



Desert Skies

Tucson Amateur Astronomy Association

Volume LIII, Number 11

November, 2007



Members work on the TIMPA observatory

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Cover Photo: Work continues on the roll-away observatory at TIMPA. Photos by George Barber

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Membership in the TAAA

Annual Fees

- Individual membership\$25.00
- Family (includes two adults plus minor children).....\$30.00
- Youth under 18 years must join as a family upon parental or guardian acknowledgement of participation in TAAA events. Ask the Treasurer for the required form.

Discounts (one discount allowed, subtract from above rates)

- Seniors (over 60 years)\$2.00
- College Students, Teachers (K – 12)\$8.00
- Youth under 18 yrs (form required, contact the treasurer)\$13.00

Options (add to above membership rates)

- Tucson society of the Astronomical League (TAL) fees\$ 5.00
- Sky & Telescope Magazine 1 year (12 issues).....\$32.95
- Astronomy Magazine 1 year (12 issues).....\$34.00
- 2 years (24 issues)\$60.00
- Postage for New Member Pack\$ 4.05

Donations are accepted for the following funds: SA-IDA/Light Pollution, TIMPA, Education, 30" Telescope & Land, and General/Undesignated.

Renewal Information

- Your membership expires as indicated on your mailing label.
- TAAA members may join the Tucson society of the Astronomical League (TAL) at the time they join or renew.
- Discounted Sky & Telescope or Astronomy magazine subscriptions are available to members and can be started or renewed at anytime. Rates are given above. Allow 3 months for processing. Subscriptions must be sent through the TAAA. Do not send money directly to the magazines. To change an individual subscription to the group rate, pay the

subscription amount to the TAAA treasurer. Include your magazine renewal notice.

- Please include a note explaining what you are paying for. Credit cards are not accepted. Write one check or money order for fees plus any options or donations. Make it payable to TAAA and send to:

Tucson Amateur Astronomy Association
PO BOX 41254 Tucson, AZ 85717

Mailing Address or Email Changes - Send to address above or email the treasurer.

TAAA Mission Statement - The mission of the Tucson Amateur Astronomy Association is to provide opportunities for members and the public to share the joy and excitement of astronomy through observing, education and fun.

Desert Skies Publishing Guidelines - All articles, announcements, news, etc. must be submitted by the newsletter deadline. Materials received after that date will appear in the next issue. The editor retains all submissions unless prior arrangements are made. Submissions should be submitted in Word compatible files via e-mail or on a recordable media.. All material copyright Tucson Amateur Astronomy Association or specific author. No reproduction without permission, all rights reserved. We will not publish slanderous or libelous material! Send submissions to:

George Barber
TAAA/Desert Skies Editor
15940 W Ridgemoor Ave
Tucson AZ 85736

President’s Message

Hello Fellow TAAA Members:

The light at the end of the tunnel for our obtaining a permanent dark sky site is growing very bright. Let's consider it an appropriate red light! Everything seems to be in place for the closing on the land taking place by the end of October. We will have a full report on what is happening at the general meeting on November 2. We are continuing to make progress on preparing the application for the Special Use Permit. That is due toward the end of November, and we will appear before the Planning and Zoning Commission in Cochise County at their meeting on January 9, 2008.

The general TAAA meeting for November is our semi-annual Members' Night, and we have a good array of presentations in store. Remember that the presentations begin at 6:30 in place of the Astronomy Essentials part of the meeting and continue until about 9:00 o'clock.

Three other events are described in other articles in this issue. The completion of the observatory at TIMPA, a special star party at Sunsites on November 10, and our Holiday Party on December 7 are coming up. Please read these articles to get the specifics.

The Evening Under the Stars event on November 10 in Sunsites, Arizona is an important part of our Citizen Review Process for getting the Special Use Permit through the Cochise County Planning and Zoning Commission. Our good friend Harry O'Neal, who lives in Sunsites, is organizing the event at the Community Center. It will give us a chance to introduce ourselves to the people of Sulphur Springs Valley and to let them know something of our plans for developing our dark site. We plan to have a dozen or so scopes there, so if you would like to participate, please plan to attend.

The TAAA Holiday Party will take the place of the General Meeting on December 7. We could not get the use of the meeting rooms at Steward Observatory or the Lunar and Planetary Lab. Specifics on the Holiday Party and its location at my home are elsewhere in this issue. We hope to see a lot of people for that event.

So, the long and the short of my notes to you this month are that things are coming together on several fronts. Many members are taking part in making these things happen, and there will be new opportunities for member involvement in the weeks ahead. Stay tuned!

Clear skies,
Bill Lofquist, President

Meeting Information and Calendar of Events

TAAA MEETING DATE: Friday, Nov. 2, at the Steward Observatory Auditorium – Room N210

Member’s Night: 6:30 PM
Tonight is your night to share the spotlight! If you have an astronomy-related topic you would like to present, contact Bill Lofquist to reserve a time slot during the main meeting.

BOARD OF DIRECTORS MEETING: Wednesday, Nov. 14, 6:30 pm. The meeting is held at Steward Observatory Conference Room N305.

STAR PARTIES AND EVENTS:
03 Nov – TAAA and Beginner’s SIG Star Party at TIMPA
04 Nov – U of A Astronomy Students at Saguaro West
05 Nov – Astroimaging SIG at China Rose

07 Nov – Beginner’s SIG at China Rose
09 Nov - Donaldson ES Star Party
10 Nov - Evening Under The Stars, Sunsites, Arizona
10 Nov – TAAA Star Party at Las Cienegas
13 Nov - Townsend Middle School Star Party
14 Nov - Van Horne ES Star Party
15 Nov - Doolan MS /Camp Cooper Star Party
17 Nov - Whipple Observatory Star Party
30 Nov - Quail Run ES Star Party
07 Dec – TAAA Holiday Party

NEWSLETTER SCHEDULE: Deadline for articles: Sat, Nov. 24. Printing: Mon, Nov. 26. Folding Party: Wed, Nov. 28. Printing: Thu, Nov. 29. The newsletter is mailed at least one week prior to the following month’s General Meeting.

Club News

THE TAAA HOLIDAY PARTY
FRIDAY, DECEMBER 07TH!

The 2007 Holiday Party will be in place of the December General Meeting. It will be held on Friday, December 7 at the home of Bill Lofquist, just as we did last year. It will begin at 5:00 and will be a potluck. So please plan to bring some hors d'oeuvres, a salad, a main dish, some vegetables, a desert, or some soft drinks.

It will be an informal gathering with dinner, lots of camaraderie, a raffle, music DJ’d by George and time to visit with your friends.

