

URANUS EDITION



THE ASTRO BULLETIN

ISSUE NO: 01 | 30/06/23

**IN THIS ISSUE:
2023 AGM, UPAS EVENTS,
MEET THE TEAM,
SPACE AND AVIATION NEWS.**



COMPILED BY: SIYARA BISESWAR

**ARTICLES BY: JEAN DU PLESSIS, SIYARA BISESWAR, KAVESAN NAIDOO
PHOTOS BY: PRANAV HARRICHUND, SIYARA BISESWAR, JEAN DU PLESSIS**

NOTE FROM THE UPAS EC

Thank you for a celestial semester!

The University of Pretoria Aerospace Society executive committee would like to extend our deepest gratitude to the members of UPAS for continuing to participate with such high levels of enthusiasm and for never losing their passion in space exploration and aviation.





LETTER FROM CHAIR

Jean Du Plessis

Dear UPAS members of 2023,

2023 is my first year as chair of the society and my second year as part of the EC, and I must say, what a great 1st semester! It has marked some exceptional moments in aerospace history as well as for the society itself, and I anticipate things only getting better.

From social events such as the Quiz Night, to educational events such as our guest speaker talks, our members have participated and supported the society wholeheartedly and with unrivaled enthusiasm. I feel confident in saying that this semester has truly been filled with interest, learning, interaction and joy.

I would like to sincerely thank our guest speakers this semester, Darren Hill and Eugene Avenant for taking the time to prepare and present us with such rich knowledge and engaging content, as well as inspiring the future aerospace generation.

To my EC, the team behind all these events, with my whole heart I would like to express the biggest gratitude. For putting in close to degree threatening time and effort, and for dealing with me when I get nitpicky (I'm working on it).

Finally, I would like to thank the members of UPAS. It is thanks to your active participation and support of the society that allows us to keep the spirit alive, and I hope that you enjoy what we have to offer next semester.

Enjoy your holiday and see you next semester!

- *Jean*

UP AEROSPACE SOCIETY 2023 PLAN OF ACTION

2 pillars, Education and Community.

Education



The pillar of education will be achieved through talks, webinars and industry tours. This pillar is intended to offer valuable knowledge to our members, other than what is found in day-to-day lectures, and to allow members of the society to make connections and explore job opportunities.

Community



The pillar of community is based on the idea that a goal of the society is to create a community of individuals who share a passion for all aspects of aerospace. This pillar is divided into 2 sections: engagement and participation.

Engagement can involve:

- Wearing UPAS merchandise.
- Engaging on the WhatsApp group and Discord server.
- Reading the newsletter.

Participation can involve:

- RC Flight Competition
- Astronomy Team
- Kerbal Space Program
- Quiz Night



MEET THE 2023 EXECUTIVE COMMITTEE



JEAN DU PLESSIS - CHAIR

At UPAS, I found a home to nurture my enthusiasm for aerospace, and I feel honoured to serve this society as chair in my final year as an undergraduate.

BENEDICT TSHIMBALANG - VICE CHAIR

My name is Benedict Tshimbalang. 2nd year BSc in Physics student. Majoring in Astronomy and Astrophysics, with an interest in quantum gravity and relativistic physics.



KAVESAN NAIDOO - TREASURER

I am a 3rd year Mechanical Engineering student. I love the space industry and I hope to one day be a part of it.

SIYARA BISESWAR - SECRETARY

I am a final year Mechanical Engineering student passionate in aviation and aerospace engineering. I am excited to work with the UPAS members and to learn more about space exploration this year!



MEET THE 2023 EXECUTIVE COMMITTEE



PRANAV HARRICHUND - MARKETING

I am a final year Mechanical Engineering student who is passionate about all things aero. I am honoured to be a part of the EC and look forward to a great year ahead!

MAX MELVILL - EVENTS MANAGER

I am a second year Physics student with an obsession with space and rocketry which explains why my major is astrophysics.



ALI JAFRY - WEBMASTER AND MERCHANDISING

I am a 2nd year informatics student. I love the technical aspects of aviation, from understanding the intricacies of aircraft design and engineering, to learning about the complex systems and procedures that keep planes flying safely.



