

The High Desert Observer

The Bulletin of The Astronomical Society of Las Cruces

November, 2005

Fall Winds Down with a Rush of Activity

It's been a busy Fall for our volunteers. Starting with the XPrize expo, there have been few weeks when our volunteers haven't been doing a school star party, a class presentation, a public viewing or some other affair. I had the opportunity to visit two classes of second graders at Hillrise Elementary School to talk about our sun and stellar evolution. I had Richard Jones' H α scope in hand and the kids got to look at prominences. A way fun experience for all of us. The kids even drew pictures of what they thought our sun would look like when it gives up its ghost in some odd billion years.

We did two star parties just last week for local middle schools. Steve Barkes arranged a star party for Picacho MS on November 7th and had about 150 participants. Nils scheduled a party for the following night at Camino Real MS and around 200 autograph-hunting kids and parents showed up (the kids got extra credit for collecting astronomers' autographs).

These parties came on the heel of a very successful Renaissance Faire. ASLC was there for the third year with free viewing, drawings, and a telescope making demo. Attendees got to look at four of the brighter planets during the daytime. Saturn proved a challenge for many and most people thought Venus was the moon due to its 'third quarter' phase. We also observed the Moon and the Sun through white and Ha light. A steady stream of visitors kept 3-5 volunteers busy the entire weekend.

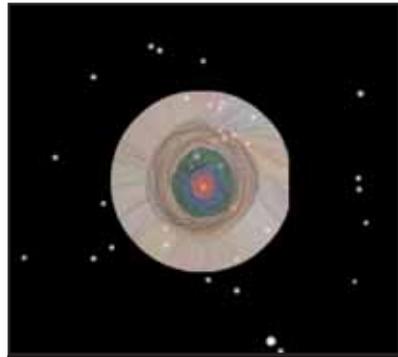


Three (of four) from Nils' latest telescope makers clinic.

Finally, we had a very successful Moon/Mars Gaze on November 12. These events rarely last more than two hours after dark, but we were still going strong on four telescopes three hours after dusk.

All of these activities couldn't have been conceived or executed without the help of numerous volunteers. Thanks for all of your hard work! Santa will have a very special gift for you at the Holiday Party.

- Rich Richins
ASLC President



A future planetary nebula as envisioned by Ashlynn, a second grader at Hillrise Elementary School

Upcoming ASLC Events	
<i>Please see the ASLC website <aslc-nm.org> for more information</i>	
November 12	Mars (and Moon) Gaze (International Delights Cafe)
November 18	ASLC Monthly Meeting Speaker: Bob Dragon (archeoastronomy)
December 3	DSO at Upham
December 9	ASLC Christmas Party
December 10	MoonGaze (international Delights)

This Month's Observer	
President's Message	1
Meeting Highlights	2
Eye Candy	3
ASLC Holiday Party	3
For Sale	3
October Skies	4
The Steve Smith Observatory	5
Proposed By-Law Amendment	6
Dave's Astrophotography Corner	7
Image Gallery	8

ASLC Meeting Highlights

November Meeting: Archeoastronomy by Bob Dragon

Ancient and prehistoric civilizations have demonstrated a profound interest in the sky for purposes of calendar, cyclical ritual and ceremony management, agriculture, maritime navigation, religion/mythology, and celestial event prediction. Archeoastronomy is the study of prehistoric peoples interest in astronomy. Except for a few glamour sites like Chaco Canyon and the Pyramids in Mexico and Central America, little research has been done in this field.



My wife (Anne Owen) and I recently researched the Arizona archaeological site known as Roundy Crossing and an unusual picture unfolded. It was a starmap! The starmap boulder was embedded in an unusual geometry similar to Stonehenge in England. We used this geometry to predict the location of an artifact buried just below the ground surface. On the nearby hill there were petroglyphs showing mythological pictures of an

alignment of the planets, the moon, the Pleiades star cluster that occurred on June 5, 1168 AD. Today we are continuing this research at other archaeology sites and find that the majority of archaeology sites are archeoastronomy sites.

Astronomer Bob Dragon and his archeologist wife, Anne Owen, have been actively researching various ancient sites for over two years in an attempt to discover and catalogue them and define the relationships that ancient people shared with the cosmos.

November Beginner's Corner will take a look at the 13 (not 12) constellations of the zodiac, with info on their history and current standing.

ASLC monthly meetings take place at 7:30 pm usually on the fourth Friday of each month in room 77 at the main Dona Ana Branch Community College (just South of NMSU). A 'Beginner's Corner' precedes each meeting.

