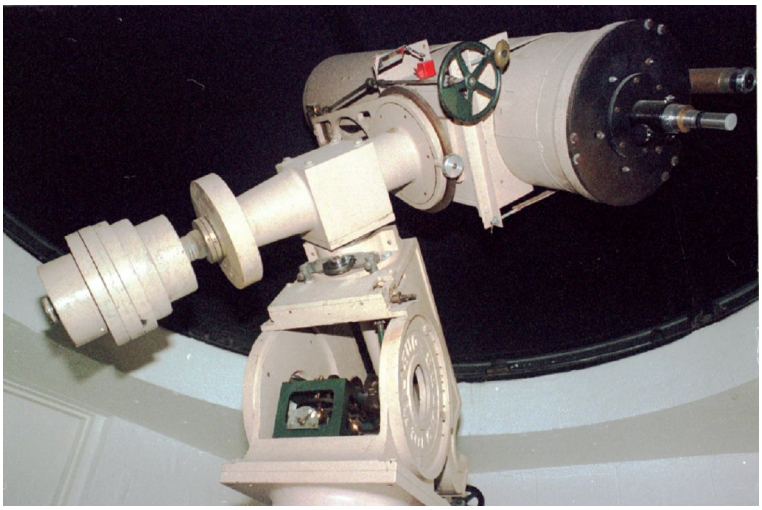
The High Desert Observer
The Bulletin of the Astronomical Society of Las Cruces
June 2010

President's Message - June 2010

The ASLC has entered he summer doldrums. School is out so we will not get many (any) requests for star parties. Astronomy Day is over, and the monsoon season has officially begun, even though we have not gotten any significant rain yet. So this the time to pull the equipment apart, clean and adjust it before the next busy season begins.

With this in mind, the ASLC needs to take a look at our situation and determine what we need to do. Our attempt to build an observatory at Leasburg Dam State Park has not progressed as we had hoped. It is still stalled while we wait for approvals from the State. Hopefully, these will be coming along soon. When we do get them, we will need as many people as possible to chip in with some of their time to help build the observatory. I am sure it will not be as big or beautiful as we would like, but it will give the ASLC a place to call home. Rich Richins has been pushing this along and we thank him for his hard work.



We also have the telescope in the NMSU dome on campus. This telescope does not get much use, since it is not computer-driven and it only has a twelve-inch aperture. Being a Cassegrain, it is from a time that was more focused on planetary observing than we are today. Nonetheless, it is our telescope and we should keep it in good repair. Steve Barkes is working to get an estimate from NMSU to repair the building to keep this telescope in good shape.

Finally, we have a dome stored with a former member, but our observatory design at Leasburg Dam is for a roll-off roof observatory. What should we do with this dome? If we do nothing, one day someone will want it off their property and we will have to move it. Should we do something else with it?

These are just some morsels for thought. I will not be at the June meeting, but hope you all will enjoy Ron Kramer's talk on Da Vinci. See you in July!

Your Humble President
Bert Stevens

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.

This Month's Observer

Next Meeting

Ron Kramer will present "Astronomy in Da Vinci's Time". He begins with a brief history of scientific achievements from the present to the time of Da Vinci, and continues with the development of astronomy from the dawn of civilization to the Renaissance. It then focuses on the astronomers between the 16th and early 18th centuries, what the prevailing theories of the universe were, and how Leonardo and his contemporaries changed the scientific communities' and church's understanding of our place in the universe.

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. For information on these and other events, please see the ASLC website.

Http://www.aslc-nm.org

July Issue of the HDO

A note to all members, we need more contributors! Sharpen your writing skills, share your knowledge and help bolster our newsletter! Articles for future issues should be sent to Bert Stevens no later than one week prior to the monthly meeting. Text should be submitted as email (blslcnm@comcast.net) or as an attached Microsoft Word format document. All Images should be in gif or jpg format.

If you have any questions about submitting materials for publication in the HDO, please don't hesitate to contact Bert at

The May 22, 2010, Moongaze

By Jerry McMahan

The May Moongaze, at the International Delights Restaurant, was attended by Muhammed Hijazi, Jerry McMahan, Steve Shaffer, and Chuck Sterling.

Muhammed had his 8-inch Celestron Schmidt Cassegrain. Jerry McMahan used a Meade 5-inch Maksutov Cassegrain. Steve had the 3.5-inch Questar Maksutov, and Chuck brought his 4-inch Orion refractor (the 16-inch was blocking his access to the 10 inch that he usually brings). I am always impressed when I see the Questar. It is the only one I have ever seen in person.

The Moon was a couple of days past first quarter, with the terminator near Clavius and Plato. We had views that showed the entire Moon with low magnification, and higher power views to show detail along the terminator.

