BARSTOW
COMMUNITY COLLEGE
Public Information Office

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Observatory View of the First Quarter Moon

Barstow, CA – Barstow Community College (BCC) will be hosting a free public event at the observatory on campus. Visitors will be welcomed to the observatory by our Astronomy Professor, Scott Bulkley, and his Observational Astronomy Class, and invited to view the first quarter moon through the college's telescope.

As the moon orbits Earth, the first phase of the 29-day lunar cycle is called the new moon. This thin sliver of the moon may be difficult to see on the first night, but on each succeeding night the waxing crescent moon gets bigger and brighter. The first quarter moon is visible by the 7th night of the lunar cycle, because it has traveled one quarter of its orbit around the Earth. Professor Bulkley explained, "The first quarter moon occurs precisely when the Moon is at a 90 degree angle in its orbit with respect to the Earth and Sun. It will appear half-illuminated and half in shadow from our point of view." Then, in the middle of the lunar cycle (14 days after the first sliver of the new moon appears) the full moon rises at sunset and is high in the night sky around midnight. By the 21st night of the lunar cycle we can see the third quarter moon. As it gets thinner toward the end of the lunar cycle, the waning crescent moon is often visible in the western sky even after sunrise.

Professor Bulkley observed, "The first quarter moon is truly impressive when viewed through a telescope of this quality. The lunar terrain is simply spectacular when we have clear October skies. Our visitors will be able to see all of the moon's features: bright rayed craters, mountains, valleys and the smooth dark volcanic plains known as 'maria'" He hesitated for a moment, and then added, "I hope that the weather cooperates on the 26th. When we tried to view the super moon and lunar eclipse in September, 2015, we had too many clouds. Most of the time though, we have had clear skies for our public events at the BCC Observatory."

The observatory houses a 16" Schmidt-Cassegrain Reflector Telescope permanently mounted on a concrete pier. This is a hybrid telescope that combines many of the best characteristics of Galileo's refractor telescope (lens based) with the Newtonian reflector telescope (mirror based). In 1692, a Frenchman by the name of Guillaume Cassegrain came up with a new design for the mirror based telescopes that would allow for a shorter focal length. This design was later combined with a special lens (corrector plate) developed in 1930 by a German optician named Bernard Schmidt. The Schmidt-Cassegrain telescope in the BCC Observatory is a modern version of this hybrid technology that includes multiple eyepieces of different focal lengths and a computerized pointing system with several thousand celestial objects in its library. All of this adds up to a research-level, deep-space viewing telescope at BCC.

Once each semester, the public is invited to visit the observatory and look through this high-tech telescope. The BCC Observatory is located on Veterans Parkway behind the BCC campus. Parking is available on Veterans Parkway. The public is invited free of charge to take a peek through the telescope and see the moon, up close and personal. Observatory visitors are urged to dress warmly since the line to the observatory is outside and the weather may be a bit chilly. The event will run from 6:30 p.m. until about 8:30 p.m.

For more information about this free public event, please contact Professor Bulkley at 760-252-2411, ext. 7301 or visit our website – www.Barstow.edu. BCC is an accredited, open access institution of higher learning committed to providing our students, community, and military population with the educational tools needed to achieve personal goals and professional growth. All potential future students (young and old) are invited to visit the campus, talk to an advisor, and learn more about the classes, certificates and degree programs offered at *your* community college.