2023 ANNUAL GENERAL MEETING



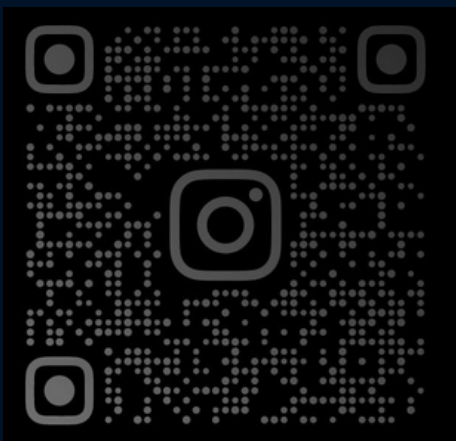
The 2023 UPAS Annual General Meeting or AGM took place on Wednesday the 4th of April at 5:30pm in the Humanities Building. The purpose of the AGM was to bring together newly registered members to inform them of the 2023 plans, present opportunities for involvement, encourage participation, and reinforce our mission and vision, as well as to allow members to meet each other and ask any questions to the EC.

This year's AGM witnessed an impressive turnout. The evening started with the UPAS chair, Jean du Plessis, opening the meeting and welcoming everyone. Thereafter, the 2023 Executive Committee or EC were introduced before Jean began the AGM presentation. The AGM ended with a fun quiz and the awarding of a UPAS t-shirt as a prize for the winner!

Thank you to everyone who found time to attend!



SOCIAL MEDIA



INSTAGRAM

@UPAEROSPACESOCIETY



TIKTOK

@UPAEROSPACESOCIETY



WHATSAPP

@UPAEROSPACESOCIETY

2023 QUIZ NIGHT



On Tuesday the 18th of April, UPAS hosted an Astronomy, Space Exploration and Aviation themed quiz night at Mystics in Hatfield presented by the UPAS EC. It was an exhilarating night that ignited a competitive spirit and showcased the depth of aerospace and aviation knowledge among the UPAS members.

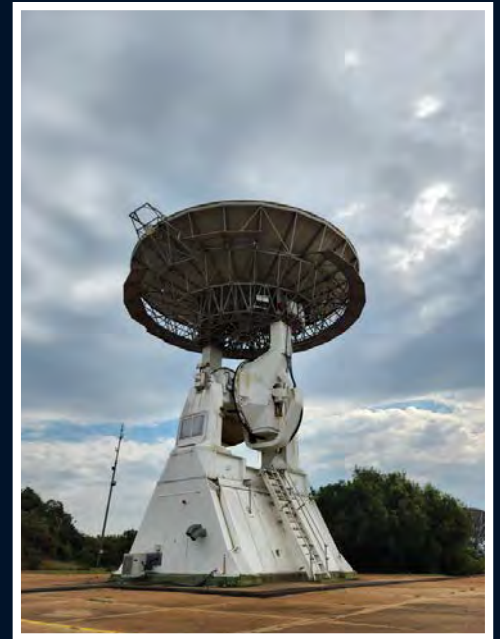
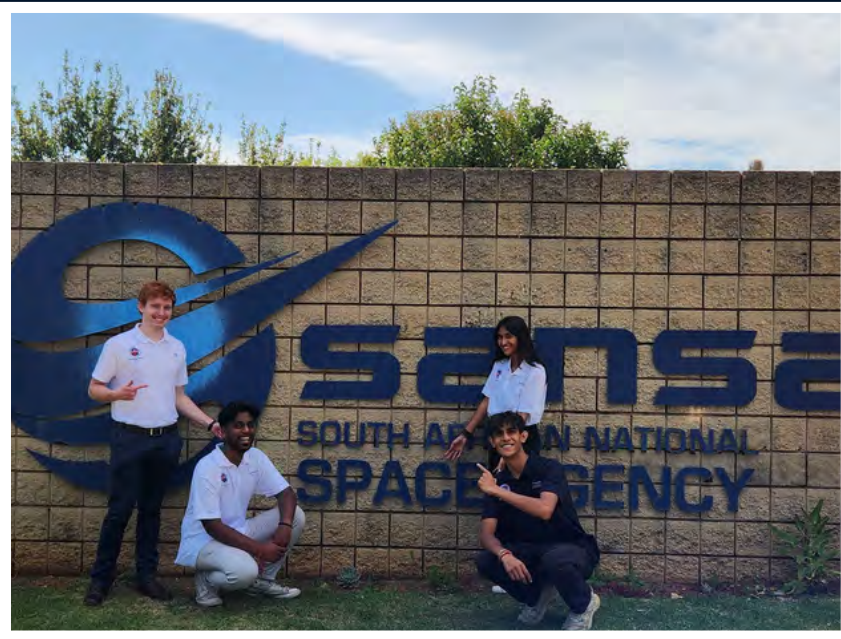
The quiz night witnessed an impressive turnout with a large number of passionate students in attendance with their teams and team mascots.

