Desert Skies

Tucson Amateur Astronomy Association

Volume LVIII, Number 3 March 2012

Messier Marathon — March 24th at CAC (& maybe TIMPA)

General Meeting March 2nd

Steward Observatory Lecture Hall, Room N210

6:30pm

TAAA Astro-Imagers Presentations

Affiliates

TAAA Meeting Friday, March 2

Steward Observatory Lecture Hall, Room N210, U of A campus

6:30pm Annual Astro-Imaging Presentations

Title: TAAA Astro-Images Presentations
Speaker: Several Astro-Imager Special Interest Group members

March is our annual Astro-Imagers Special Interest Group exhibition. Come see those "insane" people (and their astro images) that Steve Coe mentioned during his lecture last month. We will continue by expanding on what Steve shared by showing what can be done when one is willing to invest more time and money in the hobby of Astro Imaging.

We will present a sampling of the current work being done by members of TAAA with regard to imaging the night sky. The format this year will be a little different in that we will present the efforts of individuals from all levels of capability. We will share with you what equipment is needed to acquire the images shown and give you some idea of the effort to process the image data once acquired. You will see the results of individuals just recently beginning to take images and the level of investment to get nice images. Then we will show those who have spent a little more time and energy to get a different level of image. Finally, we will share with you the results of those who have invested a greater amount of money for advance equipment and software and even more time processing their raw images.

Join us and decide if we really are "insane".

Editor's Message

There are a boat load of outreach and observing opportunities this month!

We have several star parties for school children and one for UA students. We also have the Sharing the Sky public event on March 31st. These are listed on page 7. Remember instead of bringing a telescope, you can bring one of our Outreach Toolkits. See them briefly described on page 9.

This is also that time of the year when all Messier Objects are theoretically visible over the course of one night. The best time this year is on March 24th. A Messier Marathon will be held at the Chiricahua Astronomy Complex. If you don't want to drive that far, the Astronomy Fundamentals SIG may hold one at the TIMPA site if there's enough interest. Let the AFSIG know if you are interested in a TIMPA Messier Marathon.

The AFSIG is also conducting their popular 3-day long Introduction to Astronomy Fundamentals this month. I hear there isn't much room for more students. If this interests you I hope you are signed up already!

The Family Astronomy Program has returned to the Wilmot Library, too. If you have young children or if you know of a family with young children, this would be a great environment in which to introduce them to astronomy. This program is described on page 7 with our other outreach activities.

We are selling a Celestron NexStar 11 GPS telescope to benefit the Chiricahua Astronomy Complex. See page 8.

Hope to see you at an event this month!

Terri Lappin

Unless otherwise noted, contact information for individuals mentioned throughout this newsletter can be found on page 15—"How to Contact Us".

Book Giveaway at March 2nd Meeting

The TAAA has a significant number of donated astronomy -related books in storage. These books will not fit in our library cabinet, so they must be disposed of. At the March monthly meeting, these books will be placed out on display for TAAA Members to take free-of-charge. This could be a great way to enhance your personal astronomy library.

Sharing the Sky
Public Star Party
March 31st

Save the date! We need you for this public event. We'll be on the UA Mall in front of Flandrau Planetarium beginning at 3pm for Solar observing. Night viewing begins when it's dark enough and ends about 10pm.

Cover Photo

A Messier Marathon montage designed by Loretta McKibben. Larry Phillips, coordinator of our Astro-Imagers SIG, provided images of M1, M42, and M100. TAAA member Alistair Symon provided images of M13, M45, and M57. March is not only when our Astro-Imagers shine at our meeting, but it's also time for a Messier Marathon! A Messier Marathon will be held at the CAC observing site on the evening of March 24th. The AFSIG is considering holding one at TIMPA, too. Do you dare to attempt to see all the Messier Objects in one night?

Desert Skies is published monthly by the Tucson Amateur Astronomy Association, PO Box 41254, Tucson, AZ 85717.

This Month in Brief

Event Contact Person	Date Location	Time	See Page
General Meeting Keith Schlottman	Mar 2 (Fri) Steward Observatory Rm N210 933 N Cherry Ave	6:30pm	2
Intro Fundamentals of Astronomy Class Ben Bailey	Mar 3,10, 17 (Sat) USGS Building – Room 253 520 N Park Avenue	9:00am	Call Ben
Astro-Imaging SIG Meeting Larry Phillips	Mar 5 (Mon) Coco's Restaurant 6095 E Broadway	6:00pm (for dinner)	4
Astronomy Fundamentals Meeting Ben Bailey	Mar 8 (Thurs) USGS Building – Room 253 520 N Park Avenue	6:30pm	5
Board Meeting Keith Schlottman	Mar 14 (Wed) Steward Observatory Room N305 933 N Cherry Ave	6:30pm	10
Space Exploration SIG Meeting Al Anzaldua	Mar 15 (Thurs) Woods Memorial Library 3455 N First Ave	6:45pm	4
TIMPA/AFSIG Star Party Ben Bailey	Mar 16 (Sat) TIMPA Site 3250 Reservation Rd	5:30pm	–
Community Star Party Far North (Oracle) Bill Lofquist	Mar 17 (Sat) Biosphere 2 32540 S Biosphere Rd	6:30pm	7
Family Astronomy Program Jim Miller	Mar 20 (Tues) Wilmot Library 530 N Wilmot Rd	5:30pm	7
School Star Party Central Tucson Bill Lofquist	Mar 20 (Tues) Howell Elementary School 401 North Irving	6:00pm	7
School Star Party South Tucson Bill Lofquist	Mar 22 (Thurs) Utterback Middle School 3233 S Pinal Vista	6:00pm	7
Chiricahua Astro. Complex Star Party John Kalas	Mar 24 (Sat) Chiricahua Astronomy Complex		6
TIMPA/AFSIG Star Party Ben Bailey	Mar 24 (Sat) TIMPA Site 3250 N Reservation Rd	6:00pm	6
School Star Party John Kalas	Mar 25 (Sun) Saguaro Park West Red Hills Visitor Center	6:00pm	7
School Star Party North Tucson Bill Lofquist	Mar 29 (Thurs) Rio Vista Elementary School 1351 E Limberlost Rd	6:30pm	7
Starry Messenger Workshop Terri Lappin	Mar 31 (Sat) Steward Observatory Rm N305 933 N Cherry Ave	noon	4
Public Star Party Central Tucson John Kalas	Mar 31 (Sat) UofA Mall in front of Flandrau Sharing the Sky Event	3:00pm	2, 7
Astro-Imaging SIG Meeting Larry Phillips	Apr 2 (Mon) Coco's Restaurant 6095 E Broadway	6:00pm (for dinner)	4

Cancelled

Future Dates

Apr 2	Astro-Imaging SIG Mtg
Apr 6	TAAA General Meeting
Apr 11	Board of Directors Meeting
Apr 12	Astronomy Fundamentals SIG Meeting
Apr 13	Friday Nite @ TIMPA Star Party
Apr 19	Space Exploration SIG Meeting
Apr 21	Chiricahua Astronomy Complex Star Party
Apr 21	TIMPA Star Party

Newsletter Deadline

The deadline for the April issue is Wed, March 21. Desert Skies is published at least one week before the General Meeting. See the publishing guidelines for details.

