

The High Desert Observer

The Bulletin of the Astronomical Society of Las Cruces

August, 2012

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 Society and public educational projects. Members receive the *High Desert Observer*, our monthly newsletter, plus membership to the Astronomical League, which includes their quarterly publication, *Reflector*.

ASLC dues are \$30.00 per year (from January 1 to December 31), which includes electronic delivery of the *HDO*. Prorated dues are available for new members. Dues are 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 \$5.00 (per year) Sky and Telescope magazine discount.

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Next Meeting

Our August meeting will be held on Friday, August 24, in Room 77 at Doña Ana Community College, with the following schedule:

7:00 pm - 7:30 pm Show & Tell

7:30 pm - 8:00 pm Business Meeting

8:00 pm - 9:00 pm Guest Speaker & Presentation

This month's speaker is Dr. Rene Walterbos, Professor of Astronomy at NMSU. He will be discussing his research on the Andromeda Galaxy.

Editor's Note

As the new Editor of the *High Desert Observer*, the first thing I would like to do is thank Bert Stevens for his dedication in preparing this monthly newsletter. I will try to maintain his high standards and offer our membership the best possible product in the years ahead.

As individuals, we all have our own style. Some new ideas will be brought forth in this and future issues of the HDO. If any of our readers have any criticism, constructive or critical, please address comments to my attention at ronjkramer@aol.com.

We will always be seeking articles and items of information for inclusion in future issues of this newsletter. Please consider contributing images, research notes, book reviews, new product reviews, and whatever else you think would enhance this publication. Thank you. - Ron

A Note From the President, August, 2012

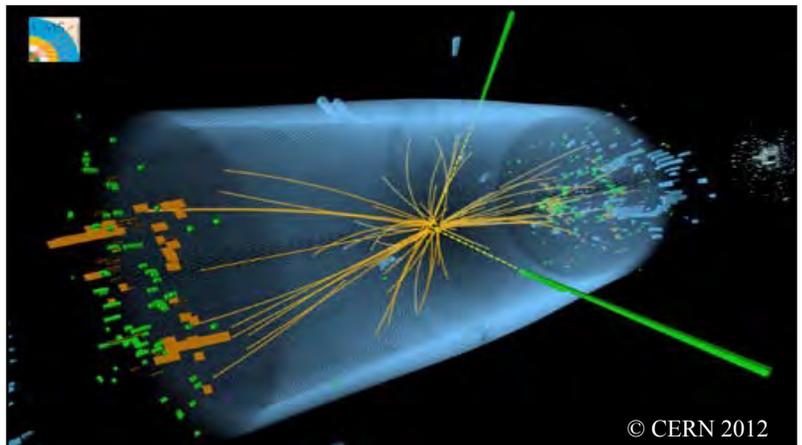
Here it is, August. The Monsoons will be behind us shortly and the cooler weather (relatively speaking) should be rolling in soon. The evenings are already in the 70's and even though the skies are not quite as clear as we would prefer (pretty yucky, actually), there are several evening and morning planets and lots of the brighter fuzzies to be seen (M13 and M57 are great examples. The good news is that our old friends, Orion, the Pleiades and the Hyades, are rising earlier and earlier. Soon we will be able to actually see them and still get some sleep before dawn.



Our new Grants Chair, Sid Webb is working on a proposal with New Mexico Space Consortium (Director, Pat Hynes) for a \$5,000 grant to allow us to add even better equipment for research. I have reviewed a copy of Sid's Grant Proposal Draft and together, he and I are tweaking the details. It will be shortly presented to our Board of Directors for comment and approval.

Ann McPhee still has lots of apparel for sale, including hats, t-shirts (short- and long-sleeved), hoodies and denim shirts. Please talk to her at the next meeting if you're interested in purchasing this gear.

This month had a few very exciting astronomical events. First, and foremost, it looks like the Higgs Boson may have finally been detected. The Large Hadron Collider, managed by CERN in Geneva, Switzerland detected a new "heavy" particle, which may be responsible for giving mass to elementary particles, such as quarks and electrons. This so-called "God Particle" had been sought after since postulated in 1964. Physicist Stephen Hawking lost a \$100 bet to another physicist, Gordon Kane, which was placed in 2002. Hawking thought the particle would "never be found."



Visualization of a single array of particle debris from the decay of a Higgs Boson



The second event was the landing of Curiosity on the surface of Mars. This SUV-sized rover will explore the Martian surface to determine if conditions are ripe for living organisms, whether life had ever existed, or does life still exist on our red neighbor. The landing was a complete success, and within hours of touching down on Mars' surface, Curiosity started taking images and transmitted them to Earth for analysis and review. The estimated two year life of the rover should answer many questions about Mars. This image shows the "blast marks" caused by the exhaust of the descent engines. One of the rover's six wheels is at lower right.

We live in fascinating times, indeed.

Hope to see you at the August 24 meeting. We will be seeking volunteers for the Nominating Committee; elections will be held in October. Please think about running for office.

There is also a star party at Bosque State Park the same evening, so you have a choice on which to attend. We trust you will choose wisely.

Ron J. Kramer

Events

ASLC hosts deep-sky viewing and imaging at our dark sky location in Upham. We also have public in-town observing sessions at both the International Delights Cafe (1245 El Paseo) and at Tombaugh Observatory (on the NMSU Campus). All sessions begin at dusk.

We frequently offer solar observing at the Farmer's Market on Saturday mornings. For further information please visit our website at www.aslc-nm.org.

Outreach

Outreach is a very important part of ASLC. We are always looking for more volunteers to help us educate the public. Even if you do not have a portable telescope to bring to the events, please consider attending our public outreach programs to help answer questions, share knowledge and point out constellations in the sky.

