

The High Desert Observer

The Bulletin of the Astronomical Society of Las Cruces

February, 2008

President's Message

Hello everyone. It's February and things are really picking up around here - new visitors, new members, new outreach opportunities, new speakers on tap and new ideas being suggested. Just look at the level of message traffic on our club Yahoo! groups, *aslcnm* and *ASLC_Imagers* - if you aren't tapped into these you are definitely missing out. See below to get a sense of all the possibilities.

Speaking of possibilities, why not become more involved in your Society? How about putting your ideas or experiences into a brief article for the *HDO*? We need new, fresh authors to add to our existing core of contributors, so put on your thinking caps and create something - remember, your newsletter, just like your club, is what you make of it. Want some inspiration? Look through our new and vastly improved website. Rich has loaded it with interesting, but succinct content of all kinds. Its truly an "extreme make-over." Many thanks to all who supplied inputs and kept him from having to shoulder the whole load (and thus going crazy)!



Nils Allen

Regarding our website, did you notice that we are preparing to start both our spring Beginning Astronomy Course and the Telescope-Making Workshop? Do your part and mention these to potentially interested folks you know. These are proven methods of stimulating interest and involvement in amateur astronomy and the ASLC, which can only be good.

The best Lunar Eclipse of the year is February 20! In addition to a school event at Hillrise ES, we will be having a public/club gathering at Veteran's Memorial Park on Roadrunner from 7-9pm. Come join in - with any luck we'll look at DSOs during totality!

Did you notice that we have a record number of school star parties coming up? Chuck is working hard to coordinate these fun and easy events with our industrious little group of outreach volunteers, but new faces would sure help - please consider what you can do.

Alas, no new word has come from Santa Fe about our observatory proposal, but (as Steve has stated so well) if we are anything we are flexible. And really that is the key to success with that new venture. We must adapt to circumstances without losing sight of our goal.

The annual ASLC Messier Marathon is coming early next month. Our own Steve Barkes will be leading the planning and execution of this unique event. Be watching for his messages, or, if you can't wait, contact him directly for the straight info. He loves to see new folks come out to "run" the marathon!

The ASLC membership directory is coming! We will be printing hardcopies of our membership list (names, phone numbers, email addresses) to hand out to members at one of our next regular meetings. If you do not

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Next Meeting

The speaker at the February meeting will be Tom Krajci, an accomplished amateur scientist, now living near Cloudcroft. He will speak on “New Advanced Telescope Designs for Amateurs - What’s New in the Last Decade or So?” Tom will overview this area that he has been participating in for years - you may have seen his name in many places on the Internet. Sub-topics will include the general design process; specific concepts and examples of scaling; new capabilities available to amateurs in the way of advanced materials and custom electronics combined with portable computing power; new looks at old designs like Dall-Kirkham and hyperbolic primary Newtonians. Though Tom will be presenting the “big picture,” he can discuss some specific systems as per the audience’s interest. Here’s your chance to learn first-hand about the future of serious amateur equipment suitable for real scientific research.

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The Imagers Group (contact: Rich Richins) will meet prior to the February meeting at 7pm. Rich Richins will discuss his embossing sharpening techniques using PhotoShop. The Astro Tidbits Group (contact: Rich Richins) will meet prior to the meeting in March. Anyone is welcome to attend these special interest group pre-meetings. Other events planned for January and early February include:

Dark Sky Observing at the Upham dark sky site, Saturday, March 8 (Messier Marathon)

ASLC Moon Gaze, International Delights Cafe, Saturday, February 16 and March 15

Don’t forget the lunar eclipse on February 20 (see page 14)

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

Imaging with Light Pollution Filters

By Dave Dockery

Introduction: The convenience of imaging from the comfort of your own yard can be adversely affected by the glow from city lights. This article will discuss the advantages of using broadband Light Pollution Suppression (LPS) filters and compare several of the filters currently available.

Signal to Noise: The general issue with imaging through light pollution is an increase in sky-glow and loss of contrast between the faint detail of the object of interest and the background sky. Skyglow can be measured by the position of the image histogram peak, which shifts to the right with increased glow and forces a reduction in exposure time to maintain dynamic range. The optimum exposure for a deep-sky astrophotograph typically places the histogram peak at between 1/4 and 1/3 of the way from the left side. Signal increases linearly with exposure time and the signal to noise ratio increases as the square root, so the longer you can expose while maintaining dynamic range the better the contrast of faint details.