October Meeting: "NASA's TDRS facility" by Bert Verstraete.

Bert discussed the Tracking and Data Relay Satellites (TDRS) system. The system is comprised of six geosynchronous satellites and a couple of ground facilities (Bert works at the facility near White Sands). The mission of TDRS is to communicate with satellites. Both telemetry and data are transferred to/from the TDRS satellites continually. TDRS doesn't process the data, but forwards it to the appropriate 'customer'. While ground-based stations can only contact orbiting satellites a small percentage of their orbits, the TDRS satellites and ground facilities can be in contact with virtually any satellite orbiting the Earth at any time. Much of the data streaming from satellites is irretrievable if lost. Bert describe some of the redundant systems that are in place to minimize data loss.



October Beginners Corner was well-attended. We discussed the value and use of the local Clear Sky Clocks, available thru our website. With illustrations from Joseph Mancilla, we looked at how these sites are surprisingly useful when making decisions about observing



Eye Candy

by Steve Barkes

We had another awesome evening at Upham for the club's October DSO night. I have some new neighbors, who are both very interested in astronomy, and I brought them out with me to Upham. Albert and Marie Hughey recently moved to New Mexico from Southern California and are excited about getting involved in astronomy and with the ASLC. Expect to be able to meet them at our next club meeting.

Nils and Rich brought their newly finished dobs, and we had a wonderful time reminding Nils all night long that Rich's mirror was a good 1.3 inches bigger than Nils'. The view through Rich's scope of the Veil Nebula was spectacular. It was nice to trace along the extent of the nebulosity, which looked three dimensional through an OIII filter. But at the end of the evening, Nils had the last word as Joseph Mancilla found the Horsehead Nebula with Nils' scope with the help of a Hydrogen Beta filter. This was the first time I have ever seen the Horsehead visually through a telescope. It was faint, but there was no doubt about what you were seeing. And all of this in a mere 15" scope ;-)

The Milky Way was big and bright and we were also treated to a number of bright meteors as well. I'm not sure if they were a precursor to the Southern Taurids, but I observed at least 30 over the course of the evening, with a half a dozen being very bright, and some left a leaving a visible trail. All night long you could the familiar cry, "Wow, that was a good one!".

Dave Dockery spent the evening doing some widefield imaging with his new LXD75 mount. Every now and then we were treated to the gentle honking of the guiding software letting Dave know that he had lost his guidestar. And Joseph and I spent much of the evening swapping eyepieces, and colored filters while comparing the views of Mars through our 8" dobs.

Around 2:00 the temperature dropped significantly in a very short amount of time. The seeing went south, and you could tell there was a lot of moisture in the air. So it was time to pack up and head back to Las Cruces. Hope to see you next month at the DSO event!



Dave imaged the Double Cluster while at Upham in October. The image won second place in the monthly Digital Astro Contest. The Heart and Soul Nebulas appear at the bottom of the image.

Mark Your Calendars - ASLC Holiday Party is December 9th

This year's ASLC Holiday Party will be on December 9th at Casa Luna Restaurant on Amador. A buffet Italian Dinner will be served including a (non-alcoholic) beverage. We'll review the year in brief, thank the outgoing officers and introduce the incoming ones. And of course, we'll have lots of fun and door prizes. Cost is \$15 for adults; \$10 for kids (12 and under). Space is limited to 30, so please reserve your place as soon as possible. RSVP Nils Allen at <nb_allen@comcast.net> or call him at 505-522-1456.

For Sale

Joseph Mancilla has the following eyepieces for sale:

- 32mm Sirius plossl eyepiece \$20.00
- 20mm Highlight Plossl eyepiece \$25.00.
- 15mm Meade super plossl eyepiece, (older model, japanese made) \$35.00

If you're interested in any of these fine eyepieces, please contact Joseph at 505-647-2676 or by email at <mancilla-joseph@yahoo.com>.

