



President's Message - November 2011

The days are shorter, the nights are cooler and the skies are clearer, so the end of the year must be approaching. This is when our "busy season" begins: The last few days of October had three major ASLC events:

- Friday, October 28: ASLC Annual Meeting, including elections; new officers include Ron Kramer (President), Tracy Stuart (Vice President), John McCullough (Secretary), Robert Yearly (Treasurer), Trish Conley (Director-at-Large), Steve Shaffer (Director-at-Large) and Bert Stevens (Immediate Past President). My congratulations to all the officers, and my thanks to the 2011 officers who did an excellent job. The new officers take effect on January 1, 2012. My thanks go out to the Nominating Committee.
- Saturday, October 29: Fountain Theatre (Mesilla) had a viewing of **Nostalgia For The Light**, an excellent movie about the Atacama (Chile) observatories and the victims of the Pinochet government, whose remains were dumped at Atacama. I was invited to give a brief (under 10 minutes) introduction to the film, which I agreed to do before falling ill. With my laryngitis it was impossible to give the presentation. Thanks to Trish Conley for speaking in my stead. After the film, Trish, Ann McPhee and I brought out some telescopes and gave the movie goers views of Jupiter and the Pleiades. About thirty people were at the event.
- Sunday, October 30: The Friends of Leasburg Dam and ASLC co-hosted "Music and the Stars at Leasburg Dam". Daniel Park, formerly from Las Cruces and presently living in Austin, provided the music along with Rein Garcia. They entertained a crowd of about forty in the late afternoon with their rendition of music from Otis Redding, Neil Diamond, Cold Play, Jimi Hendrix and many others. Snacks were served as well. After the music, ASLC members Chuck Sterling, Steve Shaffer, Jerry McMahan, Rich Richins, Ann McPhee, Trish Conley and I brought out telescopes. Under a beautiful evening, we provided attendees views of Venus, Jupiter, the Moon and a number of deep sky objects. It also gave our ASLC members a chance to check out the dark skies at Leasburg; we are planning to build an observatory there in 2012.

The first week of November had several star parties, (Tombaugh, Bosque, Renaissance Faire and others) which kept us rather busy. At the Renaissance Faire we had usually been in the Children's Realm, but our new venue this year was in the midst of a large group of vendors, outside the Realm. We were very, very busy, with no time to take any breaks. Despite the weather, the crowds at our tent were very healthy - at some points we had thirty people in line on three solar telescopes plus more people looking at the Moon through another small scope.

Please remember we have a variety of apparel items, including shirts, hoodies, hats, etc., available for sale. We earn \$1.00 per item sold which helps our Treasury. Contact Ann McPhee for details. Also, please don't forget to pay your dues; it's our major source of income, which we need for many of the projects scheduled for 2012.

NOTE: The November meeting will be one week earlier than normal due to the Thanksgiving Holiday. The meeting will be held on Friday, November 18. "Show and Tell" begins at 7:00, while the regular meeting starts at 7:30.

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.

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Next Meeting

The November meeting will be one week earlier than normal due to the Thanksgiving Holiday. The meeting will be held on Friday, November 18, in Room 77 at Doña Ana Community College. "Show and Tell" begins at 7:00 p.m., while the regular meeting starts at 7:30 p.m. Our speaker for this meeting is Jason Jackiewicz, Assistant Professor of Astronomy at New Mexico State University. He will be discussing "Helioseismology" in our Sun and other stars.

Our Sun rings like a bell, filled with acoustic waves excited by turbulent convection. These waves are continuously excited and travel throughout the solar interior, some even all the way to the core. They are then refracted back to the surface, where they can be measured using ground- and space-based telescopes. The information in the waves tells us about flows, sound speed, chemical abundances, asphericity, and magnetic fields where the waves travelled. This has given us fascinating insights about the structure of the Sun and, consequently, other stars as well.

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 <http://www.aslc-nm.org>.

Outreach

Outreach is a very important ASLC activity. We can always use more volunteers to help educate the public. Even if you do not have a telescope, we can always use more members to help answer questions at the events and point out constellations in the sky.



The 2011 ASLC Holiday Party

By Ron Kramer

The Annual Holiday Party has been scheduled for Saturday, December 10, starting at 5:30 pm at the Experimental Aircraft Hanger, Las Cruces Airport. As usual, we will need some volunteers to organize, coordinate and prepare for the festivities. Setup will begin at 4:00 pm. A map will be provided in the next communications on this event. The five major committees are:

- **Food Committee**

- ★ The party will be a potluck dinner, including meat, salads, desserts and side dishes.
- ★ If your last name begins with "A" through "M", please plan to bring a salad or dessert.
- ★ If your last name begins with "N" through "Z", please plan to bring a side dish (potato, vegetable, etc.).
- ★ If you are planning to bring a meat, please let me know as soon as possible.
- ★ ASLC will provide the drinks (non-alcoholic), cups, dishes, utensils, napkins and meat. Which meat we provide will depend on whether anyone else will bring meat as well.
- ★ I will coordinate the food.

