

## President's Message - June 2011



As we finalize preparations for the upcoming Association of Lunar and Planetary Observers Annual Conference, we are starting to accumulate registrants for the meetings, tours, banquet and cookout. We look forward to having many members of the A.S.L.C. participate as well.

Our May meeting was a good one. We had a rather lively discussion of the proposed Leasburg Dam Observatory. As soon as we have an update from the New Mexico State Parks Division of The Energy, Minerals and Natural Resources Department, we will report it. Hopefully, construction can begin in September, 2011.

There was a public science program at NMSU on Monday, June 13, 2011, sponsored by the AAS Solar Physics Division. The AAS/NMSU event was supported by three single-stack solar 'scopes and a 3-inch white-light 'scope. ASLC members Trish Conley and I were there with our double-stack and we had about 40 visitors viewing the Sun. There were some great solar exhibits at Atkinson Hall. Flare activity was moderate and we had some nice discussions with Dave Dooling (Education and Public Outreach Officer, NSO, Sunspot, NM), James Tomaka (Amateur Astronomers Group, Alamogordo), Professor Jay Pasachoff (Director, Hopkins Observatory, Williams College, Williamstown, MA), Jason Jackiewicz (NSMU) and others.

We also found out that the Tortugas Mountain Observatory (a.k.a. "A" Mountain) will be made operational once again. The A.A.V.S.O. and NMSU are in the process of upgrading the telescope and dome to computer control, which will enable remote-control operations. A.A.V.S.O. will have primary use of the observatory with additional time reserved for NMSU usage. The 24-inch telescope will be used for variable star observations and other items of interest. Work was started in December, 2010 and is presently about seventy percent complete. The ASLC will consider working on obtaining access to the equipment at a future Board Meeting.

We will schedule our next Board Meeting in July and if any member has something to be brought up to the Board, please submit your proposal, in writing, to the President before June 30.

Do not forget we also have a variety of apparel items, including shirts, hoodies, hats, etc. available for sale. Your Society earns \$1.00 per item sold which helps our Treasury. Contact Ann McPhee for details. Also, please do not forget to pay your dues; it's our major source of income which is needed for many of the projects scheduled for 2011.

I hope you are able to attend the June 24 meeting. The Texas Star Party will be the presentation. In addition, we are bring back "Show & Tell", chaired by David Anderson. This begins at 7:00 p.m. Our regular meeting starts at 7:30 p.m. Please check our website ([aslc-nm.org](http://aslc-nm.org)) for further details.

Your President,  
Ron J. Kramer



The Astronomical Society of Las Cruces (ASLC) is dedicated to expanding public awareness and understanding of the wonders of the universe. ASLC holds frequent observing sessions and star parties and provides opportunities to work on 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 \$30.00 per year, including electronic delivery. Send dues payable to ASLC with an application form or note to: Treasurer ASLC, PO Box 921, Las Cruces, NM 88004

ASLC members are entitled to a \$10.00 discount to Sky and Telescope magazine.

### ASLC OFFICERS, 2011

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## Next Meeting

The June meeting will be on the Texas Star Party this year.

## Articles Needed

The High Desert Observer is **your** astronomical society newsletter. The quality of the newsletter can only be obtained if we get high quality articles from people like **you**. Please take some time and write an article on what you are doing in astronomy that you would like to share with your fellow amateur astronomers. Thanks in advance for your efforts!.

## Events

ASLC hosts both a deep sky viewing and imaging at our dark sky location in Upham and a public in-town observing session for the public at the International Delights Cafe. Both sessions begin at dusk. We also frequently provide solar observing at the Farmer's Market on Saturday mornings. For information on these and other events, please see the ASLC website at <http://www.aslc-nm.org>.



## June Outreach Activities Roundup

By Jerry McMahan

### Moongaze - June 11, 2011

This month's Moongaze was a busy one. We had a continuous crowd, and a number of people stayed to ask questions. Two teen age girls were there with their grandmother. They were very excited about what they saw through the telescopes and asked many questions. A man and his wife, on a motorcycle, also spent some time there and wanted to discuss various topics. A couple with some young children spent a lot of time trying to get pictures through each scope.

Despite the smoke from the Arizona fires, the seeing conditions were surprisingly good. The usual targets were Saturn and the Moon. Chuck Sterling had his 10-inch, Steve Shaffer brought his 4.5-inch Dobsonian and I had the 5-inch Meade Maksutov.

Since school is out, there is nothing else in the way of school star parties to report..

## Visual Observation of Planetary Nebulas

By John Kutney

### Introduction

Observing planetary nebulas (PNs) really have a "wow" factor for the visual observer. Planetary nebulas require using all of one's skills to locate, observe, sketch, and record the necessary data and information to complete the Astronomical League's Program. This observing project has enhanced my appreciation of planetary nebulas with their various shapes, colors, and hidden attributes. The proto-planetary formations, classified as challenge objects, and the expansive faint planetaries highlight the evolving birth and death of these astronomical objects. The planetary nebula project has provided a vehicle to expand the understanding of these astronomical phenomena.