November Sky Map

Chart shows positions of objects at about 8 pm (MST) for mid November, about 7 pm for late October and about 6 pm for mid November



Nov 1



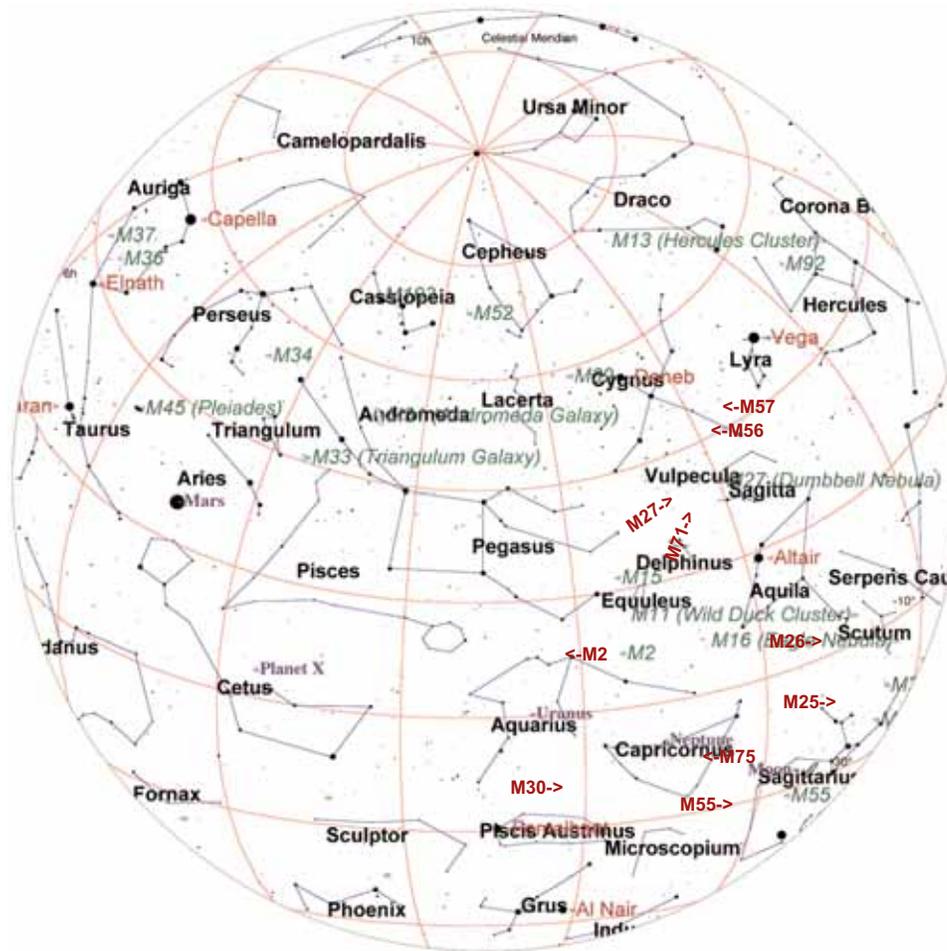
Nov 8



Nov 15



Nov 23



Mars



In Aries
Mag. -2.29
Rises about 5:00 pm

Jupiter



In Virgo
Mag. -1.67
Rises about 5:30 am

Saturn



In Cancer
Mag. 0.28
Rises about 11 pm

Astronomy Calendar

Dates are MDT. Please see the ASLC website
<aslc-nm.org> for more information

- November 6 Mars at opposition
- November 11 Sirona occults TYC 0622-00932-1
- November 14 Mars < 2° from Moon
- November 17 Leonids Meteors Peak
- December 11 Mars 1° from Moon

October's Challenge

October's challenge was IC 5146. Also known as the Cocoon Nebula, 5146 is an open cluster with nebulosity in Cygnus. Could you find it without using your 'go-to'?



October/November Tour

Binocular Objects

- 1) M15 (Globular Cluster)
- 2) M29 (Open Cluster)
- 3) M31 (Andromeda Galaxy)
- 4) M39 (Open Cluster)
- 5) M34 (Open Cluster)

Telescope Objects

- 6) M72 (Globular Cluster)
- 7) M73 (Globular Cluster)
- 8) M32 (Galaxy)
- 9) M110 (Galaxy)
- 10) M33 (Triangulum Galaxy)

Joseph's Challenge - NGC772
Gal (Aries) 11.1 1H 59 m, +19° 00'

The Steve Smith Observatory Story: Part 2

Contributed by Tim Barnett-Queen (photos by Steve Smith)

This article concludes the three-part HDO series about Steve Smith's backyard observatory.

Stage 3 – The Roof

“Some may question my decision to put off adding the roof so long, Steve acknowledges. “In hindsight, I probably would have done it much sooner. The fact is that I was in no hurry. I was pretty uneasy about leaving my scope with its sensitive electronics out in the heat of summer and the cold of winter. What finally made me start this phase of construction was a near miss I had hauling my OTA back to the house one night.”