To get to Bill and Mary's house at 1935 West Harran Circle from the intersection of Ina Road and La Cholla Boulevard, go south on La Cholla Boulevard to the traffic light at Omar Drive. Turn east at Donaldson Elementary School. Take an immediate right on Amahl Drive, and go one half mile to Harran Drive. Turn left, and take the next

Club News (cont.)

left on Harran Circle. We are at the end of the cul-de-sac on the left. If you get lost in the curvy streets, call us at 297-6653.

We look forward to seeing you on December 7.

Plan to come and enjoy some holiday camaraderie with your fellow astronomers! We look forward to seeing you then.

PLEASE NOTE that the regular monthly meeting for December has been CANCELLED due to U of A exam schedules.

Member News

We welcome these members who have recently joined the TAAA: Theresa Groff, Jim Norine, Mary Palasi, and Michael Speir. Glad to have all of you join! New members can pick up a members pack at a meeting if they didn't request it by mail. Hope you'll make it to our star parties or meetings so we can all get to know you. (Updated membership lists are available online at either Yahoo Groups email list website under Files, or at most meetings.)

Astro-Imaging SIG Meeting

Monday, Nov. 5, 7pm
China Rose, NE corner Speedway/Rosemont

Our presentations feature CCD images, planetary webcams, and film. Come see some of the state of the imaging art over some Chinese food. Just show up and enjoy the show! For more information, contact Steve Peterson.

TAAA Apparel

Looking for a special gift or a way to make that fashion statement? Try on something from our fine line of club apparel. We have got hats, T-shirts, denim shirts, and patches. We take cash and checks.

2008 Calendars

Calendars for 2008 will be available for purchase at regular meetings. You'll find them at the same table where you purchase TAAA apparel. This year you have your choice of either the Astronomy magazine "Deep Space Mysteries" calendars or the Vatican Observatory calendar...or get both. The cost for a calendar is \$10 each (\$3 or \$5 off the regular selling price), or \$9 each for more than one. Proceeds from the sale of these calendars will be used appropriately as decided by the board. Thank you to all who support the TAAA through the purchase of the yearly calendars.

Beginners' Special Interest Group

The Beginners' Special Interest Group will gather for the monthly dinner meeting at the China Rose restaurant (NE corner of Speedway and Rosemont) on Wednesday, November 7, at 6:00 PM. The Wednesday night meeting will be interactive discussions of the "BSIG Observing Program", the TAAA Loaner Program and an open forum "What do I want from BSIG". Join us at the China Rose for information and good company. **Note that the TIMPA Star Party will precede the BSIG meeting this month.** TIMPA will be on Saturday, November 3. We hope for clear skies and to see you there!

An Evening Under The Stars At Sunsites, Arizona
November 10

A special star party, An Evening Under the Stars, will be held at the Community Center in Sunsites, Arizona on Saturday, November 10, 2008. Harry O'Neal, a resident of Sunsites and a friend of TAAA, is organizing this important event. It is important because it will give us a chance to introduce ourselves to the people of Sulphur Springs Valley who will be our new neighbors when we develop and begin to use the dark site we are developing.

The event is being sponsored by the Friends of the Sunsites Community Library. It will begin at 6:30 PM and will continue until 9:00 or as long as there are people to look through our scopes. Let's be there to set up at 5:30. Dean Ketelsen will give a presentation on Astronomy in Southern Arizona. We will also let people know of our general plans for developing the dark site. There will be an opportunity for people to make a contribution to the Sunsites Library Fund.

The Community Center is on Treasure Road. This is located on the south side of the village just past the row of businesses on the Frontage Road on the west side of Highway 191.

To get to Sunsites, go east on Interstate 10 past Benson. When you get to the Dragoon Road Exit before you get to Texas Canyon, take that exit and go 13 miles until it dead ends at Highway 191. Turn right and go about eight miles to Sunsites.

If you would like to bring your scope to participate in this event, please do. It looks like we will have a dozen or more scopes. Then, for those who would like, we can go to the new property and observe more into the night. There are some camper places with electric hook-ups at the Sunsites Community Center for those who would like to spend the night. There are also motel rooms at the Shadow Mountain Golf Course in Sunsites. A double room costs \$85, and that includes two rounds of golf. You can make a reservation by calling 520-826-3533.

Club News (cont.)

We will talk more about this event at the November general meeting.

Basha’s Thanks a Million Program

Basha’s has an excellent program to support local non-profit groups like the TAAA. It’s called the Basha’s Thanks a Million for Friends and Neighbors program. This is a no-brainer fundraiser. If you shop at Basha’s and have a “Thank you” card, the next time you go through the checkout, give the cashier this number: ID #23178. They can look up the number using our name, too. It’s that easy! Just do it once. At the end of the program next spring, Basha’s will make a donation to the TAAA based on the total sales of every Thank You card linked to our number. Anyone can participate, so give our number to family and friends. If you participated last year, you need to give our ID number again, or your sales won’t count. Thanks to everyone who participates.



ID # 23178

Upcoming Lectures

Please note that we will not have a regular meeting in December due to conflicts with the UofA final exam schedule. Doug Isbell, who was to speak to us at the December meeting, will be rescheduled next year. Given that we were unable to secure a meeting location for December 7th, the TAAA board has decided to hold our Holiday

Party on that night. More information will be given in the December newsletter.

We have arranged for Peter Smith, Principal Investigator for the Mars Phoenix Mission, will speak to us in January. This should be an interesting meeting, so mark your calendars now.

The February Astronomy Essentials lecture is open. Astronomy Essentials lectures are about basic astronomy and are given by our own members. Contact Terri Lappin (see page 2) to sign up for this lecture slot.

Dec 7	Astronomy Essentials	CANCELLED Attend our Holiday Party instead
	Invited Lecture	
Jan 4	Astronomy Essentials	Mary Turner, Seasonal Objects
	Invited Lecture	Peter Smith, LPL Mars Phoenix Mission
Feb 1	Astronomy Essentials	OPEN
	Invited Lecture	Astrophoto SIG, Tentative



New Toolkit!
The newest toolkit, *Exploring the Solar System*, has arrived! This kit contains a scale model of the solar system (yes, it includes Pluto), as well as a project that explains the current and past NASA missions to explore the solar system. As with all NSN toolkits, it includes a Resources CD, a training DVD, and essentially all the materials you need for the projects. You can request a copy of the CD and DVD at a meeting, or ask to borrow this or any toolkit listed below. Contact Terri Lappin (see page 2) for more information about these kits and their use.

All toolkits contain essentially all the materials needed for the projects. The projects are easy to do and you don’t



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Club News (cont.)

have to use all the projects in your outreach activity. You get to pick and choose the project(s) you demonstrate.