### Astronomical League Planetary Nebula Observing Club

I recently submitted my observing logs and sketches to the Astronomical League to receive the certificate and pin for completing the requirements for joining the Planetary Nebula Observing Club. The list is very comprehensive and covers all the planetary nebula classifications. Many of the objects can be observed with smaller instruments, but there are a few that required significant aperture or excellent seeing conditions to discern the details.

There are four planetary nebulas from Messier's List of objects and all four of them make it into the Planetary Nebula List of 110 objects. There are 11 of the 13 Planetary nebulas from the Caldwell List. There are 68 Planetary nebulas which have NGC designations. There are five Abell, nineteen IC, five Minkowski, four Sharpless, two IRAS and nine other separate designations. There are also four proto-planetary objects; that is, they are evolving into planetaries but have not yet been designated as such. The planetary nebula list provides a diversified group of planetary objects to observe.

This program may require all four seasons to cover the constellations in suitable locations in the sky for visual observers. Some of the more difficult and obscure planetary nebulas require some aperture and dark skies to collect these objects. However, the basic program is flexible enough to fit most capabilities.

There is also an "imaging" certification that requires 90 of the objects to be submitted as astrophotos.



## Planetary Nebulas

Planetary Nebulas are not naked eye objects. They require a telescope to observe so their discovery was not until the 18th century. M27 (Dumbbell Nebula) in Vulpecula was the first recorded observation of a planetary nebula by a human, when Charles Messier observed it on July 12, 1764.

There are about 3,000 stars with planetary nebula in our galaxy out of about 200 billion stars. Most are located near the galactic plane. Planetary nebula are the late evolutionary stage of an aged star, similar in characteristics to our Sun. Oxygen III (OIII) emission is one of the most common characteristics and is a significant help to identify a planetary nebula to the visual observer. OIII filters are essential to distinguish a stellar disc as a planetary nebula in a rich field of stars.

When a star like our Sun burns away all the hydrogen in its core to helium, its nuclear reactions come to an end in its core. At the same time helium burning continues in a shell about the star. This process makes the star expand, and causes its outer layers to pulsate as a long-periodic variable star. It becomes more and more unstable, and loses mass in strong stellar winds. The instability finally causes the ejection of a significant part of the star's mass in an expanding shell. The stellar core remains as an extremely hot, small central star, which emits high energetic radiation. The expanding gas shell begins to shine by the high-energy radiation emitted from the central star; the material in the shell is moreover accelerated so that the expansion gets faster over time. The shining gas shell is then visible as a planetary nebula.

Our Sun will probably reach this state of evolution at an age of about 10 to 13 billion years; as it is now only about 4.7 billion years old, we have probably time left until this event happens.

More than a thousand planetary nebula are visible through amateur 'scopes, which is amazing since the life of a planetary nebula is only 15,000 to 40,000 years, only seconds in astronomical timeframes.

## Classification

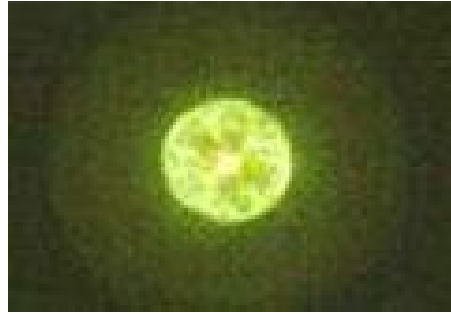
Planetary Nebula visual classification uses the Vorontsov-Velyaminov system. This classifies planetary nebula into six major types with many variations and combinations of these types. The number of planetary nebula from the project list for each type is provided in parenthesis:

- I: Stellar image (like a star) (5)
- II: Regular disc (33)
  - a: a shinier core
  - b: Uniform brightness
  - c: Presence of an annular structure
- III: Irregular disc (42)
  - a: Irregular brightness
  - b: Presence of an annular structure
- IV: Annular structure (26)
- V: Irregular form between a planetary nebula and diffuse nebula (2)
- VI: Abnormal form without a regular structure (like an S or an 8, etc.) (2)

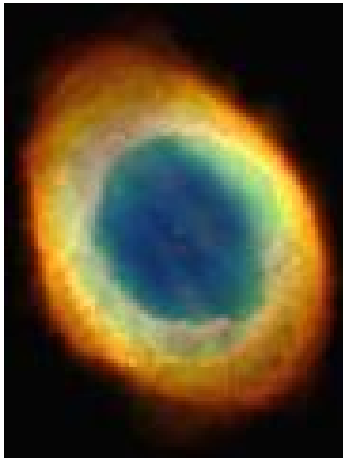
Some more complex object shapes can be characterized by two classes, the second usually being written between brackets.



