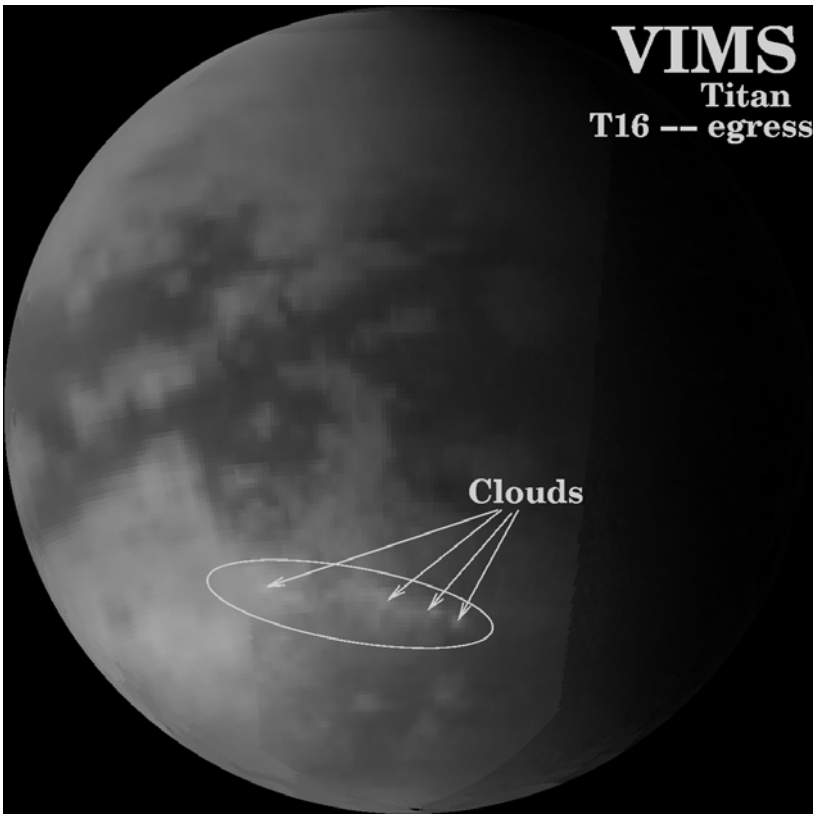
Desert Skies

Tucson Amateur Astronomy Association

Volume LII, Number 12 **December, 2006**



Latest Observations Of Titan

Inside this issue

Cover Photo: Titan as seen by VIMS (Visual and Infrared Mapping Spectrometer) after the T16 closest approach on July 22, 2006. The images were generated using the 5 micron wavelength for red, the 2 micron wavelength for green and the 1.2 micron wavelength for blue. The clouds are of the type seen previously and reported by Griffith et al. in Science. The image shows the clouds spreading out along the 40 degree South latitude line. http://wwwvims.lpl.arizona.edu/whatsnew.html

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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.. We will not publish slanderous or libelous material! Send submissions to:

George Barber
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15940 W Ridgemoor Ave Tucson AZ 85736

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President's Message

We are approaching the end of another exciting year in the TAAA. Advances in astronomy continue at a rapid pace, and we are fortunate to have people who are on the cutting edge available to us here in Tucson. A number of our members continue to produce world class astrophotos. David Levy, one of our members, has discovered another comet. Our two Special Interest Groups, the Astrophotography SIG and the Beginners' SIG, are both active and provide opportunities for our members. We have had some most interesting general meetings throughout the year, and opportunities to observe have been numerous.

We will be bringing the year to a close on December 16th with an informal potluck gathering at my home. Please read about the Holiday Party elsewhere in this issue of Desert Skies. We hope to see many of you there.

On November 18 Andrew Cooper led another group of a dozen TAAA members in making red LED lamps. These lamps are becoming more common at TAAA star parties. This was the fifth workshop, and over 60 TAAA members have now seen their new lamps light up. Thanks to Andrew for leading these workshops and teaching us a little about electronics. Not only do the workshops create some useful equipment, but they are also fun and help us get to know other members of the TAAA better.

At the November general meeting Ann Scott began to distribute some new club products. We have the new TAAA logo on the various pieces of apparel as well as new briefcases. You can put in your orders with Ann.

The Board of Directors appreciates the many contributions TAAA members have made throughout the past year, and we wish everyone a safe and joyous holiday and an adventurous New Year.

Bill Lofquist

Meeting Information and Calendar of Events

TAAA MEETING DATE: Friday, Dec. 1, at the Steward Observatory Auditorium – Room N210

ASTRONOMY ESSENTIALS: 6:30 pm
Title: Southern Arizona Major Telescopes
Speaker: Steve Marten

For relatives and friends in town or just for an easy and quiet weekend night, you may want to visit one or more of the handful of major scopes in clear and arid Southern Arizona. There are more optical scopes in this region than anywhere on Earth and, if you haven't pegged the info on the lot of them, this Astronomy Essentials (AE) lecture will deliver it to you (including handout.) Some are more visitor friendly, and some have an interesting story of how they came to be. Take 30 minutes with Steve Marten to get tuned in at the December AE.