- PlanetQuest:** materials to explain how planets are detected, why we put telescopes in space, treasure hunt for objects related to stellar evolution, star chart of naked eye stars known to have planets in orbit
- Our Galaxy, Our Universe:** scale model of the Milky Way galaxy and the Universe
- Black Hole Survival Kit:** what is a black hole and how does it affect objects nearby, includes a game that a group or family can play
- Telescopes – Eyes on the Universe:** explains the basic principles of optics, the human eye, and observing
- Shadows and Silhouettes:** covers lunar phases, eclipses, and transits
- Exploring the Solar System:** scale model (size and distances) of solar system and NASA explorations of planets

The Night Sky Network has also given us a SolarScope to use in our outreach efforts. It will provide a white light image of the sun suitable for a small group to view together.

Robert Burnham, Jr. Memorial at Lowell Observatory
By Terri Lappin

Many of you may have a copy of the 3-volume set called *Burnham’s Celestial Handbook*. I have two complete sets; one I keep with my observing gear and one I leave at home. This remarkable work, written by a lover of the night sky, is much more than a listing of neat objects to look at. As an example, reading the section about the star Alpha Herculis includes the Greek and Roman stories surrounding Hercules, pictures of ancient coins that depict Hercules, historical notes of the star’s name through the ages, light curves showing the variable nature of this

star, and information about its visible companion. The handbook also includes photos, all in black and white, of many deep sky objects. Years ago I would use the *Burnham’s Celestial Handbook* to prepare my monthly Chief Observer reports. Some scientific information may have changed over the years, but it’s still a joy to pull off the shelf and read – and it still makes it to a few star parties. There is now talk of a newly revised edition being published.

Robert Burnham, Jr. worked at Lowell Observatory from 1950 to 1979 during which time he composed his handbook. He gained fame among amateur astronomers for this work but never received the recognition that was due him. In 1987 he left Arizona and his family never heard from him again. He passed away in 1993 at Mercy Hospital in San Diego, known only as a struggling artist. Two years later word reached his family that he had passed away. His relatives, unaware of the important contribution he made to amateur astronomy, didn’t tell anyone in the astronomical community. Only in the past decade or so has Robert Burnham’s tragic life become known to those who enjoy reading his handbook.

Through the grassroots efforts of the Cloud Night Forum and the East Valley Astronomy Club, a fund has been created to honor Robert Burnham, Jr. with a memorial at Lowell Observatory. Jack Horkheimer of PBS fame has contributed \$1000 to the memorial. You can contribute, too, by going to www.rbjm.org or by sending a check, payable to Burnham Memorial Fund to: East Valley Astronomy Club; PO Box 2202; Mesa, AZ. 85214-2202.

To learn more about Robert Burnham, Jr., go to <http://tinyurl.com/29g9hs> (or <http://www.phoenixnewtimes.com/1997-09-25/news/sky-writer/>).

Member’s Events

TAAA and BSIG Star Party at TIMPA
Saturday, 03 Nov

Come on out and enjoy the fall skies! TIMPA star parties are great for both beginners and experienced observers. Our novice members can get help with observing issues or equipment problems, as there are many experienced members there who would be happy to help. If you don’t own a telescope, come anyway, because there are lots of telescopes set up and everyone is invited to look through them. This is a great way to check out different telescope designs before you make that all-important decision to buy. We’ll do our best to get you the answers you need. If you have friends or relatives who are curious about amateur astronomy, feel free to bring them along. The TIMPA site features a large parking area, and full restroom facilities. Be prepared for cold temperatures. Directions to the TIMPA site are located on the outside flap of this newsletter.

TAAA Star Party at Las Cienegas (Empire Ranch)
Saturday, 10 Nov

Las Cienegas (formerly Empire Ranch) has been our normal dark-sky observing site for quite a number of years. Please try to arrive before sunset. Stay as long as you like, but let everyone know when you are ready to leave; someone may be taking astro-images. Bring a telescope if you have one, but you don’t need one to attend. Any member would be glad to let you look through their telescope. And, there are now restroom facilities at the site. Las Cienegas is at 4000 feet so be prepared for cold temperatures. Attendees should park their vehicles either perpendicular to the airstrip facing toward the center of the strip, or parallel to the airstrip along either side facing west. That way, when you are ready to leave, you will not have to back up and turn on your bright white backup lights. See the directions to Las Cienegas on the outside flap of this newsletter.

Items of Interest

Websites: Trips On The Internet Super-Skyway
By Rik Hill

Making a spectrum of yourself...pt. 2

Okay, over the last couple years we've looked at observatories, telescopes, webcams and various objects you can observe with these things. If you've been following these articles you are probably taking some pretty good images with minimal investment. But it's time to go to the next level One of the myths in amateur astronomy is that spectroscopy is so difficult and the instrumentation so complicated that you have to spend thousands of dollars to get into the field. Not true.

I pointed out some spectroscopes last July but have found some more information since that I think you should see and some designs that can be easily built and used. I have been building spectroscopes/graphs since the mid-1970s and even the title of this article (and part 1 back in July) came from Roger Hofer who used it to introduce one of my talks at Apollo Rendezvous.

First, not to toot my own horn again, but I will remind the reader that I have posted directions on making a spectrograph for only \$10 (prices may vary depending on availability of materials) on my website at:
<http://www.lpl.arizona.edu/~rhill/spect/spect.html>

There's a little catalog of stellar types made with the little device at the end of the article. This spectrograph was recently adapted to my webcam and I hope to have an updated webpage for that in the next couple weeks. Keep watching.

For educators I have another article that I posted over 5 years ago that shows how to make a rudimentary spectroscope using a CDROM for the dispersing element:
<http://www.lpl.arizona.edu/~rhill/spect/cdspec.html>

Some other simple and inexpensive spectrograph designs can be found on a BAA webpage at:
<http://home.freeuk.com/m.gavin/baaobfor.htm>

Maurice Gavin of the BAA in the U.K. has done a lot of work on home made spectroscopes. He is the preeminent amateur spectroscopist in the U.K. and his webpages show it. One of his more simple designs can be seen at:
<http://home.freeuk.net/m.gavin/mk1afocal.htm>

His higher resolution Ebert (actually an Ebert-Fastie) spectrograph can be seen at:
<http://home.freeuk.com/m.gavin/ebert.htm>

which uses your existing telescope. You will be amazed at the resolution of such an instrument.

If your interest has been piqued by these articles, take a look at Gavin's experimental designs at:
<http://home.freeuk.com/m.gavin/doodle.htm>

Maybe you can be the first to bring one of these designs into reality!

There are a number of do-it-yourself articles listed in the brief bibliography at:
<http://www.nleindex.com/index.php?pid=HTDI&sid=BrowseIndex&tID=E/1543>

All of this reading material is bound to inspire you to want to at least try your hand at this kind of observing. Post your project and results and I will gladly publicize it. This will take you beyond the astrophotography you've known and let you explore the guts of some of those lights in the sky.

