The Astronomical Society of Las Cruces (ASLC) is dedicated to expanding public awareness and understanding of the wonders of the universe. ASLC holds frequent observing sessions and star parties and provides opportunities to work on Society and public educational projects. Members receive electronic delivery of *The High Desert Observer,* our monthly newsletter, plus, membership in the Astronomical League, including their quarterly publication, *Reflector,* in either paper or digital format. ASLC members are also entitled to a $5 (per year) discount on *Sky and Telescope* magazine.

Annual Individual Dues are $30
Annual Family Dues are $36
Annual Student (Full Time) Dues are $24

Annual Dues are payable in January. Prorated Dues are available for new members. Dues are payable to ASLC with an application form or note to: Treasurer ASLC, P.O. Box 921, Las Cruces, NM 88004. Contact our Treasurer, Patricia Conley (treasurer@aslc-nm.org) for further information.

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Member Info Changes

All members need to keep the Society informed of changes to their basic information, such as name, address, phone number, or email address. Please contact Treasurer@aslc-nm.org with any updates .

November Meeting

Our next meeting will be on **Friday, November 22,** Our guest speaker will be Steve Barks, his topic will be on Spectrography.

Events

ASLC hosts deep-sky viewing and imaging at our dark sky location in Upham. We also have public in-town observing sessions at the Pan Am Plaza (on University Ave.) and at Tombaugh Observatory (on the NMSU campus) All sessions begin at dusk.
At our Leasburg Dam State Park Observatory, we hold monthly star parties. Located just 20 miles North of Las Cruces, our 16" telescope at this site is used to observe under rather dark skies.

Masthead Image: Moon rising over the Organ Mtns. Las Cruces, in Penumbral Eclipse, February 10, 2017.

From the President's Desk

November 2019

The origin of our universe has been an interesting itch in the minds of most humans since the beginning of mankind. A herd of astronomers and physicists has attempted to explain the universe and one of the most acceptable theories so far is the Bib Bang. As the theory goes, somewhere around 13.8 billion years ago the universe exploded into being, as an infinitely compact fireball of matter that cooled as it expanded, triggering reaction that produced the stars, galaxies, and all the forms of matter we see today.

The next question of course is what came before the Big Bang. One answer is that just before the Big Bang there was another, more explosive phase of the early universe. This phase has been referred to as *Cosmic inflation,* which lasted for less than a trillionth of a second. During this period matter, a cold glob, inflated exponentially quickly before process of the Big Bang took over.

Recent observations have supported theories for both Big Bang and cosmic inflation. These two processes are radically different and there in lies the rub. If you are interested, I recommend looking into the work done at MIT, Kenyon College.

Our speaker this month is Steve Barkes. He will be doing part two of his earlier talk on spectrography.

The answer is 42.

Tracy Stewart, ASLC President

Transit of Mercury on November 11, 2019 !!!

Mercury – the innermost planet of our solar system – will transit the sun on November 11, 2019. In other words, Mercury will pass directly in front of the sun and be visible through telescopes with solar filters as a small black dot crossing the sun's face. It'll be visible in part from most of Earth's globe. The entire transit is visible from South America, eastern North America, and far-western Africa.

The last transit of Mercury was in 2016. The next one won't be until 2032.

Mercury will come into view on the sun's face around 7:36 a.m. Eastern Standard Time (12:36 UTC; translate UTC to your time) on November 11. It'll make a leisurely journey across the sun's face, reaching greatest transit (closest to sun's center) at approximately 10:20 a.m. EST (15:20 UTC) and finally exiting around 1:04 p.m. EST (18:04 UTC). The entire 5 1/2 hour path across the sun will be visible across the U.S. East – with magnification and proper solar filters – while those in the U.S. West can observe the transit already in progress after sunrise.

Posted by Bruce McClure in Tonight On EarthSky News.com

Outreach Report

by Jerry McMahan

Tombaugh Observatory, Friday, October 4th

When I arrived at the observatory, I saw a sign saying that the open house had been canceled due to the weather. It was cloudy. There were several people waiting to see though the telescopes. When Steve Shaffer arrived, he decided to open our dome for those people. The young man with the Newtonian scope set his up and probably had the best views of the Moon since he was set up before we had the 12.5 in operation. We only had a few minutes before the clouds moved in, giving us a short time to decide if we should . Steve said it would probably clear after we shut down. We did shut down, looked at the sky and saw Jupiter and Saturn.

