President's Note

I was overwhelmed by your wonderful response to my call for help. I now have a list of willing and able potential speakers for our monthly meetings from within our own ASLC. We were torpedoed by the NMSU Spring Break during the same week as our meeting. They are leaving town in droves for better beaches than Las Cruces desert sands, and I don't blame them. I'm sure we will have some very interesting talks on their own NMSU astronomy projects and other scientific endeavors during our future meetings. In the mean time I became intrigued by our own Wirt Atmar's offer to present a talk on finding planets around other stars. I am keen to find out if our amateur equipments are good enough to get similar results, at least for the easier planets to detect. He will present a professional copy of a presentation that he has, and will answer our questions, as well as enter into discussions on any project we might attempt. I think that this is where long focal lengths, and high f/ numbers would pay great dividends. Perhaps a fitting project for the "A Mountain" 24 inch scope at f/75 ???

I was just contacted by the science and engineering folks who are organizing the next science presentation event at the Messilla Valley Mall. I am told it will be on April 15, and we are invited to have our astronomy displays, instruments and photos as we did last year. I'll be receiving more info just before our meeting, so we will be discussing this event at the March meeting. Hope Niles might bring his newly acquired 20 in. scope to wow the population with what we are now able to get into amateur hands. Also, there is a Las Cruces schools Science Fair on April 5. They have about 100 school kid's projects entered and need more judges. Please contact Pam Eagan, the SCIAD coordinator, and volunteer if you are able to help out. I plan to be one of the judges. See you all at our March 24 meeting. Vince D.....your Prez.

A Marathon for Everyone

Rich Richins

March is Messier Marathon month, and on Saturday, March 25, ASLC will hold it's third annual marathon at our Upham dark sky site. The hard-core marathoners will, of course, set their sites at locating all 110 objects between dusk and dawn. But what if you don't want to stay out all night? What if your experience or equipment isn't sufficient to bag all 110? Is it worthwhile at all to even attempt the marathon?

The obvious answer is that everyone should get out and give it a try. It's a marvelous chance to hop your way around the night sky, and see a collection of beautiful objects. You'll be amazed just how many you can see even with very modest equipment and even if you can only stay out until 10 pm or so. The following table lists 60 Messier objects, their ease of finding

This Month's Observer

Continued on page 2

Marathon for Everyone, continued from page 1
and a time at which the objects may be viewed. For simplicity's sake, I've broken down the times (T) into three categories: objects visible by 10 pm, visible by 1 am and visible by 5 am. The 'ease' (E) ratings are derived from the Astronomical League's Binocular Messier list.

Object	E-T	Object	E-T	Object	E-T	Object	E-T
2	E-5	18	E-5	37	E-10	55	E-5
3	E-10	19	M-5	38	E-10	62	M-5
4	E-1	22	E-5	39	E-5	63	M-10
5	E-1	23	E-5	40	M-10	64	M-10
6	E-5	24	E-5	41	E-10	67	E-10
7	E-5	25	E-5	42	E-10	78	M-10
8	E-5	27	E-5	44	E-10	79	M-10
10	E-1	28	M-5	45	E-10	80	M-1
11	E-5	29	E-5	46	E-10	81	M-5
12	E-1	30	M-5	47	E-10	82	M-5
13	E-1	31	E-10	48	E-10	83	M-1
14	M-1	33	M-10	49	M-10	92	E-1
15	E-5	34	E-10	50	E-10	93	E-10
16	E-5	35	E-10	52	E-5	94	M-10
17	E-5	36	E-10	53	M-10	103	E-10

So, M3 will be easy to find and visible by 10 pm. M14 is just a bit harder to locate and will be at least 15 degrees above the horizon by 1 pm. M55 is easy, but you'll need to stay up late. If you can only stay until 10 pm and only go after the easy targets, you'll still net 18. Go for the moderate objects too and you'll bag nearly 40 by 1 pm.