The quiz night consisted of 3 rounds each containing 15 questions, with a bonus round of 5 questions worth double the points. Extra points went to the best team name and to any teams that brought along a team mascot.

Congratulations to ISS and Space Cadets for winning first and second place for the night! And thank you to everyone who participated so enthusiastically throughout the night.



SANSA PRESS CONFERENCE

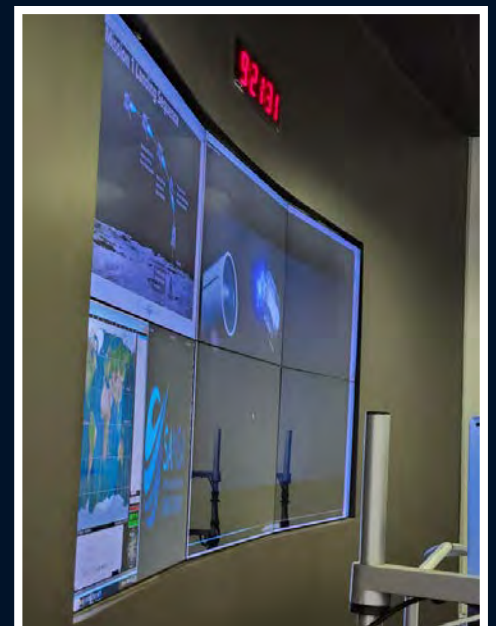


The South African National Space Agency hosted a press conference on the 25th of April to discuss and inform South Africa regarding the support that SANSA would be providing to the Rashid Lunar Rover Mission and its role in space exploration over the years. The Executive Committee of UPAS were invited to the press conference to represent the University of Pretoria.

SANSA was established in 2010 and aims to promote cooperation in space-related activities, foster research in space science, and advance scientific engineering.

The Emirates Lunar Mission consists of the development and launch of the 10kg Rashid lunar rover. SANSA was responsible for facilitating communication between the rover and earth once it had landed on the surface of the moon.

Unfortunately, the Rashid rover crashed on the moon during a landing attempt and contact with the rover was completely lost. However, this mission undeniably marks a giant leap towards a larger, global space economy.



DARREN HILL TALK



On Thursday, the 11th of May, Darren Hill, a Mechanical Engineering student and pilot in training who has a passion for flight simulation and aviation presented a talk entitled "Flight Sim Made Me a Pilot and it can Make You One Too" with the aim of sharing his experiences in the simulation space, and also to give members tips and ideas for how to get involved with flight simulation.



The talk was enlightening and inspirational, and captivated those in attendance.

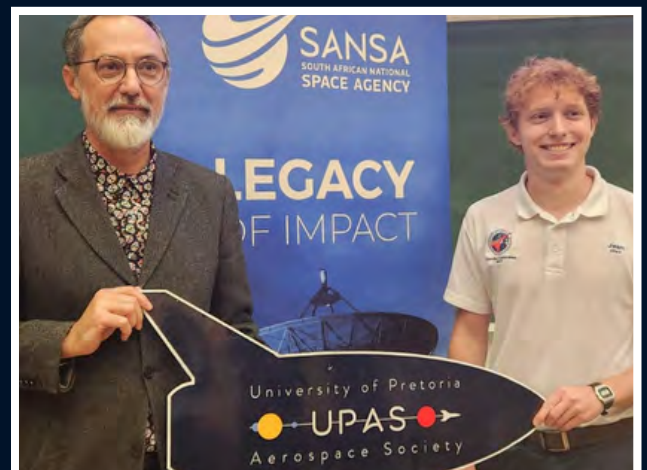


EUGENE AVENANT TALK

On Wednesday the 17th of May, Chief Engineer at SANSA, Eugene Avenant, visited Engineering III to deliver a talk about the relevance of SANSA and the local space sector in South Africa and globally.