Leasburg Dam State Park Observatory Update

by Ron Kramer

We are still waiting for the State Parks Department to start ground breaking on the Leasburg Dam Observatory. The process of weaving it's way through the governmental entities is no better in New Mexico than anywhere in the United States. The money has been allocated, some contracts have be set and the blessings have been given. We're still aiming at "first light" before the end of this year and I have pushing as hard as possible (without getting anyone too upset) to make it happen. Once the building has been started, and we reach the new ASLC Fiscal Year (starting October 1, 2012) we will start purchasing the necessary equipment for outreach and research programs.

Loaner Telescope Program Update

by Ron Kramer

A 10.1" Coultter Dobsonian reflector has recently been donated to our Society by Rick Barton. It is need of a replacement rack & pinion focuser as well as a 4" x 4" x 1/8" thick aluminum plate to mount the focuser to the tube, but otherwise it is optically and mechanically intact. If someone is willing to contribute either of the parts mentioned above, please contact me.

With the addition of this instrument, we now have a total of five scopes in the program:

100mm Unitron refractor
12" Dobsonian reflector
10.1" Coultter Dobsonian reflector
2 ETX-90's (Cassigrain)

The 12" Dob and one of the ETX-90's are already being loaned out, but the other 3 instruments are ready to go (the Coultter will be ready once I get the needed replacement parts).

There are also plenty of eyepieces (we recently acquired 10 eyepieces from the Ken Kile estate, plus the 5 that Jerry McManan donated in 2011). Each loaner telescope comes with 2 or 3 eyepieces.

This is a great way to test different apertures and mount configurations before purchasing one for yourself. At the rate of only \$10.00 per month, it's a great bargain. Several of these instruments are valued at over \$1,000.

Loaner Agreement forms are available at each monthly meeting of the ASLC and will shortly be available on our website.

For further information contact ronjkramer@aol.com.

Outreach Activities Roundup

By Jerry McMahan

Saturday, July 21 at the Chihuahuan Desert Nature Park

The previous two attempts to do a star party at the Desert Nature Park did not work out due to clouds and rain. This time was no different. Chuck Sterling, Ron Kramer and Jerry McMahan showed up, but the sky was completely overcast, with no blue showing. There were no cloud holes that even looked a little promising. Our scheduled start time was 9:00 P.M., and it was decided, at around 8:00, that there was no chance of it clearing.

Just before leaving, Ron joked that it would probably clear up by the time we got home. I got to my driveway at about 9:00 and looked up. Saturn, Spica, Arcturus and Vega were in the clear, although it did look pretty cloudy further to the north. I went outside at about 10:00 and there was not a cloud in the sky. So much for our weather predicting abilities.

Moongaze, July 28, 2012

Trish Conley, Steve Shaffer, Dave Anderson, Chuck Sterling and Jerry McMahan were in attendance. Robert Brinks, who had been to several Moongazes and attended the meeting month before last, was there as well.

It was not a promising start since high winds, rain, and some power outages happened not long before I arrived. The sky was mostly cloudy, with enough holes to make it possible that we might see something. When we were at the Desert Park, Ron Kramer commented that we didn't have any control over the weather. I told him that I did have some control over the weather at Moongaze. The clouds did give us a fairly good Moongaze night. I told you so Ron.

Actually we had times of clear seeing and about half-way through it was ten minutes of clouds for every 15 seconds of Moon visibility. It cleared again and we continued until after the restaurant closed. Chuck had his ten inch on Saturn and went to Alberio when Saturn went behind clouds, and back to Saturn when it reappeared. The rest of us were on the Moon.

Robert brought a small Newtonian that belongs to his mother. Some parts were missing, but Steve worked on it and apparently made it usable for the evening.

Steve said that having a woman present (Trish) may have helped attract more viewers. He may have a point since she would make us seem more accessible and Chuck and Steve are obviously pretty intimidating.

Calendar of Events: August / September 2012 (MDT - 24 hr. clock)

| | | | |
|-----|----|-------|---|
| Aug | 17 | 09:55 | New Moon |
| | 22 | 01:50 | Moon near Mars |
| | 23 | 13:39 | Moon at Perigee |
| | 24 | 04:45 | Neptune at Opposition |
| | 24 | 07:53 | First Quarter Moon |
| | 24 | 19:00 | ASLC Monthly Meeting |
| | 24 | 19:30 | Star Party at Bosque State Park |
| | 25 | 19:30 | MoonGaze at International Delights Cafe |
| | 31 | 07:58 | Full Moon |
| Sep | 07 | 00:00 | Moon at Apogee |
| | 08 | 07:15 | Last Quarter Moon |
| | 08 | 04:59 | Moon near Jupiter |
| | 12 | 11:09 | Moon near Venus |
| | 13 | 02:52 | Venus near M44 |
| | 15 | 20:11 | New Moon |
| | 17 | 23:05 | Moon near Spica |
| | 22 | 08:49 | Autumnal Equinox |
| | 22 | 13:41 | First Quarter Moon |
| | 29 | 00:35 | Uranus at Opposition |
| | 29 | 21:19 | Full Moon |

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

Southern Arp Peculiar Galaxies

Halton Arp continued his studies of peculiar galaxies and teamed with Barry Madore in 1973 to generate the Southern Arp Peculiar Galaxy Atlas. This collaboration lasted for over 10 years analyzing plates from the Schmidt 48 inch Telescope in Australia for declinations of -90 to -22 degrees.