Moongaze, Saturday, October 5th

Chuck Sterling, Steve Wood, Howard Brewington and Jerry McMahan set up telescopes at the Pan Am plaza. It is a scenic location, maybe that is why a man, woman and a baby appeared at that location. They said they were there to locate places for the movie they are planning. The story takes place in El Paso, but Las Cruces will act as a stand in for El Paso. The woman, whose name is Cher, will be in the movie. In addition to movie stars, we also saw the Moon, Jupiter and Saturn.

The Uranograph - November 2019
by Bert Stevens
Constellation of the Month: Pegasus, The Winged Horse

This month a flying horse, Pegasus, glides across our night sky. This constellation's main visual feature is a square, made up of four bright stars. This asterism is commonly referred to as "The Great Square of Pegasus". However, the northeast (upper left) star of the Great Square actually belongs to the constellation Cassiopeia. Even so, the Great Square remains "of Pegasus".

Pegasus is the famed winged horse from Greek mythology seen in many Greek tales. Pegasus appeared when Perseus beheaded the Gorgon Medusa and a few drops of her Medusan blood fell upon the white sea foam, giving rise to the blazingly white stallion and his glorious wings. Perseus put Medusa's head in his bag, and sitting atop Pegasus, Perseus set off to save Princess Andromeda from the evil sea monster Cetus. After aiding Perseus, Pegasus was set free to roam the world, and carry thunderbolts for Zeus.

Pegasus means "spring", and wherever his hoofs struck the earth, a spring of water would appear. He is responsible for the famed fountain of Hippocrene on Mount Helicon, a source of poetic inspiration. Because of this, he is associated with the Muses who also provided poetic and artistic inspiration.

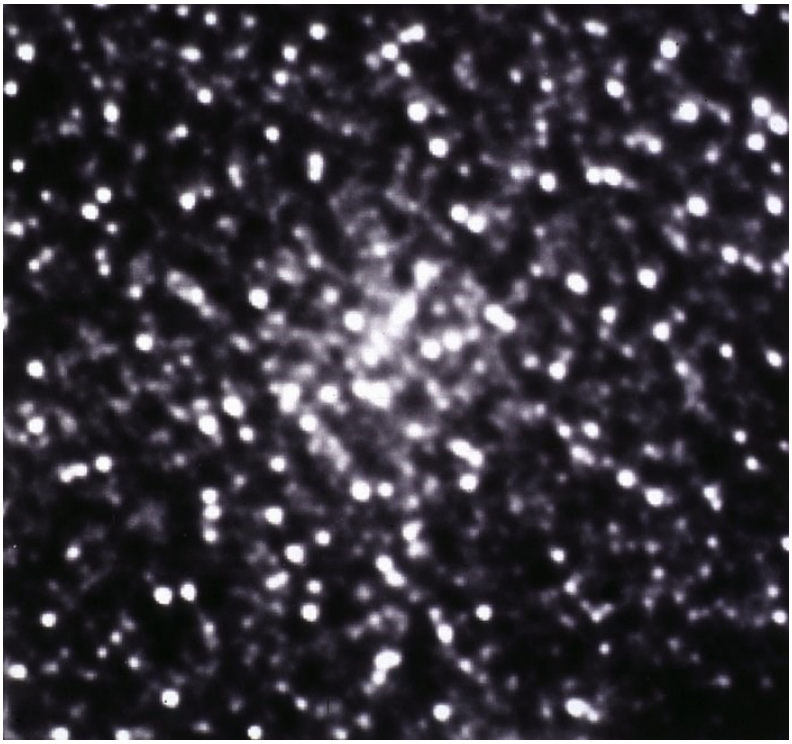
Meanwhile, Sisyphus, an arrogant man punished by the gods, condemned to roll a bolder up a hill only to have it roll back down just before reaching the top. Sisyphus would then have to start again at the bottom. His grandson, Bellerophon, was given a golden bridle by the goddess Athena. He found out where Pegasus was and while the winged horse drank from the Pierian spring, Bellerophon slipped the golden bridle over Pegasus's head, taming the wild stallion.

Bellerophon and Pegasus fought a number of battles, including those against the Chimera, who had the head of a lion, the body of a goat, and the tail of a snake. He also fought the Amazons. But like his grandfather, Bellerophon became arrogant and tried to ride Pegasus up to Olympus. Zeus quickly put a stop to this mere mortal's impudence by causing an insect to sting Pegasus, who threw Bellerophon off his back. Bellerophon fell back to earth. Crippled and blinded by the fall, he died a lonely and miserable old man.