{As always, if you have a topic you'd like explored or have some interesting URLs you've turned up, drop me a line at: rhill@lpl.arizona.edu}

Whipple Observatory Star Party
Saturday, November 17

See The Stars Through A Telescope - Free and open to the public,

Smithsonian Institution, Fred Lawrence Whipple Observatory, Visitors Center near Amado, Arizona

Observing will begin after 6 p.m. with telescopes provided courtesy of the Tucson Amateur Astronomy Association (TAAA) and the Sonoran Astronomical Society (SAS).

4 p.m. Visitors Center opens
5 p.m. Informal lecture presented by Observatory staff
~6:15 p.m. Observing begins (next to Visitors Center)

On view: Jupiter, double stars, star clusters, the Pleiades and the Moon.

Dress for cool evening temperatures. Small flashlights and binoculars are useful to bring. Lecture seating is limited, so you might want to bring a lawn chair.

Please cooperate with staff directing parking when you arrive. The parking spaces nearest the building are reserved for TAAA/SAS members and their telescopes. Visitors should park along the driveway or in the parking area outside the gate or along the road as directed.

For more information call 670-5707. In case of threatening weather, call 670-5707 after 4 p.m. on the 17th for information about star party cancellation.

<http://www.cfa.harvard.edu/flwo/starparty.html>

Public Star Parties and Community Events

All members of are asked to support the TAAA School Star Party program and other community events listed below. TAAA either sponsors or co-sponsors these events. These are great opportunities for beginners as you may only need to know a few objects in the sky. Even without a telescope, you can be valueable in other capacities. Sign up sheets for many events can be found at the meeting or contact a TAAA officer.

UofA Astronomy Students Star Party

Sunday, 11/04/2007 10 scopes

The TAAA will be supporting a star party for two classes of astronomy students from the UofA. The event will be held at the Saguaro National Park West in the parking lot at the Visitors Center. The activity runs from 7:00 to 9:00 pm. Set-up will start at 6:00 pm and must be completed before 7:00 pm when the students arrive. Approximately 125 students are expected to attend. This is a fun event. The students are very interested and appreciative and will be asking lots of questions to complete their assignments for the evening. John Kalas is the coordinator. There will be a sign-up sheet at the November 2nd meeting. If you are interested in helping out but are unable to attend the meeting, please give John a call at 620-6502 or e-mail him at <jckalas@cox.net> to volunteer.

Donaldson ES Star Party

Friday, 11/9/2007 Northwest No. of Scopes: 6

Donaldson ES will be hosting Exploring the Night Sky at 240 W Omar Drive. Take La Cholla Blvd North from River Road. Go right (east) on Omar Drive (Omar is the next traffic light North of Orange Grove Road). The school is on the North side of the street, immediately after turning onto Omar. To enter the playground, turn into the last parking lot entrance (someone will be there to direct you to the exact observing position). Contact person Samuel Cox can be reached at 794-1663 or email samuel@coxfamilyhome.net. Set-Up Time: 6:00pm. Observing will be from 6:30 pm to 8:30 pm. Sunset: 5:30pm Dark Sky: 6:26pm Moon Phase: (no moon during viewing).

Townsend Middle School Star Party Central

Tuesday, 11/13/2007 No. of Scopes: 4

Townsend Middle School will be preparing for Exploring the Night Sky at 2120 N Beverly Blvd. Tucson 85712. From Tucson Blvd and Grant go east on Grant to Beverly Blvd (this is the next light past Rosemont and is across from emergency entrance to Tucson Medical Center). Turn right or south. Go past the medical facility and bank parking lots about 2 blocks to Townsend on the left or east side of Beverly. Turn left into the 2nd school parking lot just past the front of the school with grassy lawn. Park there. Then unload and head north toward the lawn in the front of the school. Contact person April Baisan can be reached at 232.7900 or email april.baisan@tusd.k12.az.us/ Set-Up Time: 6:00pm. Observing will be from 6:30 pm to 8:30 pm. Sunset: 5:25pm Dark Sky: 6:21pm Moon Phase: Crescent after New Moon.

Van Horne ES Star Party

Wednesday, 11/14/2007 East No. of Scopes: 4

Van Horne ES will be hosting Exploring the Night Sky at 7550 E. Pima St. East on Speedway to Pantano. North on Pantano to Pima St. West on Pima St. until you reach the school. Viewing will be on the playground. Contact person Jaquetta Alexander can be reached at 520-731-6900 or email mattnj@cox.net. Set-Up Time: 6:00pm. Observing will be from 6:30 pm to 8:30 pm. Sunset: 5:25pm Dark Sky: 6:20pm Moon Phase: Crescent after New Moon.

Doolan MS /Camp Cooper Star Party

Thursday, 11/15/2007 West No. of Scopes: 4

Doolan MS at Camp Cooper will be planning Exploring the Night Sky at 5745 W. Trails End Rd. Drive west on Speedway or Anklam Road. Just beyond the intersection of Speedway and Anklam turn right (north) on to Camino De Oeste. Turn left (west) on to Trails End Road. Drive one mile. Cooper ESC is on the left (south) side of the road. Contact person Ivan Yocum can be reached at 232-6976 or email Ivan.Yocum@tusd1.org. Set-Up Time: 6:00pm. Observing will be from 6:30 pm to 8:30 pm. Sunset: 5:29pm Dark Sky: 6:23pm Moon Phase: Late Crescent.

Quail Run ES Star Party

Friday, 11/30/2007 Northwest No. of Scopes: 4

Quail Run ES will be holding Family Space Night at 4600 W. Cortaro Farms Rd, Marana. Exit I-10 at the Cortaro Farms Road exit and head east. Continue on Cortaro for about a mile. The school is a couple blocks west of the Camino de Oeste stoplight, on the left hand side. Viewing will be at the school outdoor amphitheater. Contact person Melissa Wilburn can be reached at 520-579-4700 or email M.A.Wilburn@maranausd.org. Set-Up Time: 5:45pm. Observing will be from 6:15pm to 8:15 pm. Sunset: 5:19pm Dark Sky: 6:16pm Moon Phase: (no moon during viewing).

TIMPA SITE NEWS

Progress on Roll-Away Observatory
By George Barber

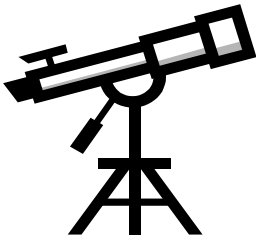
Thanks to the hard work by the volunteers at the Oct. 13 work party, we have made significant progress on getting the roll-away observatory completed. Painting and roofing were completed. Metal work was completed for the framework which will hold the building onto the track. Some work is still needed on the positioning of the V-groove wheels which will support the building.