The Southern Atlas² was completed in the eighties and published in 1987. The Southern Arp/Madore collection is significantly less observed and described as compared to the classic Northern Arp. However, the details and categories provided are much more extensive. The section on “Southern Arp Galaxy Classification” details the 24 categories organized by Arp and Madore but does not indicate the plethora of additional sub categories and details they provided.

Photography that can address slightly fainter surface-brightness levels than usual reveal the much larger outer areas of many galaxies. In turn these outer regions, being less dense, can reveal perturbations and distortions more easily. These perturbations can come from internal activity such as explosions or ejections, or from interaction with neighboring objects. It is the combination of fainter surface-brightness detection and wide-field registration that enabled this new area of astronomical research to be opened up.³

In total 77,838 galaxies were studied out of which 6,445 were classified as peculiar, indicating that eight percent of all galaxies looked at were peculiar. The Astronomical League’s List for the Southern Arp Collection is comprised of 498 Peculiar galaxies. But unlike the Northern Arp they are not classified by Arp number but by an **AM nnnn-nnn** number and their standard catalogue designations such as NGC, ESO, etc.

Although this Catalogue was developed without specific reference to the earlier *Atlas of Peculiar Galaxies* (Arp 1966), many of the Categories illustrated in that Atlas were utilized. Some Categories were given slightly different names. For example, the *Northern Atlas* had an important class of objects called “Companions on Arms,” which is now Category 9: M51-Types.

But many Categories turned out to be essentially the same; some examples from the earlier Atlas being “galaxies with associated rings,” “galaxies with jets,” “disturbed galaxies with interior absorption” and “chains of galaxies.” New categories were able to be added to the present Catalogue because of the large number of galaxies included and because they took advantage of the ability to compare surrounding sky areas. The new Categories include the apparent associations (Categories 1, 8, 23, 24), and the galaxies of very high or very low surface brightness (Categories 13 and 20).⁴

Overview

My plan of action to observe the Southern Arp collection was to attack the constellations as they were dropping out of view into the southwest horizon. I had to act fast to catch them at their best position in the night sky. The action plan was to observe Sagittarius, Aquarius, Indus, Microscopium, Cetus, Grus, Pisces Austrinus, Sculptor, Phoenix, Fornax, and Eridanus in that order. I had planned dates for other constellations to see if I could pick off some low ones in Horologium and Columba and some special cases in constellations that I have never observed such as Caelum and Pictor.

2 *A Catalogue of Southern Peculiar Galaxies and Associations*, Arp, H. C. and Madore, B.F., Vol. 1, Positions & Descriptions, Cambridge University Press, 1987.

3 http://ned.ipac.caltech.edu/level5/SPGA_Atlas/frames.html

4 *ibid.*

I have had some experience with Caldwell Objects that were low on the horizon from a past project so I knew what was in store for me with these low objects from the Southern Arp Galaxies. I was hoping that I could use my 18" reflector since my 4½ inch refractor may not be able to pick up the galaxies just above the horizon.

I was expecting to have a success rate around 50% but the visual conditions and new site west of Las Cruces allowed me to obtain an observing success rate of over 80% and in some cases such as in Grus and Pisces Austrinus near 100%. This success rate allowed me to complete the first 100 objects well in advance of what I had expected. It only took 7 nights of observing with an average rate of 14 objects per session. The fact that many of the galaxies are fairly close together in the small constellations certainly helped. It was essential to preplan where and when the constellations would be at their maximum declination for optimum observing. This was of particular importance for Indus, Phoenix, and Sculptor.

The 18" Ultra Compact (UC) Obsession was used for all the observations. This enabled me to observe objects along with some details either with the 6mm Ethos or 22mm Panoptic eyepieces. The 6mm seemed to work best for the very low objects because of the loss of magnitude due to diffraction. For some objects in Sculptor and Fornax the 22mm was very successful in seeing and isolating the galaxies. The 6mm was used to observe additional detail.

It was necessary to explore for an additional viewing site to get the necessary southern view with no local light pollution and reduced sky glow. I found a suitable spot about half way between Las Cruces and Deming on the outskirts of the Burrell Ranch. This is now designated as location 116NW at Latitude 32 17' 40" and Longitude -107 16' 47". It falls within the darkest areas within a 50 mile radius of Las Cruces and rivals our dark site at Upham that does not have a good view to the South.

Astronomy League Arp Peculiar Galaxies Observing Club^s

My observing logs were submitted to the Astronomical League for completing the requirements for observing 100 Southern Arp Galaxies. The observing list has 498 Southern Arp Galaxies and I estimated that about 375 of these galaxies are probable within reach of the Las Cruces area. There are 122 galaxies above -30 degrees. There is also a Northern Arp list which is better known for the Northern Hemisphere.

Most of the Southern Arp Galaxies on the AL's List are brighter than 15th magnitude, with most within the range of medium-size amateur telescopes.

Observers are required to observe any 100 Southern Arp Galaxies from the List for a Certificate and pin. The galaxies can be located manually, with digital setting circles, or with Go To enabled telescopes. This makes it easy to get to the general location and allow more time to analyze the objects to discern the characteristics and categories. One may also obtain another certificate for the Northern Arp Peculiar Galaxies. There is also an "imaging" certification that requires the objects to be submitted as astrophotos.