The seeing was fairly good, with steady views of the Moon and Saturn. Saturn was still a crowd pleaser, even with the rings seeming edge on in the field of view of the 4-inch refractor. We did have a fairly large group of spectators over the evening, with many of them asking questions about what they were seeing. Most did not have to be told that it was Saturn when they looked through the eyepiece. A new street light, that caused a lot of problems a couple of months before, was not as bright this time and did not cause as much glare in the eyepiece.

Steve and I (Jerry McMahan) stayed until a little after midnight and took down the telescopes when the lights were turned off around the restaurant. We were there for another hour as Steve did repair work on my mount for the 5-inch. He was already aware of the problem and brought an assortment of springs, bolts and clips so that he could find the ones that fit the mount. I appreciate his efforts and the repair job was successful.

The next Moongaze will be on July 17, a day before the first quarter Moon.

Visual Observing on the Southern Border

By John Kutney

Introduction

Visual observing on our southern horizon, intersecting with the border security, and wilderness events that one encounters at our remote observing locations can be rewarding as well as adventurous. Many of us have been approached at the Astronomy Society of Las Cruces (ASLC) remote observing locations by the Border Patrol or other Federal Agents. The ASLC has multiple dark sites for visual observing and astrophotography with the main locations at Upham, the Blue Mesa, and Exit 116 West on Interstate 10.

In the Beginning

New astronomy observers (I am one of these) focus on the seasonal stars that rise in the East and set in the West. There are many constellations and wonderful observing targets in this central sphere. One night at the ASLC dark site at Upham there was a bright object just rising on the southern horizon that caught my attention. What was it? The “experienced pros” that night indicated it was Canopus, a gem usually limited to observers from the Southern Hemisphere as a star of magnitude -0.6 in Carina. It came and it went, not following the normal path of the “standard” stars. This event started my mini-obsession with the southern horizon.

The Caldwell Objects

My initial organized exposure to visual observing was Double Stars and the Messier List. While waiting for the seasonal Messier objects to rise, I became interested in the Caldwell Objects since many of these objects were available during that time frame. What was very special about the Caldwell's was not only the special nature of the objects but also the "hunt" required to locate and observe some of these obscure objects. Finding the targets was intellectually and physically challenging. This required unlimited patience, endurance, and knowledge of the various objects.

There are 109 Caldwell Objects with 89 of them "possible" from the Las Cruces area. Most observers focus on obtaining the objects that are reasonably above the horizon. But there was always something mysterious to me about the Southern Horizon after seeing Canopus appear and disappear like a ship on the ocean. There were several Caldwell Objects located in constellations not normally recognized that tantalize the observer with their magical disappearing acts.

Border Constellations

As a new observer, the constellations of Sculptor, Columba, Fornax, Horologium, Vela, Ara, Circinus, Centaurus, and Norma let the imagination wander to unknown distant places with visions of isolated objects and new exotic species in the realm of the heavens. They are all on the southern horizon with some of them just giving a passing glimpse of their precious jewels from our locations in Las Cruces.

First Encounters

Sculptor was my first encounter with these low southern constellations. There were several large galaxies, Caldwell numbers 65, 70, and 72, that required getting on my hands and knees to observe through my

