

AstroBaqir

Monthly Magazine

January 2026



AstroBaqir

Syed Mohammad Baqir

www.astrobaqir.com



Super Moon

4th January 2026

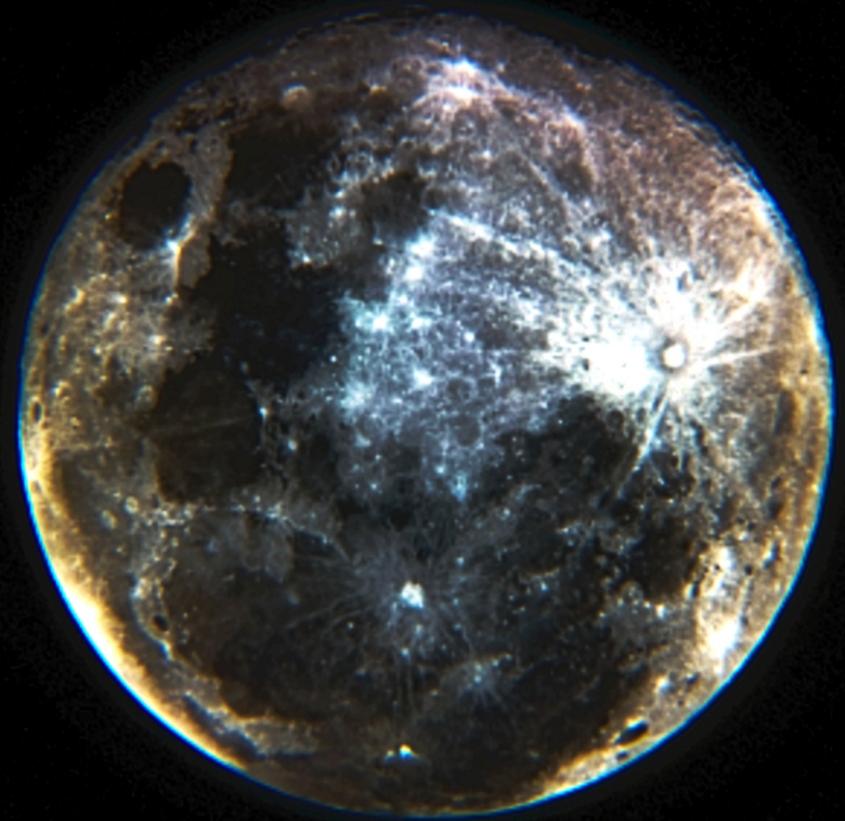
A supermoon is a full or new moon that occurs when the Moon is at or near its closest point to Earth (perigee) in its elliptical orbit, making it appear larger and brighter than usual, sometimes up to 14% bigger and 30% brighter, though the difference can be subtle to the naked eye. The term, coined by an astrologer, describes what astronomers call a "perigean full moon" (or new moon) and can lead to slightly higher tides.

The Moon appears to have different colors because its surface is made of different types of rocks and minerals. The dark areas (lunar maria) are ancient volcanic plains rich in iron and magnesium, which makes them look darker or slightly bluish, while the bright regions (highlands) are composed of lighter rocks like anorthosite. Fresh impact craters expose newer material that appears brighter, whereas older areas darken over time due to space weathering. These subtle color differences become more noticeable in telescopic images, stacking, and during events like a Super Moon, when surface details are enhanced.

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Celestron 130 Telescope
10 mm eyepiece
Infinix 40 Pro Cellphone
12 images stacked
4:25 AM, 4 Jan 2026
Quetta, Pakistan
Syed Mohammad Baqir



Jupiter

6th January 2026

Jupiter is the largest planet in our Solar System and is famous for its striking belts and zones, which are bands of clouds wrapped around the planet by its rapid rotation. The dark belts are warmer, lower cloud layers rich in compounds like ammonia and sulfur, while the bright zones are cooler regions where clouds rise higher into the atmosphere. These bands are driven by powerful jet streams that can reach hundreds of kilometers per hour. The most remarkable feature is the Great Red Spot, a gigantic storm system larger than Earth that has been raging for over 300 years. Its reddish color is thought to come from complex chemical reactions in Jupiter's atmosphere under intense sunlight, making it one of the most fascinating and dynamic objects to observe through a telescope. I have done this observation using my cellphone connected with my telescope, Celestron 130. I did observations of this gas giant in very cold weather and then obtained many images which I used for stacking and got this final image.