IC 4997 -  
Planetary  
nebula of  
class I



IC 3568 -  
Nebula  
planetary  
of class II (IIa)



M57 - Ring  
Nebula of  
class IV  
(III )



NGC 2899  
- Nebula  
planetary  
of class VI

### Example Target Classifications:

Type	Description	Class	Con	Size	Mag
4 + 3	Ring structure + irregular disc (Helix nebula)	NGC 7293	Aqr	12'x10'	7.3
1	Stellar (Peace 1 in M15)	Peace 1	Peg	1"	15.1
2a	Smooth disc (Baby Eskimo )	IC 3568	Cam	18"x18"	11.1
3	Irregular disc (Fetus nebula)	NGC 7008	Cyg	98"x75"	10.7
4	Ring Structure (Headphones Nebula)	JnEr1	Lynx	6.7' x6'	12.0
5	Irregular form (elongated N-S)	NGC 6765	Lyra	38"	13.1
6	Anomalous Form (Bug nebula- Caldwell 69)	NGC 6302	Sco	83"x24"	9.6
Proto	Minkowski Footprint (5+3 ?)	M1-92	Cyg	3"x8"	11.0

The type for the Minkowski Footprint (Proto) is estimated based on my personal observations. Sue French in her observation of this object does not agree that it is a planetary nebula but rather a reflection nebula. There are still many astronomers debating the status of this proto. As described later in this paper, this is not inconsistent with this phase of the life of a star as it transforms into a planetary nebula. It is, however, a very interesting object and it does look like a footprint with a heel and toe area.



## Identify the Images Below

Try to identify these common images of Planetary Nebulas that are on the Astronomical League's list (with the exception of Sh 2-188), selecting from the list of designations below. This list is in a random order.

Headphone Nebula (JnEr1) - Lynx  
Cats Eye (NGC 6543) - Draco  
Dumbbell Nebula (M27) - Vulpecula  
Medusa (Abell 21) - Gemini  
Jones1 - Pegasus

Sharpless 2-188 - Cassiopeia  
Bug Nebula (NGC 6302) - Scorpius  
Ring Nebula (M57) - Lyra  
Little Dumbbell (M76) - Perseus



## Identity of the Planetary Images

Most of these planetary nebulas are very well known to the visual observer and the astrophotographer. This sample provides a glimpse at the variety and extraordinary shapes one can observe or image. The colors of these images appear as shades of blue and green to the visual observer with a rare few showing some pink and red.





Jones1 is a faint nebula to the observer with only one of its crescents obvious, but has a bright blue star at the center that is not its central star. Sharpless 2-188 does not exhibit the reds as seen in the image but an OIII filter reveals a lot of the nebula. The Ring Nebula is familiar to all. The central star at magnitude 15 is a real challenge to the amateur observer. It requires excellent seeing and transparency. The Dumbbells are easy to find and a pleasure to observe. One can spend hours on the big one with all its details. The Bug Nebula is quite small and the image shown is beyond expectation for the visual observer. I am still not sure why it is called the Cats Eye since cats have an elliptical slit in lieu of a round one. The astronomer who named it must have had a dog for a pet. The Medusa Nebula with its incomplete disc reminds one of the Eastern half of the Veil Nebula which is really a supernova remnant. The Headphones are obvious but one needs averted vision to get the complete picture when observing.

The correct names for the nine images are:

Dumbbell Nebula	Little Dumbbell	Headphone Nebula
Ring Nebula	Sharpless 2-188	Cats Eye
Medusa	Jones1	Bug Nebula

### Large and Small Planetary Nebulas

The following table is a list of the largest planetary nebulas from the observing list in the order of their size. A large planetary nebula is classified as being at least 5 minutes-of-arc in diameter. Jones1 just makes it into the list while Sharpless 2-216 is the largest, and incidentally, one of the most difficult to observe. The Helix and Dumbbell make the list and are relatively easy targets because of their brightness. Abell 21 is the Medusa Nebula while JnEr 1 (Jones-Emberson) is the Headphones Nebula; and they require an OIII filter to see any details. Abell 35 and 36 (Bow-Shock and Batman) are very faint and need good seeing, filters, and aperture.

Most of these large planetary nebulas require low power and a wide field of view (FOV), along with a lot of patience. With the exception of the "bright ones" this set of planetary nebulas will require all of ones observing skills.

The smallest planetary nebula on the observing list is Peace1 which is located inside of Messier 15. It is just one arcsecond in size. It required special field notes that were located on the web to star hop within M15. There are several small planetary nebulas of types 1 and 2 that are in the range of three to six seconds-of-arc across. This becomes a problem when they are located in a rich star field such as Cygnus, Aquila, and Sagittarius. The use of an OIII filter is required to identify a planetary nebula in this environment. The planetary nebula will stand out as a fuzzy object while the other stars fade.