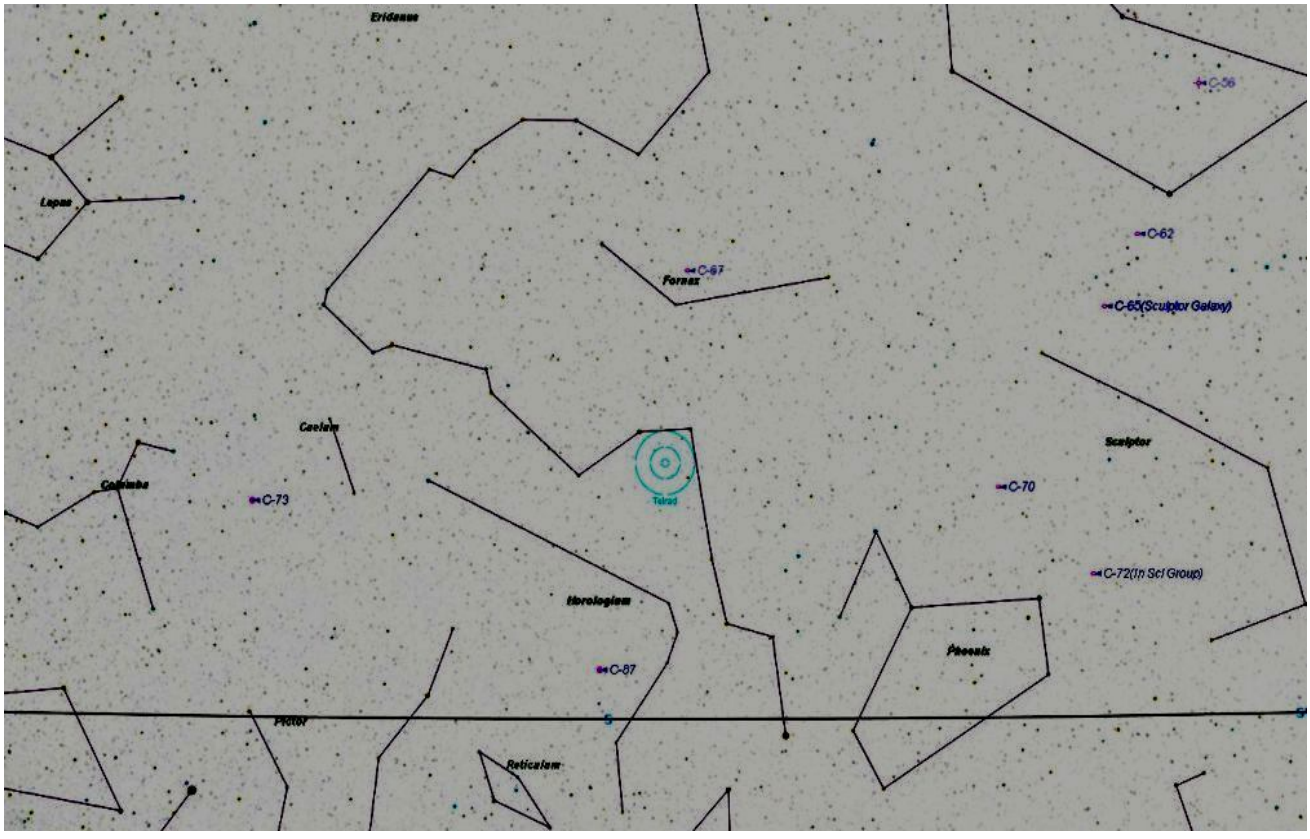


Figure 1: Columba Star Chart

Dobsonian at Upham. Caldwell 67, a faint galaxy in Fornax, needed dark skies and averted vision but was very feasible to find and observe. Caldwell 73 in Columba was a pleasant surprise as this globular cluster of magnitude 7.1 jumped out brightly in my 'scope. This provided encouragement to continue on this path to locate and observe even lower objects. A refractor was used whenever feasible for the lower objects to avoid crawling on the ground; this was suggested by a colleague who had been down this road already. This plan definitely enhanced my viewing pleasure and feasibility but made finding faint galaxies a real challenge.

The 116 West Location

Some of our ASLC field explorers identified this location about 25 miles West of Las Cruces. It is a great location for observing toward the south since there is no sky glow from the city, very low hills on the horizon, and an increased elevation.

116 West is heavily patrolled by the Border Guards who are friendly and interested in our eyes and ears for any unusual traffic in the area. They also enjoy viewing some heavenly bodies though our telescopes when they have the opportunity. The area also has electronic surveillance and infrared telescopes covering the open areas of the Corralitos ranch and the BLM areas. Checkpoint "Charley" located astride Interstate 10 is the base for the Border patrol which is about five miles to the Northeast from the observing location. A patrol in May 2010 provided a number to call ((575) 541-4941) if anyone needs to report information or requires support.

One thing – don't even think about going to 116 West after a good rain. The location is part of the drainage field of a huge area. The mud is deep and sticky and impassable in some spots.

Who Let the Dogs Out?

We all heard the quips that coyotes are afraid of humans and will avoid contact. Possibly the coyotes in New Mexico haven't got the word yet. While alone one morning at the 116 West location I noticed both cattle and coyote tracks (lots of them) around the area that I set up my equipment. There is an abandoned windmill and water tank about 50 yards to the west of the open area.

The coyotes were howling off in the distance about 1:00 AM and one thinks of how great it is being out doors with nature and the stars. There seemed to be quite a large number of them which is unusual. About one hour later the hairs on my neck stood up as the howling of five or six coyotes was only 50 yards away at the water tank and I could see a pair of them walking near it. That was the fastest time that I ever packed up all my equipment and vacated an observing site.

Vela

Vela was the first southern constellation that required unique timing and special observing. This meant that there is a narrow window of time that is required to catch the objects before they set in the southwest and few markers from which to star hop. Vela has a set of three impressive Caldwell objects comprised of a planetary nebula (Caldwell 74), a globular cluster (Caldwell 79), and an open cluster (Caldwell 85).

Objects rise and set during a limited period on the southern horizon. It is imperative that a pre-planned approach is used to ensure one gets the object at its high point (some limited to one hour) for improved visual observing. Vela is a real treat since none of the required objects were galaxies. Galaxies prove to be very difficult to visually observe on the horizon with their expected magnitudes diminished by diffraction, limited seeing, and transparency issues. However, open and globular clusters provide greater viewing opportunities as they bounce along the horizon.

Caldwell 85 is a very rich Open Cluster with embedded double stars, multi-colored stars, and nebulous areas. It is well worth the special effort to observe this cluster.

