

# NEWSLETTER OF ASTRO CLUB

Exploring the universe, one discovery at a time.



# Introduction to Astro Club

“Somewhere, something incredible is waiting to be known.” – Carl Sagan



Founded with a vision to ignite the curiosity of students toward the cosmos, the Astro Club of Anna University is more than just a group of stargazers. It is a community of dreamers, researchers, and visionaries who believe that astronomy is the purest form of exploration. Over the years, the club has:

- Organized night sky observation sessions, allowing students to witness lunar craters, planetary alignments, and meteor showers.
- Hosted guest lectures by eminent astrophysicists and scientists who shared cutting-edge discoveries.
- Conducted workshops on telescope-making, astrophotography, and space science basics.
- The club isn't limited to science students—it embraces enthusiasts from all disciplines, reinforcing the idea that the stars belong to everyone.

# History Revisited - Ancient Astronomer Spotlight

"The Earth is the cradle of humanity, but mankind cannot stay in the cradle forever." - Konstantin Tsiolkovsky



In the 5th century, \*\*Aryabhata\*\*, an Indian mathematician and astronomer, revolutionized the way civilizations perceived the universe. He introduced the concept that Earth rotates on its own axis—centuries before it was widely accepted. His calculations of the value of  $\pi$  (pi) to four decimal places and his theories on solar and lunar eclipses reflected extraordinary brilliance.

His work inspired generations of Indian scholars, and even India's first satellite launched in 1975 proudly carried his name—\*\*Aryabhata\*\*.



Another beacon of astronomy, \*\*Galileo Galilei\*\*, often called “the Father of Modern Observational Astronomy,” defied dogma and proved that Earth is not the center of the universe. By improving telescopes and discovering Jupiter’s moons, he transformed our view of the cosmos.

# Mission Watch - Upcoming Space frontiers

"We are all made of star stuff." - Carl Sagan



- \*Gaganyaan (2025–26):\* India's first manned mission to low Earth orbit, symbolizing the nation's leap into human spaceflight.
- \*LUPEX (Lunar Polar Exploration Mission):\* A collaboration with JAXA to explore water at the Moon's southern pole.

- \*Artemis Program:\* Prepares humanity's return to the Moon, setting up the foundation for Mars missions.
- \*Europa Clipper (2025):\* A mission to Jupiter's moon Europa, investigating its potential subsurface ocean.



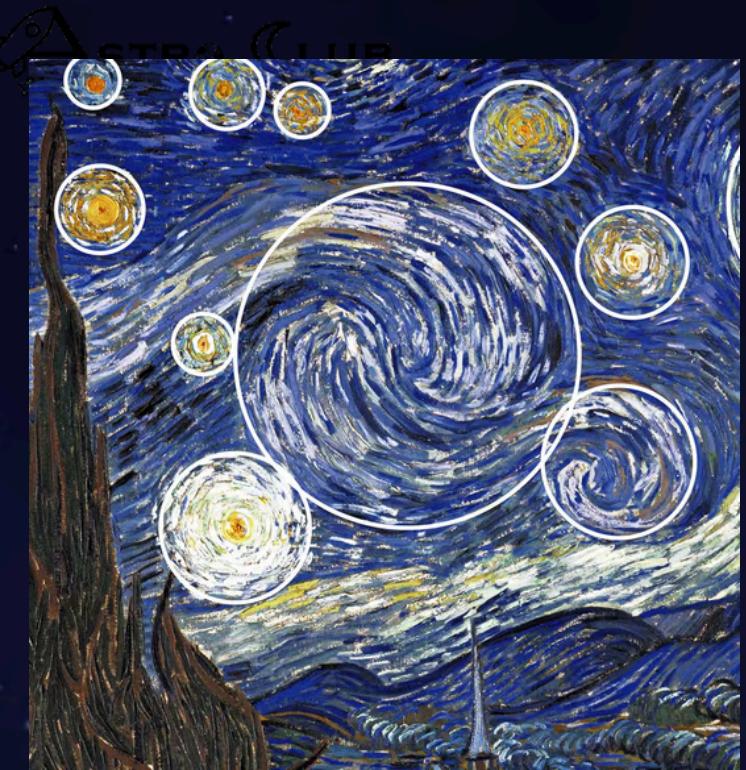
- JUICE Mission:\* Already en route, aimed at exploring icy moons of Jupiter like Ganymede and Callisto to seek hints of habitability.