Much of the light pollution is generated at specific wavelengths and this enables broadband filter designers to suppress those wavelengths, but allow others of interest to pass with very little attenuation. Some of the biggest city light pollution contributors are sodium and mercury vapor street and parking lot lighting (see Figure 1 for spectral distribution.) Another contributor that’s always present is airglow caused by various ➤➤

➤ processes in the upper atmosphere. All light pollution filters typically attenuate light from these sources and pass light from prominent celestial emission wavelengths like H-alpha, H-beta, and O-III. This tends to make LPS filters more effective when imaging objects like emission and planetary nebulae over broadband emitters like galaxies and reflection nebulae, although in most cases there should still be some level of improved contrast. A case where you would gain little to no advantage using an LPS filter would be when imaging a broadband target under broadband light pollution such as a galaxy under moonlight. A narrowband filter matched to the emission spectra of a target such as an H-Alpha filter and emission nebula would be a much better choice for improving contrast under those conditions.

Spectral Response: Most broadband LPS filters have two transmissive bands from ~450nm to 540nm and 640 nm to around 680nm that effectively block the typical streetlight and airglow emission wavelengths. Filters classified for photographic use typically roll-off above 680nm to block the IR. Visual LPS filters don't bother due to the insensitivity of the eye to these wavelengths. Note: visual LPS filters can still be used for photography but you need to ensure that there is another IR blocking element in the optical path, such as the built-in sensor filter on an unmodified DSLR.

Most LPS filters exhibit significant gaps in the color spectrum in the deep-blue/violet region and between the green and deep red regions, which does have an effect on the overall color balance (e.g. reproducing yellow and orange stars.) The IDAS LPS filter from Hutech has a more complex design that provides a better color balance across the visible spectrum yet still attenuates the most significant pollution lines. (See Figure 3) This additional coating complexity comes at a cost and as a result, the IDAS filter is a little more expensive. ➤➤