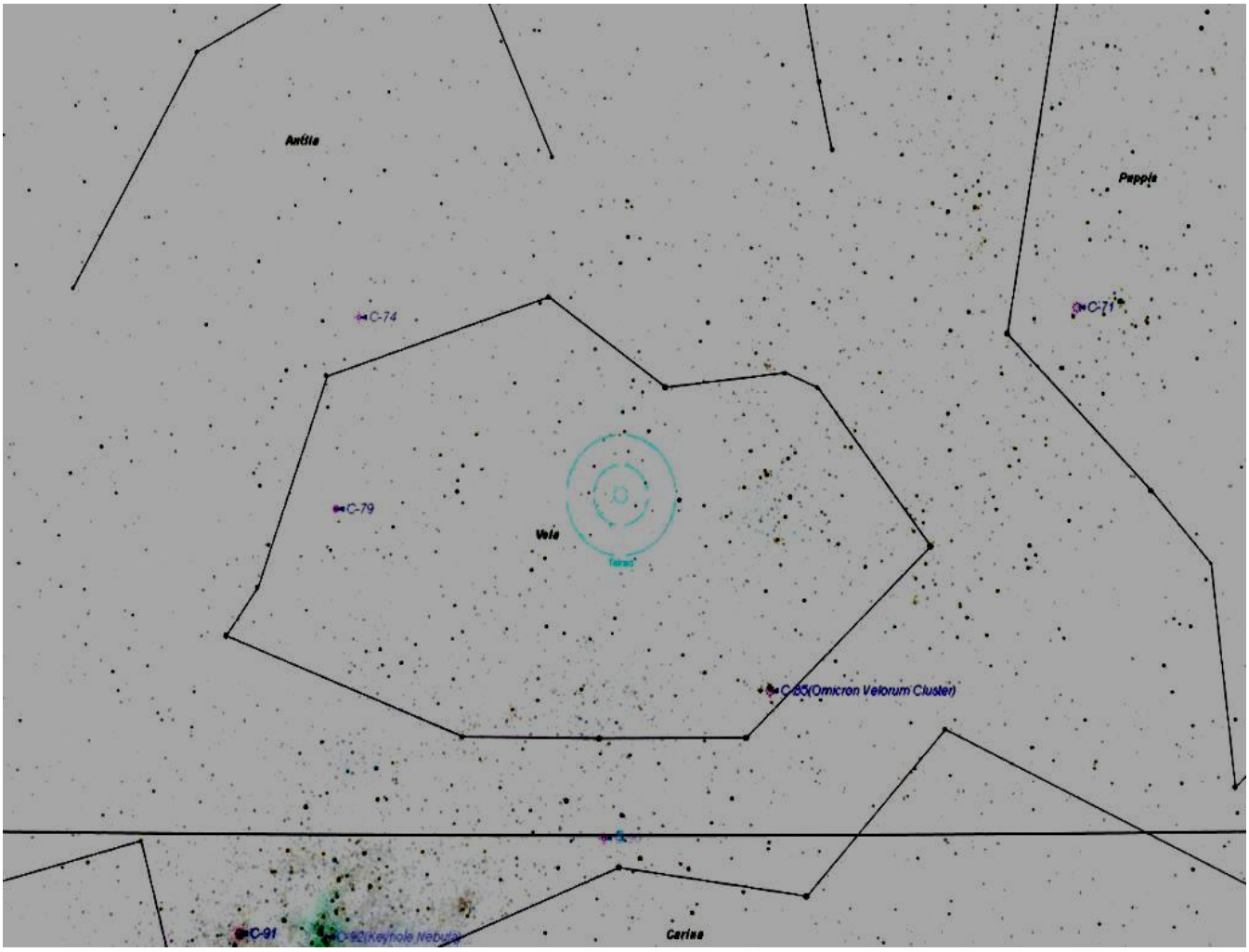


Figure 2: Vela Star Chart

Caldwell 79 is a bright globular with a rich star field, easy to locate and observe.

Caldwell 74 with its bright outer ring and a visible magnitude 9 central star compares to M57, The Ring Nebula in Lyra. Caldwell 74 is a very rewarding object and worth spending extra time observing. One could only wish that Vela was several degrees higher with all its rich treasures.

Centaurus

Most observers have seen Omega Centauri (Caldwell 80) the bright (magnitude 3.7), large globular cluster in the constellation Centaurus. Actually, at 116 West Caldwell 80 is clearly visible with the naked eye. This rich beauty makes it easy to find the Caldwell objects in Centaurus, all but pesky Caldwell 83, but more on this later.

Caldwell 77 is 4.5 degrees due north of Caldwell 80 which makes it easy to find with a Telrad. This is a visually pleasing galaxy that is high enough above the horizon to observe in some detail. This galaxy has a dark line visually splitting the galaxy in half. One could envision a misty Saturn with a black ring around it.

Caldwell 84 is very bright as a globular cluster and easy to pick up half way between Epsilon and Zeta Centaurus. It is five degrees southeast of Caldwell 80.