When the electrician wired the pier’s outlet for power, he

moved the outlet box to the side of the pier. This won’t allow our building to move properly. I have arranged for him to re-position the outlet; this should happen in the next week. The pad and rails turned out great; SMR did a fine job on this.

So, we need only one more work party to finish this project! I am planning a work party for Oct. 27, and a final update at the November meeting. Dedication and first light for the 14-inch telescope will be announced in December.

Telescopes for Borrowing



Free service
★
Only for Members

Don’t own a telescope?
Our Loaner Program is your answer!
These telescopes are in the program
Sears 60mmf/15 on equatorial mount
Unitron 62mmf/14.5 on equatorial mount
Meade 90mm ETX
Coulter Odyssey8 8-inch f/4.5 Dobson
Meade 8-inch f/4 Schmidt-Newtonian LXD-55
Meade10-inch f/4.5 on equatorial mount
Meade 10” LX200 GPS (requires training session)

Beginners, here's your chance to learn and observe the sky before buying any equipment. The Loaner Program is available to any current member after meeting requirements detailed in the TAAA Loan Policy. Contact the Equipment Loan Coordinator (see page 2) for details about these telescopes.

Dark Skies for November 2007

DARK SKIES (no twilight, no moonlight) for Tucson in 24-hour MST: 18=6pm,20=8pm, 22=10pm, 0=12am
RISE, SET, VISIBILITY for sun and bright planets: rise for morning object, set for evening object

We/Th	31/ 1	18:58 - 22:57	Su/Mo	11/12	18:50 - 5:26	Th/Fr	22/23	- - -
Th/Fr	1/ 2	18:57 - 0:01	Mo/Tu	12/13	19:13 - 5:27	Fr/Sa	23/24	Full Moon
Fr/Sa	2/ 3	18:56 - 1:02	Tu/We	13/14	20:08 - 5:27	Sa/Su	24/25	- - -
Sa/Su	3/ 4	18:55 - 2:00	We/Th	14/15	21:07 - 5:28			
Th/Fr	15/16	22:08 - 5:29	Su/Mo	25/26	- - -	Su/Mo	4/ 5	18:55 - 2:56
Fr/Sa	16/17	23:11 - 5:30	Mo/Tu	26/27	18:46 - 19:29			
Mo/Tu	5/ 6	18:54 - 3:51	Sa/Su	17/18	0:14 - 5:30	Tu/We	27/28	18:46 - 20:40
Tu/We	6/ 7	18:53 - 4:46				We/Th	28/29	18:46 - 21:48
We/Th	7/ 8	18:53 - 5:23	Su/Mo	18/19	1:18 - 5:31	Th/Fr	29/30	18:45 - 22:52
Th/Fr	8/ 9	18:52 - 5:24	Mo/Tu	19/20	2:23 - 5:32	Fr/Sa	30/1	18:45 - 23:53
Fr/Sa	9/10	18:51 - 5:24	Tu/We	20/21	3:31 - 5:33	Sa/Su	1/2	18:45 - 0:50
Sa/Su	10/11	18:51 - 5:25	We/Th	21/22	4:42 - 5:33			

Weekend	Sun	Sun	Mercury	Venus	Mars	Jupiter	Saturn	
Sa/Su	Set	Rise	Rise Vi	Rise Vi	Rise Vi	Set Vi	Rise Vi	Vi=Visibility
03/ 4	17:30	6:41	5:16 4	3:04 -4	21:13 -1	19:49 -1	1:36 1	-3 brilliant
10/11	17:25	6:47	5:18 3	3:10 -4	20:48 -1	19:28 0	1:11 1	0 conspicuous
17/18	17:21	6:53	5:36 4	3:18 -4	20:20 -1	19:06 1	0:45 1	3 moderate
24/25	17:18	7:00	6:01 6	3:27 -4	19:48 -1	18:45 2	0:19 1	6 naked eye limit
01/ 2	17:17	7:06	6:27 9	3:37 -4	19:14 -1	18:24 4	23:53 1	9 binoculars limit

By Erich Karkoschka

MEMBER'S FORUM

Astronomical Sketching: A Step-by-Step Introduction
by Richard Handy, David B. Moody, Jeremy Perez, Erika Rix, and Sol Robbins
Publisher: Springer Science (2007)
Cover price: \$39.95

Reviewed by Tom Watson

When I was very young some kind soul tried to teach me how to draw a duck, using that peculiar method of ovals and squares art teachers find so attractive. What I ended up with looked very little like any sort of waterfowl from this world, which may explain my later fixation on science fiction. The experience was, in truth, rather embarrassing, and I spent many years looking at drawing the way others view public speaking, with fear and loathing. So imagine my surprise, many years later, to see my hand making accurate, if unlovely, sketches of plant cell types while taking a class in plant anatomy a few years go. With that experience behind me I was less inclined to balk at the sketching requirement for some of the Astronomical League clubs, and as I continue to work my way through

the Messier Club I find myself with quite acceptable pictures. Acceptable, however, does not mean they are especially pretty, and they are not. But they work for me, and the attention I've paid while making them has greatly enhanced my ability to perceive details in the objects I observe.

In the meantime, as a member of the Cloudy Nights forum, I found myself viewing sketches that are simply beautiful. As I looked at these sketches I wondered "How in the world do they achieve such effects with mere pencils?" The thought was generally followed by the wish that I could do even half so well. Now, four of these master sketchers have provided a tutorial that reveals these secrets, not the least of which is that they don't just use pencils!

When they call this book a step-by-step introduction, they aren't kidding! Just about anything you might observe through an eyepiece is covered: lunar landscapes, sunspots and prominences view with hydrogen alpha filters, comets, planets, star clusters, nebulae, and galaxies. For