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Jupiter

Celestron 130
Infinix 40 Pro Cellphone
40 Images stacked
1/19 sec exposure each
ISO 1600
4:04 AM: 6 Jan 2026



Syed Mohammad Baqir
Quetta, Pakistan

Petavius Crater

6th January 2026

Petavius Crater is one of the most impressive impact craters on the Moon, located near the southeastern limb of the lunar near side. It is about 177 km in diameter and is easily recognizable by its deep, fractured floor and a prominent central mountain peak. One of its most striking features is the system of rilles (cracks) running across the crater floor, formed due to volcanic activity and tectonic stresses after the impact. The crater's high, terraced walls and shadow effects make it especially dramatic near the lunar terminator, offering a spectacular view for telescopic observers and highlighting the Moon's complex geological history.

This image is obtained using combination of eyepiece and Barlow lenses attached with my Celestron 130 telescope. This image is 13000 times magnified! We can clearly see central peak and details of crater rim. For this clear image, I stacked 10 images. We can also see shadow of central peak on crater rim.

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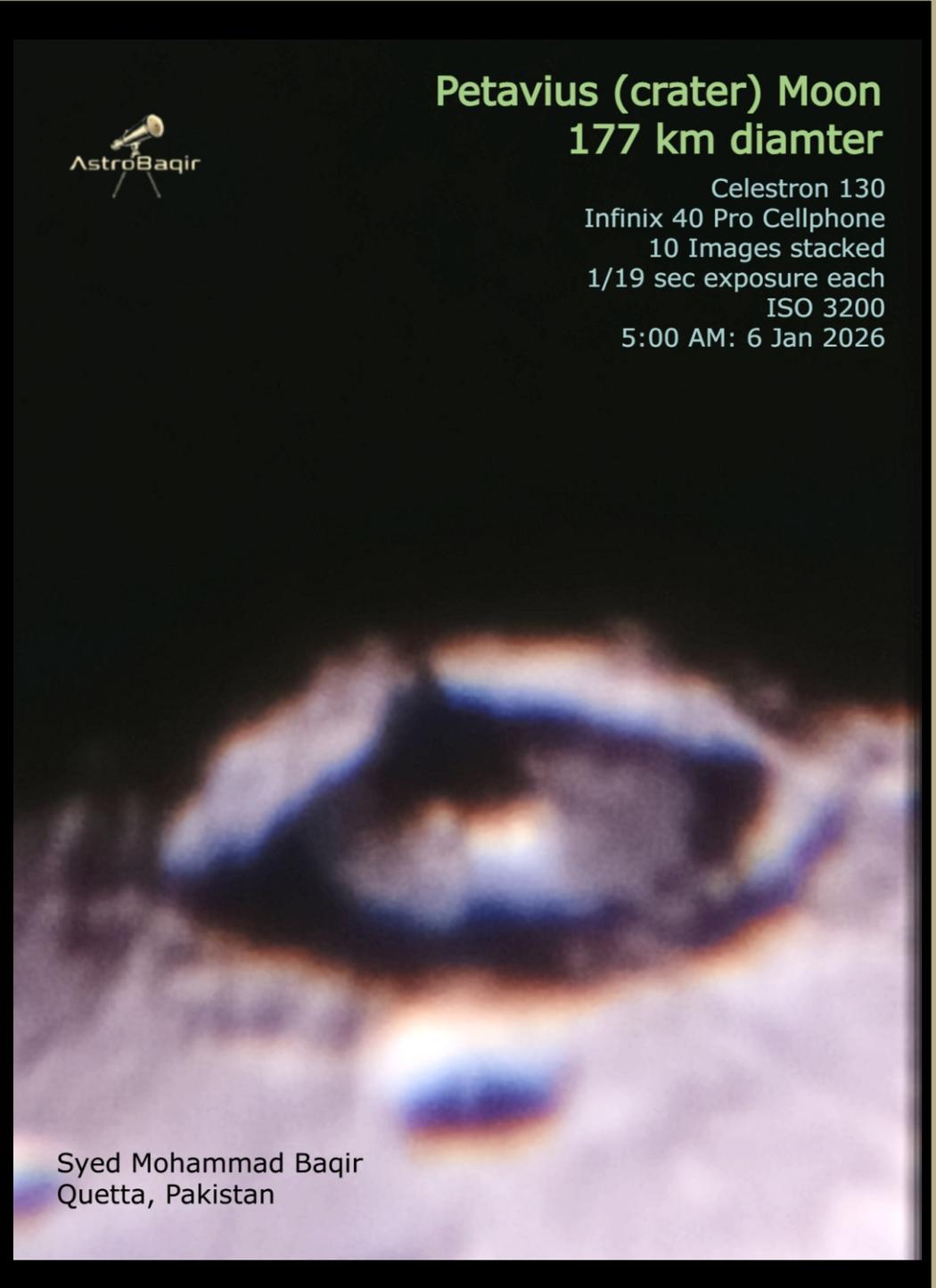
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Petavius (crater) Moon 177 km diameter