- **Decorations Committee (needs a Chair)**

- ★ This includes the tables, tree and other decorations. I am not certain who has the decorations from last year. Please let me know.
- ★ We need someone to decorate (both setup and teardown).

- **Gift Exchange Committee**

- ★ If you are interested in the gift exchange, please bring a small gift (under \$25.00), wrapped, with your name on the outside. Those who bring a gift will be able to pick a gift from the table.
- ★ Trish Conley has agreed to handle and coordinate the gift exchange.

- **Entertainment Committee (needs a Chair)**

- ★ Music, etc.
- ★ We need someone to bring a "boom box" or similar and a variety of music.

- **2011 Events Presentation Committee (needs a Chair)**

- ★ A short presentation (PowerPoint, etc.) describing the events of 2011, including star parties, outreach events, Tombaugh Observatory, Leasburg Observatory status, etc.
- ★ We need someone to put together the presentation.

Please contact me directly (ronjkramer@aol.com) with the following information:

1. Will, or will not attend (with # of guests if attending) (no one under the age of 15),
2. What food you will bring,
3. Any special needs (electric, heater, cooler, ice, etc.),
4. Are you willing to join or chair any of the committees listed above.

I would like this information by the November 18 meeting. Last year we had about 30 people, and I would like to at least match that number this year.



Visual Observation of Flat Galaxies

By John Kutney

Introduction

It seemed like a natural project for my large diameter Dobsonian and my interest in observing deep sky objects. I selected objects in Aries for the first night of observing since they were high above the horizon and the visual magnitudes were well within the scope limits. What a surprise when I was not able to visually see any of the three galaxies on the list. This was my start of the yearlong effort of “Observing Flat Galaxies” or as best known as “Edge-On Galaxies”. This project gave me a new understanding of the importance of contrast, good transparency, and excellent seeing conditions. It also enabled me to sharpen averted vision skills along with many techniques needed to observe faint objects. Flat galaxies require skills to locate, observe, record the position angle, and describe the object to complete the Astronomy League’s Program. The objective of the program is to become more familiar with this galaxy classification along with the ease or difficulty in detecting them.

The Astronomical League Flat Galaxy Observing Club

I recently submitted my observing logs to the Astronomical League to receive the Certificate and Pin for completing the requirements for observing 100 flat galaxies for the Flat Galaxies Observing Club. The observing list has 220 Flat Galaxies and covers both the North and South Hemispheres. There are 172 galaxies above 30 degrees. Approximately half of the objects can be easily observed visually with an 18” Reflector but the others required excellent seeing conditions plus averted vision to discern the details. This program requires multiple seasons to cover the constellations in suitable sky locations for visual observers.

There are thousands of flat galaxies catalogued with many of them well beyond the limit of visual observations. There were 4,455 flat galaxies over only 56% of the sky. The galaxies on the Astronomical League’s list are brighter than 15th magnitude, with the majority in the range of larger amateur telescopes.

Observers are required to observe any 100 flat galaxies from the list for honorary certification and pin. The galaxies can be located manually, with digital setting circles or with a GoTo enabled telescope. This makes it easier to get to the general location, but is not a guarantee to easy observing. There is also an “imaging” certification that requires the objects to be submitted as astrophotos.

There are no objects on the list from familiar lists such as Caldwell and Messier. New and unfamiliar galaxy catalogs were included on the list such as the Millennium Galaxy Catalog (MGC), European Southern Observatory Catalog (ESO), Uppsala General Catalog (UGC), and the Selected non-UGC Galaxies (UGCA) along with the standard Index Catalog (IC) and New General Catalog (NGC).

It is recommended that one have a good planetarium software program or atlases that provide stars beyond the 11th magnitude to identify some of these deep sky objects.

Flat Galaxies

Most single objects in the universe (i.e. planets, stars, asteroids) are round due to gravitational forces, but there are these objects that are flat. An explanation is that galaxies formed from a spinning cloud. As the cloud contracted, it started to spin faster due to the law of conservation of angular momentum. This spin flattened out the shape of the galaxy due to centrifugal force. The same thing happens to stars. As they contract, their spin increases, and gas and dust from their formation makes a disk around the star. From this disk, planets are formed. Some galaxies are flat because of this dance of gravity and centrifugal forces.

In 1959, Louise Volders demonstrated that spiral galaxy M33 does not spin as expected according to Kepler’s equations. At the time the discrepancy was discovered, it was thought that most of the mass of the galaxy had to be in the galactic bulge, near the center. Observations of the rotation curve of spirals, however, do not bear this out. The explanation that requires the least violation to the laws of physics is that there is a substantial amount of matter far from the center of the galaxy that is not emitting light. This extra mass is proposed by astronomers to be due to dark matter within the galactic halo. There are a large number of pieces of observational evidence that



point to the presence of cold dark matter. Dark matter and measurement of rotation makes galaxies and in particular flat galaxies a vital area of study of the universe.

Detection of shape and form in galaxies is a visual challenge. A subclass of edge-on galaxies are flat galaxies which are defined as having a diameter larger than 40 arc-seconds and a major to minor axis ratio of greater than or equal 7. This unique brand of galaxies is used as a scientific tool for studying large scale motions and distances. Color is due to the velocity they move relative to us. Red shifted as they move away, blue shifted if they are coming toward us. Dust bands and the central bulge are dominant features of observing.