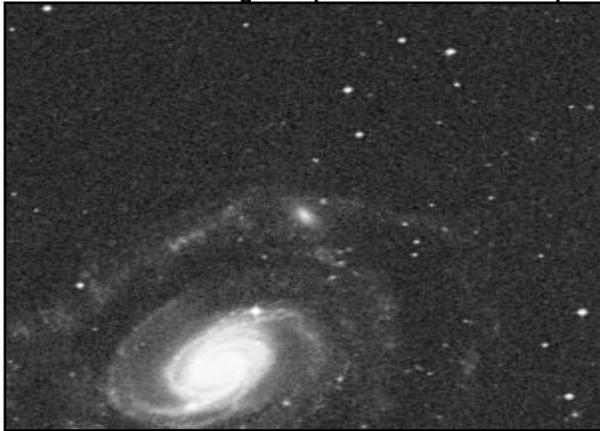
Southern Arp Galaxy Classification

Southern Arp Galaxies visual classification has a very complex schema that also has multiple subcategories for the major category numbers. The entire classification is beyond the scope of this article but are readily available at http://ned.ipac.caltech.edu/level5/SPGA_Atlas/frames.html

| Category # | Description | Percent of Total Southern Arp |
|------------|--|-------------------------------|
| 1 | Galaxies with Interacting Companions | 5.5% |
| 2 | Interacting Doubles | 12.6% |
| 3 | Interacting Triples | 2.0% |
| 4 | Interacting Quartets | 0.5% |
| 5 | Interacting Quintets | 0.1% |
| 6 | Ring Galaxies | 3.1% |
| 7 | Galaxies with Jets | 2.4% |
| 8 | Galaxies with Apparent Companions | 11.5% |
| 9 | M51-Types | 2.0% |
| 10 | Galaxies with Peculiar Spiral Arms | 4.1% |
| 11 | Three-Armed Spirals and Multiple-Armed Spirals | 0.5% |
| 12 | Peculiar Disks | 2.8% |
| 13 | Compact Galaxies | 6.4% |
| 14 | Galaxies with Prominent or Unusual Dust Absorption | 1.6% |
| 15 | Galaxies with Tails, Loops of Material or Debris | 3.5% |
| 16 | Irregular or Disturbed Galaxies | 4.2% |
| 17 | Chains | 4.0% |
| 18 | Groups | 4.9% |
| 19 | Clusters | 1.6% |
| 20 | Dwarf Galaxies | 6.8% |
| 21 | Stellar Objects with Associated Nebulosity | 0.7% |
| 22 | Miscellaneous | 1.4% |
| 23 | Close Pairs | 11.4% |
| 24 | Close Triples | 5.6% |
| 25 | Planetary Nebulae | 0.9% |

Example Target Classifications⁶

Cat 1 – Interacting Companion - NGC 289 ScIsp



Cat 8 – Gal with apparent Companion - NGC 3717 Hyd



Cat 23 – Close Pairs - NGC 5063 Cen



Cat 1/14/23 Companion with Dust and Interactions - NGC 5078 Hyd



⁶ [http:// spider.seds.org/](http://spider.seds.org/)

| Cat | Description | Class | Con | Size † | Mag |
|---------|---|----------|-----------|---------|------|
| 1 | Interacting Companion | NGC 289 | Sculptor | 5.1X2.6 | 11.7 |
| 8 | Galaxy with Apparent Companions | NGC 3717 | Hydra | 6 X1.1 | 12.2 |
| 23 | Close Pairs | NGC 5063 | Centaurus | 2.3X1.8 | 13.3 |
| 1/14/23 | Companions, Close Pairs, and Dust Absorption Lane | NGC 5078 | Hydra | 4 X1.9 | 11.8 |

Observation Process

The following matrix shows the type of categories that were observed for my first 103 Southern Peculiar Galaxies. There were a surprising amount of galaxies with interacting companions (Category 1) but Categories 2 and 8 were consistent with the expected distribution percentages. Categories 22 and 25 are not included since they are not galaxies. Grus, Sculptor and Fornax had close triples and several dwarf galaxies were observed.

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 23 | 24 | Totals | | |
|---------------|-----------|-----------|----------|----------|----------|----------|----------|-----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------------|
| Sge | | 1 | | | | | | 2 | | | | | | | | | | | | | | | | | 3 | |
| Aqr | | 2 | | | | | | 1 | | | | | | 1 | | | | | | | | | | | | 4 |
| Indus | 3 | | | | | | | 1 | | | | | 1 | | | | | | | 1 | | | | | | 6 |
| Micro. | 2 | 2 | | | | | | 4 | | | | 1 | | | | | | | | | | 1 | | | | 10 |
| Cetus | | | | | | | | 2 | | | | | | | | | | | | | | | | | | 2 |
| PsAust. | 3 | 3 | | | | | | 3 | 2 | | | | 1 | | | | | 2 | | | | | | | | 14 |
| Grus | 1 | 1 | | | | | | 7 | 2 | | | | 1 | | | | | 1 | | | | | | 2 | | 15 |
| Sculptor | 3 | 1 | | | | | | 8 | 3 | | | 1 | | | | | | | 1 | 1 | | | 1 | | | 19 |
| Phoenix | 3 | | | | | | | 3 | | | | | | | | 1 | | | | 1 | | | | | | 8 |
| Fornax | 3 | 1 | 1 | | | 1 | 1 | 10 | 1 | | 1 | 1 | 1 | 1 | 1 | | | | | | | | | 1 | | 22 |
| Totals | 18 | 11 | 1 | 0 | 0 | 1 | 1 | 41 | 0 | 8 | 0 | 2 | 1 | 4 | 1 | 2 | 0 | 3 | 1 | 3 | 0 | 1 | 4 | 1 | 4 | 103 |

Indus was quite difficult to obtain good observations since it was already low on the horizon when I started this project. Diffraction was in play and I had to use high magnification to locate the objects. GOTO could not be used due to the software stops in the scope. The objects were close together and therefore easier to locate with my preplanned charts. I needed the 6mm Ethos with an 18 minute FOV to cut through the diffraction. Several objects in Indus were out of reach during my sessions; however, I was very satisfied with the initial progress on this transient constellation.