Upcoming Lectures

6 Apr	*Astronomy Essentials*	Mary Turner Seasonal Objects
	Invited	Tom Polakis Astronomy Trip to Chile
May 4	*Meeting begins at 6:30pm*	Members Night Election of Officers
Jun 1	*Astronomy Essentials*	Al Anzaldua Near Earth Asteroids
	Invited	Carl Hergenrother OSIRIS-REx
Jul 6	*Astronomy Essentials*	Mary Turner Seasonal Objects
	Invited	OPEN

Lectures are arranged by Terri Lappin. She's always open to suggestions.

Astro-Imaging Special Interest Group (AISIG)

Meeting: March 5 (Mon) 7pm

Coco's Restaurant (Broadway between Wilmot & Craycroft)
Contact: Larry Phillips

The Astro-Imaging SIG meets at 7pm usually on the first Monday of the month. Come early, anytime after 6 PM and enjoy dinner before the meeting. We will meet in the banquet room which is to the far left after you enter the restaurant proper. Our program consists of members sharing their images, setups, problems, or suggestions. Meetings end no later than 9 PM.

Note that our April AISIG meeting takes place *before* the April General Membership Meeting.

Starry Messengers SIG (SMSIG)

Workshop: March 31 (Sat) Noon

Steward Observatory, Rm N305
Contact: Terri Lappin

Astrobiology has only recently become a popular sub-field of astronomy. The field considers the origin and evolution of life in the universe. What can we learn from the only planet known to support life? At this 3-hour long workshop you'll see that the Earth provides a superb set of widely varying environments to study. You'll experience hands-on projects developed by the Astronomical Society of the Pacific designed to open the eyes of young and old to the wonderful world of life here on Earth and the possibilities for life beyond Earth. These projects come from the *Life in the Universe Outreach Toolkit* which we received last fall. There is no charge to attend this workshop. We will call in a sandwich order to Baggin's during the workshop so you'll want to bring a few bucks, or bring your own lunch. We'll be eating while watching a video.

Workshop attendees are not obligated to participate in TAAA outreach events. However, the Sharing the Sky Star Party will start immediately after the workshop ends at 3pm. It's hoped that some of the workshop attendees will want to use their newly learned skills at that event.

All workshop participants will receive the toolkit CD containing the manual and background information and the training DVD. Like all NSN Outreach Toolkits, this one will be available for checkout should you want to present the materials to a group of any age.

The Starry Messenger SIG provides an environment in which TAAA members can enhance their knowledge and understanding of astronomy and related concepts, all with an emphasis on conveying that information to people of all ages. Any TAAA member involved in astronomy outreach can consider themselves a member of the Starry Messenger Special Interest Group. If you have never attended a SMSIG workshop or meeting but are participating in TAAA outreach activities, you are supporting the goals of the Starry Messenger SIG. We value your contribution.

Solar Observing Group

The Solar Observing group will not be meeting for group solar observing until further notice. Please ignore the March 17th Solar Observing date that appears on the 2012 TAAA wall calendar. Solar observers are encouraged to use the TAAA Forum to post their solar observations.

Space Exploration Special Interest Group (SESIG)

Lecture: March 15 (Thurs) 6:45pm

Woods Memorial Branch Library
Contact: Al Anzaldua

Can we beat light pollution and bad seeing without going into orbit? Software & Micro-ElectroMechanical Systems Engineer Conrad Schneiker, co-founder of Arizona Technology Cluster and board member of Arizona Optics Industries Association (AOIA), will offer a solution to these and other earthly problems in a lecture on March 15 titled, *Stratospheric Platforms for Astronomy, Solar Power, and Space Launch*. Mr. Schneiker's presentation will take place at 6:45 pm at the Woods Memorial Branch Library, 3455 N 1st Ave, just south of Prince Rd on the west side of the street.

On April 19 the SESIG will be holding a planning meeting at 6:45 pm also at the Woods Memorial Branch Library. All TAAA members interested in space exploration and development are welcome!

Sign-up sheets for SESIG talks will be provided at the General Membership Meetings, or RSVP to Al Anzaldua.

Unless otherwise noted, all contact information can be found in the section called "How to Contact Us", found on page 15 of this issue of *Desert Skies*.

Astronomy Fundamentals SIG (AFSIG)

AFSIG Monthly Meeting

March 8 (Thurs) 6:30 pm
U.S.G.S. Building, Room 253 (520 North Park Avenue)
Contact: Ben Bailey

On Thursday, March 8th we will hold our regular monthly meeting. Jerry Farrar will teach us about sketching astronomical objects. AFSIG is dedicated to building astronomy knowledge and practical skills among our members. Please come out and help us succeed.

The USGS Building is on the northeast corner of Park and 6th Street. Free parking after 5pm behind the building in a paved lot. Please join us.

AFSIG Observing Clubs

AFSIG Observing Clubs are open to all members of TAAA at no charge. They are guided programs which means that at the scheduled observing sessions, there is someone there to guide you in finding the objects or features needed for successful completion of the program. You can join the programs at any time and can either attend the guided sessions or work on your own. A certificate is awarded at the completion of all the requirements. All observing programs are patterned after those of the Astronomical League, so you can continue on to complete the additional requirements and get your AL certificate.

Solar Observing Club helps those interested in observing solar activity — like sunspots, solar flares and other interesting features — and recording those observations. The beauty of this observing program is that our Sun offers great flexibility in observing and recording the different features – you don't have to be concerned about light pollution, night vision, or traveling great distances to find dark skies. The Solar Observing Club is taking a temporary hiatus from their regular observing schedule. Watch the newsletter for future observing dates. If you are interested in solar observing, please email Ben Bailey to be added to the solar observing email list.

Lunar Observing Club meets sporadically depending on schedule compatibility and the moon cycle. The purpose of this club is to identify and log 30 specified lunar features – some of which are easy while others are more difficult. This is a great club in which to participate as it is ideal for observing from your back yard or patio. Dark skies are not really necessary and some features are even visible through light clouds. If you are interested in participating in the Lunar Observing Club or if you just want to be added to our email list to keep posted about our activities, email Robert Gilroy at bobgilroy [at]tucsonastronomy.org.

Constellation Observing Club meets monthly on our regularly scheduled TIMPA night. The purpose of this club is to identify and log 20 constellations, their brightest stars and deep sky objects. This is a great way to learn your way around the night sky. If you are interested in participating in the Constellation Observing Club or if you just want to be added to our email list to keep posted about our activities, email Paul and Cathy Anderson at paulanderson [at]tucsonastronomy.org.

Solar System Observing Club meets monthly on our regularly scheduled TIMPA night. The purpose of this club is to observe and log the different features and actions of the planets and their moons and other interesting solar system objects. If you are interested in participating in the Solar System Observing Club or if you just want to be added to our email list to keep posted about our activities, email Mike Finerty at mfinerty1[at]msn.com.

Double Star Observing Club meets monthly on our regularly scheduled TIMPA night. The dark night sky is filled with millions and millions of stars. Some are close by (relatively speaking) but most are far away. Some are single stars (like our sun) but others are multiple star systems. Of these multiple star systems, we can detect and split many double stars with our equipment. The purpose of this club is to observe and log the different types and colors of double stars. If you are interested in participating in the Double Star Observing Club or if you just want to be added to our email list to keep posted about our activities, email Tom Watson at watson1987[at]cox.net.

This is the Month for Messier Marathons!