Desert Skies Classified	
For Sale	Celestron 9.25 Schmidt-Cassegrain Advanced SGT Telescope with: XLT coatings, upgraded 50mm finder, Telrad, 40mm Plossl Eyepiece, and more. \$1100.00. William Optics 80mm Megrez Refractor O.T.A. (original generation, f6). Includes; 2" Crayford focuser with compression clamp, 1.25" adapter also with compression clamp, and carrying case. \$300.00. Contact Edward Stramler at 293-0210, 349-1893 (cell), or surroundhound@yahoo.com [02/08]
Wanted	Telescope for Sunnyside School District. Is that C-12 just taking up space around the house? The Sunnyside School District is looking for a telescope for use in school classes and programs. The ideal instrument would be a 10-inch telescope or larger and would be permanently mounted at a school site. Anyone who is interested in helping with any part of this project should contact the office of Tucson City Council member Steve Leal. Vice Mayor Steve Leal, Ward 5, 4300 South Park Avenue, Tucson, AZ 85714, Phone: (520) 791-4231, FAX: (520) 791-3188, E-Mail: steve.leal@tucsonaz.gov [02/08]
For Sale	Orion VersaGo Precision Alt/Az mount with dovetail 5" L-Arm. Used only 3-4 times, \$300.00. ZenithStar 66 Petzval f/6 400mm semi-apo with crayfor focuser with 1:10 dual speed microfocuser. Comes with William Optics custom soft case. Used 3-4 times, \$300.00. William Optics 2" star mirror diagonal with 1/10 lambda @99% dielectric, carbon fiber plate, used 3-4 times, \$170.00 William Optics 1 1/4" 45deg erecting prism, \$75.00. Items bought for use by wife, physical disability no longer allows viewing. Package deal - Paid \$845.00 - will take \$700.00. Make offer for package deal or individual items. Contact Neal Scofield at (520) 883-5456 or email RetiredBadge@msn.com . [02/08].
For Sale	4.5-inch elliptical secondary mirror and holder. 1/8 wave. Excellent condition \$300. Meade 2-inch, 26mm QX wide angle eyepiece. \$70 or best offer, brand new in box. Gary Vecere, 207-2898 [12/07]
For Sale	Celestron C-14 optical tube assembly with dovetail mounting plate, 50mm finder scope, dust caps and trunk; \$2500.00. SBIG ST-9E parallel port CCD camera with TC-211 guider, CFW-8 filter wheel (no filters), carrying case with cables; \$1800.00. Meade LXD75 10" Schmidt-Newtonian optical tube assembly with mounting rings; \$600.00. Losmandy G-11 German equatorial mount; complete, with adjustable tripod 2-21# and 1-11# counterweights, Losmandy digital setting circles, polar axis alignment scope; \$2000.00 Contact Steve Peterson at 762-8211 or email at ccdcat@msn.com [12/07]
For Sale	Total custom professional 12.5" f-17 ultra-lightweight Cassegrain system. 96% coatings, Zerodur secondary, Cervitt conical primary. Completely diffraction limited with 25% center obstruction. In original cartons, for \$2500. A new in-the-box Astrophysics focuser is also available; price negotiable. Robert Powers, 822-3107. [12/07]
For Sale	1.4 acre dark site in Diamond Bell Ranch. Comes with custom executive 2500 square foot home with rock fireplace, library, 3-bdr. Complete custom woodwork, 3-car garage. \$395,000. Robert Powers, 822-3107. [12/07]

Your ad will run for 4 months unless specified. Month and year of last appearance is last item of ad. For additions or changes to this list, call or e-mail the newsletter editor.

MEMBER'S FORUM (cont.)

each the reader is walked through clearly written instructions that are illustrated with photographs of the author's hand performing the described step. The tools of the trade are listed and described and tips are provided on using the various pencils, erasers, and other sketching paraphernalia. Reading this book provided me with a series of revelations, and the secrets revealed (having nothing to do with ovals, squares, or ducks) all seem do-able, a tribute to both the writing and editing involved in producing this slim volume. I found myself finishing the book with the thought that I, too, could (with practice) upgrade my own sketches to something like the work I've viewed so enviously on that forum.

It is not a large book, and some might be reluctant to buy it, given the price, but a quick look will show you what I

mean about the degree to which this book is illustrated. Even black and white photographs will run up the price of a book, and these photographs are reproduced which exceptionally high quality. The text alone would not tell you what you need to know in a useful way, but the prose combined with those photos makes it all very clear. Put the price in perspective. When was the last time you bought a good eyepiece for forty bucks? If you have tried to sketch the view in the eyepiece and been frustrated by the result, this book will be an investment that pays you back, in terms of satisfaction, at a rate comparable to the best eyepiece you own.

TAAA Board of Directors Meeting - 10 October 2007

Attending: TAAA Board Members present: Bill Lofquist presiding, Ken Shaver, Steve Marten, Terri Lappin, George Barber, Teresa Bippert-Plymate and Keith Schlottman. Members present: Robert Crawford and Claude Plymate.

President's Call to Order: 6:35PM

September Minutes The effective date for new paid star party rates was reported as 1 December 2007; the correct date is 1 January 2008. September minutes were accepted with amendment. Unanimous.

Member Feedback -

Suggestion to offer honorary memberships or monthly newsletters to neighbors adjacent to proposed Bumble Bee observing site; both will be considered by the Board.

Approximately ten members met at Village Inn after the October monthly meeting for late evening dinner/snack and discussion.

Announcements

After Board members received a request for donations for a Robert Burnham, Jr. Memorial the Board requested that the TAAA *Desert Skies* editor, George Barber, include an article describing Mr. Burnham's contributions to astronomy, his unusual circumstances and the recent request for memorial donations. Mr. Burnham was best known for writing the classic three volume *Burnham's Celestial Handbook*.

Treasurer's Report - Terri Lappin

Terri reviewed current assets in TAAA accounts and reported that income for last month was approximately \$500 after recent expenses for dark site search, newsletter postage and miscellaneous club expenses.

Revised TAAA Brochure - Terri Lappin

Bill commended Terri for the recent update of our TAAA tri-fold brochure. The updated version will be printed (500 copies) for fall star parties and to distribute at local astronomy retailers and at monthly meetings.

TIMPA Observatory - George Barber

George reported that the observatory is ready for mounting, painting and finishing next Saturday, October 13, on the recently completed extended pad. With volunteer assistance most of the work should be completed by the end day. Roof treatment will require several applications over several weeks. First light of the 14" SCT to be mounted in the TIMPA Observatory in the next several weeks is scheduled for Saturday, November 3, 2007.

Dark Observing Site - Bill Lofquist

Robert Crawford reported that the Perseus Group has voted to purchase the 60 acre Bumble Bee site south of Wilcox on October 31. One of the four members will buy 30 acres with the others buying the remaining acres in equal shares. Sixteen acres will be donated from the group to TAAA. Currently, the group is reviewing CC&Rs (Covenants, Conditions and Restrictions) and land suitability details. The Board will consider guidelines for interim uses during the special use permit application process. Bill led a Board review of site preparation, appropriate future development and interested neighbors. The Board also discussed the citizenry review process and our relations with the Sulphur Springs Valley community.

December Meeting Cancellation - Bill Lofquist

Because of scheduling conflicts that will prevent us from using the Steward Observatory Lecture Hall on Friday, December 7, the Board voted to cancel the December monthly meeting. Bill Lofquist will host the 2007 TAAA Holiday party on the former meeting night, December 7, 2007.