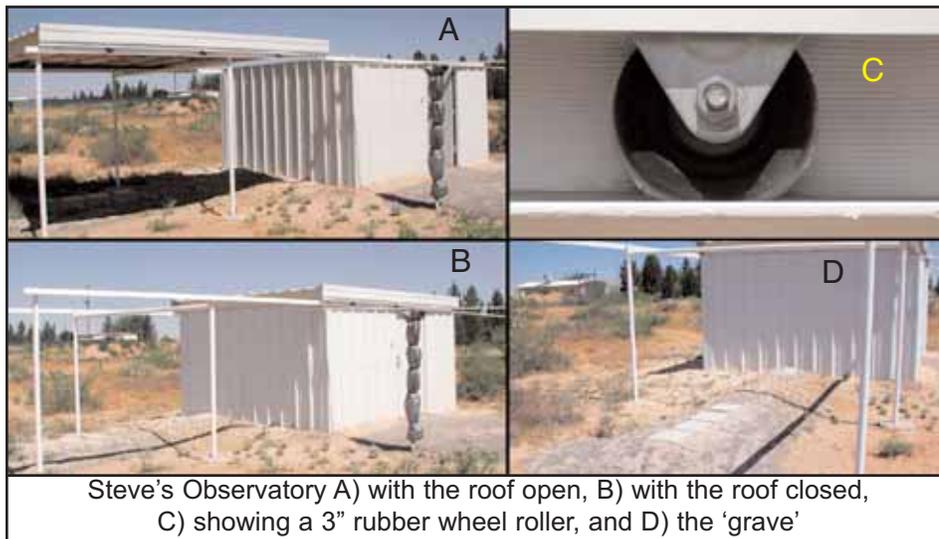
Steve used to have his OTA in a wood case that he hauled back and forth between the house and the observatory on a dolly. One night (or was it early morning?), as he was pulling the dolly up a couple of steps to get back into the house the whole thing slipped and fell to the ground. Fortunately, no damage occurred, but he realized that he could probably do more damage hauling the scope in and out of the house than the heat and cold could do. As a result of his “near-miss” he decided to add the roof.



Hauling the OTA out for a night of observing

Since the rails for the roof to roll on were installed from the beginning, the roof project took very little time. It was completed over a weekend. Steve built a frame of 2 X 6 boards and attached the same type of metal panels he used for the walls. On the bottom, Steve used 3 inch rubber wheels purchased from Home Depot. With the help of a couple of friends, the roof was lifted into place onto its tracks. Although the roof weighs about 200 lbs., it is relatively easy to roll. To secure the roof when closed, 6 snap hooks attach eyebolts in the roof to eyebolts in the walls of the observatory.

Steve insulated the roof of the observatory, but doesn't know how much this helps. However, in the 8 years he's been keeping equipment in the observatory he has never had a piece of electronics fail.



One of the funniest things that happened was the first time Steve used the roof. Rolling the roof off worked great. However, when he went outside to roll the roof back on, he said he wasn't able to reach it! Steve had built up by about 8 inches the area in and around the observatory. Of course this meant that the ground he needed to stand on to roll the roof back on was too low. To fix the problem he had to build up a strip of land to be used to close the roof. Several people have

commented that it looks like someone is buried behind the observatory!

The roof has been the best addition ever and has mostly completed the observatory. His scopes are left set up inside permanently. As a result, to do his routine observations, he simply rolls the roof off, uncovers his scope, and powers everything up. He can literally be observing in about 10 minutes. Steve also added some indoor/outdoor carpeting on top of the gravel.

Many thanks to Steve Smith for his help developing this series of articles on his observatory and for the use of his photographs.

Proposed By-Law Amendment

The following amendment to the ASLC By-Laws is proposed. The amendment was originally to have been decided at the October ASLC meeting, but the Board of Directors voted to delay the vote to November to allow ASLC Treasurer, Janet Stevens an opportunity to publish an opposing point of view. The proposed amendment and arguments pro and con appear below. Members are asked to consider the amendment carefully and send their ballot to P.O. Box 921, Las Cruces, NM 88004. Alternatively, the ballot may be cast at the ASLC meeting on November 18th. Given the late date, ballots will be accepted at the ASLC PO Box until 11/25/05.

Proposed:

VII. DUES (Section 1.)

Membership periods shall be from October 1 through September 30 of the following year. Dues for each membership shall be reckoned and paid for membership periods of twelve (12) months, provided: that a ~~new~~ member may be granted an ~~initial~~ membership period of less or more than twelve months in order to put the membership in sync with the October 1 to September 30 membership period. Dues for such irregular ~~initial~~ periods will be adjusted equitably.