Microscopium and Pisces Austrinus were timed correctly for optimum observing and I was able to complete most of the galaxies on the AL List. Grus and Fornax were by far the richest constellations to observe with a vibrant selection of Peculiar Galaxy categories. For Grus and Fornax the 22mm Panoptic with a FOV of 44 minutes was the best to locate the targets with the 6mm/320X eyepiece used for details for some of the objects.

Sculptor proved to be somewhat troublesome in that the galaxies were difficult to locate. In fact, some of the objects required multiple sessions but I was dogged in the sense that I wanted to get all of the objects. Sculptor with its triple galaxies and galaxy group was not disappointing.

I specifically timed Phoenix early in the morning to observe these targets since I have never observed in this constellation previously. The newly founded location off of Exit 116NW, 5.6 miles up County Road C001 was necessary to observe Phoenix since the skies were very dark (Bortle 2/3) at this observing site and Phoenix laid in the best viewing slot to the SSW.

There are no Messier objects in the Southern Peculiar Galaxy Collection while there are 10 in the Northern Group including the well-known M51. There are several Caldwell Objects in the Southern peculiar galaxies such as C#67 in Fornax, a barred spiral with companion, C#70 the southern pinwheel in Sculptor, C#77 the split galaxy in Centaurus, and C#83 the tweezers galaxy also in Centaurus.

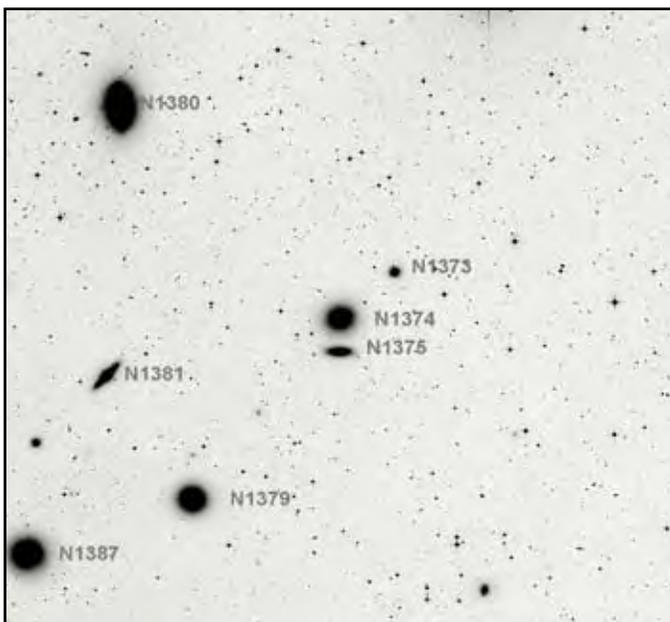
There are six objects that are both on the Northern and Southern List:

| Arp # | AM # | Constellation | NGC |
|-------|--|------------------|---------------------------|
| A226 | AM 2217-245 | Aquarius | NGC 7252 |
| A93 | AM 2225-250 NED01 AM 2225-250 NED02 | Aquarius | NGC 7284 NGC 7285 |
| A153 | AM 1322-424 | Centaurus | NGC 5128 Caldwell # 77 |
| A77 | AM 0244-302 | Fornax | NGC 1097 |
| A154 | AM 0320-372 | Fornax | NGC 1310 |
| A14 | AM 2233-261 | Pisces Austrinus | NGC 7314 |

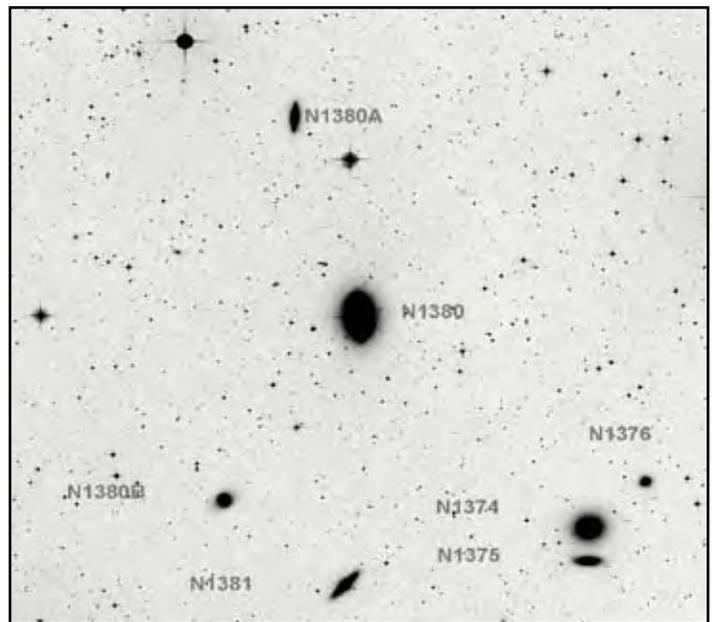
Notable Observed Southern Peculiar Galaxies