The list of large planetary nebula with my observations is included in the following table:

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Object	RA	Dec	Size (")	Mag	Con	Type	Filter/Req	Central Star	Description
Sharpless 2-216	04 45.5	+46 49	100'	-	Per	3	OIII/Yes	N	Very faint nebula, eastern side was visible as a large arc running N and S perforated with various stars. Smaller nebulous area to the west following the same curve line. An excellent seeing and dark night with Perseus at a desirable location provided a view of the object with and without averted vision. This was my 2nd attempt at this object. OIII filter was required to separate the nebula from the rich star field.
NGC 7293 (Helix Nebula)	22 29.6	-20 48	900x720	6.3	Aqr	4+3	OIII/no	Y	Faint ring like nebula, OIII filter enhances the nebula. A number of stars visible in the nebula and around it, central star is also visible but not bright. Higher mag doesn't help.
Abell 35	12 53.6	-22 52.3	720	12.7	Hyd	3a	OIII/yes	N	Large, faint with arcs or waves emanating from the center. Waves more visible to the South. Bright star toward the center but may not be the central star. OIII filter required to see nebulosity. Lower magnification required to see the PN.
M-27 (Dumbbell Nebula)	19 59.6	+22 43	480x240	7.3	Vul	3+2	SGF/no	Y	Large bright dumbbell shaped, central star is visible in pinched area. Multiple stars visible in the nebula extending in the outer nebulous fan-like structures. Bright spot on the south edge of the dumbbell, at 320X the nebulosity fades but more star detail is available
Abell 21	07 29.0	+13 15.2	14' x 10'	11	Gem	3a	OIII/yes	N	Very large nebula, faint, filter is definitely required to see the nebula. Round crescent shape open to the NW with two bright areas in the N and S ends of the arc. Several stars are embedded in the nebula with a bright star on the N side in the nebula.
NGC 1360	03 33.4	-25 51	460x320	9.4	For	3	OIII/no	Y	Large oval nebula, elongated NE to SW, edges fade away. Central star visible along with several lighter stars inside the nebula. Best seen at 87X with OIII filter a big help in seeing most of the extended nebula. Slight blue tint with a slightly brighter area to the North with higher mag.
Abell 36	13 40.7	-19 52.9	293 X 400	13	Vir	3b+3a	OIII/no	Y	Halo like, very faint nebula surrounding the central star. Central star fuzzy around edges. Round structure more dense/visible to the SW. OIII brings out more of the nebula.
PK 164+31.1 (JnEr 1)	07 57.8	+53 25	450x 400	12	LYN	4	OIII/yes	Y	Large faint circular nebula, requires OIII filter and low power to see. Bright spots or areas with some embedded stars, several stars in the center very faint or darker area. There is a star visible at high power and averted vision in the center. The brighter spot toward the NW end is more pronounced, fainter areas to NE and SW are difficult to see.
Jones 1	23 35.9	+30 28	314x314	12.1	Peg	3b	OIII/no	N	Faint nebula as two crescents to the NW and SE. Full ring is not visible this morning. There is a blue star in the central portion which may be a central star. OIII filter helped a little. Higher mag helped to identify the stars in the middle.

## Notable Planetary Nebulas

The closest planetary to our solar system is Sharpless 2-216 in Perseus at 400 light-years. It is also the largest and oldest planetary nebula. The Helix Nebula was once considered the closest, but it is actually 700 light years away. One of the faintest objects in the Messier List is M76, the Little Dumbbell, at magnitude 10.1, but this is not even close to the faintest on the Astronomical League's Planetary Nebula List with Minkowski's Butterfly (M2-9) at magnitude 14.6 and the small Pease 1 at magnitude 15.1. The brightest planetary nebula at magnitude 7.3 is a tie between M27, the Dumbbell Nebula, in Vulpecula and the Helix Nebula (NGC 7293) in Aquarius. Aquarius has another bright planetary nebula with the Saturn Nebula (NGC 7009) at magnitude 7.8 and Hydra has the Ghost of Jupiter (NGC 3242) also at magnitude 7.8.





The youngest known planetary nebula is the Sting Ray Nebula. Hen 3-1357 was observed in 1967. The Stingray is located in the direction of the southern constellation Ara, and is located 18,000 light-years away.

Of the 150 globular clusters with each containing several 100,000 stars, planetary nebulae have been discovered only in 4 of them, namely Pease 1 in M15, IRAS 18333-2357 in M22, and the two recently discovered planetary nebula Jafu 1 and Jafu 2 in globular clusters Palomar 6 and NGC 6441, respectively.