Argument in favor of the proposed amendment

Do you know when your ASLC dues expire? If you're like many members, you probably don't. The proposed amendment would alleviate the confusion of random ASLC anniversary dates by creating a single anniversary, October 1. New members would have their memberships pro-rated (already allowed for in the ASLC by-laws); current members would have a one-time partial year (pro-rated) membership to bring their membership in sync with the October 1 anniversary date.

I have contacted Sky Publishing, and they are happy to synchronize your S&T subscription (on a pro-rated basis) to the October 1 anniversary further simplifying the process.

The pro-rating calculations couldn't be simpler: \$2.50 per month for most members (\$2.92 per month for members wishing mail delivery of the HDO. S&T is \$2.67 per month. I have offered to personally make these adjustments to ease the transition for our Treasurer. The transition should easily be complete within a month. Following that, the Treasurer's job will be made considerably easier since only one notice (published in the High Desert Observer) will need to be sent to remind all members of their ASLC (and S&T) anniversaries, and only one main collection will need to be made.

Please note that in addition to the Treasurer, membership anniversaries must be monitored by the Bulletin Editor and the Club Secretary, so simplifying the process will benefit several of the hardest working members in your club.

submitted by Rich Richins, ASLC President

Argument against the proposed amendment

Last month's HDO, included an amendment ballot to change the method of collecting dues from the current method of collecting them throughout the year as new members join to one where they are collected from everyone at the same time, in November of each year. This was proposed on November 12, by ASLC President and HDO Editor Rich Richins in an e-mail message to the ASLC Board, in response to a problem he had with renewal dates of current members and their dues payments. This problem arose when the ASLC started to send its newsletter via the Internet. Previously, when all the newsletters were sent by U.S. Mail, a member's expiration date was provided on the newsletter's address label. This was not possible with the electronic version. When I realized this had created a problem last fall, I started contacting members about their membership expirations. In the spring, Rich offered to take over this duty in addition to all his others. After a little while, this became cumbersome to him. At a Board Meeting in late spring, the Board discussed changing the way dues were collected. As the ASLC treasurer, I opposed the suggestion at that time and no motions were made.

Rich sent his original message in mid-October, when I was busy editing the LWV Voters' Guide for this month's municipal election. Somehow, I completely missed this message, leading to the confusion at last month's meeting. When I saw this proposal in the HDO, I protested it.

As the current ASLC treasurer, and re-elected to be next year's treasurer also, I had agreed to collect the dues using the current method which is more in keeping with

Opposition argument continued on page 8

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 *ASLC Bulletin*, 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 Bulletin* 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, 2005

<Board@aslc-nm.org>

President:

Rich Richins

r-richins@zianet.com / 532-5365

Vice President

Dave Dockery

dave.dockery@comcast.net / 541-0717

Treasurer

Janet Stevens

jastevens@zianet.com / 382-9131

Secretary

Timothy Barnett-Queen

trbqueen@zianet.com

Immediate Past President:

Steve Barkes

Directors:

John McCullough, Dick Olson

Education Director:

Nils Allen

ASLC Bulletin

Editor: Rich Richins

Distribution: Tim Barnett-Queen

Emeritus (life) Members:

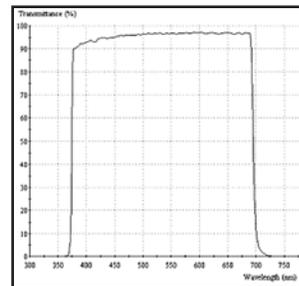
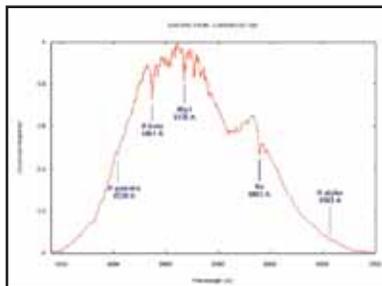
Walter Haas,

Dave's Astrophotography Corner

H α sensitivity in DSLRs

There has been a trend in Digital SLR astrophotography to modify the stock Canon and Nikon cameras to remove or replace the wavelength compensation filter with one designed pass more of the H-alpha wavelength (656.3nm.) which is needed for imaging emission nebula. In general these filters are optical IR/UV blocking filters but they are designed to also manipulate the amount of visible light passed per wavelength to optimize the image color for things like skin tones.