GENERAL MEETING: 7:30 pm
Title: Titan Observations by Cassini
Speaker: Jason Perry

For over two years, the Cassini spacecraft has been in orbit around Saturn. There are a dozen instruments, all snapping images or taking readings of Saturn and its family of moons. If you search the web for the number of moons known to orbit Saturn, you'll find anywhere between 18 and 56. That's because the cameras on board Cassini keep finding more moons! The first known moon to orbit Saturn is Titan. Discovered by Christiaan Huygens in 1655, it is Saturn's largest moon and the second largest in the solar system. (Ganymede is the largest.) It is the only moon in the solar system with a dense atmosphere, making it more in like a planet than a moon.

At the December meeting, we'll be treated to a lecture by Jason Perry, a Lunar and Planetary Laboratory undergraduate student. He's working with Titan data taken by the Cassini Imaging Science Subsystem and he'll tell us what he's learned.

Note: Dr Melia was to speak to us this month but asked that his lecture be rescheduled.

BOARD OF DIRECTORS MEETING: Wednesday, Dec. 13. The meeting is held at Steward Observatory Conference Room N305.

STAR PARTIES AND EVENTS:
04 Dec – Astro-Imaging SIG at China Rose
04 Dec - Sonoran Science Academy Star Party
06 Dec - Cub Scout Pack 231 Star Party
08 Dec - Painted Sky ES Star Party
11 Dec - Borton Primary Magnet School Star Party
12 Dec - Twin Peaks ES Star Party
16 Dec – TAAA Holiday Party/Potlluck at Lofquist's home
16 Dec – TAAA Star Party at Las Cienegas
20 Dec – Beginner's SIG at China Rose
23 Dec – TAAA and Beginner's SIG Star Party at TIMPA

NEWSLETTER SCHEDULE: Deadline for articles: Sat, Dec. 16. Printing: Mon, Dec. 18. Folding Party: Tues, Dec. 19. Mailing: Wed, Dec. 20. The newsletter is mailed at least one week prior to the following month's General Meeting.

Club News

Member News

We welcome these members who have recently joined the TAAA: Larry Phillips and Stan Raskauskas. 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, Dec. 4, 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!

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've got hats, T-shirts, denim shirts, and patches. We take cash and checks.

2007 Calendars

There are plenty of 2007 calendars left. You'll find them at the same table where you purchase TAAA apparel. This year you have your choice of either the Sky Publishing "Celestial Wonders" or the Astronomy magazine "Deep Space Mysteries" calendars…or get both. They make great gifts! The cost for a calendar is $10 each (~$3 off the regular selling price), or $9 each for more than one. These calendars have information about astronomical events and room for your own important dates.

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.

Beginner's SIG

The BSIG dates for December will be 12/20 for dinner at the China Rose Restaurant (6pm, the northeast corner of Speedway and Rosemont) and 12/23 (the following Saturday) for observing out at TIMPA. Mary Turner will talk to us about some objects that are especially suitable for observing in December, and JD Metzger will give a talk entitled "Seeing, Transparency, and the Airy Disk". There will also be plenty of informal discussion on whatever progress we have to report on our own observing projects.

If the dates seem awfully close to the Holiday, you're right. They are. Unfortunately the combination of lunar phase and other events prevents us from altering these dates. So consider it a chance to take a breather from the hectic holidays. Join us for dinner and, if you can, join us for a few hours under the stars.

Speaking of TIMPA, it was our intention to hold an informal object finding workshop at TIMPA in November. Clouds got in the way, as they so often do. We will attempt to do so again in December. An object list will be announced at the dinner meeting, and via the club's online forum and announcement system. The idea is to have all participants (this is strictly voluntary) track down these objects one at a time as a group. Those who find an object first will be encouraged to help those who are having less success. If you are keeping a log and want to add these observations to it, we will pace the workshop so that you will have a reasonable amount of time in which to do so. You are also encouraged to share the view through your telescope when you have the object in sight. This will help others confirm that they have the right object, and also will give us all a better idea of how different telescope types and sizes perform relative to each other. To facilitate this activity, it would be helpful to set up as a group. Watch for a gray '07 Subaru Forester and park as near to it as you can. We want to be within easy reach of each other, which is another good reason to arrive before sunset. Experienced observers willing to join in and serve as mentors are most welcome.

For more information about the Beginners' Special Interest Group, send an email to: novice@tucsonastronomy.org.

Hope to see some of you in December!

The BSIG Committee

THE TAAA HOLIDAY PARTY ON DECEMBER 16TH!

Plan to join other members of TAAA at the Holiday Party on Saturday night, December 16. The party will begin at 5:00 PM. This year's plan for the more traditional kind of Holiday Party at a restaurant did not work out, so we are going to try something a little different. We are going to have a potluck dinner at the home of Bill Lofquist at 1935 West Harran Circle. This is in northwest Tucson near Foothills Mall. If it is cool, we will have some outdoor heaters to take the chill off. We will also have grills set up for cooking meat.