March 24 (Sat)

The TAAA will be hosting a Messier Marathon at the club's Chiricahua Astronomy Complex (CAC) in Cochise County. For those not familiar with a Messier Marathon, it is a fun and friendly competition between participants to see if you can observe all 110 Messier Objects in a single night; from sunset on Saturday, 3/24, through sunrise on Sunday, 3/25. The CAC Site will be open at 3:00 pm for those wishing to arrive and set up early.

Bill Lofquist is developing the recording sheets that will contain all of the Messier Objects in the order that you should observe them. He will distribute them at the event. At the end of the event, Bill will collect the recording sheets and generate a personalized certificate for each participant acknowledging their accomplishment.

There will be lots of coffee, tea and hot chocolate to help you get through the evening. We will also have some munchies to help with your energy level. This activity is the ultimate observing challenge and, with a good crowd, it should be tons of fun. Even if you are not interested in participating in the marathon, you are welcome to attend. You may stay as long as you like and leave when you like. Won't you join us? Reservations are required, so contact John Kalas if you would like to attend.

AFSIG is considering a Messier Marathon at the TIMPA Star Party. If interested, please email fundamentals[at] tucsonastronomy.org or contact one of the AFSIG Committee members. If enough folks sign up, an official email announcement will be made.

Members' Star Parties

TAAA Star Party at TIMPA

Mar 24 (Sat) Gate opens at 6:00pm

Contact Person: Ben Bailey

The AFSIG is considering a Messier Marathon at TIMPA on March 24th. If you are interested, send an e-mail to fundamentals[at]tucsonastronomy.org or contact one of the AFSIG Committee members. If enough folks sign up, we will make an official announcement. Marathon or not, please come out and join the AFSIG on Mar 24 for an enjoyable evening of observing. The TIMPA site features a large parking area, and full restroom facilities. Be prepared for cool temperatures after sunset. Guests are welcome, accompanied by a TAAA member. We hope to see you there!

Note the Mar 16 Friday Nite @ TIMPA star party is cancelled due to a scheduling conflict.

TIMPA Site Notice

A gate card is required for TIMPA access. Please *DO NOT* ask the caretakers for entry to the TIMPA SITE. On scheduled TIMPA star party nights, a designated TAAA representative will provide access to the site. At other times, a gate card is available from the TIMPA Gate Card Controller.

Directions to TIMPA Site

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

The TIMPA site is about 25 minutes from Speedway & I-10, about 7 miles west of the Arizona-Sonora Desert Museum.

From the North:

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

From the East:

1. Take Speedway Blvd west. It turns into Gates Pass Rd.
2. Go over Gates Pass and continue west to Kinney Rd.
3. Turn north (right) onto Kinney Rd and continue past the Arizona-Sonora Desert Museum.
4. At the entrance to Saguaro National Park West, go towards the left onto Mile Wide Rd. (This is easy to miss so watch for the park entrance sign.)
5. Take Mile Wide Rd west about five miles to Reservation Rd. Mile Wide Rd ends at Reservation Rd and you must turn north (right) onto Reservation Rd.
6. Take Reservation Rd (a dirt road) north about one mile. The entrance to TIMPA will be on the right.

Star Party at Chiricahua Astronomy Complex

Mar 24 (Sat)

Contact Person/RSVP to: John Kalas

The Chiricahua Astronomy Complex (CAC) will be open for a Messier Marathon on March 24th. Details about the Messier Marathon are on page 5. This site is located in Cochise County approximately 100 miles from the center of Tucson and includes a full bathroom facility. At an elevation of 4800 feet, be prepared for cooler temperatures. Try to arrive before sunset. Unlike the TIMPA site, members are required to make reservations for both monthly club star parties and private member use. We are restricted to 60 persons and 30 vehicles maximum at any time. If you would like to attend, you must contact CAC Director John Kalas. Reservations will be on a first come – first serve basis. Depending on the number of members interested in attending, guests may not be allowed.

CAC Site Notice

Reservations are required at all times including scheduled star parties. On scheduled CAC star party nights, a TAAA designated representative will unlock the gate. At other times, access can be granted by the CAC Director.

Directions to Chiricahua Astronomy Complex Site

GPS coordinates: 31 deg 52.07' N, 109 deg 30.9' W

The Chiricahua Astronomy Complex is about 90 miles and a 1½ hour drive from the TTT Truck stop at Craycroft Road and Interstate 10.

1. Take I-10 east from Tucson past Benson.
2. Exit I-10 at Dragoon Road (Exit #318) . Turn right onto Dragoon Road at bottom of exit ramp.
3. Travel 13.5 miles southeast to the intersection with Route 191. Turn south (right) onto Route 191.
4. Travel 17.9 miles south (past Sunsites and Margie's Corner Café at High St on the right, and the Border Patrol checkpoint) to the intersection with Route 181 at Sunizona.
5. Turn east (left) onto Route 181 and travel 10.9 miles east to the intersection with South Price Ranch Road. Turn south (right) onto South Price Ranch Rd. This is a dirt road just before you reach mile post 49 (cluster of mailboxes on right side of Route 181).
6. Travel ½ mile south on South Price Ranch Rd to the intersection with East Perseus Way. This is a wide dirt road marked with a street sign on left. Turn east (left) onto East Perseus Way.
7. Travel east on East Perseus Way slightly more than ¼ mile to the entrance of the Chiricahua Astronomy Complex on the right. The address is 9315 E Perseus Way. It is marked with a TAAA sign and twin brown gates flanked by white rail fences set back 50 feet from road.

Community and Educational Events

Members are asked to support our outreach events. TAAA either sponsors or co-sponsors these events. This is a great opportunity for beginners as you can remain on a single object if you like. You can even contribute without a telescope. Sign up sheets will be at the meeting. You can also contact the star party leader or the volunteer coordinator, see the section "*How to Contact Us*" on page 15 of this issue. Details and maps can be obtained from the TAAA website calendar.

Star Party at Biosphere 2

Mar 17 (Sat) **Set-up: 6:30pm**
Outside of Oracle, AZ Volunteers Needed: 4
Leader: Bill Lofquist

Biosphere 2 is having a star party for the Coalition for the Public Understanding of Science. The Biosphere 2 is located at 32540 S Biosphere Rd outside of Oracle, AZ. Connie Walker will address half the participants about Globe at Night while TAAA addresses the other half, then the groups switch. The participants are PhDs. Observing is from 7:00pm to 9:00pm.

Peter Howell Elem School Star Party

Mar 20 (Tues) **Set-up: 6:00pm**
Central Tucson Volunteers Needed: 5
Leader: Bill Lofquist

Peter Howell Elementary School is having a star party for 120 students and family members. This is located at 401 North Irving, near 5th St and Alvernon Way. The school sits on the southwest corner of 5th and Irving. Viewing will be on the playground. Observing is from 6:30pm to 8:30pm.

Family Astronomy Night at Wilmot Library

Mar 20 (Tues) **Set-up: 5:30pm**
East Tucson Volunteers Needed: 2
Leader: Jim Miller

We will have the "Glass and Mirrors" and "The Solar System" Outreach Toolkits inside in the Conference Room and telescopes will be set up in the Courtyard in back of the Library. The library is located near 5th and Wilmot. The event ends at 8:00pm.

