

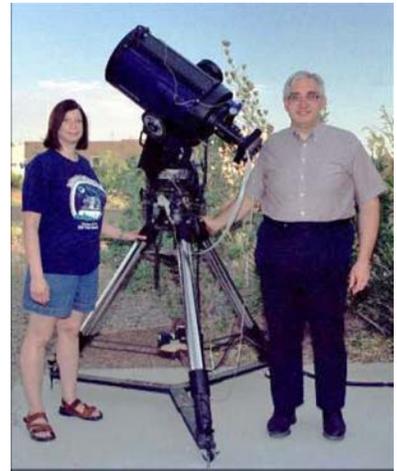
The High Desert Observer

The Bulletin of the Astronomical Society of Las Cruces

November, 2007

President's Message

November is here. Halloween is over and the Christmas season has started. The Renaissance Arts Faire has come and gone, and with it our premier public information event. Nils did a wonderful job organizing our efforts and making sure that the booth was manned during the entire event. I would like to give him a big "thank you!" and would also like to thank the other people who participated in the event, including Rich, Chuck, Steve, Dave, Joseph Z., Joe E., John, Kirby, Bill, Jerry, Wes and Carol, Bob L., and everyone else involved. I was able to stop by the booth for a few minutes and the folks there were doing a great job showing the planets and the Sun to visitors. We had a great display of astrophotos contributed by our members, running the gamut of astronomical objects from the ISS to the deep sky. Unfortunately, Meade has been slow at getting us our new Society solar telescope, so it was not in use for this year. We should have it for next year.



Janet and Bert Stevens

The November meeting has been moved to November 16, so it is less than a week away. This is our annual business meeting, so there will be a number of business-type issues to resolve, including the election of next year's officers. We have a fine slate of officers for next year, thanks to Vince's efforts. We actually have a contest in the Director at Large category, with three candidates and only two positions. **The ballot is included with this newsletter. Please make sure that if you send the ballot back via the mail, that we receive it by the meeting on November 16. It should probably be mailed immediately. The envelope must have a return address on it so we can identify the voter and validate membership. We will be doing the same thing at the meeting, with the treasurer collecting the ballots and checking off membership as the ballots are received. If you can, bring your completed ballot to the meeting.**

With December being Christmas, and since many of us will be traveling, there will not be a December meeting. However, there will be a Christmas Party, on a Saturday evening to be determined soon. We will have the details at the November meeting, on the ASLCNM Yahoo group, and on the ASLC website. We may book a room as early as December 1, so if you are not on the ASLCNM Yahoo Group, please be sure to check the website right after Thanksgiving.

The coolest thing to happen in the last month is Comet Holmes, which was nominally supposed to be 18th magnitude, but has flared up to almost second magnitude, making it a naked eye comet. It is in Perseus, and is visible as a fuzzy star to the unaided eye. Through binoculars, it is a glowing disc, and the latest telescopic photos are just spectacular, with a gas fan-shaped tail forming off to the east of the brilliant coma. If you have not seen it yet, take a look at our surprise comet! Thanks! - Bert

Next Meeting

The next meeting will be held on Friday, November 16, which is one week earlier than normal due to the Thanksgiving holiday. It will be held at the usual place and time (DABCC, room 77, 7:30pm). This will be the annual business meeting and the election of officers for 2008. Be sure to bring your completed ballot to the meeting. Tony Gondola will be the speaker and will present "High Resolution Lunar Imaging."

The Imagers Group (contact: Rich Richins) will meet prior to the November meeting at 7pm. The Astro Tidbits Group (contact: Nils Allen) will meet prior to the January meeting. Anyone is welcome to attend these special interest groups meetings. Note that there is no meeting in December.

Other events planned for November include:

Dark Sky Observing at the Upham dark sky site, Saturday, December 8, dusk

ASLC MoonGaze, International Delights Cafe, Saturday, November 22, dusk

Please see the ASLC website for further information (<http://www.aslc-nm.org>).

This Month's Observer

President's Message	1
Next Meeting	2
Ren Faire Report	2
Comet Impact	3
December Issue	4
Nightfall	5
Eclipsing Binaries	6
October Meeting Minutes issue	9
Officer Election Ballot	12
Comet Holmes	12
Sky & Telescope Subscriptions	13
Leonids	13

ASLC Does the Ren Faire in a Big Way

By Nils Allen

It's come and gone - another successful Dona Ana Renaissance Arts Faire for the ASLC. We had a blast, visiting with hundreds of curious town-folk, stirring up interest in our activities and showing how wacko we are about amateur astronomy. The many youngsters were suitably impressed with our scopes and what they could see. There were lots of favorable comments about our efforts and of our astro-imagers, especially the almost "still warm" print of Comet Holmes by Chuck. Here's some of the particulars:



*ASLC 2008 Ren Faire Booth
Photo by Dave Dockery*

Friday afternoon I was concerned when I found out that our booth wasn't in the location I was expecting. But not to fear, our valiant set-up crew turned that surprise into a plus, creating a flow-through venue that pulled passersby into viewing our photos and then observing the Sun, Moon, and Mystery Planet (Venus, Jupiter, and even Mercury) through our scopes. Putting up the new pop-up canopy under the trees was so much easier and quicker than the old wooden structure. As usual we made our limited space work by spreading the scopes out somewhat away from the booth.... where there's a will, there's a way!>>