# Beyond the Observatory - Astronomy in Art and Philosophy

"To confine our attention to terrestrial matters would be to limit the human spirit." – Stephen Hawking

Astronomy has always inspired human imagination far beyond science. When Van Gogh painted \*The Starry Night\*, he wasn't just capturing swirls of light but humanity's eternal wonder at the skies. Walt Whitman's poems, such as \*When I Heard the Learn'd Astronomer\*, reflect the balance between analytical knowledge and emotional awe.



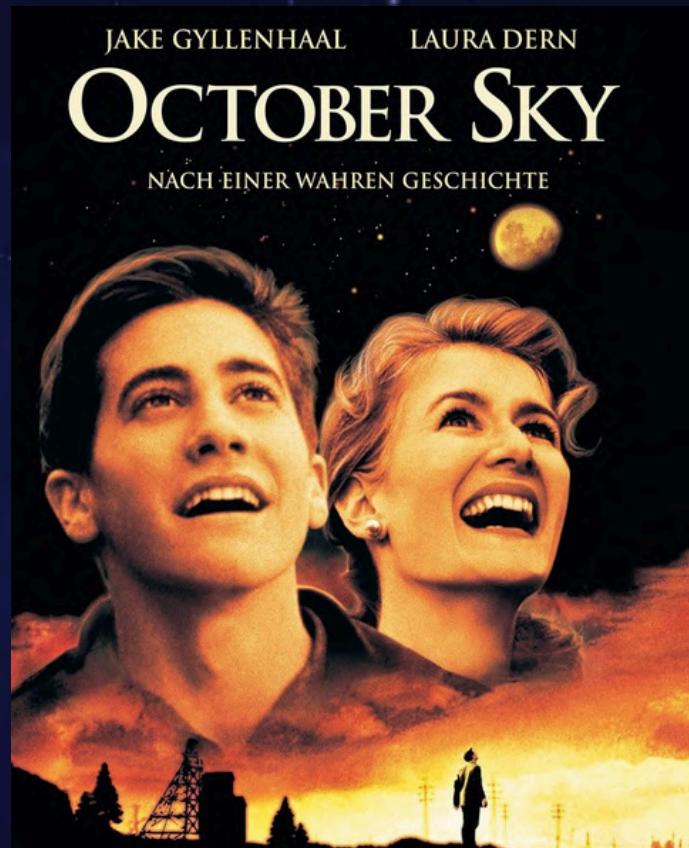
Philosophically, astronomy changes humanity's perspective—it makes us realize how small we are, but how big our curiosity can grow. Artists, musicians, and poets use the stars as metaphors for love, hope, and infinity. The link between science and creativity is not a divide, but a bridge.

# Cinema Corner

"Space is for everybody. It's not just for a few people... That's our new frontier." - Christa McAuliffe

## Movie Review 1: Interstellar (2014)

Christopher Nolan's *\*Interstellar\** is more than a sci-fi spectacle—it's a poetic exploration of time, love, and survival. Based on real physics concepts like black holes and time dilation (advised by physicist Kip Thorne), the film visualized a black hole (Gargantua) so accurately that its rendering was later cited in scientific papers. What makes it powerful is not only its accuracy but the emotional weight of a father's journey.



## Movie Review 2: October Sky (1999)

This lesser-known gem tells the true story of Homer Hickam, who, inspired by the Sputnik launch, dreams of becoming a rocket scientist. Despite opposition, he pursues his passion, proving that space is not just for extraordinary geniuses but for ordinary dreamers with grit. It is a film that resonates with every space enthusiast who dares to dream beyond boundaries.

# Science Features

"For small creatures such as we the vastness is bearable only through love." - Carl Sagan

## Planetary Oddities You Didn't Know!

- Venus spins backwards—it has a retrograde rotation.
- Saturn could float in water because of its low density.
- Neptune's winds blow faster than 2,000 km/h—faster than sound!



## Astronaut's Inspirational Journey: Kalpana Chawla

From Karnal, Haryana, Kalpana Chawla soared to NASA, becoming the first Indian-born woman in space. Despite facing challenges, she kept reminding: "The path from dreams to success does exist." Her legacy continues to inspire countless young Indians.