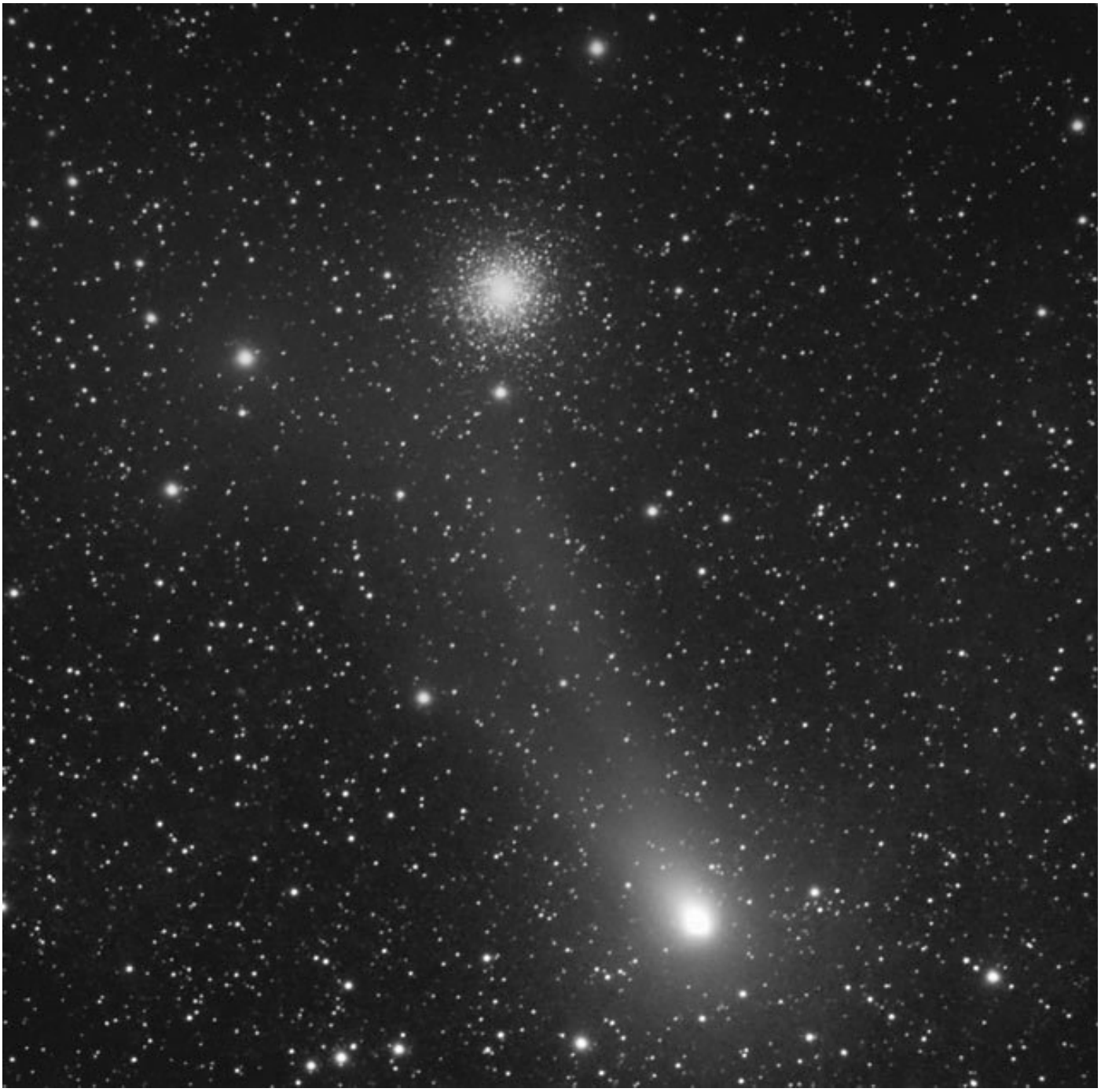
Pegasus continued up to Olympus, and once again carried thunderbolts for Zeus. For his efforts, Zeus made him into a constellation. A single feather from Pegasus's wings fell to earth and there the city of Tarsus (meaning feather) was founded in what is now Turkey.

Pegasus (the constellation) travels right over our heads during November evenings. The Square is quite obvious, and its northeast star, Alpheratz, which is actually in Andromeda, is a good starting point for finding the Great Andromeda Galaxy. The other three stars in the Great Square do belong to Pegasus.

M 15



M 15 Core



Comet Garrad

Franz Cumont (1868-1947): *"After a duration of a thousand years, the power of astrology broke down when, with Copernicus, Kepler, and Galileo, the progress of astronomy overthrew the false hypothesis upon which the entire structure rested, namely the geocentric system of the universe..Celestial mechanics and spectrum analysis finally robbed them of their mysterious prestige."*

Member John Kutney kindly submitted his efforts of the Helix Planetary Nebula (NGC 7293) I'm lovin that '80's Neon vibe!