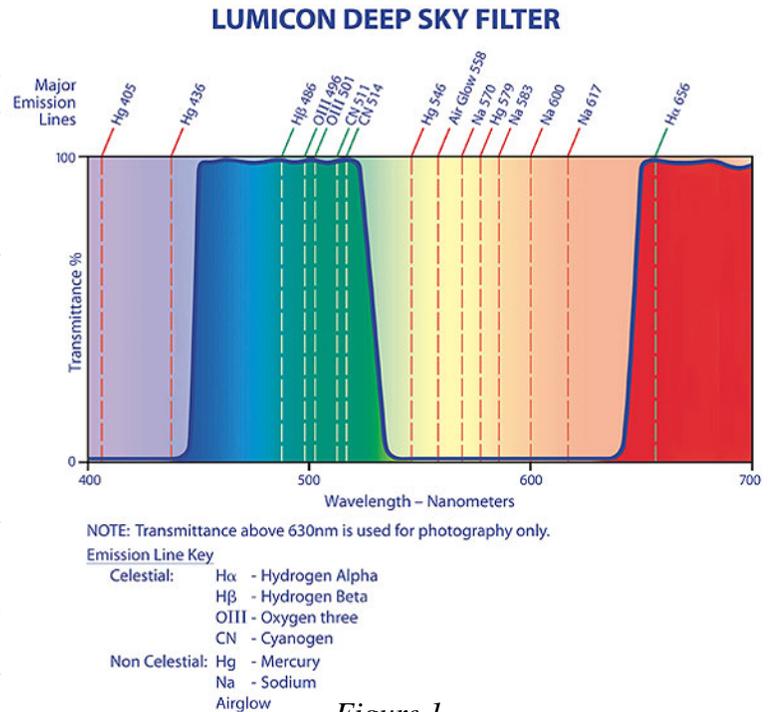


Figure 1

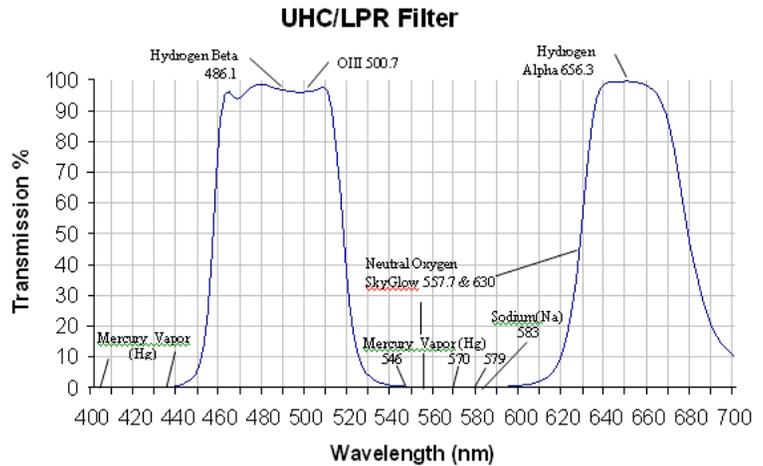


Figure 2 – Celestron LPS filter

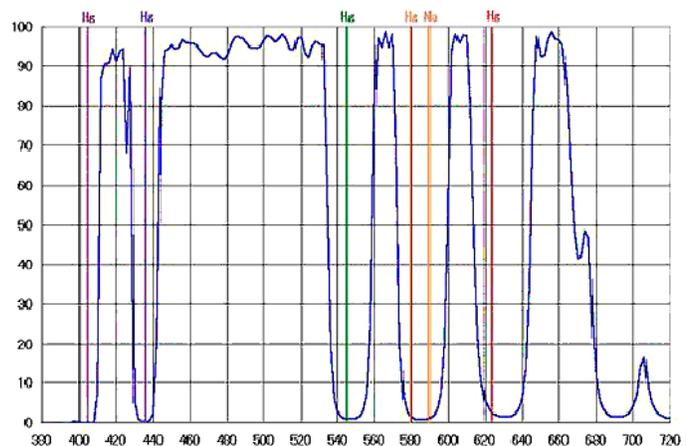
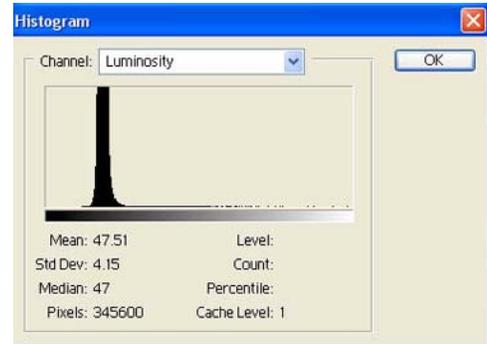
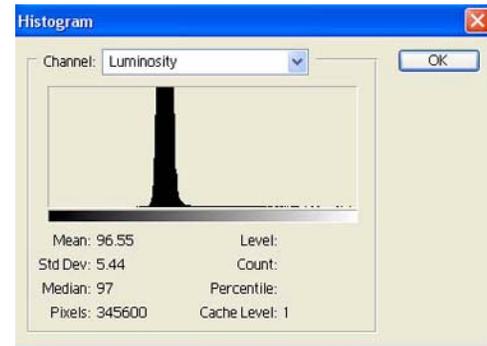


Figure 3 - IDAS LPS Filter

➤ Performance Measurement: Here are two-60 second unprocessed images of Comet Holmes taken from my backyard in Mesilla Park with and without an IDAS LPS filter. Note the histogram shows a factor of two in the median level of the background sky. This means I can only expose for about half as long without the filter to reach the optimum background level and will lose significant signal from my target.



60 seconds @ ISO 800 using an unmodified DSLR and IDAS LPS filter



60 seconds @ ISO 800 using an unmodified DSLR with no LPS filter

Summary: Light pollution suppression filters can significantly increase the visibility of faint detail in astro-images captured from your back yard, but all filters, targets, and light pollution conditions are not created equal so results will vary. It is important to review the spectral transmission curve before purchasing an LPS filter and to consider the spectral content of the light emitted by your target when determining how much collective exposure you'll need for an acceptable image. LPS filters are not a perfect substitute for dark sky conditions, but they can do a pretty good job on those nights that you don't feel up to packing up all the gear and heading out to Upham.

Where Is The Milky Way?... The Issue Of Light Pollution

By Steve Henderson

I'm new to Las Cruces, and the ASLC, but not new to the problem of light pollution. When I got active in astronomy about 20 years ago, all I wanted to do was enjoy my telescope under a starry night sky. I had no desire or intention to get involved in politics. I quickly realized that my new hobby might not last long if the sky continued to brighten. I discovered the IDA (International Dark-Sky Association, <http://www.darksky.org>) through an article in one of the astronomy magazines. One thing led to another and here I am about 15 years later as an IDA member, Section Leader, and co-author of two lighting ordinances; stargazer and lighting activist. You just never know what direction life will take you.



It's a sad fact that most of the people in the US have never seen the Milky Way! Given that a majority of the population lives in or near a city, all they see are a few of the brightest stars and planets. Why is this so? Light pollution. Simply put, light pollution is light that is going where it is not wanted or needed. It could be into a neighbor's window in the form of light trespass. Into the eyes of motorists as glare, or up in the sky causing sky glow blotting out the light from the stars.

Light pollution is wasted energy. It's estimated by the IDA that 30% of all US outdoor lighting is directed upward. Close to \$2 billion dollars is wasted annually to light the bottoms of clouds and airplanes, disorient birds, and possibly harm human health (more on this later). Here in the southwest where we are in a drought, the energy waste hits especially hard. Most electricity is generated through steam-driven generators. So you're asking why does it matter how the electricity is generated? It matters because it takes 2/3 of a gallon of water to generate one kilowatt of electricity. It doesn't matter if the steam is produced by coal, fuel oil, natural gas, or nuclear power. If you're wasting electricity, you're wasting water.