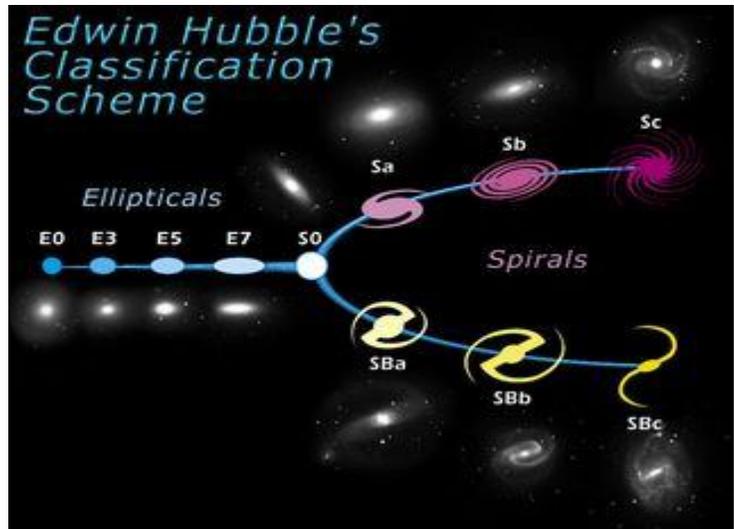
The Nature of Superthin Galaxies

Goad and Roberts wrote a paper on "super thin galaxies" (SGs). They are extreme cases of flat galaxies, fitted out with some peculiarities. Defined through an axial ratio of 8:1 or more, they lack a bulge and a dust-ring. These galaxies mostly belong to the late types Sc, Sd or Sm from the Hubble Tuning Fork. They are underdeveloped systems, simple featureless discs showing a flat rotation curve. Due to a small amount of interstellar matter, the internal extinction is low and also the star formation rate is minimal. The resulting low stellar density causes a low surface brightness. There are several flat galaxies on the list that meet this criterion.

Classification

Flat galaxy visual classification does not have any officially recognized system but one can start with the Hubble Tuning Fork (to the right).

Flat galaxies, if viewed face on, would most likely be in the classification Sa thru Sc or SBa thru SBc. If you are familiar with the Hubble tuning fork there are also some "super thin" galaxies further out there in the Sd category, a spiral without a bulge. Many "Hubble Tuning Fork" diagrams don't even include the "d" or beyond categories.



It has been known for some time that whenever there is a galactic bulge, you find a supermassive black hole. There are also some "superthin" edge-on galaxies that have no bulge, in fact some are flatter than a pancake and have no central bright region (see Pancake Galaxy). These are some of the factors that are evident to the visual observer. S. Kautsch has categorized several classes of flat galaxies in his paper on *The Nature of Flat Galaxies*.

Disk galaxies range from bulge-dominated early-type galaxies to late types with little or no bulge. The galaxies were subdivided into flat galaxies with a bulge (see Figs A and B), intermediate types (Figs. C and D) and simple disk galaxies without any obvious bulge component (Figs. E and F). The structure-density trend among edge-on systems is both one of luminosity and thus likely stellar mass and structure. The simple flat galaxies also are bluer, implying star formation extends over a longer time.

The following are examples of flat (edge-on) galaxies with bulges, with faint central concentrations, and with bulge-less simple disks.

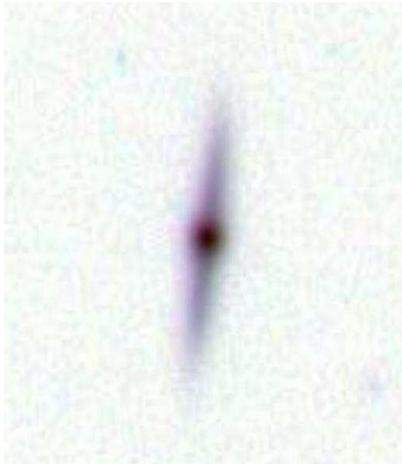


Fig. A - Prominent spherical bulge



Fig. B - Standard bulge with bright center



Fig. C - Intermediate bulge with bright center



Fig. D - Bright center without bulge

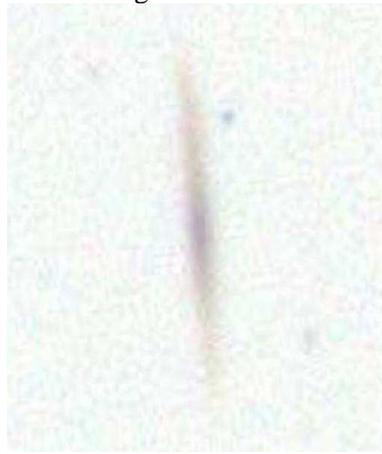


Fig. E - Simple without bulge



Fig. F - Super thin without bulge or bright center

Example Target Classification

Type	Description	Class	Con	Size (')	Magnitude
A	Prominent Spherical Bulge	UGC 10043	Ser	2.7 x 0.4	14.7
B	Standard bulge with bright center	UGC 5173	Leo	2.7 x 0.3	14.7
C	Intermediate bulge with bright center	NGC 5714	Boo	3.1 x 0.4	14.5
D	Bright center without bulge	NGC 4183	CnV	6.3 x 0.7	13.3
E	Simple without bulge	NGC 5023	CnV	7.3 x 0.8	12.7
F	Super thin without bulge or bright center	UGC 7321	Com	5.5 x 0.4	14.0