Friday afternoon I was concerned when I found out that our booth wasn't in the location I was expecting. But not to fear, our valiant set-up crew turned that surprise into a plus, creating a flow-through venue that pulled passersby into viewing our photos and then observing the Sun, Moon, and Mystery Planet (Venus, Jupiter, and even Mercury) through our scopes. Putting up the new pop-up canopy under the trees was so much easier and quicker than the old wooden structure. As usual we made our limited space work by spreading the scopes out somewhat away from the booth.... where there's a will, there's a way!>>

➤ Overall the weather was cooperative though warm and the sky mostly cooperative. Thank goodness for sun-block! After all afternoon in the sun, some of us probably smelled like Medieval folks! We handed out club and IDA brochures and generally sought to find out which of our activities were interesting to the wide range of folks who came through. As usual we met some special people too, from retired astronomers to very enthusiastic newbies wanting to get involved. If we can pick up even a few committed new members due to our efforts there, it was all worth it. I firmly believe that you reap what you sow, so a harvest will be coming! Hopefully we can take advantage of this in 2008, especially with our ambitious observatory project which we were able to show to folks thanks to Rich's poster.



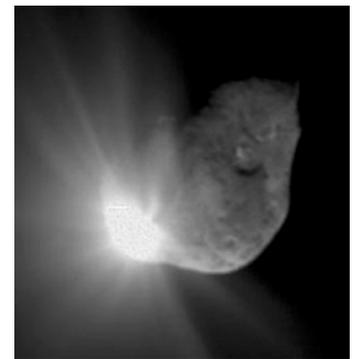
Photo by Dave Dockery

I want to give well deserved thanks to everyone who contributed to our effort there - Rich, Chuck, Steve, Dave, Joseph Z., Joe E., John, Kirby, Bill, Jerry, Wes and Carol, Bob L., Bonnie, and anyone else I didn't mention that took part. I personally enjoyed sharing the experience with some of our newer members. Special "ataboys" to Steve, Chuck, and Rich for their leadership roles. All of you that helped made our participation successful. I especially appreciate everyone's lighthearted spirit and can-do attitude.... it sure made the job of coordinating the event more enjoyable. How 'bout we do it again in 2008?!

Blowing a Hole in a Comet: Take 2

By Tony Phillips (NASA)

The flash! The dazzle! The front page of the *New York Times*! Two years ago, NASA's Deep Impact spacecraft dropped an 820 lb copper projectile onto Comet Tempel 1, unleashing an explosion that made headlines around the world. Exploding comets tend to have that effect. But how many people know what happened after the blast? The surprising answer is none--not even NASA. Deep Impact's prime mission was to punch a hole in Tempel 1 and look inside, giving researchers their first glimpse of a comet's internal structure. But "we were never able to see the crater because the cloud of debris was so thick," says Michael New of NASA Headquarters. Why didn't Deep Impact wait until the dust cleared? It couldn't. The mission was designed from the beginning as a high-speed flyby, giving extra velocity to the "bullet." Orbiting was not an option. Carried by its own momentum, Deep Impact sailed away before the cloud had time to dissipate.

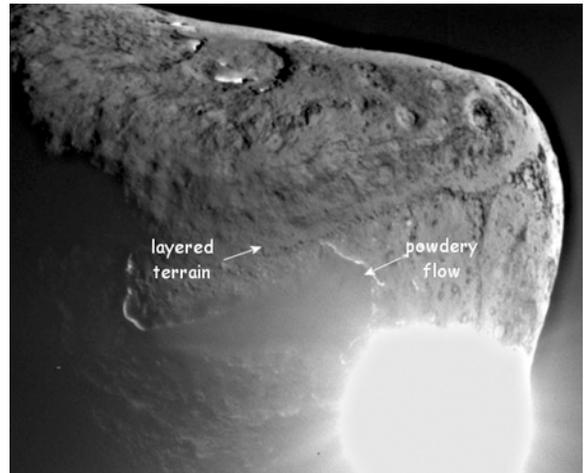


*Deep Impact strikes
Comet Tempel 1*

Take 2: NASA is going back for a second look. "We're sending another spacecraft back to Tempel 1, the Stardust probe," says New. Stardust is famous for its January 2004 flyby of Comet Wild 2. Severely buffeted by jets of gas and debris flowing from the comet, Stardust nevertheless managed to snatch thousands of samples of comet dust and return them to Earth for analysis. "Stardust is one of the great successes" ➤ ➤

►of NASA's Discovery program," says New. The Discovery program launches innovative, inexpensive spacecraft every 18-to-24 months on cutting edge missions. Deep Impact is also part of this program.

