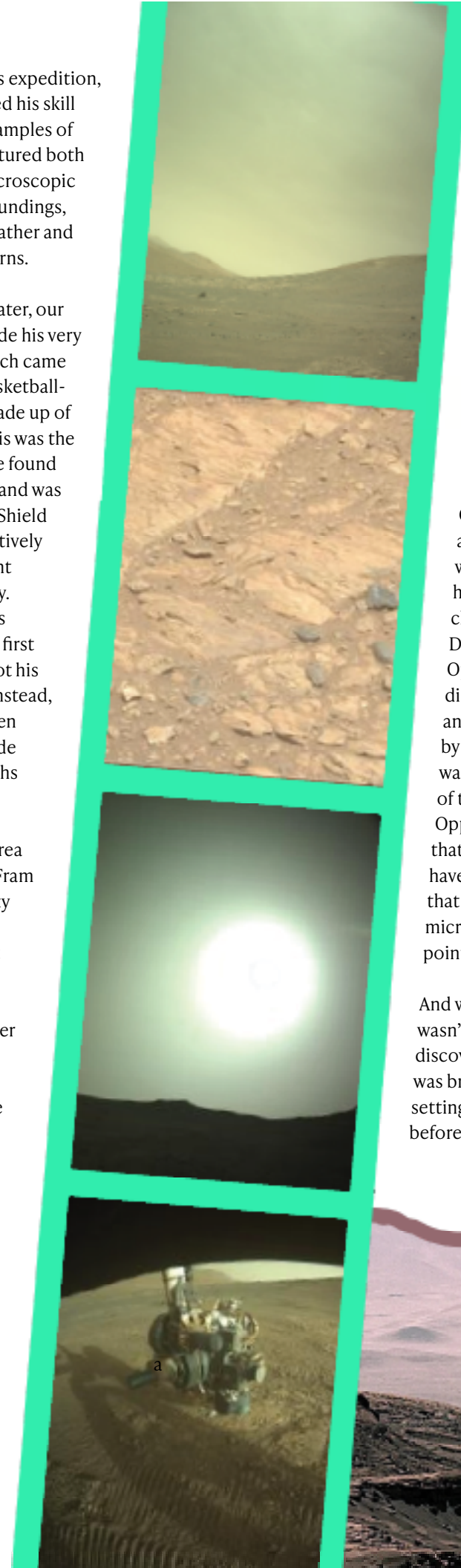
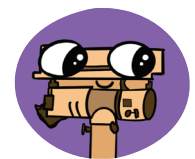
Opportunity's final transmission back to the space team was sent on June 10, 2018, and came in the form of a series of telemetry and atmospheric data. However, this too was given an anthropomorphic spin as scientists translated it to the somber message:

"My battery is low, and it's getting dark." This translation further characterized Opportunity as more than a machine and set the stage for his memorialization.