Celestron 130
Infinix 40 Pro Cellphone
10 Images stacked
1/19 sec exposure each
ISO 3200
5:00 AM: 6 Jan 2026



Syed Mohammad Baqir
Quetta, Pakistan

NGC 2903 galaxy

30th January 2026

NGC 2903 is a beautiful barred spiral galaxy located in the constellation Leo, about 30 million light-years from Earth. It is one of the brightest galaxies in its region and is rich in gas, dust, and active star-forming regions, especially along its central bar and spiral arms. The galaxy's core shows intense activity, with young, hot stars illuminating vast clouds of interstellar material. Although not a member of the famous Messier catalog, NGC 2903 is considered a missing Messier object due to its brightness and is a rewarding target for amateur astronomers, appearing as an elongated glow with a bright nucleus through medium-sized telescopes under dark skies.

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Galaxy NGC 2903

Celestron 130 Telescope
Infinix 40 Pro Cellphone
10 mm eyepiece
30 Images Stacked
9 Sec exposure each, ISO-19200
4:21 AM, 20 Jan 2026
Syed Mohammad Baqir
Quetta, Pakistan



M 82 galaxy

23rd January 2026

Messier 82 (M82), commonly known as the Cigar Galaxy, is a remarkable starburst galaxy located in the constellation Ursa Major, about 12 million light-years from Earth. Its elongated, cigar-shaped appearance is the result of a nearly edge-on orientation and intense gravitational interaction with its neighbor M81, which has triggered an exceptionally high rate of star formation in its central regions. M82 is undergoing a powerful starburst phase, producing stars tens of times faster than the Milky Way. This extreme activity drives enormous galactic superwinds, visible as reddish and bluish filaments of ionized hydrogen and dust flowing perpendicular to the galactic disk. These outflows are powered by stellar winds and supernova explosions from massive young stars, enriching intergalactic space with heavy elements. Through telescopes, M82 appears as a bright, narrow streak with mottled structure, making it one of the most fascinating and scientifically important galaxies for both professional research and amateur observation.

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M 82 galaxy (Cigar galaxy)

Celestron 130 Telescope
Infinix 40 Pro Cellphone
10 mm eyepiece
27 Images Stacked
5 Sec exposure each, ISO-19200
11:30 PM, 23 Jan 2026
Syed Mohammad Baqir
Quetta, Pakistan (-7 deg C)



M 81 galaxy

23rd January 2026

Messier 81 (M81), also known as Bode's Galaxy, is a magnificent grand-design spiral galaxy located in the constellation Ursa Major, approximately 11–12 million light-years from Earth. It is one of the brightest and nearest spiral galaxies visible from the Northern Hemisphere, making it a favorite target for both professional astronomers and amateur observers. M81 closely resembles the Milky Way in structure, with a bright central bulge, well-defined spiral arms, and extensive regions of ongoing star formation marked by glowing hydrogen clouds. At its core lies a supermassive black hole with a mass tens of millions of times that of the Sun, producing weak but detectable nuclear activity. M81 is gravitationally interacting with its nearby companions, particularly M82 and NGC 3077, and these interactions have distorted its outer arms and triggered enhanced star formation in the group. Through small to medium telescopes, M81 appears as a bright oval glow with a concentrated nucleus, while long-exposure imaging reveals its elegant spiral structure and dust lanes, highlighting its importance as a key laboratory for studying galactic evolution.