There are several modification options available: 1. Replace it with a wider pass-band IR/UV blocking filter such as the Hutech type one; 2. Replace it with a clear glass filter of similar thickness; or 3. Leave it off completely. Option one allows you to continue to use the camera for terrestrial photography using a custom white balance setting. It also allows the use of any lens or telescope without needing an external blocking filter. Option two allows you to still use the auto-focus feature and permits IR photography with an IR band-pass filter. You will always need either a visible or IR band-pass filter somewhere in the



optical train. Option three is identical to option two except it disables the auto-focus feature.

The graph above left (courtesy Christian Bull) demonstrates the response of a typical DSLR through the stock filter. Note the poor response at the H-alpha wavelength. Above right is the Hutech Type 1 replacement filter. Note the high transmission at the H-alpha wavelength. The images below were taken using my unmodified 300D and Rich Richins' Hutech modified 300D. The exposures were similar in equivalent time and ISO number. The improved H-alpha red response is evident in the modified camera image.

A modified DSLR is the current astrophotography tool of choice for

many of the former SLR masters, given the discontinuation of so much of the good AP film. There are instructions on the web for removing the filter or you can opt to have it



done professionally at a cost of \$150.00 – \$600.00 depending on replacement filter. I plan have the Type 1 filter installed by Hutech sometime soon. For more info drop me an email

- Dave

Opposition Argument, continued

my schedule. Now it is proposed that the rules be changed, making it more difficult for me to perform my duties.

New members join the ASLC throughout the year, and I would have to compute a pro-rated dues amount before I could collect their first dues payment. Also, currently when they join, their subscriptions to Sky & Telescope are staggered throughout the year, and many already have subscriptions to the publication when they join. Although Sky Publishing has agreed to change subscription renewal dates, I think this is more trouble than it is worth. I will have to prorate subscription costs as well as dues for the new member to bring them in line with our regular renewal date. Sky publishing also sends renewal notices to their subscribers, which acts as an ASLC renewal notice as well. I do not mind collecting dues and subscription payments throughout the year, and contacting members as to their expiration dates. This involves only a few members each month. We would have new members joining each month and this would occur even with a simultaneous date of membership renewal.

I have also spoken with a number of members of other societies over the years through my service in the Astronomical League who disliked subscribing to Astronomy magazine through their clubs because they could only subscribe by the end of October for a January-December subscription. For these reasons, I hope you will vote against the proposal for simultaneous society dues payments in November every year.

Submitted by Janet Stevens, ASLC Treasurer

ASLC IMAGE GALLERY



The Pipe Nebula region photographed by Dave Dockery. Dave used a Canon F1 and Canon 135mm f/2.5 lens. Several emission nebula are also visible including M8, NGC-6559, NGC-6526, and M20



Out of the vault at last! This image by Steve Barkes of Omega Centauri was taken earlier this year at TSP



Halloween Mars. Imaged 10/31 by Rich with his ToUCam through his C11 @ f/20.

ASTRONOMICAL SOCIETY of Las Cruces, New Mexico

PO Box 921, Las Cruces, NM 88004



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

Proposed By-Law Amendment

The following amendment to the ASLC By-Laws is proposed. Arguments pro and con appear in this month's High Desert Observer. Members are asked to consider the amendment carefully and send their signed ballot to P.O. Box 921, Las Cruces, NM 88004. Alternatively, the ballot may be cast at the ASLC meeting on November 18th. Given the late date and the need to provide at least six business days for voting, ballots will be accepted at the ASLC PO Box until 11/25/05.

Proposed:

VII. DUES (Section 1.)

Membership periods shall be from October 1 through September 30 of the following year. Dues for each membership shall be reckoned and paid for membership periods of twelve (12) months, provided: that a ~~new~~ member may be granted ~~an initial~~ membership period of less or more than twelve months in order to put the membership in sync with the October 1 to September 30 membership period. Dues for such irregular ~~initial~~ periods will be adjusted equitably.

Ballot

Please clearly mark your choice regarding the proposed amendment and return the ballot as directed above. You may tri-fold and stamp this piece of paper, if desired.

_____ **FOR** the proposed amendment synchronizing ASLC memberships

_____ **AGAINST** the proposed amendment synchronizing ASLC memberships

Signature

Please Print Your Name

To:

Tim Barnett-Queen
ASLC Secretary
P.O. Box 921
Las Cruces, NM 88004.