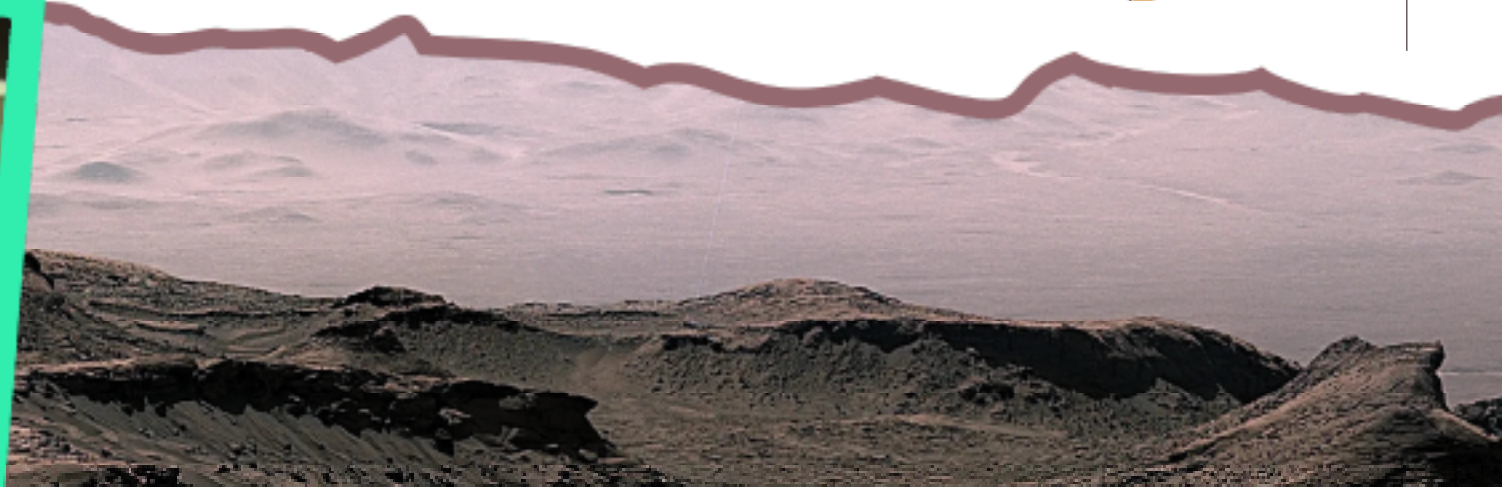
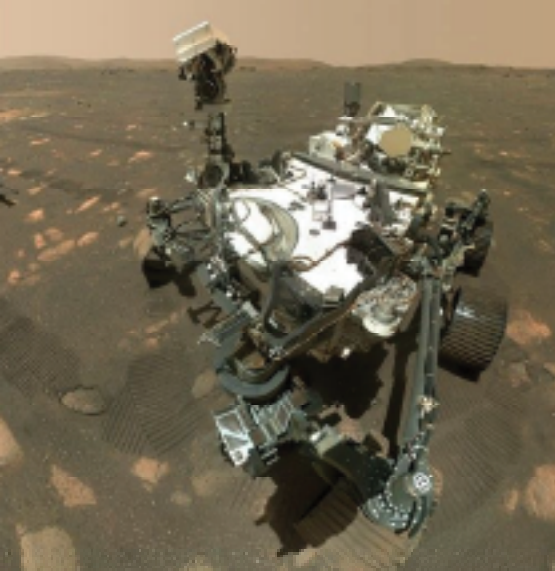
Throughout his life, Opportunity was adored and was characterized as more than a cold, unfeeling machine and this didn't change when he perished. After all, it's been over 20 years since Opportunity roamed the Red Planet, and he remains one of the most popular and loved rovers produced by NASA.

Upon his death, Opportunity was mourned and memorialized in many ways. Starting with the final communication attempt from NASA that came in the form of the Billie Holiday song, "I'll Be Seeing You" and continuing all these years later to a YouTube piece uploaded on Sept. 5, 2025 by V101 SPACE that detailed his life and journey. Today, Opportunity still isn't forgotten by those who followed his journey in the past or by those who learned about him post-mortem. Quick searches online bring up artwork, documentaries and merchandise in every form imaginable, showcasing Opportunity with either cartoonish, human-like features or his final message printed in bold.

I hadn't learned about Opportunity and his story until recently, but I quickly found myself attached to the cute little rover among the many who think there's more to him than just nuts and bolts. But what's your take? Is he just a hunk of metal? Or is he our friend, taking a well-deserved rest on Mars after a long, arduous journey in the name of science?



ROBOTS TAKE  
0.5S



Moons, Myths and Mars

To Infinity and Beyond

# Celestial Connections

You thought we would only tell you about the outermost sky? Brace yourself, because you'll be shocked to know space can be experienced right here at our fingertips...

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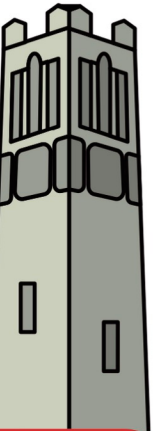
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# SCI-FI SPOTLIGHT

ROUNDBOUT'S OWN GUIDE TO THE BEST SCIENCE FICTION BOOKS AND MOVIES!

DESIGN BY LILY DRIVER

## SCI-FI BOOK REVIEWS

BY LAYNEY KEESEE

We've all heard of science-fiction classics like Orwell's 1984 or Bradbury's Fahrenheit 451. A select few are taught in most high schools across the nation, and while these are certainly important reads, there are many equally as well-known stories that perhaps don't always garner the attention of a younger audience not already interested in the genre. Thus, I've compiled a little list of my personal favorites, from short stories to full novels, to scratch the science-fiction itch.