People do the MM in a variety of ways: - GoTo; star hopping (using charts); star hopping (from memory); photographically, big scopes; little scopes; binoculars; and various mixtures of the above. The idea is to play. How you play is up to you. Last year I used my C11 and tried to find everything using hopping/charts. I found 103, but did GoTo for six objects that I just couldn't find (M30 rose too late to be viewed). This year, I'll drag my 16" dob out there and try for all 110 by hopping/chart (no go-to option).

Remember to dress warmly and bring some food and a warm beverage. You'll need a viewing plan. Messier Marathon plans are available on the internet or talk to one of the "veterans". You'll also need a planisphere or star chart showing the locations of the objects. Astronomical twilight begins at 7:45 pm, but you may be able to spot some of the brighter objects even earlier. A note of courtesy - If you decide to leave early, please let people know before you turn on your car's lights so that they may look away from the bright lights and preserve their night vision. Be sure to tell Rich or Steve Barkes how many objects you saw. If you do, you'll receive a nice certificate commemorating your participation at the May ASLC Meeting (we'll be at

TSP in April). Friends/family are more than welcome. Just make sure that they dress warmly. Also - if conditions look poor on Saturday night, we'll switch to Friday or Sunday (or even Monday or Tuesday). Monitor the ASLC-NM Yahoo Group list for the latest info. One final note, if you're staying all night, you'll want to position yourself along the South end of the viewing "field" so that you are not blocked from seeing any of the objects in the Southern MW. If you're planning on leaving before 2am you can position yourself pretty much anywhere since the Southern MW objects aren't good targets until after 2 am.

As Far as the Eye Can See - Messier Marathon + Solar System

Joseph Mancilla

One of the nice things about staying up all night is that if one is lucky, one can view the entire solar system in a single night. Before the Messier Marathon begins, we'll all watch the sun set to begin the evening. Once astronomical twilight begins, it is fast and furious work for about 40 minutes to catch the low western objects. Taking a breather, we can look up to see Mars not too far from the Pleiades. Saturn lies further off in Cancer. Both are very easy objects to find. Usually we all settle into a steady pace until we reach the dreaded Virgo cluster of galaxies. Once we are through the cluster we continue until we run out of objects in the given sky. After a nap and a late night snack we resume at around 2:00 am. Jupiter will be bright in the sky preceding the head of Scorpius. Hiding in Ophiuchus is Pluto. Now this one is a tough one to find and to see. Ideally one should find the field and make a sketch 3 or 4 days before so one can detect which faint speck has moved. Venus will be very bright and near the crescent moon. Neptune and Uranus are also in the morning sky. Uranus can be seen as a disc at 160x or more. Neptune requires at least 200x to be seen well. Now the hour between 3:30 and 4:30 am is critical. We are racing along in the home stretch with no room for errors. It may be asking a little too much to take the time to hunt down these planets but it could add to the excitement. After we keep our fateful rendevous with M30, we can watch for Mercury very low in the morning twilight. All 110 Messier objects, 9 Planets, and our home star all in one night. I can't wait ! Happy hunting!

Upcoming ASLC Events

See the ASLC website <aslc-nm.org> for more information

March 24	Monthy ASLC meeting, 7:30pm
March 25	Messier Marathon, Upton dark sky site
March 28	Course "Astronomy - Getting Started" begins
April 1	Dark sky observing, Upton dark sky site
April 5	Las Cruces Schools Science Fair
April 8	MoonGaze (International Delights)
April 15	Science Display, Messilla Valley Mall

ASTRO-TIDBITS (formerly Beginner's Corner)

Nils Allen, ASLC Education Chairman

Prior to the regular meeting, some of use get together to discuss topics that might be interest to both beginners and experienced observers. We normally gather about 7:10 pm on the meeting night, which will be March 24. At the February meeting, as I understand it, Steve B. presented an overview of the Messier Marathon, so as to encourage new folks to take part in the marathon ASLC is doing at the end of March. Hopefully he was successful and we'll see some new faces out there! For the March meeting we will discuss some well-known (and lesser known) celestial "coincidences" which result in a number of neat things to see in the sky above us. If you already know of any, come and share them!

March Sky Map From Rich

Chart shows positions of objects at about 8 pm (MST) for mid-March, about 7 pm for late March. Additional maps are available from the club website.