Eugene Avenant has been with SANSA since its inception in 2011 and has contributed to a number of national strategies, has led teams in SANSA and has helped to develop infrastructure and systems.

The presentation gave students details and insight into SANSA's new Deep Space Network Centre and space operations, as well as their role in major space exploration missions over the years. The talk was very valuable in highlighting the local space sector and inspiring young space enthusiasts.



SWARTKOP AIR SHOW

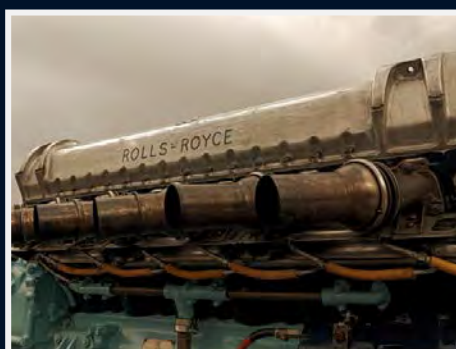
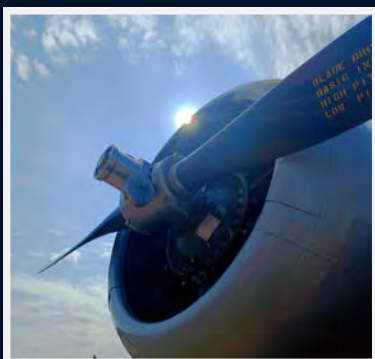
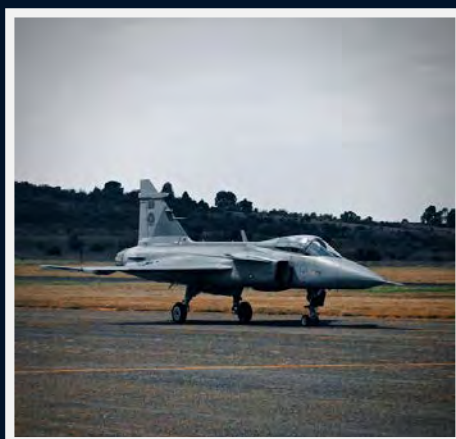
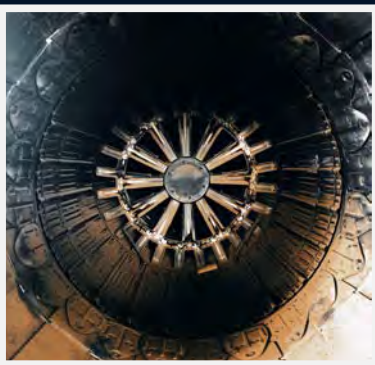
UPAS was present at the exhilarating May 6th airshow, held at Air Force Base Swartkop. The event hosted a captivating blend of static and aerial displays. Among the breathtaking performances, the SAAB Gripen stole the show with its awe-inspiring aerial manoeuvres. The event demonstrated what makes the art of flight so remarkable. The gathering of people. The celebration of South African excellence, integrity, service, and dignity. All accompanied by roaring engines and the cheerful trumpets of the SA Air Force Band.



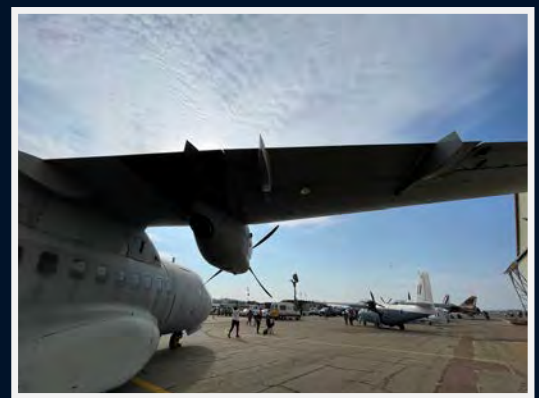
It was a pleasure spending the day with UPAS members who attended and running into familiar faces. We look forward to future events of a similar nature and we can't wait to share more special moments with our members.

A big thank you to those who captured the stunning sights and shared it with us.

Kyle Coetzer



Thando Mshengu



ARTEMIS CREW

NASA's Artemis program reached an exciting milestone with the recent crew announcement, bringing us one step closer to returning humans to the Moon. This diverse team represents the spirit of international collaboration, with astronauts from NASA, ESA, and JAXA. The crew members are Reid Wiseman, as the commander; Victor Glover, the pilot; Christina Hammock Koch the mission specialist; and Jeremy Hansen, mission specialist. The mission is set to launch in November 2024 and will last for 10 days.