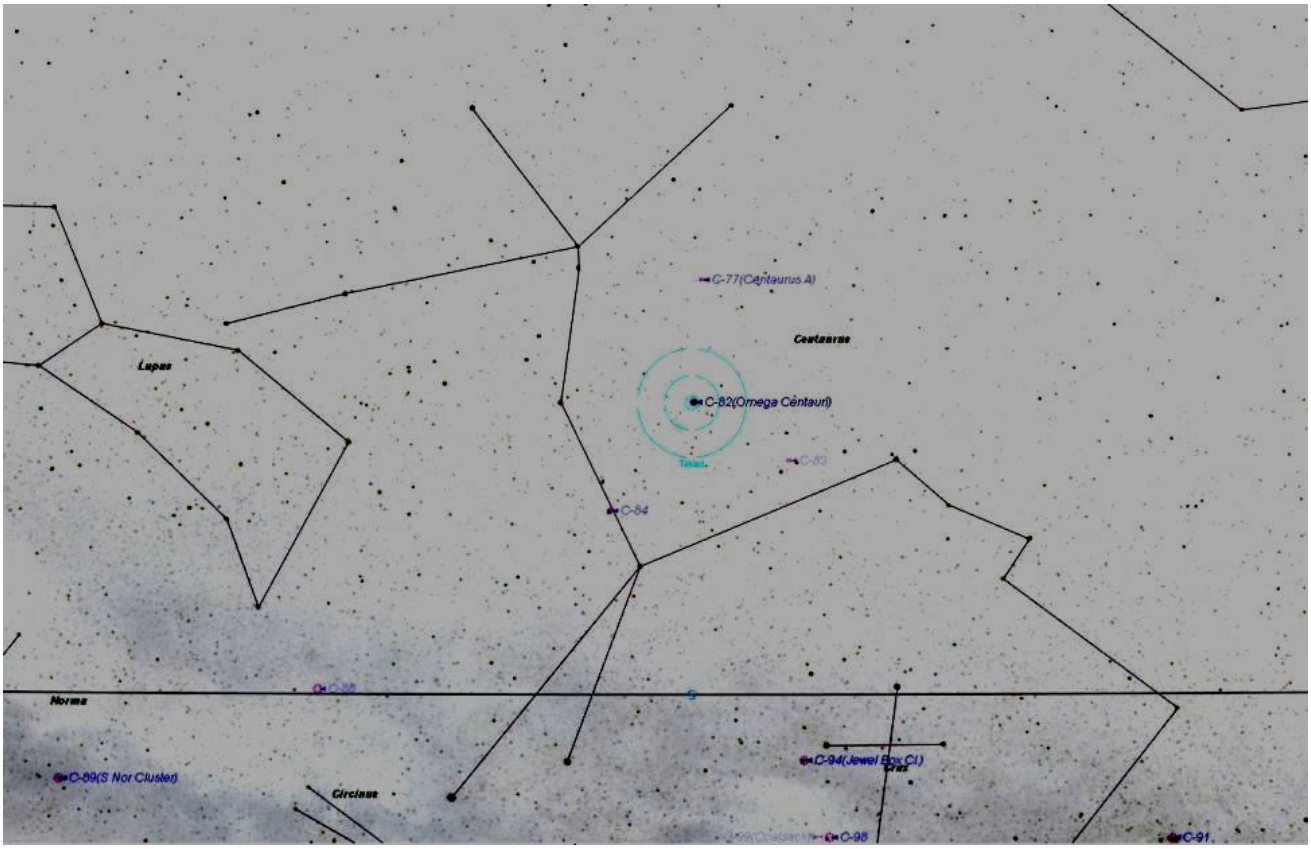


Figure 3: Centaurus Star Chart

Then there is Caldwell 83, the magnitude 9 barred spiral galaxy called the Tweezers Galaxy. It is easy to star hop to and locate this object, but very difficult to see due to its low position on the horizon. My first encounter with it was at Upham when a lone cloud continued to obscure the viewing area until the galaxy dropped into the darkness of the southern horizon. Next opportunity was with the 120-mm refractor at 116 West. A faint cloud like object could be vaguely seen with averted vision in the star field; but, forget about seeing a tweezers like figure. The next night the big Dobson (18") at 116 West was able to finally obtain a substantial visual of this object. Sometimes one needs to get on their hands and knees (and beg) to see these ghosts of the southern border.

Ara

Ara reminds me of Vela in that the Caldwell objects are of the same genre, thereby making it easier to observe them on the southern horizon. One almost may think that Sir Patrick Moore had Las Cruces in mind when he selected these Messier-like objects for Ara. There are two globular clusters and one open cluster here with Caldwell 86, a rich bright globular cluster, being the last object to reveal itself as Ara takes its ballistic path across the southern horizon. Caldwell 82 is large and nebulous with several asterisms making it easy to verify and observe. Caldwell 81 is another splendid globular between Scorpius and Ara with a hook of stars leading into the faint center of the globular. Caldwell 86, while low, is very bright (magnitude 5.8) so it is easy to see along the refracted horizon.