Adjourned at 9:14 pm

Respectfully Submitted,

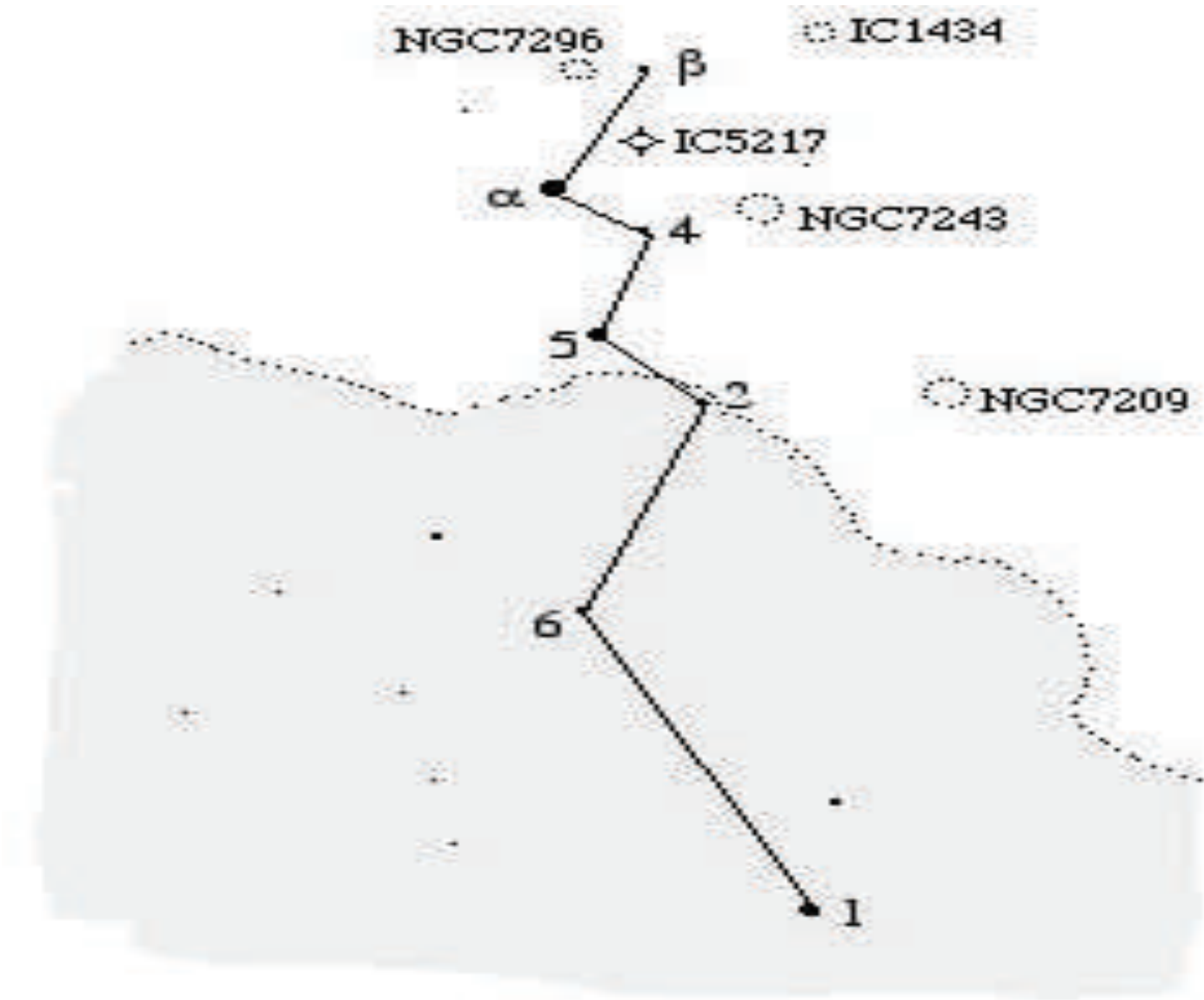
Steve Marten

Secretary

Constellation Report by Chris Lancaster

Lacerta
The Lizard

This group of stars was largely neglected by the ancients since only dim stars comprise its indiscriminate shape. It wasn't until late in the 17th century that astronomers began concocting names for this scattering of stars. One of the original ones comes from the French astronomer Augustin Royer, who proposed the ponderous name of "Scepter and the Hand of Justice" in honor of Louis XIV. Johann Bode of Germany suggested the name "Frederici Honores" after the reign of Frederick the Great of Prussia. However, it was Johannes Hevelius, also German, who is given credit for the name Lacerta, which has endured to the present day and left the other names to be forgotten over time.