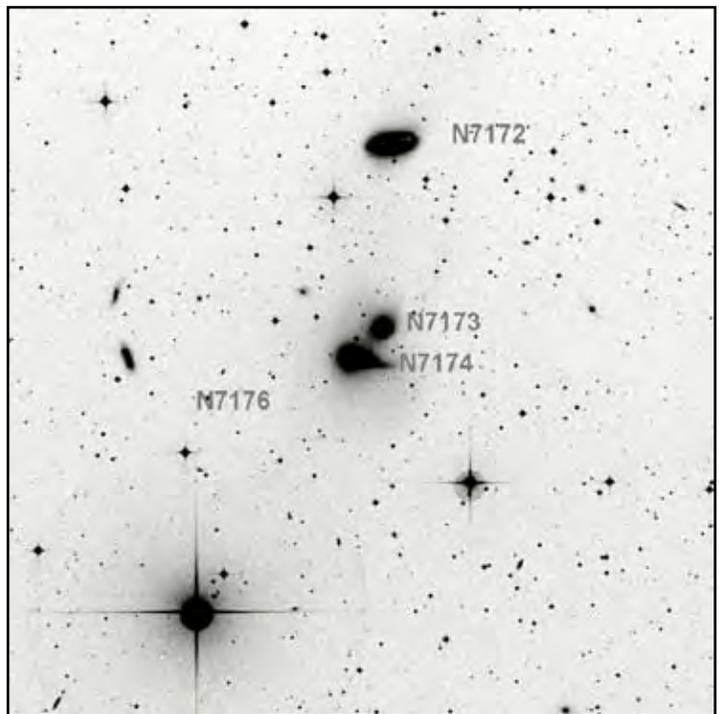
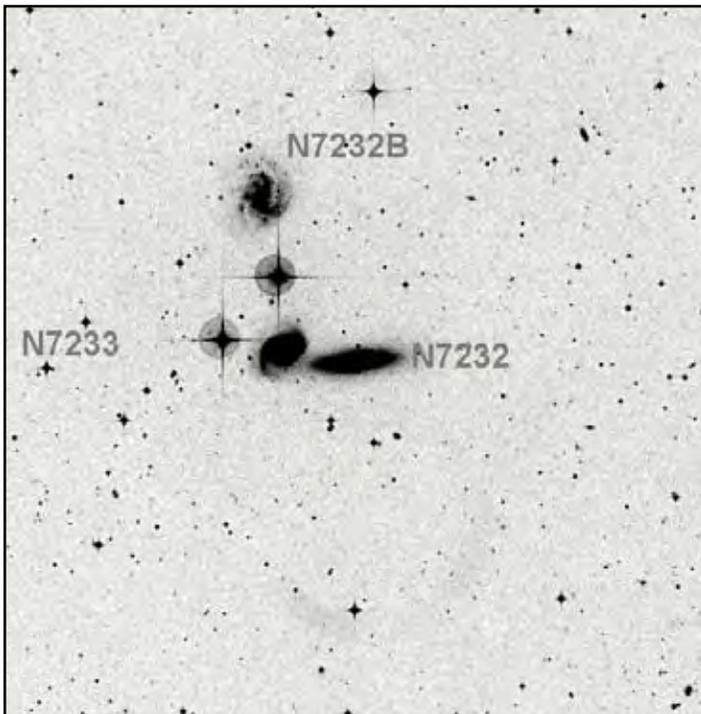
There were many targets that stand out in my observations but the following targets were specifically spectacular in that there were a significant amount of galaxies in the FOV and the objects were visible without averted vision and showed a vivid sample of peculiar galaxies.

NGC 1374 and Companions in Fornax [FOV=44']



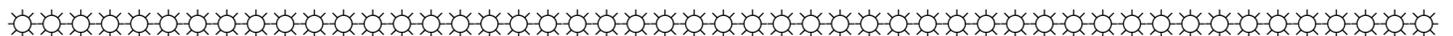
NGC 1380 and Companions N1380A&B in Fornax [FOV=44']





Summary

I plan to continue to observe and record Peculiar Galaxies as I encounter them in my observations. Observing the Southern Peculiar Galaxies has exceeded my expectations. I will return to the expanded list and try to complete as many as possible from Las Cruces. It could be greater than 250 objects with Hydra, Antlia, and Centaurus coming up in the next months along with the expected objects in the more common constellations such as Canis Major, Corvus, Eridanus, and Puppis. In addition, I will also look to the more common classical Northern ARP Peculiar Galaxy collection as a future project.



Minutes, July 2012 ASLC Meeting

Show & Tell:

David Anderson introduced this month's session of "Show and Tell". Sidney Webb presented information on solar damage to the human eye (very important considering the number of Society outreach events that include solar observing). Chuck Sterling passed around a copy of the "*Deep Sky Image Catalog*" by Roger Blake that he finds very useful for both imaging and visual observing. David demonstrated the finder 'scope mount(s) he has built to use with the main telescopes he has also built. Ron Kramer displayed some of the equipment that Ken Kile had acquired and that Judy Kile is disposing of now. Note: A formal sale of these items will take place following tonight's presentation.

Call to Order:

Ron Kramer, President, Astronomical Society of Las Cruces (ASLC), called the business meeting to order at 7:24 pm., 27 July 2012, Room 77, Dona Ana Community College, Las Cruces, New Mexico.

President's Comments:

Ron Kramer, President, welcomed the group, noting that tonight's meeting was again preceded by an excellent "Show and Tell" session organized by David Anderson. Ron thanked David and noted again that presentations for "Show & Tell" don't have to be highly technical to be informative. Almost anything is "fair game" for a topic. Ron asked that attendees be sure to sign the attendance rosters at the rear of the room.

Ron welcomed visitors to tonight's meeting: Joseph Clower is attending his first meeting tonight. He is relatively "new" to Las Cruces, being here for about three months after growing up in southern California. His interest in astronomy was fostered by his grandfather, a US Navy veteran. There were no new members present.