The sky with and without light pollution (IDA website)

The one nice thing about light pollution - it is the easiest and lowest cost type of pollution to solve. Whereas air, water, and ground pollution can cost millions of dollars and take years to correct, if ever. Light pollution stops as soon as you redirect, shield, or turn off the light. Reducing the wattage of a bulb will even help. Turning off a light costs nothing. It's a win-win situation. You instantly start saving energy and money. Only turn the light on when you need it. Or use a properly adjusted motion sensor light in areas where security is an issue. Redirect the light down on the ground where you need it.

Most so-called "security" lights don't offer any real security, but people have been conditioned over the years to believe that. So instead of using some thought and planning for their outdoor lighting needs, they go and pick out the cheapest and brightest light they can find, usually with a photocell so it comes on when it gets dark, whether they are using the light or not. These are not so affectionately known as "light bombs" since they indiscriminately spray light everywhere. Bright-unshielded light causes glare, forcing you ➤➤

➤to shield your eyes from it. How does that contribute to security?

I think a big part of the problem is world's addiction to light. As far as I can remember the addiction in the US started back in the 60s when energy was cheap and all electric homes were popular. Nobody cared how much energy they used. Kilowatt-hours used, who cares? And then there were the TV ads from law enforcement. "Leave a light on for safety," they would say. Protect yourself from burglars. This type of ad from Southern California Edison ran on California TV stations until the "energy crisis" hit. The amount of light used has spiraled upwards ever since. Of course some comes from the increase in population, but more comes from the careless use of lighting. We now know that light in itself isn't a deterrent to crime. Think about it. Cities always have the brightest lighting. So if light were a deterrent to crime, why do cities have higher crime rates than the generally darker rural areas? Light attracts attention. It's human nature to look towards something that's illuminated. Advertisers use this to their advantage. Las Vegas has taken it to the extreme, where each new hotel/casino has to be brighter than the others to be noticed. Is that the kind of environment you want to live in?

I mentioned earlier about unwanted light at night possibly harming human health. All life evolved to function with a day/night cycle. Plants, animals, and humans need darkness for their systems to function properly. A researcher, Dr. David Blask, gave a talk at the IDA convention a couple of years ago. His recent and ongoing studies on nightshift nurses who have to sleep during the day appear to show a direct relationship of having too much light around you during sleep, and breast cancer. Not that light causes breast cancer, but having too much light suppresses melatonin production and may contribute to it. It turns out there is a sensor at the back of our eyes that doesn't contribute anything to our vision. It is sensitive to blue light, and regulates the melatonin production in our bodies. It seems that too much light turns the production off, not allowing our bodies cells to heal and regenerate. In the case of the nurses, leaving them more susceptible to breast cancer. The question you're now asking is how much light is too much when sleeping? That is still being researched. The answer in the meantime is, your bedroom should be as dark as possible. No nightlight, and no bright digital clock staring at you from the nightstand. Hopefully no streetlight or light from a neighbors "security" light coming in your bedroom window.

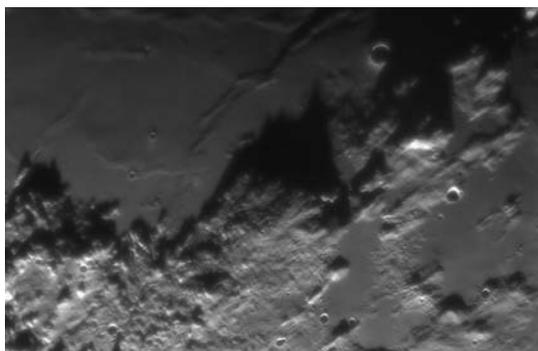
Well there you have it, a thumbnail description of light pollution. With all that is known about the effects of too much light at night, and the popularity of being green, it's amazing that there is any opposition to having controls on outdoor lighting. It's a matter of education. Most light polluters don't think their lights are causing anyone problems. Some just don't care. There is progress being made. There are lighting ordinances being passed somewhere almost every month. Towns, cities, counties, states, and even whole countries like Italy are seeing the light, and taking action. There is still much more to do. I hope you'll join me.

Next month we'll take a look at the Las Cruces and New Mexico lighting codes to see how they compare with other cities and states.

PhotoShop Toolbox: Extending Dynamic Range with Contrast Masking

By Tony Gondola

A constant problem in all types of photography is the need to translate the wide range of brightness values into something that can be displayed on an 8-bit screen. There are many advanced techniques for doing this including HDR processing and complicated layering and masking. These methods work very well, but both require precisely aligned, multiple exposures and a fair amount of care in post-processing. Contrast ➤➤



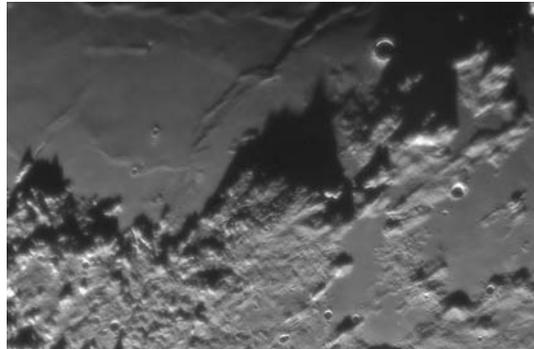
Step 1: Lunar Example



Step 2: Gaussian Blur of image



Step 3: Inverted



Step 4: Masked lunar Image

► masking, while not quite as effective as the more advanced methods, works with just a single exposure so it can be applied to work both old and new; here's how it's done using Photoshop:

Our first example image is a typical lunar image, taken near the terminator where the brightness range is extreme.