### "DO ANDROIDS DREAM OF ELECTRIC SHEEP?"

By Phillip K. Dick

The inspiration for the classic Blade Runner films, this novel is often overlooked in favor of its film counterparts. Although the films were based on more than one PKD novel, Do Androids Dream of Electric Sheep takes its own individual approach to the concept of robots passing (almost) perfectly as humans. An interesting take on what exactly it means to be alive, the novel seems all too familiar to modern-day debates on just how much artificial intelligence really knows.

### "I, ROBOT "

By Issac Asimov

Something about a collection of short stories that all connect is so delicious to me. This makes I, Robot easy to pick up and put down when finals get too serious, but also interesting enough to make you want to finish the book. Because of its many moving parts, I Robot is difficult to summarize in an accurate way. Like the first two works in the list, the novel wrestles with what it means to be human, but in an entirely unique way, as we see it in snapshots of individual android "lives," rather than following a singular robot through a human's mind.

### "ANNIHILATION"

By Jeff Vandermeer

Not into space or androids? That's okay! How about apocalyptic wastelands? Don't get swept up in the misconception that "apocalyptic" has to mean zombies. In the case of VanderMeer's Annihilation, it can take the form of jello monsters residing in fleshy towers. Short, mind-bending and spooky, this is a perfect read for fall...or all year-round if you're so inclined. There's also a movie adaptation of this novel, but it's definitely not the same as reading the book. Be careful not to lose track of reality.

### "THE JAMESON SATELLITE"

By Neil R. Jones

This short story is a wonderful way to dip your toes into the science-fiction genre without the commitment a novel requires. It's also the best of both worlds when it comes to the two behemoths of the genre: robots and space. The father of the aptly-named cyberspace subgenre, "The Jameson Satellite" follows a professor who arranges for his corpse to orbit the planet until he can be revived by futuristic medicine. He does end up revived, just not by who he thinks. It's a perfect story for those who like a little bone-crushing existentialism to go with their interplanetary adventures.

## SCI-FI MOVIE REVIEWS

BY SOPHIA CEDERBURG

Science Fiction has become one of the most renowned genres in film. The movies span from fantastical ideas of space to very possible visions of an apocalyptic future. Sci-fi is an important genre because it has always been a way for visionaries to create their own ideas of the future. Below is a list of some of the most well-known science fiction movies to date.

### "WALL-E"

"I don't want to survive. I want to live."

If there were any one movie on this list you should watch, it is "Wall-E", because it represents a very real, very terrifying future that's not necessarily a far-off depiction of reality. While being a movie that is technically intended for kids, the film expertly warns us about what our future will look like if we don't change things, all while being told through the perspective of a trash robot. The film opens up to a wasteland Earth, covered in dust and garbage due to consumeristic greed and environmental neglect, an important message ahead of its time. Wall-E, a robot isolated on Earth, works tirelessly to execute a fruitless mission: picking up the trash left behind. Although not as action packed or plot heavy as some other sci-fi related films, Wall-E contains possibly the most important message of any Pixar movie, demonstrating how apathy and carelessness can lead to the downfall of our planet.

### "STAR WARS: REVENGE OF THE SITH"

"This is how liberty dies...with thunderous applause."

If I were to review every single Star Wars movie, I would need another spread. That being said, I will stick to writing about what is objectively the best Star Wars movie: Part III, Revenge of the Sith. This movie includes governmental parallels to our world today, an artfully conducted villain arc, and one of the

best fight scenes in cinematic history. This movie delves into many political and wartime topics, but throughout this unease, we are watching Anakin Skywalker's descent into madness. The plot development depicts how often your biggest enemy is yourself as Anakin had everything going for him, but despite his best efforts, ended up becoming exactly who he despised, and all for love. Not only does this film do a great job of starting and finishing Anakin's story, it perfectly sets the scene for the most iconic franchise to date.

### "BACK TO THE FUTURE"

"Your future is whatever you make it. So make it a good one."