At first, Stardust was simply retired, sailing the void with nothing to do - but now it is being recycled as "Stardust-NExT," short for New Exploration of Tempel 1. Planetary science professor Joe Veverka of Cornell University is the mission's principal investigator. "We're very excited to go back," says Veverka. "Stardust is due to reach Comet Tempel 1 in 2011. By then the debris cloud will be long gone and we should get a clear view of the crater." Peering into the crater, however, "is only half the story," says Veverka. Before the cloud spoiled the view, Deep Impact's cameras recorded some surprising things. For one, the comet is ringed by a strangely-layered "sedimentary" terrain. There are no rivers on comets, so what causes these features? "Good question," says Veverka. One possibility: comets might be formed in layers. "Imagine two small proto-comets smashing into one another, sticking together and flattening like pieces of playdough," he says. Or maybe the layers are created via some form of hot erosion when the comet swings past the sun every 6.5 years. "We just don't know." Stardust will gather important clues. "We're returning to the comet almost exactly one orbit--that is, one comet-year after the first visit. This gives us a chance to see how solar heating might have altered Tempel 1's face."



Surprising terrain on Comet Tempel 1

Another surprise was landslides. "Deep Impact saw an enormous flow of smooth, powdery material" completely covering about a kilometer of underlying terrain, says Veverka. This feature is as mysterious as the layers, but it could explain one thing: why Deep Impact's debris cloud was so troublesome. "We might have hit a patch of deep powder," adds New. "Fine particles tend to make big clouds that are hard to see through." "This is why we explore," adds Veverka. "Tempel 1 is an amazing comet."

Veverka notes that recycling a mission like Stardust is cheaper than sending a whole new spacecraft. "Stardust-NExT costs less than 15% of a full-up Discovery mission." "Giving new assignments to veteran spacecraft represents not only creative thinking and planning, but also a prime example of getting more from the budget we have," agrees Alan Stern, associate administrator of NASA's Science Mission Directorate.

Deep Impact is being recycled, too. "We're using Deep Impact for two new projects," explains New. One is called DIXI (Deep Impact Extended Investigation). "Deep Impact will fly by Comet Boethin in December 2008 for a close-up investigation of the comet's nucleus." The second is EPOCH (Extrasolar Planet Observation and Characterization). "Cameras on Deep Impact will target nearby stars with known giant planets. By watching these planets transit (pass in front of) their stars, Deep Impact will be able to determine whether they possess rings and/or moons". For this work, EPOCH's sensitivity will exceed that of existing ground and space-based observatories, possibly leading to the discovery of new Earth-sized planets. This article was taken from the NASA site: http://science.nasa.gov/headlines/y2007/26sep_next.htm.

December Issue of the HDO

Articles for the December issue should be sent to me by Saturday, December 8. Material should be sent as email (GMHLCNM@msn.com) or as an attached Microsoft Word document. If you have any questions about submitting something to the HDO, please don't hesitate to contact me (532-5648 or via email). Thanks in advance! George Hatfield, Editor, ASLC Newsletter.

Nightfall

By Susan S. Carroll, Bradenton, Florida

“Nightfall” was posted in two parts on the Astronomy.com blog of Michael Bakich, under “the excitement of observing.” Here’s how he introduced it: This week and next, I’m sharing a short essay by one of my astronomy friends, Susan Carroll. Susan has been a dedicated observer for more years than most. Her 18-inch Starmaster Dobsonian-mounted reflector is a familiar sight at star parties across Florida and the Southeast (and the Midwest, when she lived there). If you’re a telescopic observer like me, I’m sure you will relive the moments Susan describes. If you haven’t yet taken the plunge and turned a telescope toward the sky, this is what awaits you.

I stand, in late twilight, squinting above and waiting for darkness to fall on the field below. All the preparations have been made, and the 18-inch stands next to me, waiting, expectant. The eyepiece is already in the focuser. Now all I have to do is wait for the deep turquoise twilight to turn to black night.

Around me are scores of others, waiting for the same thing. Voices raised in jolly repartee fill the air, punctuated by hearty laughter. But as the Sun dips below the horizon, the voices are quieter. When the first stars appear, the voices have dropped, and here and there the light from a red flashlight can be seen, piercing through the oncoming dark.

I flex my arms and legs and stretch; it will be a long night. I search the sky above me for the two stars that mark the path to the first object I have planned. As soon as I see them, I grab the dowel on the bottom of the secondary cage and swing the 18 into position, sighting the object in my finder scope. I press my eye against the eyepiece and spot the wondrous nebula that is, even now, giving birth to new stars. I squint and stare at the object to see how many stars I can find within it.

As the nebula rises in the sky, so do I, cursing the fact that I am vertically challenged. Up, up, up - until I stand, en pointe, at the eyepiece, straining to see. Finally I must concede defeat, and grab the ladder/chair I use for putting my eye level with the eyepiece.

As the dark deepens, the voices around me have become murmurs, and I hop down off my perch to sight another object. Now everyone is faceless; identification of any one of the people around me will be based on voice or shape familiarity.

As I peer into the scope, the inevitable “what are you looking at?” comes from somewhere below me and to my left. “Nothing,” I say truthfully. “I’m still looking for it.” I don’t recognize either the voice or the shape, so my answer comes out more easily, even automatically. There are times when I love nothing more than to share my views with others; but this isn’t one of those times.