Secretary's Report:

The Secretary, John McCullough, reported that the minutes for the June 2012 meeting were submitted for publication in the July issue of the Society newsletter, the *High Desert Observer (HDO)*. Robert Williams moved that the minutes from the June general meeting be accepted as submitted; Sid Webb seconded. The motion passed by acclamation. There was not an additional Secretary's report.

Treasurer's Report:

The Treasurer, Trish Conley, provided a report on the status of the Society's accounts. The 2013 budget was approved by the Board of Directors and has been published in the *HDO*. Income vs. outlays for the previous month resulted in a deficit of slightly less than \$600 with the major outlays being purchases of eyepieces from the Kile estate and an additional print run of Society brochures. Tracy Stuart moved to accept the Treasurer's report and Robert Williams seconded. The motion passed by acclamation. There was not an additional Treasurer's report.

Committee Reports:

Apparel Committee:

Ann McPhee, Committee Chairman, was not present. She had informed Ron Kramer that she continues to look for "safari" hats and/or caps with neck shields as the next apparel item to be offered. This is a fund raising opportunity for the Society as \$1.00 from the sale of each item benefits the Society.

Loaner Telescope Program:

Ron Kramer continues to act as Committee Chairman. He purchased ten (10) eyepieces and an EXT90 telescope (the initial Society-owned EXT90 is currently on loan) from the Kile estate for use in the program. A 10.1" Coulter, possibly originally owned by the Society, has been donated to the Loaner program. Loaner agreements are pending for the Society's 12" Dobsonian and the second EXT90. The Society continues to search for the Celestron C8 believed to last be in the possession of Bernie Joplin. There are legal issues involved, so if any members have information on the whereabouts of either this equipment or Bernie, please let Ron know. Ron stated that excess and/or redundant equipment may be offered for sale to Society members or the public at large to raise funds for the Society. Members may contact Ron if they have questions about the loaner policy, including how to donate equipment to the program.

Membership:

John McCullough, Committee Chairman, reported that new informational brochures are available for distribution to the public. A new member, Dr. Alex Woronow from Silver City, joined the Society this month (visitor Joseph Clower also joined the Society following tonight's meeting).

Leasburg Dam State Park (LDSP) Observatory Committee:

Ron Kramer, Committee Chairman, reported on the construction of the observatory at LDSP. The State of New Mexico Parks

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Department will build or buy a sliding roof structure to house the observatory. Total construction cost is expected to be approximately \$75,000. Bids are still being solicited and contracts are still being let. Ground breaking is expected sometime in August with first light expected by the end of this year.

Tombaugh Observatory:

Steve Shaffer, Committee Chairman, reported the NMSU Astronomy Department open house schedule is due out in August in conjunction with the start of the fall semester. He is still working maintenance, primarily water leak, issues with the University. The telescope and Grubb mount remain in good shape.

Outreach Committee:

Chuck Sterling, Outreach Coordinator, reported on a star party at the Chihuahua Desert Nature Park on 21 July that was deemed "clouded" out before full darkness. The monthly Moon Gaze at International Delights Café (IDC) will take place on 28 July. A star party at Mesilla Valley Bosque State Park is scheduled for 24 August (the same night as the ASLC monthly meeting). A star party is planned at Central Elementary, exact date to be determined. Three (3) events were planned in July for clients of the Dona Ana County Health and Human Services; the first one was rained out. More details will follow, watch the yahoo group.

Publicity:

Daniel Giron, Committee Chairman, was not present but has been very active. The Society has received good exposure in the community, papers, radio and other media.

Society Website:

Steve Barkes, web master, was not present.

There were no additional committee or officer reports.

Old Business:

1. Fundraising/Grants - The Society still needs a "go-to" person for grant proposal writing. If you are familiar with this process or know of someone with grant writing experience/expertise who can help the Society, please let Ron know as soon as possible.
2. Astronomy Gear Swap & Auction – This will be the topic of a future monthly meeting.

There was no additional old business discussed.

New Business:

1. ALCor – Janet Stevens has resigned as Astronomical League (AL) CORrespondent, i.e., ALCor, effective this month. Responsibilities of this position include corresponding with the AL on various League issues, including updating the Society's active membership list for distribution of the quarterly *Reflector*. Trish Conley will fill the position for the foreseeable future.
2. *HDO* Editor – Bert Stevens has resigned as *HDO* editor with the distribution of the July issue. The editor must edit and produce the monthly newsletter. Ron Kramer will fill in for the time being, but requires "backup".
3. State-wide Star Party – The president of The Albuquerque Astronomical Society (TAAS) would like to hold a New Mexico-wide star party this fall. A proposed location is the interpretive center at the Camino Real Heritage site south of Socorro. This would be an overnight event that the center has tentatively agreed to host. The members present expressed support for this event.
4. Astronomy Day 2012 – This event will take place on 20 October. Tracy Stuart will chair the planning committee for this event. The members present expressed support for this event.

5. Renaissance ArtsFaire 2012 – This event will take place 03-04 November at Young Park. Tracy Stuart will also chair the organizing committee for this event. The members present expressed support for this event.

There was no additional new business for discussion.

Announcements:

Items for Sale:

1. As noted earlier, items from the Ken Kile estate will be available for purchase following the presentation.

No additional items were announced for sale.

Announcements:

There were no announcements made.

Recognitions/Achievements:

John Kutney has received the Master Observer Award from the Astronomical League (AL). To qualify for this recognition, a candidate must acquire multiple (10 minimum) observing awards. John has received the Herschel 400, Lunar, Binocular Messier, Southern ARP, Flat Galaxy, Planetary Nebula, Advanced Open Cluster, Globular Cluster, Messier, and Double Star club certificates and the Caldwell Observing Award leading to this recognition. John briefly described the effort it took to make the approximately 1100 observations required to qualify for all the certifications. Ron Kramer presented John with his certificate and a commemorative award pin.