As planetary nebulae occur only late in the life of a star, they are usually absent in open star clusters (OC) because these OCs tend to dissolve in times much shorter than that needed for a star to evolve in a planetary nebula. Only few open clusters live longer than a billion years. It seems that because of the short lifetime of this stage, there is only one planetary nebula, NGC 2818, which was discovered to be a member of a rather old open cluster, NGC 2818A in Pyxis. The more well-known case of the planetary nebula NGC 2438 which is observed in the same direction as M46 is a chance alignment.

Several of the Planetary nebulas do not exhibit the double ionized oxygen OIII. This makes it difficult to isolate them if they are stellar like and located in a rich star field. However, there is one notable planetary nebula; namely, Campbell's Hydrogen Star (BD +30 3639) in Cygnus. The bright central star is reddish-orange and masks the faint thin nebula. An H-beta filter brings out the object. This is a very unusual planetary nebula since most others have been shades of blue or green. This is a must see object for planetary nebula enthusiast.

## Proto-Planetaries

Proto-planetary nebulas are formed during a short period in the last part of the life of a star of medium mass. These stars leave the main sequence when the zone of hydrogen fusion shifts from the center of the star to a shell further outside. This causes the star to expand and to become a Red Giant. If the star is massive enough, the helium in the center of the star will also start nuclear fusion to carbon. Subsequently, the star will have two concentric shells of fusion around a carbon core. Now, the star is on the asymptotic giant branch (AGB) in the Hertzsprung-Russell diagram.

The outer parts of the star become unstable and star winds will blow away the outer atmosphere, which can be observed as a reflection nebula, illuminated by the light of the star. This nebula is called a protoplanetary nebula (proto-planetary nebula). Due to different velocities of the star winds, there is a chance of shock ionization, which will superimpose emission lines onto the continuous spectrum of the proto-planetary nebula. When the star finally collapses to a White Dwarf, it will again become hot enough to ionize the surrounding blown-off gas and to form a true planetary nebula with emission line characteristics. Proto-planetary nebulas exist, therefore, only during a relatively short period between the asymptotic giant branch and the planetary nebula stages during the life of a star. Accordingly, only few proto-planetary nebula are known. A more detailed account of the proto-planetary nebula stage is available on the web pages of Martin Schönball.

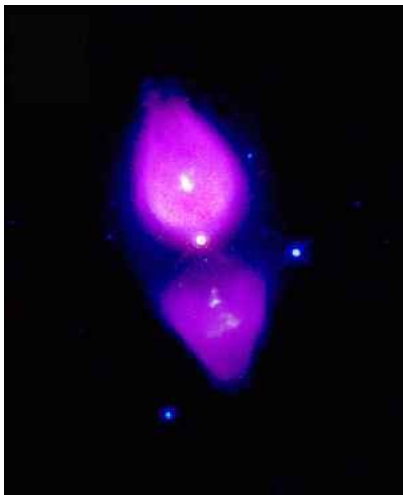
There are four Proto-Planetary objects on the Astronomical League's List. Each has unique characteristics, but collectively all of them do not respond to nebula filters, especially OIII, making them more difficult to locate, identify, and observe. The Gomez Hamburger is the most difficult of the set of proto-planetaries, because it is in a rich star field. One has to rely on the star field identification. It is faint and stellar-looking at 5 seconds-of0arc across. A detailed star field map is required since it appears as a 14th magnitude star.



## Proto List

CRL 2688 in Cygus- Egg Nebula	Size 16" Mag 13.5	Dual lobed - <i>double yolk fried egg</i>
IRAS 18059-3211 in Sagittarius - Gomez Hamburger	Size 5" Mag 14	Two faint buns with a dark slice in middle- <i>looks like a small hamburger</i>
IRAS 09371 1212 in Leo – Frosty Leo	Size 12" Mag 11	Bright object in sparse star field in the midst of multiple galaxies – <i>icy appearance</i>
M1-92 in Cygnus – Minkowski's Footprint	Size 3"x8" Mag 11	Tiny irregular shape – <i>looks like a wet footprint</i>

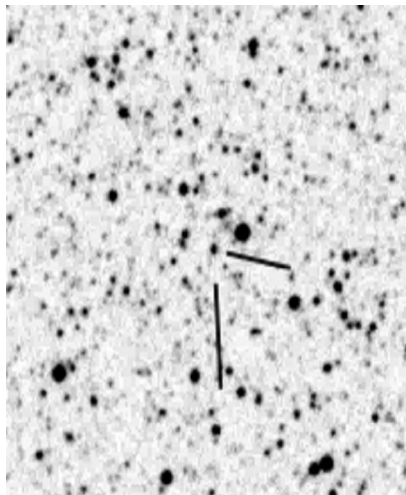
I have included images of Minkowski's Footprint and Gomez Hamburger provided by very large scopes. The star field of Gomez indicates the difficulty of locating this planetary nebula. Included are my field notes and drawing of Minkowski's Footprint as a comparison to what one actually observes. I used an 18" Obsession Dobsonian Telescope with a 6mm eyepiece to observe any details.