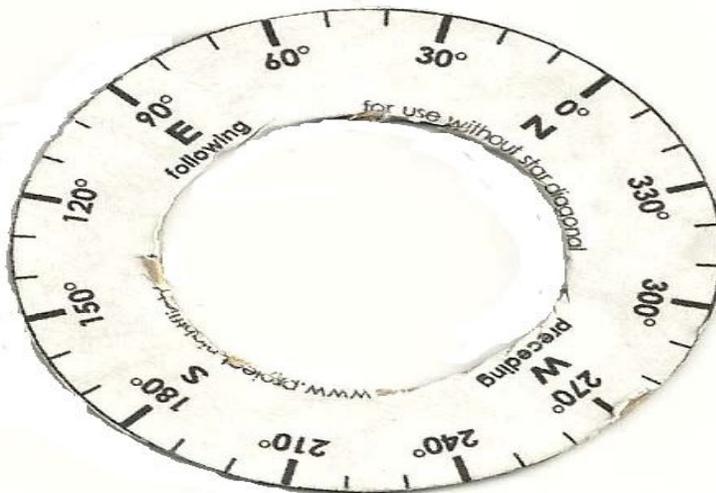
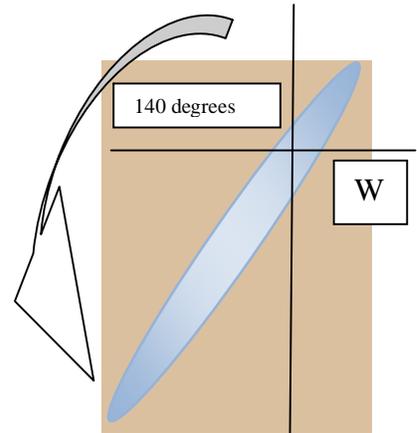


Measurement of Flat Galaxies

In addition to describing a flat galaxy as indicated by the proposed classifications above, one is also required to measure the position angle (p.a.) of the flat galaxy.

The position angle is the angle in degrees formed by the major axis of the galaxy referenced to the north, moving counter-clockwise towards east, and then south. The maximum p.a. cannot be larger than 180 degrees. A galaxy whose major axis is east-west has a p.a. of 90 degrees.

The galaxy to the right is would be measured to be p.a. 140 degrees in the east direction from north.



The 18-inch Obsession Dobsonian Telescope was utilized for observing flat galaxies. I found the Dobsonian most effective with its large aperture. I did not attempt to use my 120mm refractor. Also, the use of the 22mm eyepiece with a 2X Powermate and the 6mm Ethos were a favorite combo for this scope giving the best magnification parameters and field of view for the majority of the objects. I would use the degree template for position angle attached to my eyepiece and find west by letting the stars drift. Then I would observe the object and try to estimate the position angle of the galaxy using the template to the left.

Observation Process

Flat galaxies have been very rewarding due to the requirements and discipline needed to observe the objects. The extensive and comprehensive list was a challenge; but, it enabled me to enhance the skill of using all the visual techniques required to observe very faint objects. I included the averted vision scale created by Ron Morales of the Sonoran Desert Observatory with each observation in my flat galaxy log. Even though my scope is rated at least to magnitude 17, it was not possible to visually observe many of the objects. At first I used several eyepieces, filters, etc., but eventually settled into a 22mm Panoptic with a 2x Barlow at 175x for best results.

Seeing, transparency, limiting magnitude, and the size of the object play a role in visual observations of flat galaxies. In general, the skies in this part of New Mexico have limiting magnitude between 6.5 and 7.0. Most nights locally are nearer to magnitude 6.2, so I would not even try to observe flat galaxies unless the conditions were optimum.

The last six to eight months in southern New Mexico have not been typical for this semi-arid area. We are usually blessed with high transparency and very good seeing conditions but we have had above average number of overcast night skies or high winds. This has added to limiting the number of excellent seeing conditions coupled with the unpredictable weather and precipitation that we have had during the summer months. It was necessary to use several dark sites to complete the list and a lot of aperture with good seeing. Some objects required multiple attempts at observing. Some of my observations may not have needed averted vision with improved seeing conditions.



Process
1. Review Sky Charts for a map of the object's field (planetarium s/w or Uranometria Atlas, et .al.).
2. Observe on a night with very good limiting magnitude and constellation at optimum angle.
3. Star hop, setting circles, or GoTo to the field of view.
4. Observe object using all techniques (averted vision, moving scope, etc.).
5. Determine west drift and set template in correct position on eyepiece.
6. Estimate the position angle.
7. Transcribe notes about the object and sketch if possible.
8. Review an astrophoto of the object to clarify estimated location/size in field of view/shape.