Utterback Middle School Star Party

Mar 22 (Thurs) **Set-up: 6:00pm**
South Tucson Volunteers Needed: unknown
Leader: Bill Lofquist

Utterback Middle School is having a star party for students and their families. This is located at 3233 S Pinal Vista near 36th St and Kino Parkway. Observing is from 6:30pm to 8:00pm.

UA Astronomy Students Star Party

Mar 25 (Sun) **Set-up: 6:00pm**
Far West of Tucson Volunteers Needed: 8
Leader: John Kalas

The UA Astronomy Department is having a star party for 100 students at the Saguaro National Park-West Red Hills Visitor's Center. This is located at 2700 N Kinney Rd. Observing is from 7:00pm to 9:00pm.

Rio Vista Elem School Star Party

Mar 29 (Thrus) **Set-up: 6:30pm**
North Tucson Volunteers Needed: unknown
Leader: Bill Lofquist

Rio Vista Elementary School is having a star party for students and family members. This is located at 1351 East Limberlost Road near Mountain Ave. Observing is from 7:00pm to 9:00pm.

Sharing the Sky Fundraiser and Public Star Party

Mar 31 (Sat) Set-up: Solar @ 3pm, Night Sky @ 6pm
Central Tucson Volunteers Needed: no limit
Leader: John Kalas

Mark your calendars for Saturday, March 31, from 3:00 to 10:00 PM. The Sharing the Sky event will be held on the University of Arizona Mall across from UA Science Flandrau (planetarium).

As in years past, we will have telescopes set up for solar viewing in the afternoon and for night sky viewing in the evening. There will also be some special hands-on activities utilizing the Night Sky Network Toolkits for children and adults. Members are needed to help with these activities. If you don't have a telescope and would like to help, your assistance with these activities and collecting donations would be appreciated. We request members supporting the event who own canopies to bring them to enhance the early-afternoon sun protection of the donation tables and hands-on activities.

David and Wendee Levy would like to thank all of you for supporting this worthwhile event. Support from the TAAA is essential for the success of this activity. Purchase your Sharing the Sky tee-shirts ($10 each) at the March 2nd monthly meeting from David and Wendee Levy.

TAAA Loaner Telescope Program

Don't own a telescope?

Our Telescope Loaner Program is your answer!

Meade 10" LX200 GPS (training required)
Meade 10" f/4.5 on equatorial mount
Coulter Odyssey8 8" f/4.5 Dobson
Meade 90mm ETX
Unitron 62mm f/14.5 on equatorial mount
Sears 60mm f/15 on equatorial mount

Members only.

Details available from the Equipment Loan Coordinator or any club officer.

Sale of Telescope Will Raise Funds for Chiricahua Astronomy Complex

We have another telescope for sale to help raise funds for further work on the Chiricahua Astronomy Complex (CAC).

Wally Rogers has donated his much loved Celestron NexStar 11 GPS telescope for us to make available for sale to the membership. The asking price for the scope is $1,800.

Wally purchased the scope in June 2001. It is being sold "as is". Wally has taken special care with his scope and has kept detailed records of its servicing. Paul Anderson and Joe Jacoby, who both own the same model scope, have looked it over and pronounced it in excellent condition. They say the collimation is "right on." In November 2011 Wally used the scope to test some new eyepieces and said the GPS navigation system worked perfectly.

As the picture shows, the scope is equipped with a tripod and Feathertouch focuser. It has a heavy duty accessory tray and leg spreader. It also has a Celestron Plug-in Class 2 Transformer, Celestron Hand Control and Celestron Dew Shield. The original user's manual is also available. The scope was serviced by Celestron on July 21, 2006, and the records of this servicing are available.

As to the "as is" condition, the scope does not have a star diagonal or a finder scope. There is a base for a Telrad finder, but the finder is not included. Also, there are no eyepieces with the scope.

Since this is a NexStar scope, it can be used with a Hyperstar and CCD imager, so it should be very good for astrophotography.

Paul has indicated that he will be available to discuss the scope with any potential buyers and can give an orientation to a purchaser. Contact Bill Lofquist if you have questions or would like to see the scope.

Chiricahua Astronomy Complex Update

John Kalas – CAC Site Director

Although additional funds will be required to complete the Phase 2b RV Spaces area, sufficient funds are now available to pursue the installation of the electrical service to each of the four RV lanes. Our contractor, Randy Maddox, is finalizing the quote for the electric service at this time. When the quote is received and accepted, a contract will be generated and the work will start. Updated quotes for the final grading and gravelling of the RV road system will be requested soon.

Several improvements to the roll-off roof observatory are currently underway. An 18" long steel pier extension has been fabricated and will be installed by the end of February. This extension is required to raise the telescope and mount to allow for a more convenient observing position when the telescope is pointed toward the zenith. The original concrete pier height was designed and fabricated too short and needed to be lengthened. Another issue with the observatory is the excessive force required to roll the roof open. It appears that the guide wheels may be binding slightly. A correction to this problem has been identified and will be installed before the March 24th CAC monthly star party (Messier Marathon). A mechanism to allow one person to easily open the roof has been designed and it will be quoted to determine the cost impact.

A fairly comprehensive toolbox has been purchased for the site. Several other items that would be advantageous for the site are a good set of jumper cables and a small air compressor. These items will be purchased in the near future. An additional video security camera will also be purchased to monitor the new roll-off roof observatory.

Life in the Universe Workshop

Emphasizing Hands-on Public Education

Saturday, March 31 at noon

Steward Observatory

Details on Page 4 (See Starry Messengers SIG)

Visit the TAAA Website

www.tucsonastronomy.org

View all events on our online calendar

RSVP to those you will attend

Get directions from any starting point

Join the TAAA Forum

General astronomy discussions

~75messages/month posted by TAAA members

Hosted by Yahoo Groups

Go to http://tinyurl.com/hwoau

Click on "Join this Group"

Night Sky Network Outreach Toolkits

Like many clubs across the US, the TAAA has an extensive outreach program. We enjoy spreading star light around—sunlight, too! However, there's more to our program than setting up telescopes. We are privileged to have a full set of Night Sky Network Outreach Toolkits to aid us in explaining astronomical concepts to the public.

The Night Sky Network (NSN) began as a coalition of astronomy clubs with active outreach programs; the TAAA is a charter member. Since 2004, the NSN has grown to over 500 clubs and now offers clubs much more than outreach toolkits. For example, we use the NSN online records management system for our membership records.

Since joining the NSN, the TAAA has used the NSN Outreach Toolkits at over 80 events. With continued use of existing toolkits, we qualify for new toolkits as they are developed. We recently received the newest toolkit, Life in the Universe.

Each NSN toolkit has a theme and is related to a NASA space mission. For example, the Space Rocks Toolkit is related to the DAWN mission currently at the asteroid Vesta snapping photos.

A toolkit contains many projects which allows the presenter to pick and choose what they want to present. All are interactive and easy to introduce to the public. Materials are included but you may be required to provide fresh batteries, scissors, or a bag of flour. The TAAA may be able to supply some of these materials. A Resources CD and a Training DVD are also included. Individual training is available.

A complete list of our Outreach Toolkits is shown below. They can be borrowed for up to a month at a time. You can keep the Resource CD and Training DVD, but all other materials need to be returned. To borrow a toolkit or receive training on their use, contact Terri Lappin.