Load your image into Photoshop, bring up the layers box and create a duplicate layer. Select the duplicate layer and apply a heavy Gaussian Blur. How much is a matter of judgment. You're looking for just broad areas of tonality with all fine and medium scale detail smoothed out. Then Invert the blurred image to create a negative.

With the negative blurred copy still selected, change the blending mode in the layer box from Normal to Overlay, and the masked lunar image is the result. If the effect is too strong, simply adjust the Opacity value until you get the desired result. Flatten layers and you're done.

This method also works well for generic daylight photography. It's quick and easy way to improve any number of image types where dynamic range is a problem.

Editors note: This is a series of articles on PhotoShop techniques that are useful in astronomy. Anyone can contribute. If you have a favorite technique that you'd like to share with the group, please let me know.

March Issue of the *HDO*

Articles for the March issue should be sent to me by Saturday, March 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.

Community Members in Hatch Honor Club Member Bobby Franzoy

By Paul Dulin

Bobby Franzoy, active member of the Astronomical Society of Las Cruces, was honored for his contributions to enlightening the general public on the wonders of the New Mexico skies. On January 23, Susan Baker, resident of Rodey, and Paul Dulin, resident of Rincon, presented Bobby with a token of their appreciation - a Beam of Light Technologies Model BTG-10 5-miliwatt Green Laser, engraved with "Bobby Franzoy, Community Astronomer," - for his selfless dedication to educating the young and old of his community of the astronomical treasures that exist right above their heads. Bobby deployed his telescope for expositions for a group of Susan's friends back in October of 2006. According to Susan Baker: "It was starless night in Rodey when Bobby was just beginning his talk. All



L to R: Paul Dulin, Bobby Franzoy, and Susan Baker

of sudden, there was a huge green meteor streaking horizontally across the sky, just above the horizon. We all shrieked, marveling at the meteor, which flew for some 7 seconds, before breaking up and disappearing." We then, jokingly said: "Good show, Bobby!" Bobby, in his usual demure manner said: "That was about the best one I have ever seen." Susan continued: "Then we settled down to see numerous galaxies and planets. We were in awe!"

In June of 2007, Paul Dulin hosted the 35th Reunion of the 1971-1972 European Studies Program, in which he and 39 students from North Carolina and Virginia studied in Germany. Thirteen of the original group came together in Las Cruces for the reunion and, after a barbecue of brisket and Hatch chile, arranged their chairs in the back pasture of Paul's farm for a view of the heavens. Bobby set up and gave the group their first ever look from Earth of Saturn and Venus through a telescope; then the shadowed craters of the half-moon; then various galaxies and twin stars. According to Paul: "This was the highlight of the reunion. While it might seem strange for a bunch of us 'elder-students,' it was the first time that any of us had seen Saturn with our own eyes. It was breathtaking. While we waited turns to look through the eyepiece, my fellow friends, mostly from the East Coast where too much humidity blocks a clear view of the stars, were marveling at the shooting stars, as if they had never before seen the night sky. It was fantastic!"

Bobby is a most appreciated asset to the community of northern Doña Ana County. He is the quick to offer his services to educate students, adults, tourists, whomever, as to the marvels of astronomy. Paul and Susan both agree: "His humility, in always being available for such community service, makes him an asset to our community. We thank him, we learn from him, we honor him, and we hope he doesn't bring down any airliners with his new laser!"

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 ASLC 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.

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Minutes, January 2008 ASLC Meeting

Call to Order: Nils Allen, President, Astronomical Society of Las Cruces (ASLC), called the meeting to order at 7:38pm, 25 January 2008, Rm. 77 (later moved to Rm. 78), Dona Ana Community College. Laura Humphreys, Sunrise Elementary School, thanked the membership for supporting a star party at the school in December. She reported that her 4th grade students were still talking about it.

President's Comments: Nils remarked on the amount of coverage the Club had received recently in the local media, particularly announcing and then covering the "New Telescope Users' Workshop" on 5 January at Veteran's Park. He thanked Bert Stevens for his service as 2007 President and for his efforts organizing the December '07 meeting/Annual Dinner at Lorenzo's Avanti Restaurant. He also stressed his goals for 2008 – more fun, learning, and sharing with our community, add new members (grow the Club), increase public outreach, and increase public awareness/publicity, particularly utilizing the new observatory at Leasburg Dam State Park (LDSP).