Averted Vision

Many of the objects are not visible with direct vision because of the small size, especially in the minor axis. This has been confirmed by software developed by Professor Jose Ramon Torres Lapasio of Valencia University in Spain, where he enhanced and expanded the visibility results of Roger Clark's book **Visual Astronomy of the Deep Sky**. The software provides information if the object is visible in your 'scope and what magnification is optimal to view it. Surprisingly, some objects below magnitude 14 are not visible even in my 18" Dobsonian. Many of his software's results were confirmed in the field. An example from a recent observation session, with limiting magnitude 6.5, is NGC 100 in Pisces at magnitude 13.3. This object required averted vision.

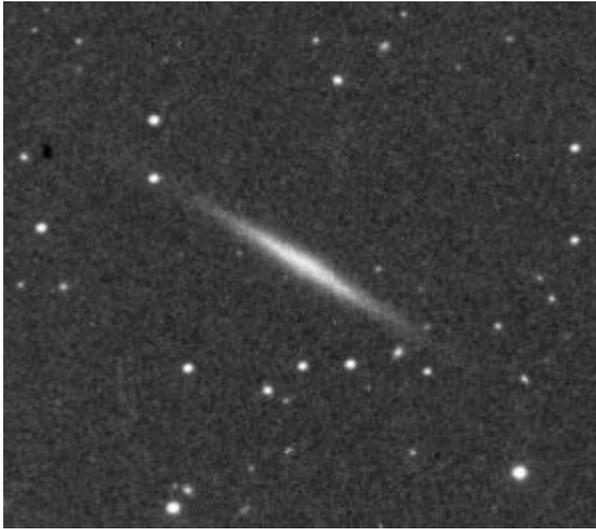
<i>Averted Vision Classifications</i>
<ul style="list-style-type: none"> • AV1 - Object can be seen with averted vision, but once found, the object can occasionally be seen with direct vision. If an object is first noticed with averted vision, but once found this object can then be seen steadily with direct vision, it is considered a direct vision object as opposed to an averted vision object.
<ul style="list-style-type: none"> • AV2 - Object can be seen only with averted vision, but it is held steady. Here the sweep of one's vision makes the object detectable.
<ul style="list-style-type: none"> • AV3 - Object can only occasionally be seen with averted vision as it "comes and goes" with the seeing conditions. In this case the object is seen more than 50 % of the time.
<ul style="list-style-type: none"> • AV4 - Object can only occasionally be seen with averted vision as it "comes and goes" with the seeing conditions. In this case the object is seen less than 50 % of the time.
<ul style="list-style-type: none"> • AV5 - Object can only be glimpsed with averted vision after a continuously viewing the field for a few minutes or more. This level of averted vision usually occurs when one carefully observes a field for a lengthy period of time. This might occur within the first 3 to 5 minutes of viewing the field. In this level, it is important that the observer has no knowledge of the exact location of a possible object. Having such knowledge prior to viewing could mislead some observers into believing that they saw something they did not actually see.

This has been the most difficult group of visual objects that I have attempted from the Astronomical League. Near 75% of the objects required averted vision and presented a real challenge to obtain the position angle of the galaxies. The following table provides the estimated averted vision categories of the objects that I observed. Averted Vision 0 refers to visible objects. They may be different for each observer based on the scope, location of object, and sky conditions:

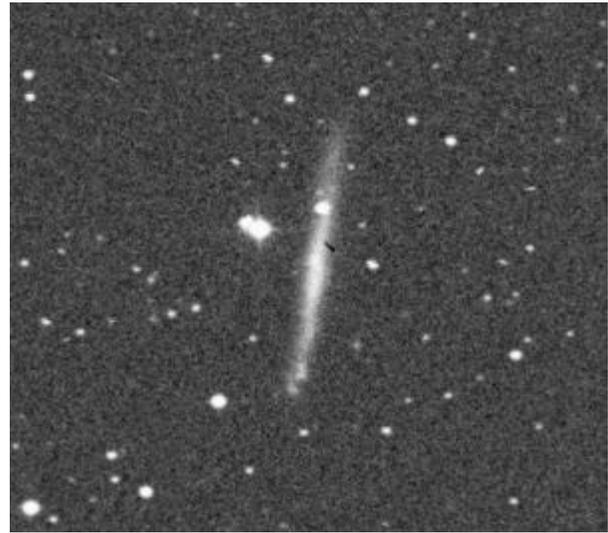
Averted vision #	0	1	2	3	4
No. of Flat Galaxies	25	19	17	29	11



Visibility Case for NGC 100 in Pisces and IC 2233 in Lynx



NGC 100



IC 2233

Both NGC 100 in Pisces and IC 2233 in Lynx were not directly visible with average sky conditions even though both of these flat galaxies are at or below 13.6 in magnitude. The Jose Torres's Visibility Software illustrates this phenomenon as indicated in the following table:

Object	Size(')	Object Magnitude	Limiting Magnitude	Scope	Visible Yes or No	Best Magnification
NGC 100	6.2 x .6	13.3	6.5	18-inch Reflector	No	160X
IC 2233	5.2 x .6	13.6	6.5	18-inch Reflector	No	160X
NGC 100	6.2 x .6	13.3	7.0	18-inch Reflector	Yes	119X
IC 2233	5.2 x .6	13.6	7.0	18-inch Reflector	Yes	119X

Incidentally, Roger Clark's visibility estimates indicate that NGC 100 is visible at 71X with the 18-inch reflector. Clearly this is not the fact or my experience in the field. Limiting magnitude (going from 6.5 to 7.0) plays an important role in providing the contrast necessary to view these deep sky objects. This is why it is important to continually search for the optimum local viewing location. The "best magnification" of 160X was the theoretical amount used with averted vision. Both NGC 100 and IC 2233 qualify as "superthin" by axial ratios but the bright centers may disqualify them.

Notable Flat Galaxies

The most difficult flat galaxies were the ones that I expected to see but were not visible. It was a large ramp-up to get a routine into place. As mentioned previously, all possible techniques were used especially in verifying the star field where the object was located. I used Goto and DSC to get to the proper area and then started the search for the object. I found Camelopardalis and Aries to be the most problematic only recording one object from Aries and none from Camelopardalis. Virgo, Sextans, and Serpens gave fast, positive results and provided me the impetus to continue on with the program when I was getting discouraged.

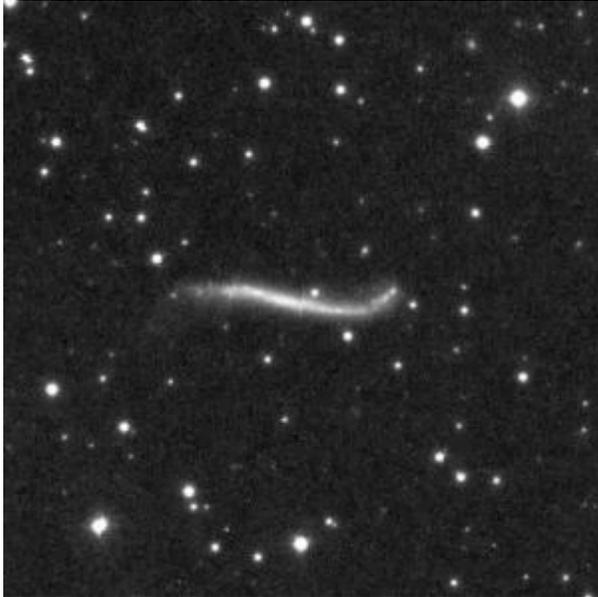
There are some special objects on the list that are very interesting. UGC 3697 and its companion UGC 3714 are a must see with its warped edges. The following is a list of objects with special features:

- UGC 3697 and its companion UGC 3714 - The prominent "integral-sign galaxy"
- NGC 3454 interaction with another galaxy 3.5 minutes to the south

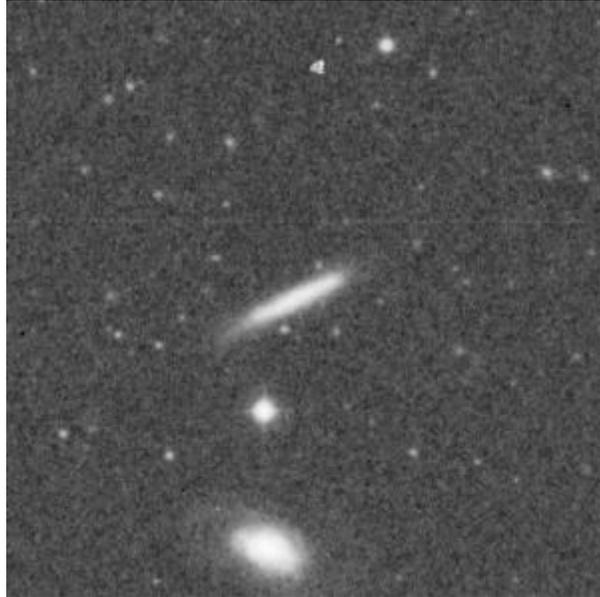


- MCG-3-33-30 in Virgo – multiple knots in center with companion galaxies
- NGC 2820 in Ursa Major – irregular companions

Although I have not yet viewed UGC 3697, this object it is on my short list of special objects. The others provided some interesting deep sky surprises.