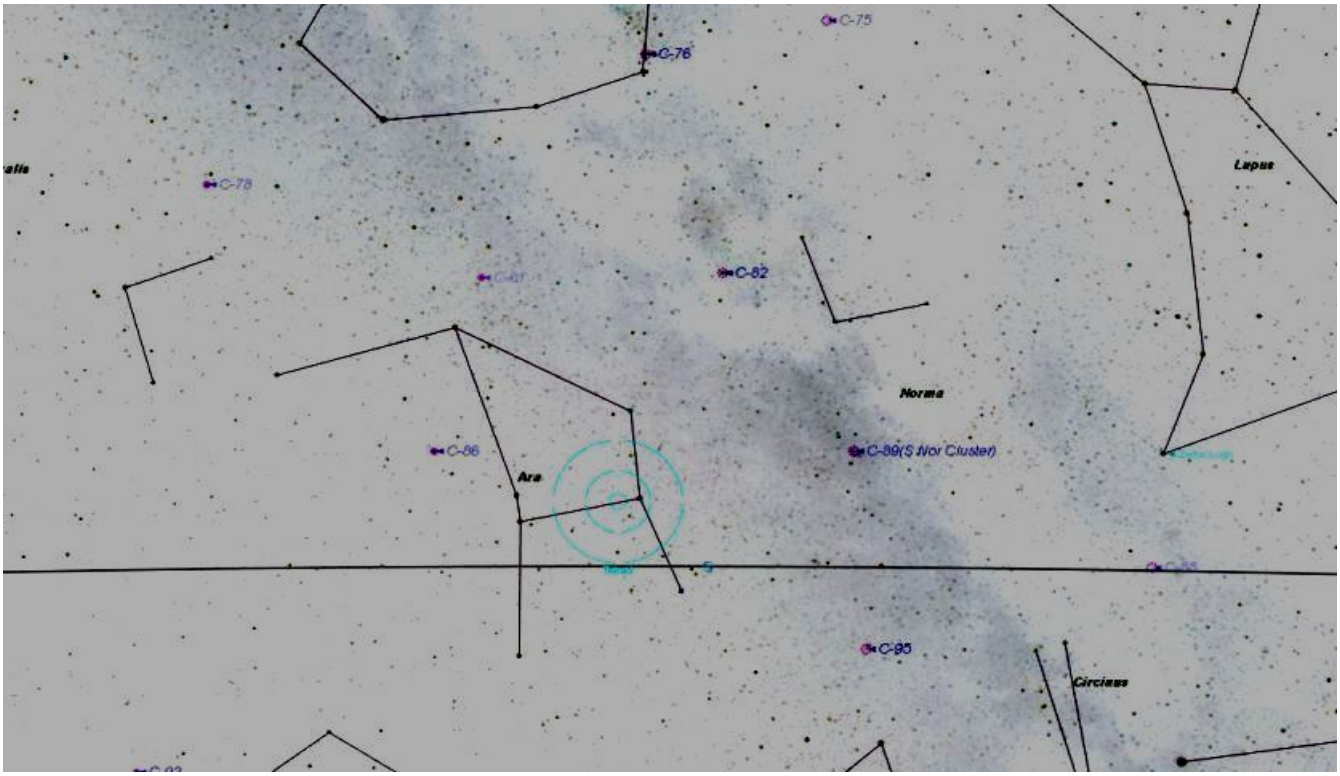


Figure 4: Ara Star Chart

The Mini-Obsession

Fellow observers indicated it wasn't worth looking at some of the objects very low on the horizon due to diminished viewing and difficulties with setting up equipment. It would be better to wait until one gets closer to the Earth's equator or into the Southern Hemisphere to really enjoy these objects.

But upon investigating computerized star charts, it indicated that for a maximum of one hour the most unlikely Caldwell candidates for the Las Cruces area may be visible about four degrees above the horizon. Not much of a window of opportunity, but a very rare hunting expedition trying to catch a glimpse of them. Now we are getting into the real obscure constellations of Circinus and Norma.

Each of these objects, Caldwell 88 an open cluster in Circinus and Caldwell 89 an open cluster in Norma, require a clear horizon, excellent seeing and transparency, and a limited viewing period from 116 West. There were few guideposts above the horizon with Zeta Lupus the only viable reference star and conflicting objects in the area such as other open clusters (NGC 5822 and 5749).

Using images and sketches from O'Meara's book, I was able to match the open clusters of Norma and Circinus with my visual observations. This was a culmination of my southern horizon obsession since I considered Caldwell88 and 89 the most unlikely objects to observe. This would enable me to obtain a view of every possible Caldwell object that was available in this area. Neither provided any particular note worthy observations that could be seen at this low point above the horizon, but they were extremely rewarding in the "hunt" for the southern Caldwell objects.