Minkowski's FootPrint



Gomez Hamburger (Hubble& DSS))



Sloan Deep Sky Survey image of the field of the Gomez Hamburger.

Below are my field notes and sketch of Minkowski's Footprint. At 320X with an eighteen minute-of-arc field-of-view, one can determine some details of this object but nowhere as definitive as the astro image:

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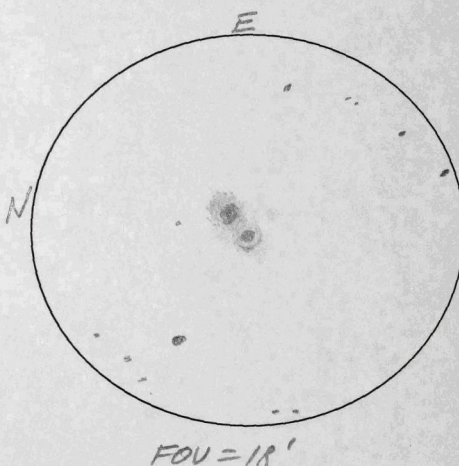
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Object: <i>MINKOWSKI 1-92</i>	<i>FOOTPRINT</i> <i>IN CYGNUS</i>	Location: <i>CORRALITOS RANGE</i>
Date: <i>11/26/2010</i>		Time: <i>1230 UT</i> <i>1930 MT</i>
Seeing: <i>1 (2) 3 4 5</i>		Transparency <i>(1) 2 3 4 5</i>
Darkness of Site: Bortle = <i>3</i>		Moon Phase: <i>1/2 RISE AT 2215 MT</i>
Aperture and Focal ratio: <i>18" Dobson F4.2</i>		Magnification(s) used: <i>175X 320X</i>
Device aided? <i>DSC</i>		Color(s) seen: <i>NH</i>
Filters used? <i>OIII - NO HELP</i>		Is Filter required to detect the PN? <i>Y (N)</i>
Is Central Star Visible? <i>Y (N)</i>		Direct or averted vision? <i>(D) A</i>

How does the planetary respond to different magnifications?  
*AT 175X can see double stars with some nebulosity. AT 320X  
 can see the footprint shape.*

Description:

*two nodes or lobes, oriented  
 WNW - ESE. Eastern node is  
 larger / brighter. Significant  
 nebulosity surrounding the nodes.  
 Footprint shape at 320X.  
 Larger node is brighter toward  
 the center and the smaller node  
 is uniform in brightness.  
 No help with OIII filter.  
 Not clear if one of these nodes is  
 a central star. Intriguing object  
 and looks like the globular cluster  
 Palomar 9 (NG 717) which looks like a  
 double star with nebulosity being close  
 to a bright star.*



**Summary**

The Planetary Nebula Observing Program is highly recommended for the beauty and diversity of the objects. You can have a great time observing these objects which requires the use of multiple skills. Check the Astronomical League Web site ([www.astroleague.org](http://www.astroleague.org)) for details.

**Minutes, May 2011 ASLC General Meeting**

By John McCullough, Secretary, ASLC

**Call to Order:**

Ron Kramer, President, Astronomical Society of Las Cruces (ASLC), called the meeting to order at 7:30 pm., 27



May 2011, Room 77, Doña Ana Community College (DACC), Las Cruces, New Mexico.

President's Comments:

Ron Kramer welcomed the group, noting that the agenda for tonight's meeting had changed. There will not be a presentation so that time period can be dedicated to discussion of the proposed Leasburg Dam State Park (LDSP) Observatory. There were no new members present, but three (3) guests were on hand: Oscar Pilhoefer and Alfred Schultz from El Paso, and Drew Conley from Ohio.

Secretary's Report:

The Secretary, John McCullough, reported that the minutes for the April 2011 meeting were submitted for publication in the May edition of the Society newsletter, the *High Desert Observer (HDO)*. Tracy Stuart moved that the minutes from the April general meeting be accepted as submitted; Bert Stevens seconded. The motion passed by acclamation. John also noted that some members have had problems retrieving the By-laws ballot from the Files section of the yahoo groups site. John will re-send the ballot with a reminder that the deadline to receive the completed votes (2/3 of membership required to take affect) is 05 June. There was not an additional Secretary's report.

Vice-President's Report:

The Vice-President, Tracy Stuart, as chairman for presentations, reported that there was no change to the presentation schedule. Phil Simpson has agreed to postpone his presentation (scheduled for tonight) until his book is closer to publication release. Tracy is already scheduling speakers for 2012. There was no additional Vice-President's report.