Secretary's Report: There were no minutes recorded at the December '07 meeting/Annual Dinner, therefore, no reading or acknowledgment of same. The secretary inquired if there had been any problems recently for members receiving the *High Desert Observer (HDO)* via US Mail. None were reported. There was no additional secretary's report.

Treasurer's Report: The treasurer reported there has been no substantial change in the status of the Club's major accounts. Membership is currently seventy-four (74), three (3) of which are complimentary. Delivery of the Meade SolarMax telescope is still pending. The primary issue is assumed to be "offshore manufacturing" facility-related, but the treasurer will follow-up on expected delivery. There have been no substantial outlays to support other Club activities. This concluded the treasurer's report.

Committee Reports:

Observatory Committee: Rich Richins, Chairman, Observatory Committee, reported that the LDSP park manager had no news on the status of the observatory proposal. Rich reported that the proposal (submitted in November '07) was being discussed at the state level, but, as was noted at that time, up to a 90-day delay could be expected before a decision was announced. He therefore is expecting a decision in the February-March time frame. The state's Parks Department will draft a statement of agreement outlining responsibilities and rights of the participants in this project. In addition, the Club will need to formulate a method for members' use of the new observatory including usage rules, procedures, access, user fees, etc. There are sufficient participants on the committee to begin roughing these out.

Astronomy Day: Wes Baker, Chairman, Chuck Sterling, and Nils Allen >>

➤are working on plans for this event. Saturday, 10 May, is Astronomy Day 2008. Some events may be coordinated in conjunction with the Dedication/Grand Opening of the new observatory. Ideas/input from the membership are welcome.

Note: It was mentioned as a side note that, as a 501(c)(3) non-profit organization, the Club can receive designated cash donations via the United Way. There were no additional standing committee reports.

Old Business: Meade SolarMax telescope – for status, see Treasurer’s Report above. For the time being, usage will be coordinated through the Board of Directors. There was no additional old business discussed.

New Business:

1. Club Asset Inventory - An attempt is being made to locate physical property, especially telescopes and eyepieces, which are owned by the Club. Jerry Gaber, Vice-President, is coordinating this effort. The eventual goals are to establish an Asset Management Plan and then a telescope loaner program and possibly increase the level of the Club’s insurance to cover the value of the equipment. To date, Jerry has listed an 8" C8 (Vince Dovydaitis), a 100 mm refractor (Joseph Mancilla), a Colter telescope (Dick Olson), 12" Dob (Steve Barkes), 11" Cassegrain (campus dome), numerous eyepieces (campus dome), 16" LX200 (Chuck Sterling), solarscope (still at Meade), 12’ dome, and projector (Nils Allen). Members are asked to contact Jerry if they have other items that belong to the Club so they can be accounted for.

2. Member Survey - Nils Allen has received responses to the survey published in the January *HDO* from less than half of the membership. He has additional blank forms and would like to summarize the results within two (2) weeks. Input will be critical to evaluating a possible increase in Club membership dues currently under discussion by the Board.

3. Club Member Directory - A directory of Club members with basic contact information has been proposed to the Board of Directors. The directory will be available in hard copy form to Club members only. Janet Stevens is coordinating the information and members should contact her for additional information regarding the directory or to update their contact information, particularly if individuals would prefer to opt out of the directory and not have their information available. Additional details will be in the February *HDO*.

4. Club Regalia - Steve Henderson proposed several methods to determine Club members from visitors/general public at meetings and public events. He would like to design shirts, caps, badges, or other means of identification with a distinctive Club logo to designate Club members, perhaps via a contest. Additional discussion will be posted via the aslc-nm.yahoo.group.

There was no additional new business for discussion. Bert Stevens offered a motion to adjourn and Steve Barkes seconded. The business portion of the meeting was adjourned at 8:05pm by acclamation of those present.

Announcements:

1. “Lens-less” Newtonian - A science teacher at Lynn Middle School contacted the Club regarding a “lens-less” Newtonian at the school. Vince Dovydaitis visited the school and brought the telescope to the meeting. It is a standard 4" Newtonian that appears complete except for an eyepiece(s). If the scope can be made operational, the school would like to use it. Vince will pursue cleaning and locating eyepieces for the scope.

2. Club website - Rich Richins, webmaster, has been upgrading and improving the Club’s website. Additional information, links, including a visitors’ packet are all available on-line, making the website more useful to visitors and members, old and new. Accolades for an attractive and informative site; members are encouraged to visit it often.

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ASLC 5th Annual Messier Marathon

by Steve Barks

Every year during the new moon in March/April it usually becomes possible to observe all 110 of the Messier objects in a single evening. While it is possible to observe 70 or more on any given evening of the year, only during mid to late March and early April can you actually view all 110. This year's marathon date is Saturday, March 8. If the weather doesn't cooperate, we'll have a second opportunity on April 5.