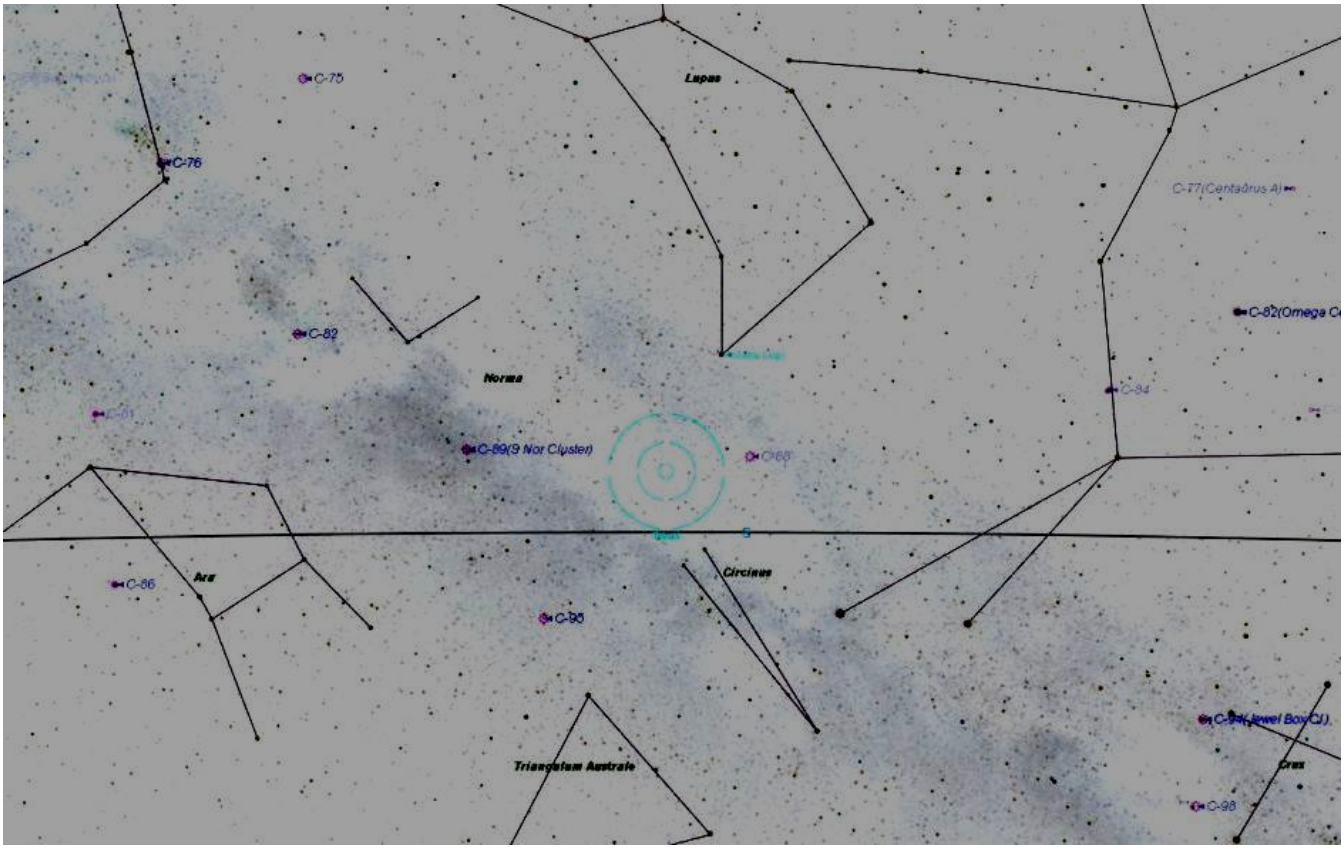


Figure 5: Circinus & Norma Star Chart

Nemesis

At this time I have observed 79 of the 109 Caldwell objects. I plan to observe 10 more objects including the only southern horizon Caldwell that slipped thru my grasp: Caldwell 87, a globular cluster in Horologium. Poor observing conditions and inadequate timing have blocked previous attempts. Caldwell 87 is not available again until December 2010 in the late morning.

Conclusion

There is a wealth of fine objects to our south and the constellations of Sculptor, Fornax, and Vela are highly recommended. There are also some interesting objects in Centaurus with Omega Centauri the centerpiece; but the other constellations on the southern border require a desire to hunt for them as well as to observe them. Visually, the really obscure ones don't provide the visual "bang for the buck", but they can really stimulate those planning and hunting desires.

Just below the southern horizon lays part of our galactic sky rich in visually rewarding objects. One needs to go below the border to see these magnificent objects. A star party in South America or Australia would be ideal to catch a glimpse.