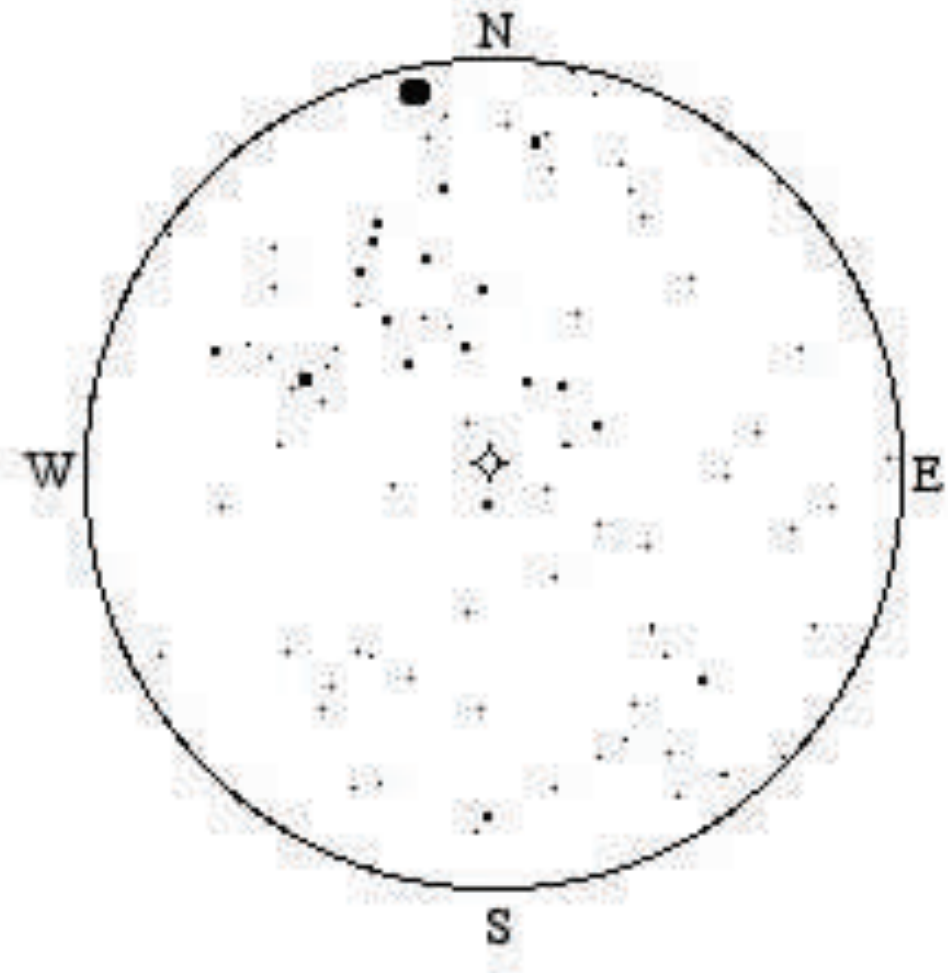


Lacerta has a northerly spot in the sky, sitting between Cygnus and Andromeda beneath the feet of Pegasus. Look east of Deneb, the brightest star of Cygnus, and you will see the zigzag of stars between magnitudes 3.5 to 4.5 which form the body of Lacerta straddling the meridian just after 9 pm in the middle of October.

This constellation would be especially uninteresting if it didn't hold the position it does in the sky--just on the edge of the northern summer Milky Way. What this means is that Lacerta is full of distant galactic, also called open, star clusters.

The two largest ones are near the border of Cygnus. NGC7209 is a bright magnitude 6.7 cluster spread across 25' of the sky. You'll find it 16' in RA west of 4.5 magnitude 2 Lacertae. It holds about 50 stars ranging in magnitude 9 to 12. A bit

Constellation Report by Chris Lancaster (cont.)

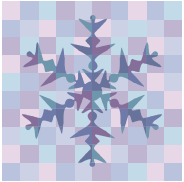
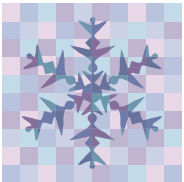


farther north is NGC7243. Being about the same size (21') and brightness (mag. 6.4) makes it a near twin to NGC7209. However, not quite as many stars populate this cluster. Look closely and you'll see a double star within this group. They are a pair of hot A0 type stars separated by 9" and each shining at magnitude 8.5.

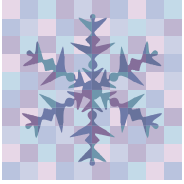
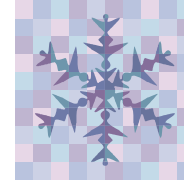
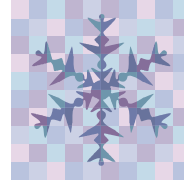
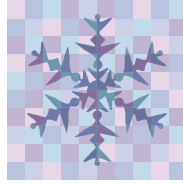
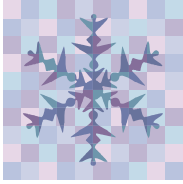
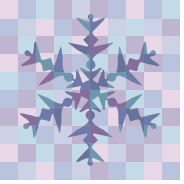
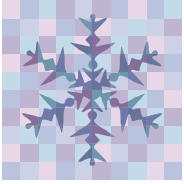
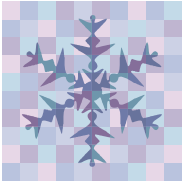
Floating near the lizard's head like insects in danger of being devoured are three modest clusters which are all small and dim but, nevertheless, worth your time if you haven't observed them before. NGC7296 near Lacerta's snout is a mist of stars 4m 40s in RA east of the 4.4 magnitude star Beta Lacertae. This cluster measures a meager 4.0' in diameter, but is fairly rich. IC1434 is another rich cluster, 8.0' in size, and of magnitude 9.0. It shows a branched structure by its stars of 12 -15 magnitude. The stars of the Milky Way collect into the tight knot of NGC7245, which rounds out the trio of our featured star clusters. This one sits near the northwest edge of the constellation 4.5 degrees due north of NGC7243.



Don't Forget!
The December 7th meeting is
cancelled.



Plan to attend the Holiday Party
Friday, Dec. 7th



Tucson Amateur Astronomy Association
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Tucson, AZ 85717

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Please consider renewing your membership on time. Renewal month and dollar amount appears on your address label. Magazine subscriptions are not included. TAL fee is included if participating in TAL. See details on page 2.

Directions to TIMPA and Empire Ranch

Directions to TIMPA Site

GPS coordinates: 32 deg 15.868' N, 111 deg 16.390' W

From the North:

1. Take Ina Rd. west about three miles past I-10.
2. Turn left (south) on Wade Rd.. Wade Rd. becomes Picture Rocks Rd. when the Rd. bends to the right (west).
3. Take Picture Rocks Rd. west to Sandario Rd..
4. Turn left (south) on Sandario Rd. to Manville Rd..
5. Turn right (west) on Manville Rd. to Reservation Rd..
6. Turn left (south) on Reservation Rd. (dirt Rd.) and go about two miles. The TIMPA entrance is on the left.

From the East:

1. Take Speedway Blvd. west and it turns into Gates Pass Rd..
2. Go over Gates Pass and continue west to Kinney Rd..
3. Turn right (north) on Kinney Rd. and continue past the Desert Museum.
4. Kinney Rd. bends left at the entrance to Saguaro National Park West and becomes Mile Wide Rd..
5. Take Mile Wide Rd. west about five miles to Reservation Rd.. Mile Wide Rd. ends at Reservation Rd. and you must turn right (north) onto Reservation Rd..
6. Take Reservation Rd. north about one mile. The entrance to TIMPA will be on the right.

NOTE

A gate card is required for TIMPA access. Please **DO NOT** ask the caretakers for entry to the TIMPA SITE. A list of TIMPA key keepers is available on the TAAA website, or by contacting a board member. For scheduled TIMPA star parties, a designated TAAA representative will provide access to the site.

Directions to Las Cienegas (Empire Ranch)

GPS coordinates: 31 deg 47.356' N, 110 deg 37.913' W

Take I-10 East from Tucson. Take Exit 281 (Route 83 Sonoita-Patagonia Highway South). Travel south on Route 83 for about 19 miles, watch for green and white milepost 40 sign on the right side of the road. Approximately ¼ mile past milepost 40, turn left into Las Cienegas. The road is dirt and is “washboarded” so go carefully. At about 2.9 miles, there is a fork in the road. Stay to the right. When the road ends in a “T”, take a left. Cross over a concrete section of the road down in a wash. Just up the hill from the wash (about .2 mile), turn left. 0.1 mile ahead will be the end of an abandoned airstrip with a covered ramada. The club members have been setting up several tenths of a mile down the runway. If you arrive after dark, as a courtesy to other members, use only your parking lights to approach the set-up location.