As midnight approaches, I sit and take a small break. My husband walks by, keys and change jingling in his pockets. “I’m going to hit the sack,” he announces. “Okay,” I say, and stand back up and stretch again. He knows that it is fruitless to ask me when I will be ready; somnolence is far from me. And the object I have waited months to see does not appear above the southern horizon for at least another two hours.

Finally, the first stars in my deep southern object peek above the horizon; it won’t be long now. I stare at them, hoping that I can raise them higher with my own eagerness. This doesn’t happen, and I content myself with scanning the horizon yet again for the enemy. If clouds move in and obscure my view, the southern deep sky will be lost to me. Fortunately, there are no enemy troops in sight. >>

➤ Now the object is standing, just on the horizon, and I swing the 18 down. This one will be a knee-biter; no chair or ladder is required. I site the object through the Telrad, and eagerly drop to my knees. The ground is grass over sharp coral, and I congratulate myself for the forethought to wrap heavy socks around each knee. I cannot, however, see the object in my eyepiece, so I consult the finder again. I nudge the 18 down just a millimeter, put my eye back to the eyepiece - and gasp. There it is. It fills the field of view of the medium-high magnification eyepiece I am using; but it is all there. I stare at it so intensely that it feels as though my eyeball will jump out of its socket. Show me your secrets, I plead. Just a hint will do. As though it heard my silent plea, the object shines brighter and I gasp again.

Now a blanket of adrenaline and sheer wonder covers me. That one split second has given me the thing I treasure most - enlightenment. One more tiny piece of the puzzle of the universe has been implanted in my brain, to be retrieved and lived over and over again. As the object sinks below the horizon in farewell, I pat the 18's secondary cage and again feel the gratitude and humility I have for the exquisite primary mirror she has.

Like a dog sniffing the breeze, the 18 rises up a little of her own accord, as if to say "What's next? Let's go!" I reluctantly turn back to reality, and sight my next object. Now the voices are much fewer, and only occasionally does the red beam of an astronomer's flashlight shine. As I peer once more through the eyepiece, I shake my head in wonder at the many people who have already gone to bed. How could they have missed this, I ask myself. But I shake off the thought. After all, what others do when observing is not my concern.

As night finally begins to fade, and a faint pink glow is visible in the east, I carefully put the 18 to bed, and slide her long silver cover over her. Silent now, she doesn't protest. I close my eyepiece case and look again to the east. A beautiful sunrise is just beginning, so I make my way to the beach, find a suitable rock to sit on, and watch. The glorious sunlight becomes brighter and suddenly I feel the signs of exhaustion; the stiff knees, the protesting feet, the sore back. I am the only one still up, so I watch the sunrise in silence, hugging my stiff knees in front of me. Then I reluctantly make my way back to our trailer for some much needed sleep. After all, behind this sunrise is another sunset, and another opportunity to look heavenward at the wonders contained within. I fall into bed; to sleep, and to dream of what I will find after that sunset.

Editor's note: This article was found and submitted by Nils Allen. Thanks Nils!

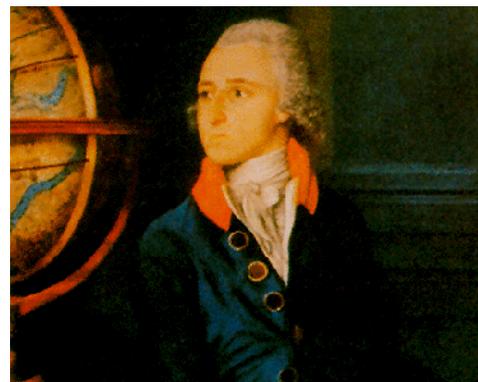
Variable Stars Part 4: Eclipsing Binaries

By Bill Stein

We can describe a binary star system simply as one containing two stars orbiting around their common center of gravity. They are orbiting under the influence of their mutual gravitation and they obey Newton's laws of gravitation. For one particular class of binary stars as we view them from Earth, the orbital planes are oriented so that the two stellar components eclipse each other and we call these stars "Eclipsing Binaries." When we observe the light from these binaries, we detect periodic variations in light, and thus we categorize eclipsing binaries as one of the types of variable stars known as extrinsic variables. In the case of extrinsic variables, we observe changes that are external to the star. I will discuss the history and importance of eclipsing variables without going into detailed mathematical explanations.

Historically, the young English amateur astronomer, John Goodricke (1764-1786), was the first to propose a mechanism to explain the variability of Algol. Goodricke reported his observations in 1783 at the British Royal Society, and, in explaining these observations, he proposed two theories: that a fainter star ➤➤

➤ periodically occults the distant star, or that the star itself has a darker region that is directed at Earth periodically because of stellar rotation. Because of his first theory, Goodricke is noted as the discoverer of eclipsing variable stars. Goodricke, who was profoundly deaf from childhood, was elected a Fellow of the Royal Society on April 16, 1786. However, he never learned of this honor, as he died four days later, probably from pneumonia. Also see <http://www.surveyor.in-berlin.de/himmel/Bios/Goodricke-e.html> for more on his life.