What's better than a movie about a mom falling in love with her son? Well, that's not the entire plot of the film, but it's definitely an uncomfortable sub-plot. "Back to the Future" is one of those movies your dad showed you as a kid that still comes to mind today. Of all the films on this list, "Back to the Future" is the most down-to-earth, literally. There are no expeditions to space or fantastical sci-fi worlds; it's just a "mad" scientist who happens to discover time travel. Known for its iconic cast, humor – you may recognize one of the most famous quotes in film, "Great Scott!" – and its innovation in the sci-fi genre. Whether it be for a good laugh or because of nostalgia "Back to the Future" is one of those films you come back to often.

### "INTERSTELLAR"

"Mankind was born on Earth, it was never meant to die here."

It's the year 2067, and mankind is facing extinction. There is a worldwide famine, and the atmosphere is deteriorating, which will inevitably lead the rest of the human race to suffocate. Former pilot, Cooper, and his daughter Murphey discover NASA, which was previously thought to be shut down, working on a project to set up life on another planet. "Interstellar" is an extraordinarily scientifically accurate film, which means it covers extraordinarily scientific topics such as time relativity, black holes and wormholes. Director Christopher Nolan took care in the accuracy of this movie such as the lack of sound in space to pay homage to the science in science fiction. The film is far more scientific than any of the other options on this list but this film also makes the audience connect with each emotion: love, hope, betrayal, grief, isolation and fear. Overall, with the compelling plot, impressive acting, and a mind-blowing score, it's not hard to see why this film is loved by critics and fans alike.



# Astronomy Club Spotlight

BY ANNA PETRIE

PHOTOS CONTRIBUTED BY KYLE MURAR

**H**ave an interest in things out of this world? The NCSU Astronomy Club might be for you!

The Astronomy Club welcomes students of all majors and interests, offering a fun and engaging environment to create lifelong connections with other students who are interested in any and everything beyond our world's atmosphere. Whether you're new to astronomy, planning a career in astrophysics or just think stargazing is cool, this club has something for everyone.

Cameron Lorenz, a third-year aerospace engineering and physics double major, joined the astronomy club because of his previous living experiences prior to his schooling. "I initially got involved with the Astronomy club because I'm from an area with dark skies, and living on campus in my first year, it was discomforting to see an almost complete lack of stars every night." Lorenz is proof that neither major or experience matters – join and have fun!

Throughout the school year, this club hosts many different events for members to engage with one another, learn about astronomy and of course have a good time. Popular events include astronomy trivia nights to test your knowledge, arts and craft events for creative souls, game nights and last but certainly not least, stargazing get-togethers which is a personal favorite of Astronomy Club secretary, Cameron Lorenz.

In an interview conducted by Layney Keese, Lorenz says, "At our last stargaze, Saturn was in opposition... We also look at deep sky objects: star clusters like M13...nebulae and galaxies." These wonders were only made possible due to the resources provided by the Astronomy Club and is one of the many highlights Lorenz has experienced. So mark your calendar for the next meeting and possibly you'll get to see Saturn in opposition too.

Additionally, the club hosts several, more unique, events throughout the year that invites members to participate in hands-on workshops or attend guest speaker presentations. One special event that occurred last year and will return in the upcoming semester was a telescoping workshop night, where members were taught the ins and outs of how to use large motorized telescopes after the sun sets. These awesome instruments allow students to easily pinpoint celestial objects for up-close views of the planets in our solar system. I mean who doesn't want the chance for an up-close view of Jupiter? Experiences like these offer the opportunity for members to learn how to operate astronomical equipment, useful skills that can be used post-graduation, and learn from accomplished individuals who have pursued an astronomical career.

Another noteworthy meeting was the hosting of keynote speaker Christina Koch, an NC State alumna who graduated with a Bachelors of Science in Physics and a Master's of Science in Electrical Engineering, who came

in to discuss her experiences and her future as the first woman to fly to and orbit the moon. A final special event that the Astronomy Club hosts each year is an astrophotography workshop. This event teaches members how to use wide-angle lens cameras and gives each member the chance to capture beautiful photos of the night sky, which are then posted in the club gallery for everyone to see.

And while Astronomy is the flavor of the club, it's not the whole pie and joining this club doesn't just teach you about space. Each member brings something new to the table and is given the chance to share their passions and interests with like-minded individuals. Additionally, new opportunities arise as Lorenz says, "I've learned a lot of new skills, had some cool job opportunities come by, and have been able to maintain a more active social life in general."