Mar 6


Mar 12


Mar 22


Mar 29

Mars


In Taurus
Mag. 0.98
Rises about 12:30 am

Jupiter


In Libra
Mag. -2.28
10:30 pm

Saturn


In Cancer
Mag. 0.02
Rises about 2 pm

Astronomy Calendar

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

March 25 - Venus at greatest Western elong.
March 27 - Mercury 1.5 degrees from Uranus
March 29 - Total Solar Eclipse (N. Africa / C. Asia)
April 2 - Daylight Savings Time begins
April 8 - Mercury at greatest Western elong.

February's Challenge

NGC2158 is a rather sparse globular cluster or a very dense open cluster. It's located about a half degree SW of M35. NGC2158 lies nearly 16,000 ly distant - six times the distance of M35. If it were as close as M35, it would be one of the brightest clusters in the night sky.

March Caldwell Tour

1) C54, NGC2506, OC, 7.6, 08:00:12, -10:47:00 (Mon)

2) C85, IC2391, OC, 2.5, 08:40:12, -53:04:00 (Vel)

3) C48, NGC2775, S-Gal, 10.3, 09:10:18, +07:02:00 (Cnc)

4) C53, NGC3115, E-Gal, 9.1, 10:05:12, -07:43:00 (Sex)

5) C74, NGC3132, PN, 9.4, 10:07:42, -40:26:00 (Vel)

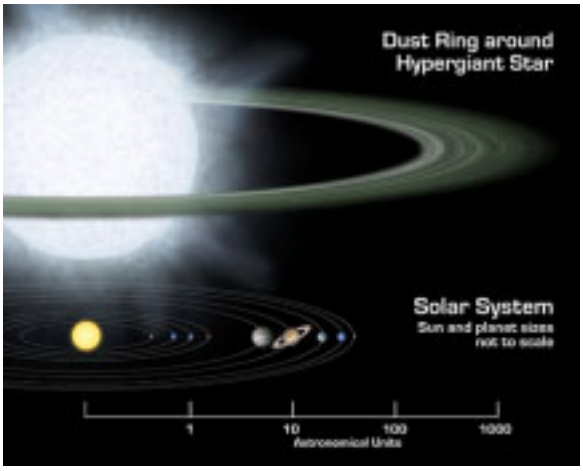
6) C79, NGC3201, GC, 6.7, 10:17:36, -46:25:00 (Vel)

Joseph's Challenge - UGC5470, Gal, 11.0, 10:08:27, +12:18:00 (Leo) Good luck!!

Planets in Strange Places

Trudy E. Bell, JPL

Red star, blue star, big star, small star—planets may form around virtually any type or size of star throughout the universe, not just around mid-sized middle-aged yellow stars like the Sun. That's the surprising implication of two recent discoveries from the 0.85-meter-diameter Spitzer Space Telescope, which is exploring the universe from orbit at infrared (heat) wavelengths blocked by the Earth's atmosphere.



Artist's rendering compares size of a hypothetical hypergiant star and its surrounding dusty disk to that of our solar system. This image may be downloaded from http://spaceplace.nasa.gov/astro_clubs/hypergiants_rendering.jpg.

At one extreme are two blazing, blue "hypergiant" stars 180,000 light-years away in the Large Magellanic Cloud, one of the two companion galaxies to our Milky Way. The stars, called R 66 and R 126, are respectively 30 and 70 times the mass of the Sun, "about as massive as stars can get," said Joel Kastner, professor of imaging science at the Rochester Institute of Technology in New York. R 126 is so luminous that if it were placed 10 parsecs (32.6 light-years) away—a distance at which the Sun would be one of the dimmest stars visible in the sky—the hypergiant would be as bright as the full moon, "definitely a daytime object," Kastner remarked.

Such hot stars have fierce solar winds, so Kastner and his team are mystified as to why any dust in the neighborhood hasn't long since been blown away. But there it is: an unmistakable spectral signature that both hypergiants are surrounded by mammoth disks of what might be planet-forming dust and even sand. Although actual planets have not been detected (in part because of the stars' great distances), the spectra of the hypergiants show that their dust is composed of forsterite, olivine, aromatic hydrocarbons, and other geological substances found on Earth.