John Goodricke

The star that Goodricke studied, Algol (Beta Persei), is actually a multi-star system 96 light years away. The central primary star is a massive, bright, blue-white main sequence star (B8) with 3.7 solar masses at 2.9 times the solar diameter and at 100 times the absolute magnitude of our Sun. The orbiting secondary star is a yellow-red sub-giant star (K2) with 0.8 solar masses at 3.5 times the solar diameter and three times brighter than our Sun. Both stars are separated by a distance of approximately eight solar diameters. A third main sequence star (F1) at a distance of two astronomical units orbits this double star system. The primary and secondary stars form the eclipsing components.

Eventually, the nature of the Algol system was verified through the spectroscopic analysis of Algol's visible spectrum by examining the Doppler Effect on its spectral lines. The Algol system's primary star is gravitationally attracting mass from the secondary star, and this material collects in an accretion disk around the primary sun and then spirals downward to the surface. Where the plasma from the secondary star hits the surface of the primary, a hot spot forms, where the temperature may be more than 100,000 Kelvin. Algol's brightness drops from a visual magnitude of 2.1 to 3.4 when the secondary eclipses the primary. This primary eclipse lasts for more than 9 hours. When the secondary star goes behind the primary star, the total luminosity undergoes another minimum, but this is only a fraction of a magnitude. The third star of the Algol system has no influence to the brightness of the Demon Star; but during its 1.862 year period, the spectrum of the star system changes, which indicates the presence of another massive orbiting body.

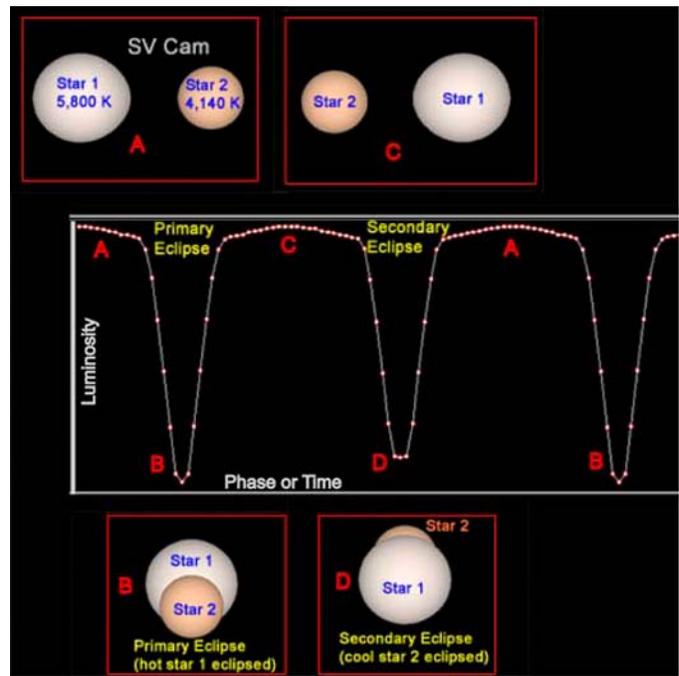
You might ask, "How do we know the masses and radii of these stars only from observations of the eclipse light curves?" The information comes from our understanding of the eclipse geometry and the application of both Newtonian Physics and orbital mechanics. If we assume that the binary stars are spherical and travel in circular orbits, we can simplify computations. However, these assumptions are not always valid. Below you see brightness (or luminosity) versus time plotted for the eclipsing variable, SV Cam. This plot is known as a light curve. From the light curve and our understanding of the physics, we can solve for the following parameters: orbital inclination (i), masses of the stars (M_1, M_2), luminosities or absolute magnitude of the stars (L_1, L_2) and stellar radii (R_1, R_2). For SV Cam, Star 1 is the hotter and brighter primary star while Star 2 is the cooler and fainter secondary star. No eclipses occur at situations A and C. The primary eclipse occurs when Star 2 passes in front of Star 1 (situation B), while the secondary eclipse occurs when Star 1 passes in front of Star 2 (situation D). Notice the shape and depth of the primary and secondary eclipses. We can determine information on the radii and shape (deviations from spherical) of stars from the light curve shapes and depths.

There are three main types of eclipsing binary and we can distinguish them based on their light curves: Algol stars, Beta Lyrae stars and W Ursae Majoris stars. As I mentioned last time, eclipses also may occur in some kinds of cataclysmic variables such as novae and dwarf novae. Named after the prototype, Algol, the first type of eclipsing binaries have periods of constant or near-constant brightness between minima, indicating that the two stars form a close binary of the detached or semidetached kind. By "detached" we mean ➤➤