NCSU's Astronomy Club does more than give insight into the stellar night sky, but also forges community and future career opportunities to set all students up for success. You never know who you might meet and what you might learn.

So pop on down to their next meeting and find out!



# An Out of this World Aquarium: The Kaiyukan Osaka Aquarium

BY KAYLA STACKHOUSE

DESIGN BY KAYLA STACKHOUSE AND AUTUMN TATE

PHOTO BY AUTUMN TATE



*When Autumn asked if I wanted to help her write a piece on an aquarium to go with our outer space issue, I questioned, “What relates an aquarium to outer space?”*

When Autumn Tate asked if I wanted to help her write a piece on an aquarium to go with our outer space issue, I questioned, “What relates an aquarium to outer space?” The answer is not just within aquariums, but within what they are teaching us about, the ocean. What makes the ocean and space so similar? We don't know. Or at least, not yet. Space and the ocean both have something in common, the unknown and the opportunity to explore the unknown. As humans, we have only explored about three percent or less of the ocean and when it comes to exploring space, we still don't have a clear number on how much has been explored. Similar to how NASA can give you an idea of what is left to explore in space, Kaiyukan Aquarium, one of the largest aquariums in the world, can only give you a taste of what lies in the ocean.



Going to Japan has always been a childhood dream of Autumn's, Roundabout's Assistant Design Editor, and that came true when accepted into NC State's study abroad program; Japan: Visual Studies in Historical Context in Summer 2025. Not knowing what to expect in comparison to North Carolina Aquariums, Autumn definitely did not leave disappointed. If you ever visit Osaka, Japan, Autumn highly recommends taking a visit to the Kaiyukan Aquarium where there's so much to explore and learn. Let's take a look at some of the exhibits Autumn visited.

*“We're a part of something so much bigger than us, much more than we realize. In all aspects, there is so much more to discover about this Earth and universe that we are a part of.”*

Autumn Tate

Welcome to the Kaiyukan Aquarium, where “Everything is Connected.” Located in Osaka, Japan, and established in 1990, Kaiyukan is the first aquarium established under the Kaiyukan company and houses 300,000 marine life from 620 species of animals.

Kaiyukan Aquarium takes you on a tour of the Pacific Ocean, the largest ocean on Earth, where everything is connected through two rings that surround the Pacific Ocean, the Ring of Fire and the Ring of Life.

## KAIGETSU GALAXY

Enter the Kaigetsu Galaxy of The Kaiyukan Aquarium where an immersive experience occurs in this pitch-dark jellyfish exhibit. Follow the transparent and luminescent Portulaca, Octopus, Moon and six other species of beautiful jellyfish as they travel through space and time.

## PACIFIC OCEAN

Experience the feeling of being a sea mammal as you explore the Pacific Ocean. Kaiyukan exhibits its rather larger animals in this “dome-like” walkable tank, including the Scalloped hammerhead, the Whale shark, and the Whip stingray.

## ARCTIC REGION

Tour the cold, icy, polar region of Antarctica and meet Kaiyukan's three species of adorable penguins: The Adelie penguin, the King penguin and the Gentoo penguin. Be sure to take pictures of Kaiyukan's well-done replica of the Antarctic and the penguins having fun in their polar enclosure.

## LIFE AND THE CORAL EXHIBITION

Autumn got to experience this beautiful and special exhibit in person and deemed it her favorite, describing the exhibit as “stunning and breathtaking.” Life and Coral expands on the diversity of coral reefs with beautifully made replicas, educating visitors on what happens when they continue to grow through their colorful life, which inevitably follows a bleached white death in the ocean.

## RING OF FIRE

A ring of active volcanoes referred to as the Ring of Fire inhabits “fire” that creates various environments in their respective regions such as grasslands, tropics and polar climates.

## RING OF LIFE

Where life forms take life and make use of the environments created by the Ring of Fire. The Ring of Life represents where life forms have taken life and make use of the environments created by the Ring of Fire such as otters in tropical forests and penguins in the Arctic.

*“One of the things that I appreciate about this aquarium is the effort put into each environment; it really makes you feel like you are interacting with each replicated living creature's home.”*

Autumn Tate



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