At the other extreme is a tiny brown dwarf star called Cha 110913-773444, relatively nearby (500 light-years) in the Milky Way. One of the smallest brown dwarfs known, it has less than one percent the mass of the Sun. It's not even massive enough to kindle thermonuclear reactions for fusing hydrogen into helium. Yet this miniature "failed star," as brown dwarfs are often called, is also surrounded by a flat disk of dust that may eventually clump into planets. This brown dwarf discovery was made by a group led by Kevin Luhman of Pennsylvania State University.

These newfound disks represent "extremes of the environments in which planets might form," Kastner said. "Not what you'd expect if you think our solar system is the rule." Hypergiants and dwarfs? The Milky Way could be crowded with worlds circling every kind of star imaginable—very strange, indeed.

Keep up with the latest findings from the Spitzer at www.spitzer.caltech.edu/ . For kids, the Infrared Photo Album at The Space Place (spaceplace.nasa.gov/en/kids/sirtf1/sirtf_action.shtml) introduces the electromagnetic spectrum and compares the appearance of common scenes in visible versus infrared light. This article was provided by the Jet Propulsion Laboratory, California Institute of Technology, under a contract with the National Aeronautics and Space Administration.

Dave's Astrophotography Corner -
The Meade DSI Pro II CCD Camera (Part 1)

Dave Dockery

It's historically been expensive to get started in astronomical CCD imaging and this has kept many potential astrophotographers from taking the plunge (including yours truly.) However, advancements in sensors and cooling technology as well as reduced manufacturing costs have made it possible for a few companies to develop truly affordable CCD imaging systems. Meade and Orion have both recently released entry level cameras geared toward the beginning CCD astrophotographer that range in price from $299.00 to $699.00.

Standard DSI Pro II

I've been interested in CCD/RGB imaging for some time and decided to get my feet wet with an inexpensive camera before spending thousands for a comparable SBIG unit. Meade offers both one-shot color (DSI) and monochrome (DSI Pro) versions of its CCD cameras so I initially opted for the DSI Pro with RGB filters, but have recently upgraded to the DSI Pro II. The Pro II has some significant upgrades including; a larger ½" sensor, greater resolution (752x587, 8.5 micron pixels), greater sensitivity, anti-blooming for bright stars, lower noise (no amp-glow), and a built in temperature sensor. The beauty of these low-cost cameras is that you can make the initial purchase and then upgrade as your budget allows. Third party upgrades include; filters, filter wheels, cooling systems, and even SLR lens adapters.

DSI Pro II with faceplate adapter and ATIK filter wheel

One of the big shortcomings to the DSI Pro design is the open filter slide. It provides no means of covering the sensor without having the filter slide installed and nothing to protect the filters when they're mounted in the slide. I'm sure this was done to keep the cost down but it makes it practically impossible to keep the sensor and filters clean. This prompted me to also purchase an ATIK manual filter wheel and a custom adapter to connect the wheel to the camera. The DSI faceplate adapter is available online at: http://www.scopestuff.com/ss_dsif.htm.

I bought the camera primarily to image small galaxies and H alpha emission nebulae so I also purchased a 9nm Schuler Ha filter to complement the Meade RGB filter set that I bought with the camera. This filter has such a narrow band of light transmission that it's mostly insensitive to light pollution, such as city lights or sky-glow from the moon (see the M42 image). Warning: this will definitely increase your imaging opportunities, which may be extremely unpopular with your significant other!

M42 in Ha 32 x 30sec - DSI Pro II

Next month I'll discuss the Envisage software, describe a typical imaging session, and the processing of LRGB data.

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.

Minutes, February 24, 2006 Meeting

Bill Stein, ASLC Secretary

Vince Dovydaitis opened the meeting and asked for any announcements prior to requesting that we have a short Business Meeting before introducing the speaker. One member described the results of a recent meteorite search. He found a small possible meteorite at about 500 meters south of the predicted impact point. Steve Barkes announced that there was a new comet, Comet Pojmanski, and it was at about fifth magnitude and showing a ten degree tail.