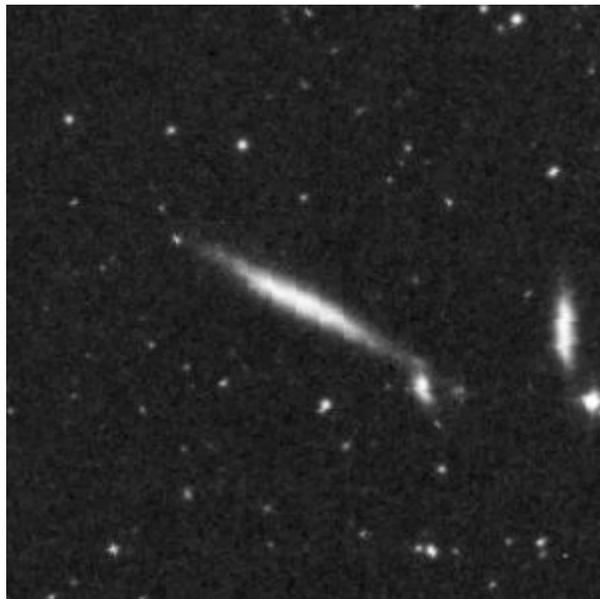
UGC 3697 in Cam



NGC 3454 in Leo



MCG-3-33-30 in Virgo



NGC 2820 in Ursa major

Pancake Galaxy

This galaxy is not on the *Flat Galaxy List* because it is not edge on but it certainly is flat. It would be the classification of Figure D or E. It happens to be on the *Southern Arp Galaxy List* that is my next project. I included it here because of the remarks by the associated astronomers.



An unusual spiral galaxy with a flat, pancake-like shape is missing the trademark central bulge common to other galaxies. The bright galaxy, called NGC 3621, appears to be a good example of a classical spiral galaxy at first blush. But astronomers taking a closer look with the European Southern Observatory's La Silla Observatory in Chile discovered that the galaxy is actually rather odd: It does not have a central bulge, making it what scientists call a "pure-disk galaxy."

The galaxy's flat shape indicates that it has yet to come face-to-face with another galaxy, since a violent galactic smash-up would disturb the thin disk of stars and create a small bulge at the galaxy's center.

This picture of the spiral galaxy NGC 3621 was taken using the Wide Field Imager at the European Southern Observatory's La Silla Observatory in Chile. CREDIT: ESO and Joe DePasquale

Summary

Many deep-sky fans are enthusiastic about edge-on galaxies where dust bands and the central bulge are dominant features. Observing the flat galaxies has been a great experience. I will continue to observe and record flat galaxies as I encounter them in my observations. It was overall a great list of objects and one of the most difficult and therefore rewarding astronomy projects that I have completed.

Minutes, October 2011 ASLC General Meeting

By John McCullough, Secretary, ASLC

Show and Tell:

Jerry Gaber started off the session by displaying the carrying case he made for his G11/Losmandy mount. Jerry said he could not find a pre-fabricated carrier, such as a Pelican case, that would do what he wanted, so he made one out of plywood. His also functions as a work station for maintenance.

David Anderson followed by showing the monocular he uses for constellation spotting. David also reported on the book "Star Hopping" which recommends using either a monocular or binoculars for locating areas for viewing. The book is season-based.



Call to Order:

Tracy Stuart, Vice-President, Astronomical Society of Las Cruces (ASLC), called the business meeting to order at 7:30 p.m., 28 October 2011, Room 96, Dona Ana Community College, Las Cruces, New Mexico.

President’s Comments:

Ron Kramer, President, was present but was still recovering from a recent illness that has depleted his vocal faculties. Tracy Stuart welcomed the group, noting that tonight’s meeting was again preceded by a “Show and Tell” session organized by David Anderson; thanks to Dave. Tracy also noted the relocation of the meeting because of a “Haunted House” under construction in the usual location. Tracy also welcomed Michael La Torra, a longtime Las Cruces resident but first-time visitor to a Society meeting.

There were no additional new members or guests present at tonight’s meeting.

Secretary’s Report:

The Secretary, John McCullough, reported that the minutes for the September 2011 meeting were submitted for publication in the October edition of the Society newsletter, the High Desert Observer (HDO), thanks to Steve Shaffer.

Ron Kramer moved that the minutes from the September general meeting be accepted as submitted; Bert Stevens seconded. The motion passed by acclamation. There was not an additional Secretary’s report.

Treasurer’s Report:

The Treasurer, Janet Stevens, continues to recuperate at home and was not present. Bert Stevens, Past-President, provided a report on the status of the Society’s accounts. He also requested that all members’ dues for 2012 be paid by the end of this year. Ann McPhee moved that the report be accepted as presented, Jerry Gaber seconded. The motion passed by acclamation. There was not an additional Treasurer’s report.

Committee Reports:

Apparel Committee:

Ann McPhee, Committee Chairman, reported no sales since August, as she has been out-of-town. There remains \$642 of inventory and \$1551 of apparel has been sold. Items will be available for purchase following tonight’s meeting. She suggested that warmer, cool weather apparel may need to be ordered.

Loaner Telescope Program:

Janet Stevens, Committee Chairman, was not present (see Treasurer’s Report above). Bert Stevens reported that eyepieces are still needed. He inquired if anyone present knew the location of either of the Society’s C-8 Celestron or 10” Coulter telescopes. It was speculated that Bernie Joplin still has the C-8 (he has relocated to either Wyoming or Montana) and that Dick Olson may have had the Coulter and it was sold in the estate sale following his death. There was no additional activity to report.

Astronomy Day 2011:

Astronomy Day was held 01 October. Tracy Stuart, event chair, reported a great turn-out and public response at the Farmers’ Market that morning. He thanked Wes and Carol Baker for their extensive help in getting the event organized.