Outreach Toolkits and Resources Available for Borrowing

Life in the Universe—Are We Alone?: origin of and search for life

Space Rocks – Asteroids, Comets, and Meteorites: meteorite samples, asteroid detection

Exploring the Solar System: scale model of solar system

Our Galaxy, Our Universe: scale model of the Milky Way galaxy and the Universe

Shadows and Silhouettes: lunar phases, eclipses, and transits

Black Hole Survival Kit: gravity concepts

Supernova!: life cycle of massive stars, earth's protective atmosphere

Mirrors and Glass: how telescopes work

Telescopes – Eyes on the Universe: basic principles of optics, the human eye, and observing

PlanetQuest: demonstrate planet detection techniques

Other Outreach Resources

SolarScope: provides a white light image of the sun suitable for small group viewing.

Dark Skies Education Kit: light pollution principles, includes a Sky Quality Meter

Comet Chef: an apron (with a comet on it) and chef's hat to wear when mixing up comets

Moon Globe: 12" diameter with stand

DVDs: *A Private Universe*; *Cosmic Collisions*

Dark Skies for March 2012

Data provided by Erich Karkoschka

No twilight, No moonlight
for Tucson in 24-hour MST
18hrs=6pm, 20hrs=8pm
22hrs=10pm, 0hrs=midnight

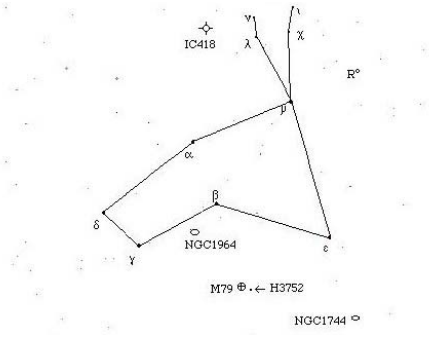
Day	Date	Dark Time		
We/Th	29/1	1:37	–	5:30
Th/Fr	1/2	2:27	–	5:29
Fr/Sa	2/3	3:14	–	5:27
Sa/Su	3/4	3:58	–	5:26
Su/Mo	4/5	4:39	–	5:25
Mo/Tu	5/6	5:18	–	5:24
Tu/We	6/7			
We/Th	7/8	FULL MOON		
Th/Fr	8/9			
Fr/Sa	9/10	19:50	–	20:20
Sa/Su	10/11	19:50	–	21:29
Su/Mo	11/12	19:51	–	22:38
Mo/Tu	12/13	19:52	–	23:45
Tu/We	13/14	19:53	–	0:48
We/Th	14/15	19:53	–	1:45
Th/Fr	15/16	19:54	–	2:36
Fr/Sa	16/17	19:55	–	3:20
Sa/Su	17/18	19:56	–	3:59
Su/Mo	18/19	19:56	–	4:34
Mo/Tu	19/20	19:57	–	5:06
Tu/We	20/21	19:58	–	5:04
We/Th	21/22	19:59	–	5:03
Th/Fr	22/23	20:00	–	5:02
Fr/Sa	23/24	20:00	–	5:00
Sa/Su	24/25	20:50	–	4:59
Su/Mo	25/26	21:44	–	4:57
Mo/Tu	26/27	22:38	–	4:56
Tu/We	27/28	23:29	–	4:55
We/Th	28/29	0:19	–	4:53
Th/Fr	29/30	1:06	–	4:52
Fr/Sa	30/31	1:50	–	4:50
Sa/Su	31/1	2:32	–	4:49

We're on Facebook!
Search for "Tucson Amateur Astronomy Association"

Chris Lancaster's Constellation of the Month

Lepus

The Hare



The winter skies are dominated by many attention grabbing constellations which are home to some very bright stars and star clusters. But lying below Orion, which is arguably guilty of stealing the most limelight, is a rather unimposing constellation by the name of Lepus. This collection of stars represents a rabbit or a hare, and its location here is significant for two reasons. Firstly, consider that Orion has been seen as the Sun god, and the hare has been connected to the moon by the fact that many cultures have seen the shape of a hare in the patterns formed by the lunar maria. Therefore, just as the sun chases the moon across the sky, Orion acts as the hunter, and Lepus is his prey, having been snared and lying at Orion's feet. Secondly, hares also serve as prey for eagles, so being afraid of Aquila, the eagle, Lepus is seen safely rising in the east as Aquila sets out of sight in the west.

To begin your observation of Lepus, look for the globular cluster M79. Among the globulars in Messier's catalog, M79 is one of the smaller ones similar to M70 and M54 in Sagittarius and M72 in Aquarius, but judging it on its own merits makes it a wonderful sight in any telescope. Glowing at magnitude 8.3, you'll see it at RA 5h 24.2' Dec -24d 31', or 3.8 degrees south and 4 minutes west of Beta Leporis. Use medium to high power to see this globular the best.

While you're in the neighborhood, slide about 2/3 of a degree to the southwest to a star designated Herschel 3752. At low power, this will appear as a double star with a wide separation of 59", but looking more closely with a high power eyepiece will turn this binary into a triple system. Its components are of magnitudes 5.5, 6.4, and 9.0 with the closer pair only 3" apart. They sit in almost a straight line with PA's of 97o and 106 degrees with respect to the primary.

Tucked near the northwest corner of Lepus is a rare, high mass star in the late stages of evolution which falls outside of the mainstream stellar categories. Designated R Leporis, it is a type of star called a carbon star, so termed because it uses carbon as a catalyst for its nuclear reactions instead of the simpler proton-proton mechanisms used by lower mass stars. Like the Garnet Star in Cepheus, R Leporis has a similar name, the Crimson Star, due to its red color. It is actually a variable star swinging between magnitudes 5.5 and 10.5, and the richness of its color likewise varies. While at its dimmest, its redness stands out like a neon bulb, but near its brightest, it is more coppery. When looking at R Leporis, you can simply enjoy its appearance, or contemplate the unusual nuclear activity taking place inside as a last ditch effort to keep the star shining.

For those wishing challenges, Lepus offers IC418, a very small 11th magnitude planetary nebula at RA 5h 27.8', Dec -12d 31.1', or start at Nu Leporis and move south 1/3 of a degree and then east 8 minutes. At 120x through an 8-inch scope, I was just able to see this nebula as a fuzzy disk compared to the surrounding stars. With decent surface brightness, this nebula can be seen fairly easily with sufficient magnification.

NGC1964 and NGC1744 are two faint galaxies that can be elusive depending on seeing conditions and the type of telescope used. NGC1964, at magnitude 11.6, is the brighter of the two and can be found at RA 5h 33', Dec -21 52', or 1.2 degrees south and 5 minutes east of Beta Leporis. NGC1744 resides at RA 5h 00', Dec -26d 05' or 3.6 degrees south and 6 minutes west of Epsilon Leporis. Both of these galaxies don't appear much more than dim, oval smudges, but some satisfaction results from finding them.

TAAA Apparel

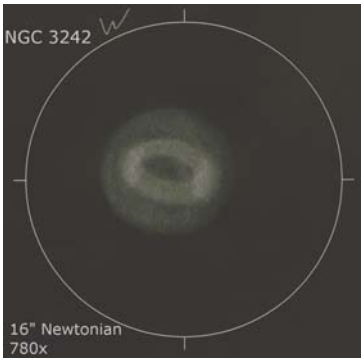
Looking for a special gift or a way to make that fashion statement? Try on something from our fine line of club apparel. We have hats, T-shirts, denim shirts, and patches. We take cash and checks. Available at most monthly meetings. Coordinated by Mae Smith.