Treasurer's Report:

The Treasurer, Janet Stevens, was not present at tonight's meeting. Bert Stevens, Past-President, provided a report on the status of the Society's accounts. There was not an additional Treasurer's report.

**Committee Reports:**

Association of Lunar and Planetary Observers (ALPO) 2011 Convention Committee:

Bert Stevens, Committee Chairman, reported that arrangements for this summer's convention are coming together. The excursions to the VLA/Socorro and SunSpot/WSMR are set, thanks to Ann McPhee, excursion coordinator. New Mexico State University (NMSU) has confirmed the use of Rm. 201, Guthrie Hall, for the papers presentation. Snacks, caterers, the Friday night "cook-out", and the Saturday night banquet are arranged. Bert encourages Society members to register prior to 01 July. A list of positions that still need to be filled was in the last issue of the *High Desert Observer (HDO)*. Bert will be looking for volunteer commitments at the June meeting.

Apparel Committee:

Ann McPhee, Committee Chairman, has the long-sleeved t-shirts available for the people that ordered them. She reported that she still has \$858.34 in inventory and has sold \$1294 in articles to date. Ann has items available for purchase following tonight's meeting. This is a fund raising effort for the Society.

Loaner Telescope Program:

Janet Stevens, Committee Chairman, was not present.

Astronomy Day 2011:

Wes Baker, Committee Chairman, was not present.

Membership:

John McCullough, Committee Chairman, reported that he expects to utilize the new Society brochure



extensively to inform the wider community of Society activities and promote membership. He has contacted Branigan Library, the Chamber of Commerce, and the Visitors' and Convention Center, among other locations. The stock of brochures that Tracy Stuart placed at the Museum of Natural History needs to be replenished.

Leasburg Observatory Committee:

Ron Kramer, Committee Chairman, said more discussion will take place later in the meeting.

Tombaugh Observatory:

Ron Kramer announced that the first training session will be held in June. Dave Dockery has volunteered to conduct the training and a notice requesting interest has been posted on the yahoo group. Ron also reported that access to the NMSU A-Mountain observatory is being investigated.

Outreach Committee:

Chuck Sterling, Outreach Coordinator, was not present.

2011 Renaissance Arts Faire:

Tracy Stuart, Committee Chairman, did not have a report.

Society Website:

Steve Barkes, Webmaster, was not present.

There were no additional committee or officer reports.

**Old Business:**

Society By-laws:

Two-thirds (2/3) of the current membership must vote to accept alterations to the Society By-Laws. An electronic ballot was posted to the Files section of the aslcnm.yahoo group. Paper ballots were mailed to the members that receive the HDO by mail. The deadline to receive votes is 05 June. See the Secretary's report for more information.

Texas Star Party (TSP), 2011:

Warren Marquette was the only member present that intends to be at TSP. This year, TSP starts on 29 May and continues through 05 June. Pre-registration has already passed, but some openings may still be available.

July Monthly Meeting:

The fourth Friday in July, 22 July, is the first scheduled event of the ALPO convention. Bert Stevens moved that the ASLC meeting be moved to 15 July to finalize any details for the convention; Fred Pilcher seconded. The motion passed by acclamation.

There was no additional old business discussed.

**New Business:**

Walter Haas:

Bert Stevens gave an update on Walter's condition. Walter spent several weeks in Memorial Medical Center and is currently in Room 416 at the Southern New Mexico Rehabilitation Hospital and is doing well. He welcomes visitors. Ron Kramer and Tracy Stuart sent a card and flowers on the Society's behalf.



Pre-meeting Sessions:

David Anderson, who displayed his alt/az mount for Dobsonian telescopes at the April meeting, also stated his desire for an informal get-together, show-and-tell session before the formal business meeting started. Ron would like him to coordinate this effort, but David was not present.

There was no additional new business for discussion.

**Announcements:**

Items for Sale:

The 25-inch Obsession for sale in El Paso is available with all accessories to astronomers in El Paso, Las Cruces, or Alamogordo for \$8800.

No additional items were announced for sale.

Announcements:

Ron Kramer reported that he has been contacted by the Solar Physics Division (SPD) of the American Astronomical Society (AAS) about their meeting at NMSU in June. The Society has been invited to participate in public viewing on the NMSU Horseshoe the afternoon of 13 June followed by a public lecture by Dr. Dean Pesnell at 7:00 pm in the Atkinson Recital Hall. Please coordinate your participation through Ron.

High Desert Observer:

Bert Stevens needs articles for the HDO. If he does not receive articles, the HDO will consist of the President's message and the meeting minutes.

There were no additional announcements made.

Recognitions/Achievements:

There were no recognitions or achievements announced.

Bert Stevens moved to suspend the business portion of the meeting at 8:05 pm; Robert Williams seconded. The motion carried. After a short break, discussion resumed.