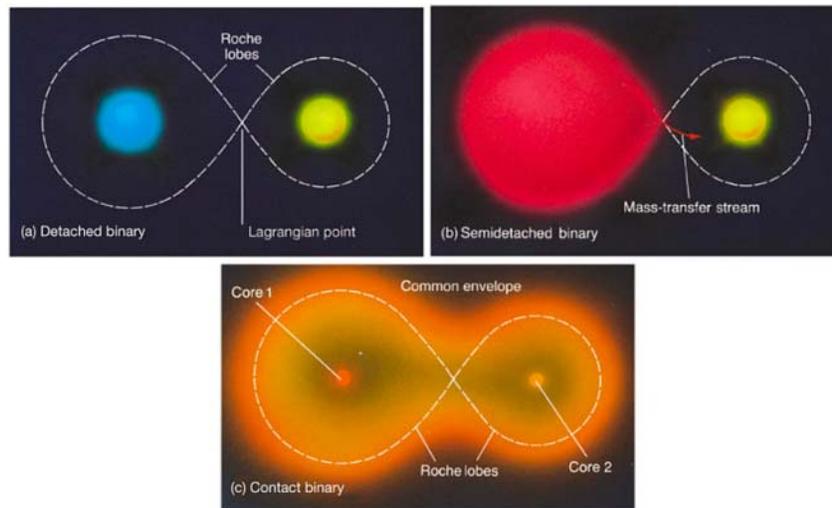
➤ that the two stars have not expanded to fill their gravitational potential limits (Roche Lobe) and thus there is no mass transfer while “semidetached” means that one star has expanded to overflow its gravitational Roche lobe and is transferring plasma gas onto the accreting primary. Thousands of Algol examples are known, with periods ranging from about five hours to 30 years and brightness variations of up to several magnitudes. In most cases where mass transfer takes place, it is by direct accretion rather than by an accretion disk.

W Ursae Majoris stars are a type of eclipsing binary with a very short period of a few hours up to a day. In W UMa systems, the component stars, which are of spectral type F or G and lie on or near the main sequence, form a contact binary (pair of stars actually touch each other or make contact) and have pulled each other into teardrop shapes. The primary and secondary minima are virtually the same (some 0.6 to 0.8 magnitude deep) and there is a continuous light variation throughout the orbit, with no clear start or end to an eclipse. W Ursae Majoris itself lies 162 light-years away and consists of two stars not unlike the Sun, the primary with a mass of $0.99 M_{\text{sun}}$, a radius of $1.14 R_{\text{sun}}$, and a luminosity of $1.45 L_{\text{sun}}$, and the secondary with a mass of $0.62 M_{\text{sun}}$, a radius of $0.83 R_{\text{sun}}$, and a solar-equivalent luminosity.

Finally, Beta Lyrae stars are a type of close binary star system that is both an ellipsoidal variable (variations in light come from seeing various aspect angles of non-spherical stars) and an eclipsing binary. The secondary minimum of a Beta Lyrae variable is intermediate between that of a Beta Persei star and a W UMa star. Even when the components are not in eclipse, we view them from different angles and see different amounts of light, so that the brightness changes are fairly smooth and continuous, unlike the abrupt changes of a normal eclipsing system.



SV Cam Light Curve (from CSIRO Outreach Education)



Figures showing (a) Detached, (b), Semidetached and (c) Contact Binaries (From University of Oregon Physics)

The Astronomical Society of Las Cruces (ASLC) is dedicated to expanding members and public awareness and understanding of the wonders of the universe. ASLC holds frequent observing sessions and star parties, and provides opportunities to work on club and public educational projects. Members receive *The High Desert Observer*, our monthly newsletter, membership in the Astronomical League, including AL's quarterly *A.L. Reflector*. Club dues are \$35 per year. Those opting to receive the ASLC newsletter electronically, receive a \$5 membership discount. Send dues, payable to A.S.L.C. with an application form or a note to: Treasurer ASLC, PO Box 921, Las Cruces, NM 88004

ASLC members are entitled to a \$10 discount on subscriptions to *Sky and Telescope* magazine. S&T subscribers MUST subscribe and renew through the Society Treasurer for the special club rate. To avoid a lapse in delivery, this must be done when S&T sends their reminder, 4 months in advance.

ASLC OFFICERS, 2007
Board@aslc-nm.org

President: Bert Stevens
President@aslc-nm.org / 382-9131

Vice President: Bill Stein
VP@aslc-nm.org

Treasurer: Janet Stevens
jastevens@zianet.com / 382-9131

Secretary: John McCullough
Secretary@aslc-nm.org

Immediate Past President:
 Vince Dovydaityus
PPresident@aslc-nm.org

Directors:
 Chuck Sterling, Alfred Hughey

Education Director: Nils Allen

ASLC Newsletter Editor:
 George Hatfield
gmhlcnm@msn.com

Minutes, October 2007 Meeting

Call to Order: Bert Stevens, President, Astronomical Society of Las Cruces (ASLC), called the meeting to order at 7:43pm., October 26, 2007, Rm. 77, Dona Ana Community College.

Note: Prior to the Call to Order, Bob Dragon, Club member, gave a brief update on his and his wife Ann's archeo-astronomy project, presenting pictures of petroglyphs and caves with presumed astronomy connections from an area north of Deming, NM.

Secretary's Report: The minutes of the September general meeting were presented as published in the *High Desert Observer* (HDO), the ASLC newsletter. At the suggestion of the President, the minutes were accepted by those present as published. There was not an additional secretary's report.