Christian Weis' Planetary Nebulae of the Month

NGC 3242 and IRAS 09371+1212

Planetary nebulae (PN) are fascinating objects that come in numerous forms of appearances. Besides the well known grand four Messiers (M27, M57, M76 and M97), there are hundreds more to explore. This article suggests two PNs, a pretty bright and easy-to-observe one and a harder one for the more ambitious observer who is equipped with a bigger scope.

It's springtime again. As we are now looking at regions on our sky that are far away from the galactic plane, bright planetary nebulae are rare. NGC 3242 is one of those rarities. It was discovered on Feb. 7th 1785 by William Herschel. He described it as "planetary disk ill defined, but uniformly bright the light of the color of Jupiter". Nowadays, NGC 3242 is called Jupiter´s Ghost. With a brightness of 7m7 and an apparent size of 40 arcsec, this object can easily be seen in basically any instrument. I observed it with a 16" Dobsonian in June 2010 from TIMPA, having mediocre conditions and noted: Shell structure, outer shell circular in shape, inner one elongated 1:1.3...1:1.5, brighter and broader at outer edges of inner structure, central part and outer structure equal in brightness, no central star, needs magnification; fst6m1 (Vir), 780x



NGC 3242
RA: 10h 24.7min
Dec: -18° 38´
Constellation: Hydra
Brightness: 7m7
Central star: 13m3
Size: 40 x 35 arcsec
Distance: 2600 ly

IRAS 09371+1212 probably is a very unknown object to most observers. It is also called Frosty Leo and is not a planetary nebula but a protoplanetary one. This means that the stellar wind is not energetic enough to ionize the ejected gases, yet. Frosty Leo was discovered by Arturo Gomez in 1985 and is tiny. Nevertheless, an apparent magnitude of 10m5 makes it an easy object for smaller instruments – if you pass on recognizing it as a non-stellar object. Beside the fact that it does not react to any filter, its size of 12 arcsec will require a whole lot of magnification to see any extension. When observing it in March 2011 from Innerlaterns, Austria, having excellent conditions I noted: Bright but small, does not react to any filter at all, angular shaped, diffuse, weaker halo surrounding; fst 6m7 (UMa), 1356x

IRAS 09371+1212
RA: 9h 39.9min
Dec: 11° 59´
Constellation: Leo
Brightness: 10m5
Central star: 11m
Size: 12 arcsec
Distance: 3000 ly

Contribute your observations between March 13th and 22nd. It's easy with a smartphone!

This is a "citizen science" program to bring attention to light pollution. Navigate to http://www.globeatnight.org/webapp/ with your smartphone. Date, time, and location are automatically entered. Get yourself dark adapted—the app has a night mode. Match what Orion looks like compared to the star charts on the site. Select the sky conditions. Submit. No smartphone? No problem. Make your observations and then enter them in the Globe at Night website. More information can be found at www.globeatnight.org, including the compilation of data from previous years.

The Visible Planets this Month

Data provided by Erich Karkoschka

Weekend	Sun		Mercury		Venus		Mars		Jupiter		Saturn		Visibility (Vi)	
Sa/Su	Set	Rise	Set	Vi	Set	Vi	Rise	Vi	Set	Vi	Rise	Vi		Code
3/4	18:21	6:45	19:46	3	21:51	-4	18:11	-1	22:31	-2	21:43	1	-3	brilliant
10/11	18:27	6:36	19:41	5	21:01	-4	Set	-1	22:10	-2	21:14	0	0	conspicuous
17/18	18:32	6:28	19:05	-	22:10	-4	5:55	-1	21:49	-2	20:45	0	3	moderate
24/25	18:36	6:18	RISE	-	22:19	-4	5:21	-1	21:29	-1	20:15	0	6	naked eye limit
31/1	18:41	6:09	5:19	9	22:25	-4	4:48	-1	21:09	-1	19:45	0	9	binoculars limit

NASA's Space Place is a fun website with games and resources for kids to learn about astronomy and space sciences. Play the game "Recycle This" and learn about recycling trash to keep our planet clean.

http://spaceplace.nasa.gov

http://climate.nasa.gov/kids/games/recycleThis/

Annular Solar Eclipse At Grand Canyon/Glen Canyon—May 20th

On Sunday, May 20, 2012 an annular solar eclipse will be visible in a narrow band through California, Nevada, Utah, Arizona and into Texas.

Grand Canyon National Park and Glen Canyon National Resource Area are hosting astronomers willing to share the experience with the public. TAAA member Jim O'Connor is assisting with the coordination of astronomers supporting the Grand Canyon venue. He is looking for TAAA members who want to share this experience with the public visiting the canyon. NOTE: ALL GRAND CANYON LODGES ARE ALREADY FULLY BOOKED FOR THAT WEEKEND! There are still Mather sites available for individual reservation through the park (around $20 per night), as well as Trailer Village for full RV hookups.

At the Grand Canyon, we will have informal star parties behind the Visitor Center on Saturday and Sunday nights. The rough eclipse schedule will be from around 5:30 PM through sunset around 7:30 PM Sunday night, with annularity in between.

To participate at the Grand Canyon contact Jim O'Connor (see page 15) and to participate at Glen Canyon contact Joan B. Mayer, Education Specialist and Special Events Coordinator at Glen Canyon National Recreation Area/ Rainbow Bridge National Monument. Here email address is Joan_Mayer[at]nps.gov

Grand Canyon Star Party 2012

16-23 June, 2012

This is a reminder that it's about time to lock down plans to attend the 2012 edition of the Grand Canyon Star Party. GCSP '12 is the 22nd annual collaboration between the National Park Service and astronomers from around North America to bring astronomy outreach to Park visitors. The event is held concurrently on both the North Rim, coordinated by the Saguaro Astronomy Club, and the South Rim, coordinated by TAAA. The level of public interest and involvement, and the opportunity for TAAA to make major contributions to public education and awareness, is profound.

We astronomers act as interpretive rangers, explaining the night sky around the Grand Canyon to the visitors just as the daytime Park Rangers and guides explain the geology of the park. Last year we had 109 astronomers (about two dozen from TAAA) registered with the NPS on site, and more that 50,000 visitor contacts for the eight night session. Think 7000 feet with dark skies.

General information regarding GCSP, including lodging links, is found at

http://tucsonastronomy.org/?p=96

If you intend to participate this year, email your intentions to me at:

gcsp [at] tucsonastronomy.org.

Lodging at the Grand Canyon fills fast, so make your plans and reservations as soon as possible. For those astronomers intending to stay 6 or more nights, there are plans for a limited number of no-cost campsites to be available. Requests for a free campsite will be accepted beginning March 1. Campsites will be assigned in order of request received beginning March 1 until none remain. If you intend to participate for six or more nights and wish consideration for a free site, please send an email on or after March 1 to get on the list.

For information and current status on the North Rim, please check at

http://www.saguaroastro.org/content/2011GrandCanyonStarPartyNorthRim.htm

Please let Jim O'Connor know if you're interested in supporting TAAA in this exciting and extremely rewarding event for one night, eight nights, or anything in between!

TAAA Board of Directors Meeting

8 February 2012

Attending Board members present (7): Keith Schlottman, Bill Lofquist, John Croft, Al Anzaldua, John Kalas, Michael Turner, Vern Dunlap.