STARSHIP LAUNCH

On Monday, the 17th of April at 2pm, SpaceX's Starship was set to launch into space. Starship is a fully reusable transportation system designed to carry crew and cargo into space.

The UPAS Discord Server was set up and ready to witness this historic event. Unfortunately, it veered off course and exploded. However, SpaceX expressed that the launch was not a complete failure, as it provided valuable data for future missions.





@up_aerospacesociety

Developed by SpaceX

The STARSHIP Launch

GOALS

Starship is intended to be a fully reusable transportation system designed to carry both crew and cargo to Earth orbit and to Earth destinations as well as planetary destinations such as the Moon, Mars and beyond!

carries up to 100 people + supplies and equipment

120m

Height of Starship System (with Super Heavy)

50m

Height of Starship Spacecraft

09m

Diameter

1500tf

Thrust

100t - 150t

Payload Capacity

SUPER HEAVY

Booster of the starship launch system.



Powered by 33 Raptor engines using sub-cooled liquid methane and liquid oxygen



With its advanced technology and capabilities, Starship is poised to revolutionize space exploration and transportation, opening up new possibilities for the future of human spaceflight!

"Pointy top" inspired by the 2012 film, "The Dictator".

Enables travel to anywhere in the world in one hour or less.

Body made out of steel that can withstand cryogenic temperatures.

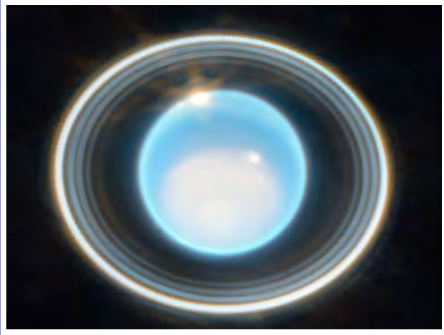
Can land itself in an upright position.

Will be able to refuel itself in space.

Source: <https://www.spacex.com/vehicles/starship/>

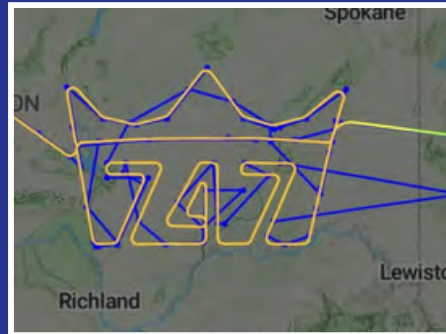
PHOTO OF THE ISSUE

ASTRONOMY



The clearest ever photos of Uranus taken by the James Webb Telescope.

AVIATION



The flight path of the last Boeing 747 produced by Boeing.

SPACE FLIGHT



The launch of SpaceX's Starship

AVIATION NEWS SPOTLIGHT

The end of an era arrived with the completion of the final Boeing 747.

The Boeing 747, AKA, the "Queen of the Skies", is a wide-body commercial aircraft used for passenger and cargo transport. From its first flight in 1969, the Boeing 747 revolutionized air travel, enabling long-haul journeys and connecting people across continents. It is composed of about six million parts produced all over the world and is among the most recognizable aircraft in the air.

The last 747 that will ever be produced is a 747-8F Intercontinental model, marking the end of the production of Boeing's most iconic aircraft.