M 81 galaxy (Bode's galaxy)

Celestron 130 Telescope
Infinix 40 Pro Cellphone
10 mm eyepiece
29 Images Stacked
10.9 Sec exposure each, ISO-19200
11:07 PM, 23 Jan 2026
Syed Mohammad Baqir
Quetta, Pakistan (-7 deg C)



Interacting galaxies

20th January 2026

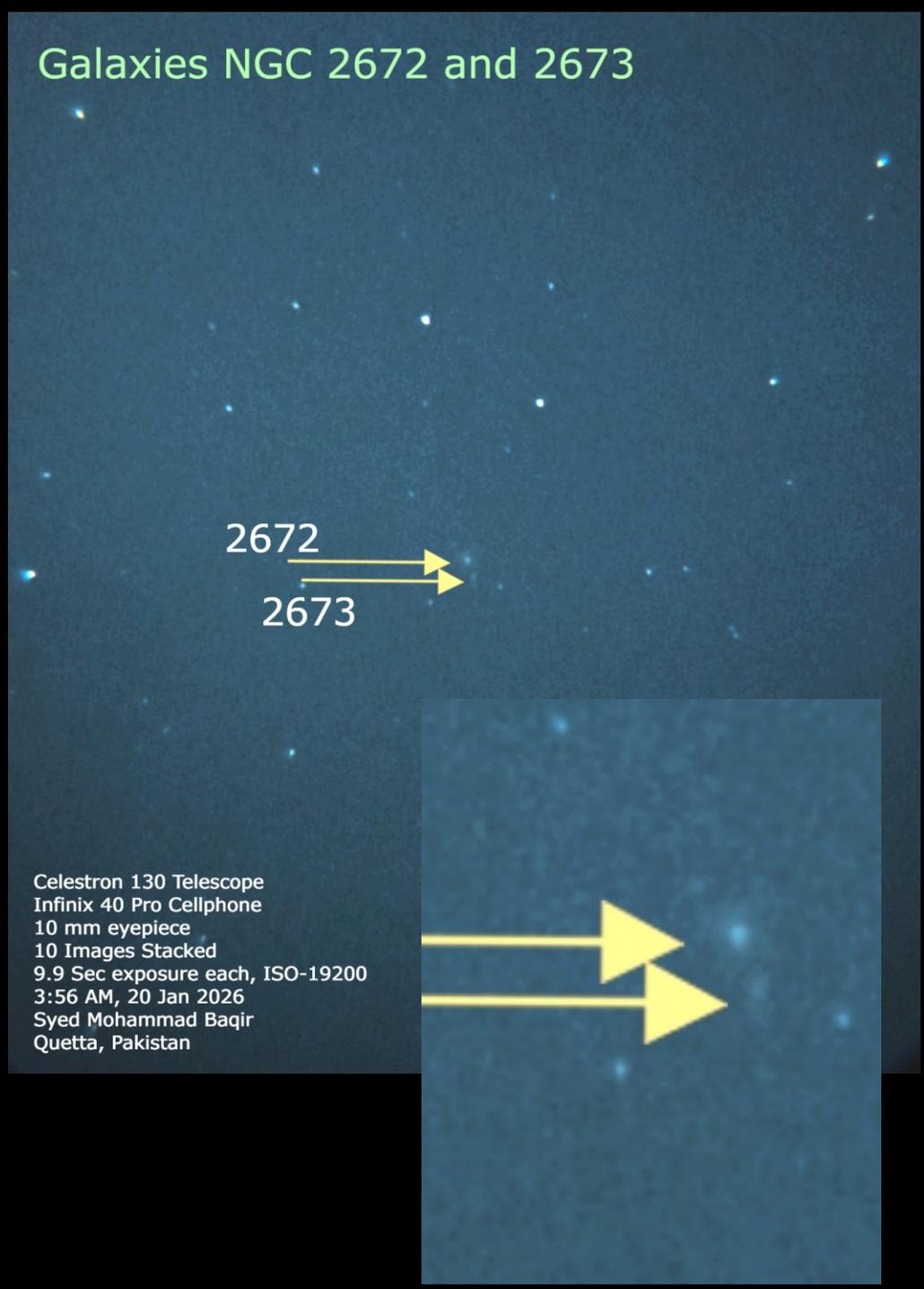
NGC 2672 and NGC 2673 form a fascinating pair of interacting galaxies located in the constellation Cancer, at a distance of roughly 150 million light-years from Earth. Their close gravitational encounter has begun to distort their shapes, subtly stretching their stellar disks and redistributing gas and dust between them. Such interactions play a crucial role in galactic evolution, as tidal forces can trigger enhanced star formation, funnel gas toward galactic centers, and alter spiral structures. Although the distortions in NGC 2672 and NGC 2673 are relatively gentle compared to dramatic mergers, careful imaging reveals asymmetries and brightness variations that hint at ongoing tidal interaction. Studying galaxy pairs like this helps astronomers understand how galaxies grow, evolve, and influence one another over cosmic time scales.