Members present (4): Ben Bailey, Bob Gilroy, Paul Anderson, Terri Lappin.

Call to Order: The President called the meeting to order at 6:30 pm.

Minutes: Board unanimously approved the minutes from the January 2012 Board meeting.

TAAA Member Feedback: Steve Coe's presentation at the last general meeting elicited a number of positive comments from TAAA members.

Monthly Listing of Upcoming Meetings: Speaker slots are still open for the coming July and August general meetings. A speaker slot is still open for the coming August Astronomy Essentials lecture. The Board discussed ways to make September's "State of the Club" meeting more interactive.

Announcements: Keith Schlottman will represent the TAAA at the Festival of Books, but will do so at the College of Science tables.

Consent Agenda: The Consent Agenda will be ready for Board consideration at next month's meeting.

Astronomy Fundamentals SIG (AFSIG) Report: Ben Bailey reported that the Fundamentals of Astronomy classes will take place March 3, 10, and 17. AFSIG members had an enjoyable star party at Anthem Parkside last Jan 28. AFSIG already has speakers lined up for the next two meetings.

Starry Messenger SIG (SMSIG) Report: Terri Lappin reported that SMSIG had a planning meeting last month about upcoming Life in the Universe workshop on March 31. SMSIG will increase the number of times they meet during the year. In April Terri will be doing Night Sky Network (NSN) training. (The NSN website has recently been updated.)

Space Exploration SIG (SESIG) Report: Al Anzaldua reported that SESIG had approximately 140 attendees at its last lecture on the subject of global warming. He will soon be inviting TAAA members to a SESIG planning meeting.

Astro-Imagers SIG AISIG) Report: Mike Turner reported that next month's AISIG meeting format is being revamped and is taking into consideration the member feedback from last year's presentations.

Star Party Coordinator Report: Bill Lofquist reported that the response by members to help with star parties continues to be excellent.

Web Director/E-Services Report: Bill Lofquist reported that the Internet Working Group (IWG) will meet again this Friday night. The first meeting went very well. Tim VanDevender and Lew Lepley are communicating well about website issues. If the Friday meeting goes well, then the IWG will be ready for the meeting with Lew. The Board approved a motion naming Tim VanDevender the Web Director. The Board recognized Terri Lappin's previous service as Web Director, and thanked her for developing that position to its current level of importance in the club.

Astronomical League Correspondent (ALCOR) Report: Paul Anderson reported that after his presentation at the last general meeting, seven or so members asked to join the Astronomical League.

CAC Status Report: John Kalas reported that work is still needed on roll-off roof structure, although the pier extension for the structure is nearly done. John also stated that TAAA is going to get five small domes for free, four of which are in good enough shape to keep. John will move those four "keepers" on to his property first, and then move two of them onto CAC property.

Bill Lofquist reported that a CAC strategic planning meeting took place the week before last. He stated that working groups are now ready to organize work on the various CAC buildings. The fundraising group will be meeting on February 21 and should be able soon to present the Board with new fundraising ideas for Spring. In that regard, Paul Anderson and Bill Lofquist have checked out Wally's 11-inch Celestron go-to scope and think it's ready to sell to increase funds for CAC construction. The Board authorized the sale of the scope.

TIMPA Status Report: Bob Gilroy reported that he will attend TIMPA meeting next Tuesday. The TIMPA area is getting weedy, and Bob will be organizing a cleanup party to spruce it up. John Kalas will check the condition of the dome in the storage container at TIMPA and look for a place at CAC to store it for possible future use there.

Nominating Committee: Keith Schlottman, by way of a general announcement to the membership, will call for volunteers to form a nominating committee in preparation for the coming election of TAAA officers and Board members at the March meeting.

Star Party Policies: Bob Gilroy proposed rules for star parties with children at TIMPA, which the Board discussed at length. Bob Gilroy will also take the proposed rules as amended by the TAAA Board to the TIMPA board for its preliminary review and comment. Bill Lofquist will set up a meeting with Harry Kressler of Pima Prevention Partnership to get his input on the proposed rules also. Mike Turner will compare Bob's documents with similar documents TAAA already has.

Other Items: Al Anzaldua volunteered to be the TAAA point person for Science Downtown and the Arizona SciTech Festival in order to better coordinate TAAA activities with these entities.

Respectfully submitted,

Al Anzaldua, TAAA Secretary

Next Board of Director's Meeting

Mar 14 (Wed) **6:30pm**

Steward Observatory Conference, Room N305

Contact the president to have your topic added to the agenda. There may not be time for topics that are not on the agenda. The front doors at Steward Observatory will be locked. Be there by 6:30pm or call the cell phone number of someone you know is attending the meeting and they can let you in.

Rik Hill's Website Trips on the Internet Super-Skyway

Cream in your coffee…

Some of the most enigmatic features on the moon still remain unexplained. These are the "Lunar Swirls", of higher albedo (brightness) that look like cream swirling in a cup of coffee. They have no surface relief, they are just areas where the albedo is greater and, oddly enough, the magnetic field is stronger.

A very nice and succinct discussion on these can be found on the NASA science website at:

http://science.nasa.gov/science-news/science-at-nasa/2006/26jun_lunarswirls/

A discussion of the cometary impact hypothesis as a cause of these features is on the ESA-SMART-1 webpage at:

http://www.esa.int/esaMI/SMART-1/SEM05FNFGLE_0.html

A popular article on this topic, highlighting Reiner Gamma, the brightest and biggest of the near side swirls, is located at URL:

http://news.discovery.com/space/natures-graffiti-art-on-the-moon.html

I particularly like the detailed images demonstrating how these areas look like a layer laid down on the lunar landscape.

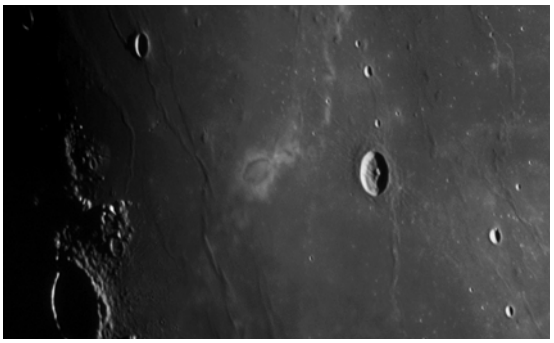
Wikispaces has a page with a spectacular multi-spectral Clementine image of Reiner Gamma:

http://the-moon.wikispaces.com/Swirl

This article also links to a number of the other swirls but none are as breathtaking as Reiner Gamma. Check out the LPOD article links at the bottom of the page for more amazing images and expert analysis by ex-Lunar & Planetary Lab scientist, Chuck Wood.

I have intentionally imaged this feature once, shown below, but never seen so much detail and additional swirl features as the Clementine images or even some of the LPOD observers. To view the full image look at the Reiner Gamma listing at:

http://www.lpl.arizona.edu/~rhill/moonobs.html



Reiner Gamma imaged by Rik Hill on Feb 16, 2011 using a C-14, 2X Barlow, f/22. North is up.

Next time the moon is full or near full, go out and try to locate this feature. Too many people try to go out and observe the whole moon or the whole terminator at one time, which can be like drinking from a fire hose! Just pick one feature, in this case Reiner Gamma, and study that one thing. Take in the environs, unique details about the feature, then sketch or image the feature. Spend and evening doing this for just one feature. It will become a familiar reference point for further investigations. You'll find this is a very rewarding way to observe the moon on these chill evenings while you have a little coffee…with cream!