Minutes, May 2010 ASLC General Meeting

By John McCullough, Secretary, ASLC

Call to Order:

Bert Stevens, President, Astronomical Society of Las Cruces (ASLC), called the meeting to order at 7:30 p.m., 28 May 2010, Room 77, Dona Ana Community College in Las Cruces, New Mexico.

President's Comments:
Bert Stevens welcomed the group and recognized new members and/or visitors present. Fred Paganucci was visiting from Maine.

Secretary's Report:
The Secretary reported that the minutes for the April meeting were published in the most recent issue of the Society newsletter, the High Desert Observer (HDO). Bert Stevens recommended dispensing with reading of the minutes if there were no objections (there were none). There was not an additional Secretary's report.

Treasurer's Report:
The Treasurer reported on the status of the Society's accounts. The Society will purchase a mount for the single-stack solarscope (recently purchased from George Hatfield) from Steve Barkes. Kirby Benson is owed reimbursement for pizza for the Astronomy Day 2010 star party. Annual dues of $400.00 were paid to the Astronomical League (AL). There was not an additional Treasurer's report.

Committee Reports:

Observatory Committee:
Rich Richins, Committee Chair, did not provide an update on the status of the Society observatory proposed for Leasburg Dam State Park (LDSP).

Apparel Committee:
Ron Kramer, Committee Chair, announced that the Society has sold approximately $1000.00 worth of apparel items to date. He has approximately $550.00 of inventory still available, including one (1) "hoodie". He expects to replenish his stock in August.

Outreach Committee:
Ron Kramer, Outreach Coordinator, reported no upcoming events until fall with the end of the school year. He is still working issues with the Mescalero schools for a star party/observation event for next school year. Rich Richins said he is conducting astronomy sessions at Conlee Elementary summer school on 04 June for grades 3, 4, and 5. This will include solar observing and classroom portions. Any Society members that can assist with this please let him know.

Loaner Telescope Program:
Janet Stevens, Committee Chair, reported that she is not receiving information regarding Society-owned telescope eyepieces. If a member currently has a Society telescope in their possession, they may also have one or more Society eyepieces as well. Please contact (email) her as soon as possible if you know you have any Society equipment in your possession along with a description of that equipment. This includes telescopes and eyepieces.

Tombaugh Observatory:
Steve Barkes and Ron Kramer continue to work with NMSU to effect door repairs for the Observatory building.

There were no additional committee reports.

Old Business:

There was no old business for discussion.

New Business:

Chuck Sterling announced the Meade 16" LX200 destined for the Society observatory will be relocated to the Stevens' home this weekend. Other options for relocation were discussed but deemed inappropriate for an asset on loan from the NMSU Astronomy Department. If any Society members can help, please let him know and be at his house at 10:00 am Saturday

There was no additional new business for discussion.

A motion to adjourn was offered by Ron Kramer and seconded by Janet Stevens. The motion passed by acclamation. The business portion of the meeting was adjourned at 7:40 pm.

Announcements:

Bert Stevens announced the Desert Moon Observatory had submitted its 18,000th astronomic observation.

Janet Stevens announced that the Astronomical League 2010 Convention (ALCon 2010) will be in Tucson, AZ, 25-26 June.

Vince Dovydaitis and Bill Stein attended the recent Society of Astronomical Sciences Symposium on Telescope Science, 11-13 May, in Big Bear, CA. There were a number of very interesting speakers presenting on the Epsilon Aurigae eclipse campaign to date, variable and cataclysmic variable stars, asteroids, and more. Vince recommended that any Society member interested in the science of astronomy or devoting some of their telescope time to science efforts should consider joining the society.

Ron Kramer announced his DACC continuing education "Introduction to Astronomy" class begins 07 June.

Items for Sale:

Jerry Gaber has a SBIG ST-8 camera with Class 1 chip for sale for $2200.00. If not sold, it will go on AstroMart next Monday.

Presentation:

The May program was a presentation by Society members who attended Texas Star Party (TSP) 2010 this month. Steve Barkes moderated the presentation, giving commentary on the images supplied by all the attendees. These included daytime campground activities as well as astrophotography.

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 2010 monthly meeting concluded at 9:10 pm.

-Respectfully submitted by John McCullough, ASLC Secretary

Calendar of Events June-July (MDT)

July	04		Independence Day
	04	8:35 a.m.	Last Quarter Moon
	09	8 p.m.	Venus 1.1 degrees north of Regulus
	11	1:40 p.m.	New Moon-Total Solar Eclipse in the South Pacific
	14	Evening	Venus near the Moon
	17		Moongaze
	18	4:11 a.m.	First Quarter Moon
	23	10 p.m.	Jupiter stationary
	23		ASLC General Meeting
	25	7:36 p.m.	Full Moon

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

ASTRONOMICAL SOCIETY of Las Cruces
PO Box 921
Las Cruces, NM 88004

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