During the Business Meeting, Vince announced that the ASLC may have an opportunity to participate in a New Mexico State University project to open up the A Mountain observatories to the public. Vince said that we may be able to host public nights with the 24" telescope on A Mountain. Vince invited Joseph Mancilla to describe the 24" telescope. Joseph stated he obtained some details from David Levy's biography of Clyde Tombaugh. The 24" on A Mountain was designed by Clyde and was one of five such telescopes that NASA funded the construction by Boller & Chivens. It is an f/5 prime focus with switchable cassegrain secondaries at f/40 to f/75. It is reported to produce some of the best planetary imagery. First light was in 1967 and by 1983 had completed a significant library of planetary image plates. The instrument is in fine shape. The main issues were that the road up to the telescope is in poor shape and that KRWG-TV recently completed construction of a large TV transmitter antenna. The antenna is directly south and in prime line of site for southern objects on or close to the meridian.

Vince then introduced the guest speaker, Shane Hollett, Director for Development for the University Endowment Office. Mr. Hollett explained that his primary function is to raise monies for the NMSU Endowment Funds and that his background, from an academic perspective, was a PhD in Atmospheric Physics. The goal of the NMSU Endowment Office is to raise more than $150M over the next five years. To date NMSU has raised $50M and they should be able to achieve $300M by the end of the five years. With respect to how the ASCL could participate with NSMU, Mr. Hollett outlined three potential areas. First with respect to A Mountain, ASLC could support NMSU outreach with astronomy education using the telescope. Right now, NASA has the rights to the roadway. NMSU would need to address improving the road. Second, ASLC could work with the NMSU Astronomy Department on relocating the three on-campus telescopes somewhere more suitable for observations. He suggested looking for an area near the University Golf Course. Third, ASLC could work with NMSU on raising funds for a planetarium. The politicians like to see a combination of both public and private funds. What can ASLC do as a group to benefit NMSU? ASLC can look to yourselves as ambassadors and advocates for a project of your choice. Vince then opened the meeting for discussions. Vince requested a show of hands for those interested in the A Mountain project. He reminded the members that ASLC has a $2M insurance policy to protect against personnel injuries. Steve Barkes suggested that supporting the planetarium idea would be a better since it would address a broader segment of the community while A Mountain appears to have limited utility. Joseph Mancilla supported the idea of working on relocating the three

Continued on page 8

Minutes, February 24, 2006 ASLC, continued from page 7

on-campus observatories. Steve Barkes mentioned that we could look at updating the equipment to a more modern, state of the art project by making the observatories accessible remotely via the internet. Vince concluded the meeting and asked those interested in taking a trip to A Mountain to meet with him after the meeting.

Educationally Speaking

Nils Allen, ASLC Education Chairman

Movin' right along — the first half of this spring's introductory astronomy course, called Star-Gazing, is just about wrapped up. Rich R., Steve B. and I have enjoyed the group of 13 students that braved the cloudy skies at the DABCC to learn about constellations, binoculars, etc. I say that because our attempts to acquaint them with the real night sky via 8pm observing sessions were frowned on by the weather gods…we had clouds and haze most of the time. This frustrates us as much as the students since it's so important to get out under the stars and experience the real thing!

Fortunately we still have before us the follow-up course, "Intro to Amateur Astronomy." That gives us five more weeks to get the class and some telescopes outside and hopefully have several good observing opportunities to practice the core skills of visual observing. Typically it's the success of this later course which can really benefit the future of our Society, hopefully getting a few folks "hooked" on our hobby so they will be eager to join in our activities. We always need "new blood." By the way, the spring Telescope-Making Workshop starts on April 1 and preparations are underway. Since Las Crucens rarely commit to anything until the last minute, I never know whether two or twenty candidates will show up (it does tend to be feast-or-famine!). Just check the next HDO to see what the results were…how's that for creating anticipation!

April Issue HDO

The April issue will be sent out the week prior to the monthly meeting which will be held April 24. Thus the deadline for articles will be April 15. 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). George Hatfield, Editor, ASLC Newsletter

---

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