WHAT TO WATCH OUT FOR NEXT SEMESTER

MOVIE
NIGHT

MORE TALKS

KERBAL
SPACE
PROGRAM
COMPETITION

RC FLIGHT
COMPETITION

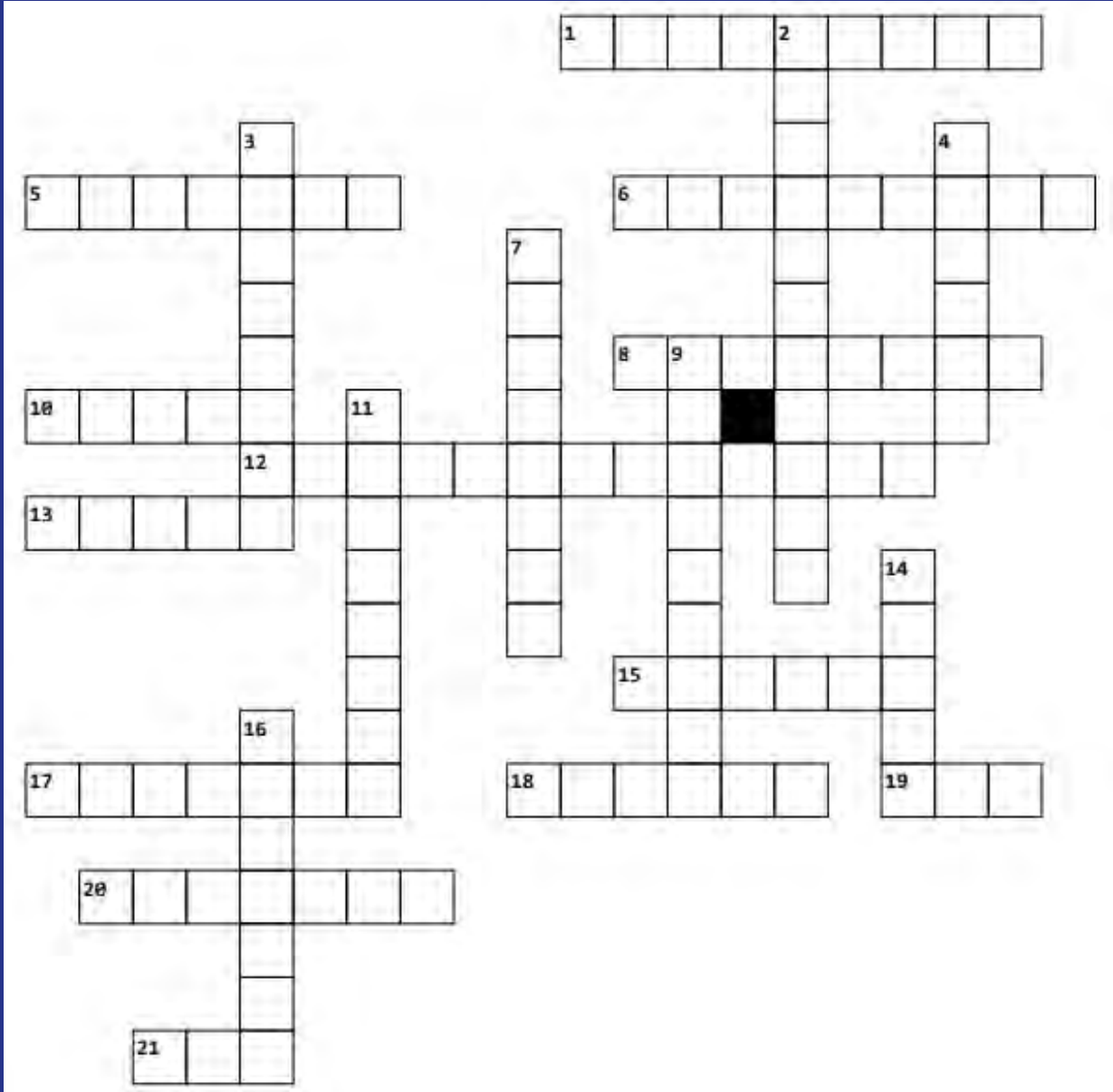
INDUSTRY
TOURS

SEE YOU NEXT SEMESTER!



CROSSWORD OF THE ISSUE

*Answers in next issue.



ACROSS

1. Piece of debris that survives passage through the earth's atmosphere.
5. What is the name of the force holding us to the earth?
6. Item used for looking into space?
8. What the universe contains many of?
10. Famous dwarf planet that is mistaken as a planet,
12. Name of the first man to set foot on the moon.
13. There are billions of these in the universe.
15. What planet is famous for the rings that surround them?
17. Closest planet to the sun.
18. Physicist who discovered gravity.
19. What do planets revolve around?
20. Famous astronomer and philosopher.
21. What is there none of in space?

DOWN

2. What is the name of a place that uses telescopes and other scientific equipment to research space and astronomy?
3. Number of galaxies and stars in the universe.
4. Transport used to travel in space?
7. Impact that caused the extinction of the dinosaurs.
9. Person who travels into space?
11. Galaxy that the earth is located in?
14. Hottest planet in our solar system.
16. What planet is famous for the big red spot on it?