There were no additional recognitions or achievements announced at tonight's meeting.

Presentation:

This month's presentation was made by Candace Barenti, a graduate student in the Astronomy Department at New Mexico State University and PhD candidate in Planetary Science. Her topic was "Solar Activity and its Effect on Planets". Candace noted that the Sun has a 22-year cycle of activity and is currently approaching solar maximum, peaking in 2013. She discussed this cycle, why it happens and the kind of activity that then occurs. These include solar flares and coronal mass ejections (CMEs), which can affect the Earth in dangerous and beautiful ways. She also described recent activity of the Sun, which has been quite large, and particularly for her, exciting! Candace studies the nightglow/aurora on Venus and how it is connected to solar activity, so she discussed the auroras on Earth and Venus, as well as the effects of solar activity on some of the outer planets.

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 July meeting of the Astronomical Society of Las Cruces concluded at 8:59 pm.

-Respectfully submitted by John McCullough, ASLC Secretary

Classifieds

The following items are on a "first-come, first-served" basis, to all readers of the ASLC's *High Desert Observer*. If you are interested in a particular item, please contact the individual listed next to the item. In some cases the ASLC is assisting the seller, so you can contact the ASLC member.

All items are sold "as is" unless otherwise warranted by the seller. It is suggested that the buyer inspect and evaluate the item prior to purchasing. Items are non-refundable and non-returnable, unless prior agreement is made between the seller and the buyer.

If you have an item to sell, please contact ronjkramer@aol.com

1. ASLC and ALPO founder, Walter Haas, is selling his primary telescope, a 12.5-inch Newtonian. He is moving out of his house into smaller quarters and needs to divest himself of some of his equipment. His telescope is f/8.1 with a Cave mirror, but it may have been reconfigured by someone in Connecticut. It is on a German Equatorial Mount with an electric clock drive. It is not a Go-To and is currently located in Las Cruces. Walter was told the telescope is worth about \$1,000, but he is willing to negotiate. If you are interested, please call him directly at 575-522-0763. Please note that the mount is rather permanently attached to a concrete pier, and could be very difficult to either remove or to move to another location. The price is for the OTA and accessories. If you want the mount, price, if any, will be negotiated.



2. AstroTrac TT 320 Astrophotography Drive System. Here are some of the seller's comments, "I bought this several years ago and successfully took widefield images with up to 200mm lenses. It is in excellent condition and works great. Comes with a polar scope (the illuminator required a new switch to be installed but works fine), an 8 AA battery power supply and a 12V car plug. In order to get up and running, you will need a tripod and a ball head. This is the perfect way to get into astrophotography, using a DSLR and forgiving focal lengths. Pictures were taken using the 320." Please contact Brian directly at ottum@comcast.net



3. Rick Barton has the following equipment for sale:

- A. 10" SkyQuest Dobsonian F/4.5 1250mm FL Asking Price \$525.00 in Perfect!! condition.
- B. 8" Meade LX-10 SCT F/10 2000mm FL In perfect condition Asking Price \$800.00
- C. 80mm 3.1" Astro Tech ED- APO - Doublet F/7 550mm FL Refractor Asking Price \$ 450.. In Perfect Condition, Also comes with a very nice case.

Rick can be contacted at 575-541- 5940 or by e-mail adrienrick@basicisp.net [Please Only Serious Buyers] He lives in Las Cruces and recently donated a 10.1" Coulter Dobsonian to the ASLC. It would be great if someone would acquire one of his pieces.

The following materials (except for the LX200) will be brought to the August meeting for examination and purchase:

4. There is still a bunch of equipment as part of the Ken Kile estate. Please contact Ron Kramer (ronjkramer@aol.com) if you're interested in any of the following (there is too much to list).

- Celestial Seeker, Illuminated Constellation Finder; \$5.00
- Meade, 10" LX200 with Autoguide, dew remover, field tripod, dolly, solar filter, etc.; \$2250.00
- Meade, #1244 Electric Focuser for ETX-90 and ETX-105, new in box; \$20.00
- Meade, Variable Projection 1.25" Camera Adapter, in original box, \$35.00
- Meade, Basic 1.25" Camera Adapter, in original box, \$20.00
- Meade, MA 12mm Astrometric Illuminated Reticle, 1.25"; \$45.00
- Meade, Variable Polarizing System, 1.25"; \$25.00
- Meade, #647 Flip-Mirror System, 1.25"/2"; \$110.00
- Meade, #928 45° Erect-Image Diagonal Prism, 1.25"; \$30.00
- Meade, #673 Dew Shield for ETX-90; \$15.00
- Meade, T-Mount, Pentax K; \$10.00
- Orion, 1.25" Extension Tube, in original box; \$10.00
- ScopeTronix, MaxView DSLR 1.25" Camera Adapter; \$70.00
- ScopeTronix, MaxView DSLR 2" Camera Adapter; \$125.00

5. The following items are part of an anonymous donation. Prices are negotiable. Please contact Ron Kramer (ronjkramer@aol.com) if interested. Our Society gets 100% of the proceeds from this material:

- Argus 40 camera, uses 620 film, 75 mm lens with case, built in August, 1953; \$10.00
- Canon, Canonet 28, 35mm film camera; \$5.00
- Capital TK-79 Light Meter, with carrying case; \$5.00
- PRO mini-flash; \$2.00
- Soligor, 400mm f5.6 telephoto lens, for Pentax (needs good cleaning); \$20.00

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for Over 60 Years