# Science Features

"Equipped with his five senses, man explores the universe around him and calls the adventure Science." - Edwin Hubble

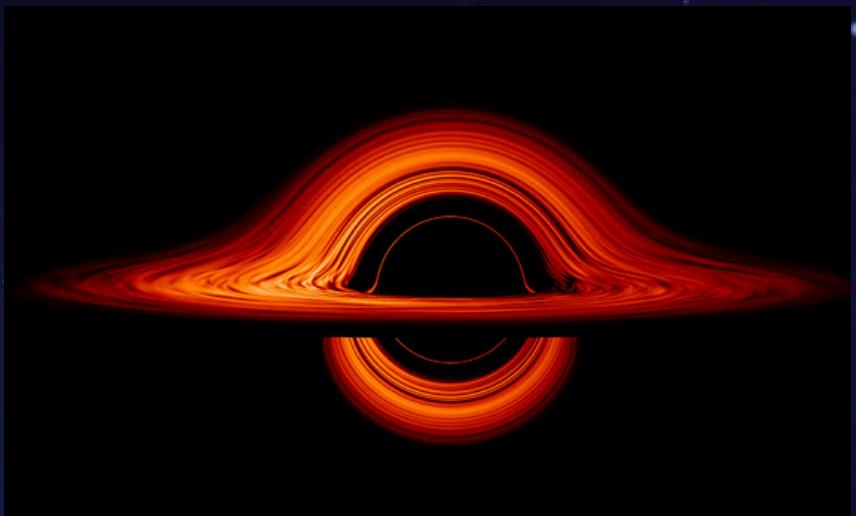


## Life on Mars?

Scientists study extremophiles—organisms living in volcanic vents, in Antarctica, and deep sea trenches—as analogues for life that might exist on Mars or icy moons like Europa. If microbes can thrive in such extreme conditions on Earth, could alien life exist just a solar system away?

## Black Holes – Cosmic Monsters

These invisible giants form when massive stars collapse. Anything crossing their event horizon cannot return—not even light. Yet, far from just “monsters,” they shape galaxies, triggering star formation around their centers. Studying them is like studying the engines of the universe.



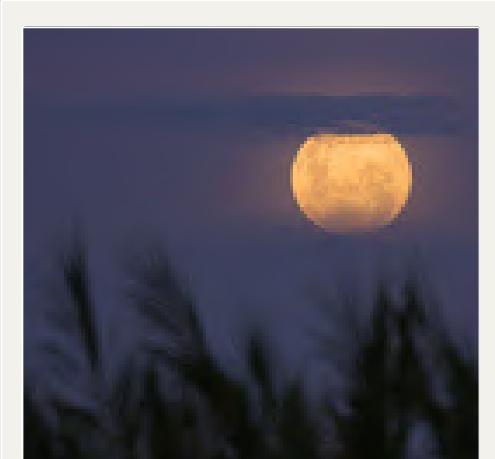
# ASTRO CALENDAR

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## SEPTEMBER



SEP-7/8  
TOTAL LUNAR ECLIPSE



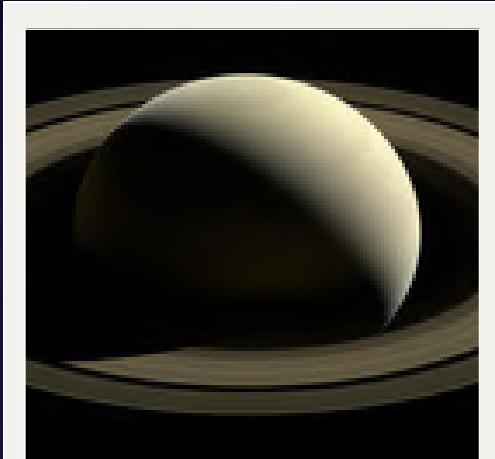
SEP-7  
CORN MOON



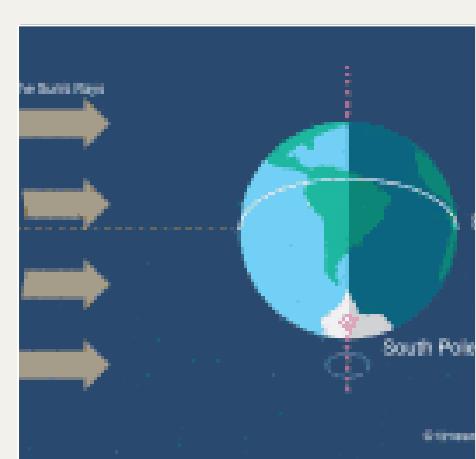
SEP-21  
PARTIAL SOLAR ECLIPSE



SEP-21  
NEW MOON



SEP-21  
SATURN AT OPPOSITION



SEP-22  
SEPTEMBER EQUINOX



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"Equipped with his five senses, man explores the universe around him and calls the adventure Science." - Edwin Hubble

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