Membership:

John McCullough, Committee Chairman, reported that Society information brochures that were left at the Very Large Array (VLA) and Sunspot during the ALPO Conference excursions probably need to be replenished quarterly (websites are on the Internet). Tracy Stuart reported that the stock at the Museum of Natural History had been replenished).



Leasburg Observatory Committee:

Ron Kramer, Committee Chairman, reported that a meeting between the Society, the State Parks Department, and LDSP personnel to discuss construction plans is expected to occur soon. The State is paying for the building and support, the Society will provide the telescope and operational expertise. The near-by water (not sewage) treatment facility is expected to have IDA-compliant lighting.

Tombaugh Observatory:

Steve Barkes was not present. David Anderson reported difficulty pointing the scope. Some maintenance on the Grubb mount is still required.

Outreach Committee:

Chuck Sterling, Outreach Coordinator, reported a very busy week in the offing, with the following events:

- A presentation at the Fountain Theater, 29 October.
- "Music Under the Stars at LDSP" starts at 6:00 p.m., 30 October.
- School star parties on 01 November at Sonoma Elementary and 03 November at Tombaugh Elementary.
- Star party at Mesilla Valley Bosque State Park on 04 November
- Moon Gaze at International Delight Café on 05 November
- 2011 Renaissance Arts Faire at Young Park 05-06 November

Contact Chuck via the yahoo group if you can support any or all of these activities.

2011 Renaissance Arts Faire:

Tracy Stuart, Committee Chairman, announced booth set-up will be from 10:00 a.m. to 12:00 noon, Friday, 04 November, at Young Park. The Faire will be Saturday and Sunday, 05-06 November. He is still looking for volunteers to man the booth. Email him via the yahoo group.

Society Website:

Steve Barkes, webmaster, was not present. There was no update on issues regarding the Society's web site.

There were no additional committee or officer reports.

Old Business:

Society Bylaws:

Changes to the current By-Laws are still pending. All members are encouraged to participate. Two-thirds (2/3) of the current membership (40 of 59) must vote to accept the proposed alterations to the Society By-Laws or 20 votes to defeat acceptance. Insufficient ballots were received from members regarding the by-laws changes, for or against. The issue will be re-addressed at the December meeting.

Officer Elections:

The Nominating Committee tabulated the votes cast. Robert Williams, Committee Chairman, reported that with twenty-five ballots cast, all nominees were selected. Thanks to the Nominating/Elections committee for their efforts. The following were elected as officers for 2012:

Ron Kramer	President
Tracy Stuart	Vice-President
Robert Yearly	Treasurer
John McCullough	Secretary
Steve Shaffer	Director
Trish Conley	Director

There was no additional old business discussed.



New Business:

Holiday Party/December Meeting:

The December meeting and Holiday party will be held 10 December at the EAA hangar at the Las Cruces Airport. Ron Farmer, Trish Conley, and John McCullough will lead the organizing efforts.

Newsletter:

Bert Stevens always needs articles for the HDO.

November Monthly Meeting:

The November meeting will be 18 November in Room 77, Doña Ana Community College.

There was no additional new business for discussion.

Announcements:

Items for Sale:

Bert Stevens announced that RASC handbooks and calendars are available. Contact him to place your order.

No additional items were announced for sale.

Announcements:

There were no announcements made.

Recognitions/Achievements:

John Kutney received the Astronomical League award for observing 100 flat galaxies, one of only ten awardees in the United States.

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

Ron Kramer moved to adjourn the business portion of the meeting, Fred Pilcher seconded. The motion carried. The business portion of the meeting was adjourned at 8:11 p.m.

Presentation:

Bert Stevens, Society member and Past-President, provided tonight's presentation. His topic was "Amateur Astrometry of Minor Planets". Bert has been observing from his Desert Moon Observatory, Minor Planet Center No. 448, for the last ten years with the objective of improving the accuracy of position and orbit of minor planets. He has submitted in excess of 20,000 observations.

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 October meeting of the Astronomical Society of Las Cruces concluded at 8:57 p.m.

-Respectfully submitted by John McCullough, ASLC Secretary



Calendar of Events November/December 2011 (MST)

Nov. 18	8:09 a.m.	Last Quarter Moon
18	7:30 p.m.	November ASLC Meeting
24	11:10 p.m.	New Moon (partial solar eclipse over Antarctica)
Dec. 02	2:52 a.m.	First Quarter Moon
04	2 a.m.	Mercury passes the Sun (inferior conjunction)
10	7:36 a.m.	Full Moon (Total Lunar Eclipse)
10	5:30 p.m.	ASLC Holiday Party at EAA Hanger
17	5:48 p.m.	Last Quarter Moon
21	10:30 p.m.	December Solstice-Winter begins
22	8 p.m.	Mercury greatest distance west of the Sun (22 degrees)
24	11:06 a.m.	New Moon

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

ASTRONOMICAL SOCIETY of Las Cruces
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ASLC - Sharing the Universe
 With Our Community
 for Over 50 Years