**Presentation:**

In lieu of a presentation, Ron Kramer wanted to discuss the status of the proposed observatory at Leasburg Dam State Park (LDSP). To begin, he gave a brief synopsis of what he knew of the project at LDSP. For various reasons, little progress has been made in the last few years. His basic question is: Will the Society proceed with its plans or not? Rich Richins, previous committee chairman, provided a contact at the park for Ron and Ron then met with "Skeeter" Giron, the current park manager. Mr. Giron is very interested in making this project happen; an observatory at LDSP is part of its five-year plan. The earliest construction can begin is 15 September 2011.

Some current (and new) considerations are: the structure will be designed by a State-employed architect in Santa Fe; the Parks Department will perform all archeological diligence; Parks architects/designers will do all design, layout, etc., at zero (0) cost to the Society; all labor will be supplied by the State; the Society will provide all construction materials, estimated to be no less than \$15,000 in 2011; and the Society must provide the services of a State-licensed electrician. The Society will need to provide a Memorandum of Understanding (MOU) for the observatory, telescope, and other equipment.

Discussion followed. Topics included the fact that the State will own the building(s) associated with the observatory. There has been no assignment of liability for any aspect of the project (include in the MOU?). There may be State money available for construction, particularly if the State decides to include additions to the





observatory structure that do not have anything to do with the functions of the observatory such as storage rooms for Park equipment.

Ron will now be chairman of the project committee as Rich has multiple demands on his time. Ron was asked if the Society will still be obligated to conduct monthly programs, an offer/agreement that was part of the original proposal. This may be covered in the MOU. The Society will be required to train Park personnel in the operation of the observatory and telescope so they can conduct programs without the involvement of Society members. However, Society members will have priority access to use the telescope and members will have unlimited, free access to the Park and the telescope. There are currently no details regarding design of the observatory structure but Jerry Gaber will provide the drawings stamped by a Professional Engineer to Ron.

Ron was asked how versatile the observatory will be. Ron responded that is unknown until the initial design is available for review. Fred Pilcher again raised the question of insurance and liability of the Society, a very open issue for him. Also, Fred noted he will not be involved in the operation of this observatory (he has his own), nor in presenting programs, and queried if there is sufficient commitment from other members of the Society to support the proposed activities at the Park. The new insurance policy through the Astronomical League will cover the Society's equipment; the structure will be the State's responsibility, as it will own the structure. The Society also has liability coverage for protection. Ron asked for a show of hands from those present if they are willing to volunteer to support the project: six of the fifteen members present were willing to commit to assist. It was noted that most Society members actively pursuing research projects have their own equipment dedicated to their research.

Ron believes an observatory is crucial to the Society's outreach mission. Robert Williams asked about maintenance of the equipment. Maintenance of the building will be the Park's responsibility, the equipment, particularly the 16-inch telescope, will be the Society's responsibility. Robert is also concerned about the long-term costs of the project. Some members stated they would consider donating funds to allow the project to proceed.

It was asked what would happen to the observatory in the event LDSP was closed because of funding cuts or other issues. Ron responded that caveats would have to be included in the MOU to address such issues. It was asked what would be the source of electrical power for the observatory, ground power, solar, wind, or other? That would need to be addressed during the design phase. In any case, who will be responsible for utilities and costs? When the MOU is generated, will there be provisions for upgrades/improvements to the observatory? Will it be possible to modify the MOU in the future? Will there be restrictions on adjacent development considering light pollution sources or general nuisance (proposed waste water treatment facility)?

Ron asked for a straw vote to proceed with the project; 11 members were for proceeding, 2 against. To conclude the discussion, there were unresolved concerns about producing the MOU especially dealing with the Park/State. Finally, does the Society agree to increase its financial commitment from \$8,000 to \$15,000? Resolution of this issue will have to wait to see the proposed observatory design.

A Call to Order resumed the business portion of the meeting at 9:05 pm. Bert Stevens moved to adjourn the meeting, Jerry Gaber seconded. The meeting was adjourned at 9:07 pm

This presentation was not recorded for rebroadcast on the Internet. Other meeting presentations can be accessed on the web at <http://www.aics-research.com/lectures/aslcnm/>.

The May meeting of the Astronomical Society of Las Cruces concluded at 9:10 p.m.

-Respectfully submitted by John McCullough, ASLC Secretary



**Calendar of Events June/July 2011 (MDT)**

June 24	7:30 p.m.	June ASLC Meeting
28	Morning	Mars, Moon, and Pleiades close together
July 01	2:54 a.m.	New Moon-Partial Solar Eclipse visible in Antarctica
04	9 a.m.	Earth farthest distance from Sun this year (94,511,888 miles)
08	12:29 a.m.	First Quarter Moon
15	12:40 a.m.	Full Moon
15	7:30 p.m.	July ASLC Meeting

Be sure to visit our web site for the latest updates: <http://www.aslc-nm.org>

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