Treasurer's Report: The treasurer reported there has been no change in the status of the major accounts. The Meade SolarMax telescope has been ordered with delivery expected by next month's meeting. Total cost, including shipping and handling, was \$3462.20. Payment for the scope will severely deplete the Club's checking account.

The treasurer is accumulating an order for the *2008 RASC Observer's Handbook*. Each copy is \$18 and she currently has fourteen requests from members. She asks that members contact her as soon as possible with their requests so she can finalize the order. A 2008 RASC Observer's photo calendar and a *Beginner Observer's Guide* are also available, but should be ordered directly via the RASC website, <http://www.rasc.ca>.

A ballot for the IDA Board of Directors was received. Due date is November 26; therefore the topic was tabled until the November meeting.

Committee Reports:

1. Nominating Committee: Nominees for the 2008 calendar year are as follows:

President	Nils Allen
Vice-President	Jerry Gaber
Secretary	John McCullough
Treasurer	Janet Stevens
Director-at-Large	Wes Baker
Director-at-Large	Frank Miller
Director-at-Large	Kirby Benson (nominated at the September meeting) >>

➤ A ballot will be published in the November issue of the newsletter.

2. 2007 Renaissance Arts Faire: Nils Allen, event coordinator, gave an update on preparations for the Dona Ana Arts Council 2007 Renaissance Arts Faire, November 3 and 4 in Young Park. Set-up will be 1pm to 5pm, November 2, and tear-down will be after the event closes at 4pm, November 4. The ASLC booth in the Children's Realm will display astronomy posters and images and present information about the Club and its activities. Solar and planetary observing will also be available, weather permitting. Volunteers are still needed to man the booth (in costume) both days.

3. 2007 X-Prize Expo: The 2007 Expo will take place at Holloman Air Force Base, Alamogordo, NM, October 27-28. Although the Club will not officially participate this year, members are encouraged to attend. Admission is free.

4. Observatory Committee: Rich Richins, Chairman, Observatory Committee, was not available to provide a report. Chuck Sterling reported on the status of the Meade 16" LX200 telescope obtained from NMSU. He stated that after replacing the RA drive motor and general cleaning and lubrication, the Club has a working telescope. The optics look good; he will go through the RA drive system again; and he has the pier and all the accessories available from the University.



*Conceptual Drawing of Proposed
ASLC Observatory*

Jerry Gaber presented the planning and design status for the proposed observatory structure at Leasburg Dam State Park (LDSP). A requirement to proceed with the construction proposal to the state of New Mexico is "buy-in" from the Club. Jerry presented a preliminary design concept of the observatory (a roll-off roof design has been selected) with material estimates and a budget breakdown. He presented lists of committee participants and local businesses used as information resources. A current rough estimate of the Club's portion for the observatory construction is \$7700-\$7900. An unknown factor is if a specific exterior finish will be required by the state.

Bert Stevens made a motion that the Club commit up to \$8000 to support the construction portion of the observatory project. Chuck Sterling seconded. Discussion followed including questions about the longevity of the observatory and Club access, available power, maintenance requirements and responsibilities, security, and degradation of viewing conditions. The question was called and carried with no opposition or abstentions.

There were no additional standing committee reports.

Old Business: The following old business was discussed:

1. 2007 Renaissance Arts Faire: Nils Allen asked that the Club provide \$50 for printing informational handouts. Steve Barkes made a motion to provide up to \$100 for reimbursement with appropriate receipts. Jerry Gaber seconded the motion. Motion was carried unanimously.

2. Night Sky Network (NASA/JPL): Steve Barkes, POC, had no report.

3. Meade 4M Community: Bert Stevens, POC, reported the logo is now displayed on the ASLC web page.

4. Holiday Dinner/December meeting: Bert Stevens asked for input on a venue and menu options for the dinner. Please forward suggestions or comments regarding previous years' parties to him or suffer the consequences. Lorenzo's on Lohman is a possibility. ➤➤

➤ There was no additional old business discussed.

New Business: The November meeting is the official annual business meeting of the Club. The fourth Friday of November is the day after Thanksgiving. Jerry Gaber made a motion to move the November meeting date to 16 November. John McCullough seconded. The motion carried.

There was no additional new business for discussion.

Announcements: There were no announcements made.

John McCullough offered a motion to adjourn and Bill Stein seconded. The business portion of the meeting was adjourned at 8:25pm by acclamation of those present.

General Announcements: Various information resources, including *Reflector* magazine and print copies of the HDO newsletter, were available on the front table.

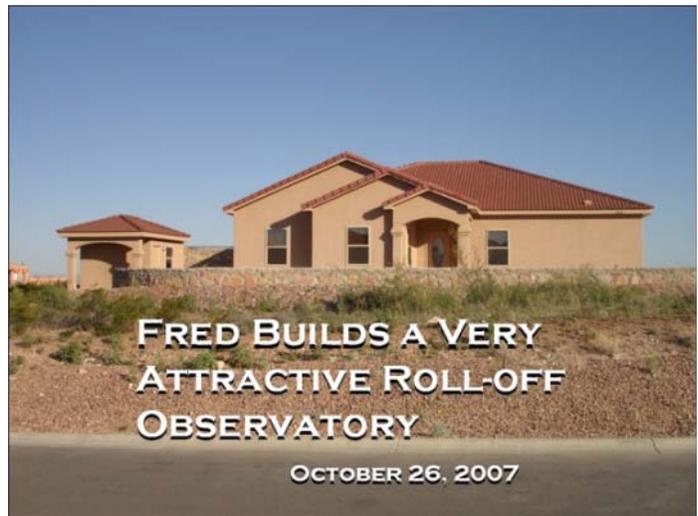
There were no additional general announcements made.