As always, if you know of a particularly good website you would like mentioned here, drop me a line at: rhill[at] lpl.arizona.edu

TAAA Classifieds

For Sale Price Reduced!	Observatory with Home for sale - 3 BR 3 Ba Ranch home on 3.2 acres with horse facilities, huge garage/workshop, in-law or guest room with separate entrance/bath and Home Observatory! Observe steps from your back door, yet easy commute to downtown Tucson. See 5150sBryce.com for details. $200K. Thanks for looking! Claude & Teresa Plymate. 520-444-5979 Expires May 2012
For Sale	Celestron Nexstar 6SE Schmidt-Cassegrain with "go to" electronics and rechargeable battery-pack. Call Al at 520-409-5797 if interested. $500 Expires May 2012
For Trade	12.5" full thickness mirror blanks (two of them) to trade for a PST Solar telescope, or an older Ha filter capable of adapting to a high F/ratio Newtonian. Also lots of books and other stuff to horse trade with. This is needed for the annular eclipse and the Venus transit. Already have white light filters but I need a bit more "wow factor" for either my 8 or 10 inch F/8 Newts. James Lehr Miller starman1000[at]msn.com 520 751-4961 Expires July 2012
For Sale	10' x 12' motorized roll-off roof observatory in a great rural neighborhood. Situated on a 1-acre lot with southwestern style home. About 35 miles southwest of Tucson, close to Kitt Peak. Excellent night skies with desert climate giving many clear evenings. Home is 1900-square foot sturdy slot-block with tiled and newly carpeted floors, carport, new paint, and desert landscaping. 15940 Ridgemoor, Tucson, listed with Long Realty (http://www.longrealty.com), MLS#21123526. Current price is $74995! Expires July 2012

Ads 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.

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 qualified 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)

Astronomical League (AL) fee..... $7.50
Sky & Telescope Magazine 1 year (12 issues, group rate)..... $32.95
Astronomy Magazine 1 year (12 issues, group rate)..... $34.00
..... 2 years (24 issues, group rate)
..... $60.00
Postage for New Member Pack..... $4.95

Donations are accepted for the following funds: SA-IDA/Light Pollution, TIMPA, Education, Chiricahua Astronomy Complex, and General/ Undesignated.

Renewal Information

You'll get an email reminder when it's time to renew.
TAAA members may join the Astronomical League (AL) 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 any time. Allow 3 months for processing. New subscriptions must be sent through the TAAA treasurer. Renewals can be paid online through magazine websites. To change an individual subscription to the group rate, pay the group rate to the TAAA treasurer. Include your magazine renewal notice.
Include a note about what you're paying for. Credit cards are not accepted. Write one check or money order for dues 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

Mail changes to address above, email them to the treasurer, or make them yourself online through Night Sky Network login account at http://nightsky.jpl.nasa.gov/login.cfm.

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

Send submissions to taaa-newsletter[at]tucsonastronomy.org 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 Word compatible files sent by e-mail or on recordable media. All copyrights retained by Tucson Amateur Astronomy Association or specific author. No reproduction without permission, all rights reserved. We will not publish slanderous or libelous material!

How to Contact Us

TAAA Web Page: www.tucsonastronomy.org Mailing Address: PO Box 41254 Tucson 85717 TAAA Phone Number: 520-792-6414

Office/Position	*Name*	*Phone*	*E-mail Address*
President (elected board member)	Keith Schlottman	520-250-1560	president[at]tucsonastronomy.org
Vice President(elected board member)	Bill Lofquist	520-297-6653	vice-president[at]tucsonastronomy.org
Secretary (elected board member)	Al Anzaldua	520-409-5797	secretary[at]tucsonastronomy.org
Treasurer (elected board member)	John Croft	520-260-4687	treasurer[at]tucsonastronomy.org
Member-at-Large (elected board member)	Vern Dunlap	520-326-1964	mal1[at]tucsonastronomy.org
Member-at-Large (elected board member)	John Kalas	520-620-6502	mal2[at]tucsonastronomy.org
Member-at-Large (elected board member)	Michael Turner	520-743-3437	mal3[at]tucsonastronomy.org
Chief Observer	Dr. Mary Turner	520-743-3437	chief-observer[at]tucsonastronomy.org
AL Correspondent (ALCOR)	Paul Anderson	520-625-5035	alcor[at]tucsonastronomy.org
Community Event Scheduler	Bill Lofquist	520-297-6653	school-star-party[at]tucsonastronomy.org
Volunteer Coordinator	Bill Lofquist	520-297-6653	school-sp-volunteers[at]tucsonastronomy.org
TIMPA Gate Card Controller	John Kalas	520-620-6502	timpa[at]tucsonastronomy.org
Chiricahua Astronomy Complex Director	John Kalas	520-620-6502	cac-director[at]tucsonastronomy.org
Newsletter Editor	Terri Lappin	520-977-1290	taaa-newsletter[at]tucsonastronomy.org
Web Director	Tim VanDevender	520-495-0694	webmaster[at]tucsonastronomy.org
Publicist	Liz Kalas	520-620-6502	publicist[at]tucsonastronomy.org
Astro-Imaging Special Interest Group (SIG)	Larry Phillips	520-777-8027	astro-photo[at]tucsonastronomy.org
Astronomy Fundamentals SIG	Ben Bailey	520-903-7925	fundamentals[at]tucsonastronomy.org
Family Astronomy Program	Jim Miller		family@tucsonastronomy.org
Starry Messenger SIG	Terri Lappin	520-977-1290	smsig[at]tucsonastronomy.org
Space Exploration SIG	Al Anzaldua	520-409-5797	sesig[at]tucsonastronomy.org.
Club Apparel Sales	Mae Smith	520-850-7137	taaa-sales[at]tucsonastronomy.org
Equipment Loan Coordinator	Al Dohner	520-297-7118	elc[at]tucsonastronomy.org
Librarians	Hunter Bailey Irene Kitzman		librarian[at]tucsonastronomy.org
Grand Canyon Star Party Coordinator	Jim O'Connor	520-546-2961	gcsp[at]tucsonastronomy.org
General Information	Keith Schlottman	520-250-1560	taaa-info[at]tucsonastronomy.org

Virtual Observatory Community Day in Tucson

Tuesday March 13 9:00AM – 11:50AM
Steward Observatory Lecture Hall (N210)

No charge, registration is required

http://www.usvao.org/voday@tucson

- tools for data-intensive astronomy
- constructing and modeling spectral energy distributions
- cross-matching objects from diverse catalogs
- exploration of time series data
- image analysis tools
- advanced discovery tools for images, tables, and literature

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Want better observing?

Join the group that's keeping the sky dark

International **Dark Sky** Association
Southern Arizona section

Monthly meetings

2nd Wednesday, 5:30 – 7 pm.

3225 N. First Ave

- Talks to schools and organizations
- Demonstrations at Desert Museum
- PowerPoint presentations on CD
- Work with government agencies
- Identify non-compliant lighting

Contact: Joe Frannea: sky[at]sa-ida.org

www.sa-ida.org

To preserve and protect the nighttime environment and our heritage of dark skies through quality outdoor lighting.

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