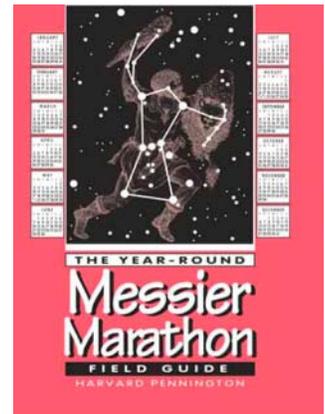
One thing to note for this year, is that 110 will not be possible on either date. The ability to see all 110 objects in one evening is dependent on several different factors. The first is the date of the new moon. As the marathon is typically run on a Saturday, the date of the new moon closest to that Saturday makes a difference. Ideally you need to be within 3 days of new moon to maximize your chances. The other major factor is where that new moon falls during the month of March. If it happens early in the month, as it does this year, the early objects will be easier, but the later objects may not rise until after sunrise has brightened up the sky to the point where they aren't visible. This usually means that M30, a small globular cluster in Capricorn can't be seen. If the new moon occurs very late in the month, or in early April, the early objects have to be located in the glow of the setting sun, and typically you'll not be able to find M74 at the start.

Even if you don't intend to stay the entire night, I would encourage everyone to give the marathon a try. The marathon is not a competition between individual observers, but is a personal competition with yourself. I would like to see everyone try and better their previous year's numbers. If you didn't participate last year, and you go out and observe ONE object this year, then you've improved on your numbers! While that is an extreme example, and I would hope you can observe more than one object, I really would like to have as many people as possible participate in the event. You'll find that everyone is excited about achieving a common goal, and we all are willing to help you out in finding those elusive objects.

Even if you don't have a telescope, you can run the marathon. How many can you find using your binoculars? Probably 70 is possible. Or maybe a naked eye marathon? You should be able to see a handful of objects without any optics at all. And of course you don't need to stay the entire night. Set your own personal time limit, and see how many objects you can observe in that time. How many can you get in 3 hours? There is no shame in leaving early. It's all about participating!

For those who are serious about running the entire marathon, there are two resources that I highly recommend. The first is "The Year-Round Messier Marathon Field Guide" written by Harvard Pennington. This book contains lots of information on preparing for the marathon, and detailed finder charts for each Messier object. The charts are geared towards someone who is using a Telrad finder on their scope, and shows the Telrad field of view in each chart. The second resource is "The Observing Guide to the Messier Marathon: A Handbook and Atlas" by Don Machholtz. While similar to the Pennington book, this resource is geared more to those who run the marathon with an equatorially mounted telescope. Machholtz gives offsets in RA and Dec for each object that make it easy to navigate from one object, or from an easy-to-find star to the next object. Both of these books are available from Amazon, and you may want to pick them up to prepare for next year's marathon.

So come out and join us at Upham for the 5th Annual ASLC Messier Marathon on Saturday, March 8. Be there before sunset and stay as long as you like. I guarantee you'll have a great time, and enjoy the company of others sharing a common goal.



January Meeting minutes continued from page 10

3. *HDO* - George Hatfield is doing an excellent job publishing the Club newsletter. Thanks to the membership for article submissions, providing great content, but we can always use more.
4. Outreach Reports and Upcoming Events - Chuck Sterling, Outreach coordinator, reported on school star parties held so far this year. There are already four (4) planned in February, including Tombaugh Elementary where 300 students with their parents are expected. The Club may support two (2) events for the lunar eclipse on 20 February, one at Veterans' Park and another at Hillrise Elementary. Central Elementary needs support for its Mars Project; also possibly an Orion viewing with a commercial/residential light pollution tie-in. There were no additional announcements made.

Observations: There were no observational reports offered.

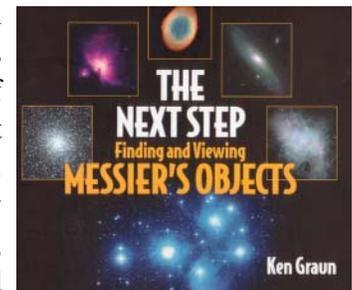
Presentation: The program for the January meeting was presented by Dr. Reta Beebe, Professor of Astronomy, NMSU, and ASLC member. She discussed the structure of the National Academy of Science and its role in determining NASA's Solar System Exploration Program. Dr. Beebe discussed her research involving interpretation of data from the NASA Planetary Exploration program. She has also worked on Voyager, Galileo, and Cassini data and used the Hubble Space Telescope for a Jupiter/Saturn observing program early in the mission. She was a member of the Shoemaker/Levy team at the Space Telescope Science Institute in 1994. Drs. Herb and Reta Beebe are long-time members and supporters of the ASLC. 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 January 2008 monthly meeting concluded at 9:30pm. Respectfully submitted by John McCullough, Secretary