Observations:

1. Comet 17P/Holmes has gone into outburst mode and is visible to the unaided eye.
2. Chuck Sterling, Jerry McMahon, and Richard Jones hosted the monthly MoonGaze at International Delights Cafe on October 20. Approximately 40 patrons and passers-by took the opportunity to look through the members' scopes.
3. Joe Ewing, Club member, gave a brief demonstration of his new Trico Machine Sky Window binocular holder.

Presentation:

The program for the October meeting was presented by Frederick Pilcher, Club member. Fred's topic was a presentation of the building process for his "backyard" observatory that he plans to use for asteroid light curve research using CCD techniques. Fred began his presentation with the three rules that were emphasized in the August 2006, "Four Member-Constructed Observatories" presentation; i.e., (i) Plan, plan, plan, (ii) seal, seal, seal, and (iii) keep the neighbors happy. In a series of very nice photographs, Fred documented in detail the construction of his new roll-off roof observatory just 30 feet away from his house, while commenting on the architectural integration of the observatory with both his house and the neighborhood as a whole. The end result appeared not only highly functional but very attractive. This presentation was recorded for playback via the Internet. It and other meeting presentations can be seen on the web at <http://www.aics-research.com/lectures/aslcnm/>.



The October 2007 monthly meeting concluded at 9:10pm. Respectfully submitted by John McCullough, Secretary

ASLC Officer Election Ballot

Please vote for the candidate of your choice by checking the box for the candidate. If you are voting for a write-in candidate, check the appropriate box and print the name of the member for which you are voting.

President (vote for one):

- Nils Allen
- _____ (write-in)

Vice President (vote for one):

- Jerry Garber
- _____ (write-in)

Secretary (vote for one):

- John McCullough
- _____ (write-in)

Treasurer (vote for one):

- Janet Stevens
- _____ (write-in)

Director-at-Large (vote for two):

- | | |
|---------------------------------------|---|
| <input type="checkbox"/> Wes Baker | <input type="checkbox"/> Kirby Benson |
| <input type="checkbox"/> Frank Miller | <input type="checkbox"/> _____ (write-in) |

You may mail your completed ballot to ASLC, PO Box 921, Las Cruces, NM 88001 or it can be brought to the November meeting. Please note that the ballot must be received by the November 16, 2007 meeting. Mail ballots or those brought to the meeting by another member must have a return address on the envelope so that the membership of the voter in the Society can be verified.

Dave Captures Image of Comet 17/P Holmes at Upham

Dave Dockery imaged Comet 17/P Holmes on November 8 at the ASLC Upham dark sky site. He used a TV85 refractor on a Losmandy G11 mount. The camera was a modified Canon 350XT and this image was created from 20 x 5 minute exposures. Dave notes "This is an amazing outburst from a comet that was extremely dim just a few weeks ago. On October 24th the comet roared to life and brightened almost a million fold in a matter of hours to become a naked eye object in Perseus. The comet is currently near opposition with the Earth and Sun so the main tail is pointed back towards us. A faint blue ion tail also developed, but on November 8th it broke away from the comet. You can see part of the detached blue tail to the upper right of the main body of the comet." The high resolution image can be seen on Dave's website at http://home.comcast.net/~dave.dockery/Comet_Holmes_Frag_Tail.htm. Thanks, Dave!



Sky & Telescope Renewals

Recently, Sky Publishing Corp., the publishers of *Sky & Telescope*, made changes to their Club Plan. You are now able to renew your subscriptions directly via mail or phone. Validation of your society membership is not required at the time of renewal. A subscriber's membership list will be sent to the ASLC Treasurer once a year to verify your membership.



You may also renew your *Sky & Telescope* renewals by mail (include your renewal notices in the envelope along with your payment), or renew via phone (1-800-253-0245). Payment at the time of renewal is required. Contact Janet Stevens (jaslcnm@comcast.net) if you have any questions.

Leonids Fly on November 17

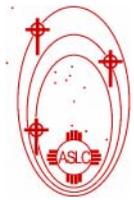
By Rich Richins

The annual Leonids meteor shower is scheduled to peak on the night of November 17-18. The show usually produces a dozen or two meteors per hour. The first quarter moon should set by the time things really get going (after midnight). Find a dark sky and enjoy the free fireworks. For more on the Leonids, see <http://stardate.org/nightsky/meteors/>.



*NASA Image of
Leonid Shower*

ASTRONOMICAL SOCIETY of Las Cruces
PO Box 921
Las Cruces, NM 88004



ASLC - Sharing the Universe
With Our Community
for Over 50 Years