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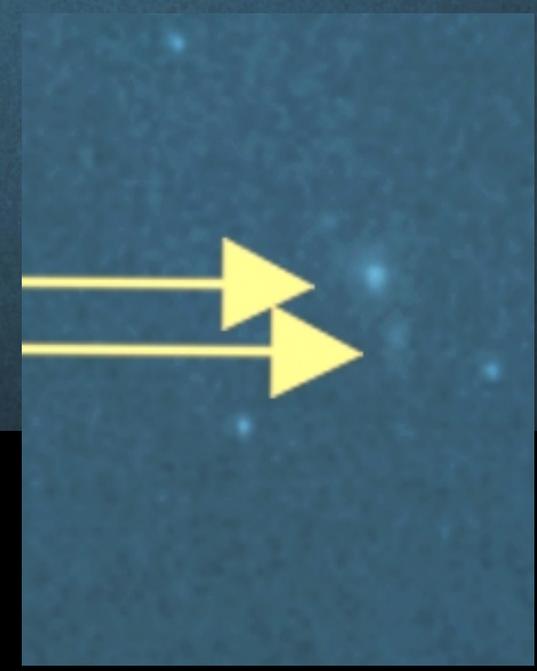
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Galaxies NGC 2672 and 2673



2672
2673



Celestron 130 Telescope
Infinix 40 Pro Cellphone
10 mm eyepiece
10 Images Stacked
9.9 Sec exposure each, ISO-19200
3:56 AM, 20 Jan 2026
Syed Mohammad Baqir
Quetta, Pakistan

Exoplanets Lecture series on YouTube

In the month of January 2026, I completed 5 lecture series on exoplanets. These lectures were uploaded on my YouTube channel. I have planned to continue my lecture series on different topics throughout the year. February will see a new one, March will be with a different one and so on.

Each lecture is little less than 20 minutes. Main purpose for these lectures is to spread awareness among people of all age groups and all walks of life.

Not only this I am also posting my regular small clips on my Instagram account as well s on TikTok.

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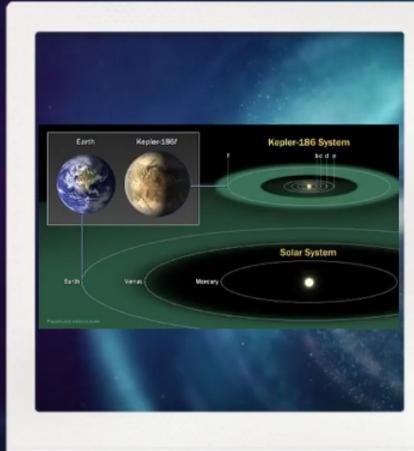
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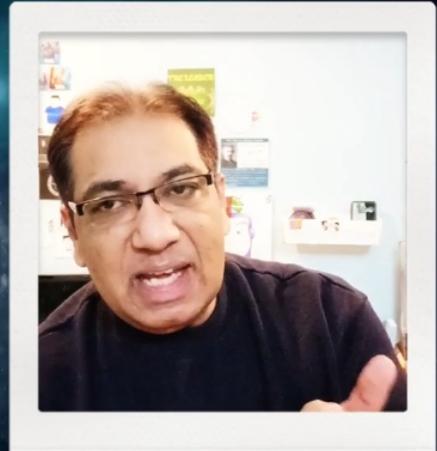
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Astronomer, Physicist



Exoplanets
Episode 5



Syed Mohammad Baqir
Astronomer, Physicist



Exoplanets
Episode 3



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