Book... "The Next Step, Finding and Viewing Messier's Objects"

By George Hatfield

I bought this book several months ago, but was stimulated to get it out again when Rich Richins started the Messier Gallery on the ASLC website. This hardbound book, by Ken Graun, and published by Ken Press, provides a lot of information about members of this now famous list of celestial objects, but probably the most interesting part of the book concerns Charles Messier himself. Graun devotes several chapters to Messier, his associates and the times they lived in during the late 18th century. There are sections on Messier's telescopes, Joseph Delisle (Messier's mentor), the Hotel Cluny where Messier worked, and Pierre Mechain, one of Messier's colleagues who contributed to the list. There is also a chapter on John Dreyer, the astronomer who compiled the NGC catalog of nebulae and clusters in the early 20th century.



There is a short monograph for each of the Messier objects as well as a couple of "honorary" members added by Mr. Graun. Each includes a brief description of how and when the object was cataloged by Messier and his original notes. Interesting reading. Also included is a NGC summary, miscellaneous facts concerning the object, its location, and when it can be observed during the year. The images provided are all black and white and rather primitive by today's standards. Often the image scale is too large to really get a good sense of the object.

Overall, the book was a worthwhile addition to my library and allows a quick check of an object before observing it. But the real value, at least to me, was the background information provided on Messier, an individual whose name is familiar to almost every amateur astronomer.

Star Parties Galore!

By Chuck Sterling

In the three years of my ASLC membership I've not seen such a heavy load of school star parties in a single month before the four confirmed for this February. And that's only the tip of the iceberg. My daily summary at work sometimes contains the quip, "On this day in 2008, absolutely nothing happened." That is definitely not the case for ASLC this month.

We have school star parties scheduled for Tombaugh Elementary on Monday, February 11; Desert Hills Elementary, Tuesday, February 12; Hillrise Elementary, Wednesday, February 20 (Full Lunar Eclipse); and Camino Real Middle School Wednesday, February 27.



ASLC school star party at MacArthur Elementary in January

In addition, there is a Lunar Eclipse Event at Veteran's Park, concurrent with Hillrise, on Wednesday, February 20.

We also support the monthly Dark Sky Night at Upham, and this month both Saturdays (February 2 and 9) were likely candidates, with the new moon occurring mid-week. And, the monthly Moon Gaze at International Delights Café will be on Saturday, February 16 from dusk until we run out of people, the restaurant closes, or we freeze.

There is also a possible star party at Jornada Elementary on Thursday February 21, though that may wind up being an indoors presentation only.

And finally, looking into the near future, a star party is tentatively scheduled for Central Elementary on Thursday, March 6, just before early daylight savings time goes into effect, making it more painful to hold school star parties on school nights. Last, at least for now, is a star party to be held for the general public at the Chihuahua Nature Desert Park on Saturday, April 19.

There is also a possibility of a star party at Canutillo High School, where two of our members hung their hats for many years. That is for future, and as Niels Bohr once noted, "Prediction is very difficult, especially about the future."

I want to remind y'all, again, yes, we have several star parties to support this month. And the next, and next...

As of today, while I write this, we have sufficient support for Tombaugh, Desert Hills, and Hillrise. We are still a bit light otherwise, as far as having commitments to bring scopes and expertise to support the other events, including the Veteran's Park Lunar Eclipse event.

Please, if you've not already done so, and it's practical for you, consider tossing your hat in the ring. We can use all the help we can get. Remember, it's for the kids. Give me a call or talk to me at the monthly meeting if you are interested in getting involved with these activities.

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want your info included on this, please let me know ASAP. I asked at the January meeting and no one asked to be excluded.

ASLC shirts and hats are coming! Join in the friendly competition to create the best club logo/emblem to put on said shirt or hat – voting will take place at the February meeting. Contact Steve Henderson if you have any ideas for the logo. Finally we'll have something nice to wear so members stand out from the crowd at club events. And by the way, thanks to those who turned in the membership survey. Your inputs will definitely be considered.

If you have questions about any of this, please contact me or another officer – I don't want anyone being left out through a lack of info. We've got plenty to do, folks - enjoy! Nils Allen

Lunar Eclipse, February 20

Thanks to Tony Gondola, here is some information on the total lunar eclipse that will occur on February 20. Elevations are too low for any kind of high resolution imaging, but perfect for wide-angle time or multiple exposure images with interesting foreground included. Azimuth is just past East at mid-eclipse at 98 degrees. See <http://www.mreclipse.com/LEphoto/LEphoto.html> for information on how to image the eclipse.

Partial phase begins 6:43pm, elevation 10° 34'

Totality ends 8:51pm, elevation 36° 28'

Totality begins 8:0pm, elevation 28° 12'

Partial phase - eclipse ends 10:09pm, elevation 51°26'

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