Bring any meat you would like to fix for yourself and your family, and bring another dish to go into the potluck. Bring salad, a vegetable, hors d'oeuvre or dessert. We will have soft drinks, water and coffee, cups, plates, and utensils.

Club News (cont.)

David Levy will make a presentation about an exciting adventure he and Wendee participated in recently.

We will have several telescopes on the observatory patio for edge-of-the-city observing.

We would like you to RSVP so we will know how many to expect. Please send an email to Bill at "wlofquist@comcast.net" or call him at 297-6653. If you can, the email will be most convenient so we will have a record. If you can bring a grille, contact Bill.

To get to Bill's house from the corner of Ina Road and La Cholla Boulevard, go south on La Cholla to the traffic light at Omar Drive. Turn left (east) on Omar past Donaldson School on the left and the tennis courts on the right. Take the first right after the tennis courts on Amahl Drive. Go one half mile to Harran
Drive. At that point Amahl becomes Sesame Lane, and you will see the sign. Turn left on Harran Drive for about 300 yards, and turn left on Harran Circle. It is a short cul-de-sac, and Bill's is the first house on the left on the turn-around circle. Park on the circle, but please leave the neighbors' driveways clear.

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

Volunteer Needed for Basha's Thanks A Million Program

The TAAA is participating in Basha's Thanks a Million for Friends and Neighbors program. In addition to our members' participation in the program, we have recently learned we can set up a booth at Basha's stores to solicit shoppers to link their Thank You card to the TAAA. At the end of the program, we will receive 1% of all linked sales so more linked cards means a larger donation will be made to the TAAA.

We are looking for a person to contact local Basha's store managers about setting up a booth at their store location. It will entail a few phone calls, and then, once a date is scheduled, this person would make sure there's someone to man the booth. Perhaps a telescope could be set up as part of the booth. Details need to be worked out with the store managers.

If you can take on this job, please contact either Bill Lofquist or Terri Lappin (see page 2 for contacts).

If you shop Basha's, you can link your Thank You card to TAAA. At your next visit to Basha's, give the cashier our ID #23178. It's that easy! Just do it once.

Paid Star Parties – Year-end Recap
by John Kalas

The TAAA has enjoyed an outstanding year regarding its Astronomy Services program. The success is directly attributable to the efforts and commitment of the members who support the program. In 2005, the club participated in 23 events that generated $6,300 in revenue for the organization. This year, through November 25th, the club provided astronomy services to 35 activities generating $13,245 for the organization. By far and away, the most frequent client requesting our service is the J.W. Marriott Resort & Spa in Starr Pass (25 of the 35 events for 2006). I would like to personally thank the following members for their support of this worthwhile program in 2006.

Michael & Mary Turner
Andrew Cooper
Thom Peck
Steve Marten
Robert Crawford
Nick Applegate
Lou Faix

Club News (cont.)

George Barber
Jim O'Connor
Robert Wilson
Bill Lofquist
Harold Staves
Tom Rolfsmeyer
Claude & Teresa Plymate
Chuck Schroll

Moonbeams and Chocolate

By Tom Watson

I finally did something I've wanted to do since I bought the Newt in '04. I took it out for Trick or Treat on Halloween. Why not? It's almost three years old. Of course, not being very mobile it didn't do the door to door shtick, and a costume was out of the question, but none of this put a damper on that clear, mild evening. The Moon was riding high, a little past 1st Quarter, and the Newt really likes moonlight. So we set up shop at the end of the driveway, waiting for stature-challenged goblins, spooks, elves, and the odd political caricature. The front door was marked out with a pair of hand-carved jack-'o-lanterns, lit the old fashioned way with candles. My wife was stationed there to hand out little packets of M&Ms. Children coming up our street would receive two treats this year. At least, I was hoping they would see it that way.

The sun had just slipped below the western horizon when the first two arrived, a pair of fairy princesses all done up in satin and lace, with wings, of course. They skipped between the pumpkins, went through the routine, and received chocolate and compliments from my wife. Back out on the street, they paused at the sight of the Newt, looming for all it was worth in the gathering dusk. But let's face it, there really isn't anything all that intimidating about a three-legged newt. Their mother asked them what they thought it was, and both of the small girls just shrugged. "It's a telescope," I told them. "Want to see the Moon?" But the first of them was on the first step of the kitchen step ladder before I could finish. Each took a long turn, making sounds of delight remarkably similar to those that had greeted the M&Ms a few moments before. Without any prompting the girls... Excuse me, the fairy princesses thanked me and yelled happy Halloween as they dashed off to the next house. Their mother thanked me in a calmer fashion, after taking a long look for herself.

This process repeated itself 88 times. Add to the number of children of various ages the parents and guardians walking along with them, and the Newt showed the Moon to well over 100 people on Halloween '06. At one point the Newt had attracted such a crowd that a car slowed and the driver asked if there'd been an accident. She was all set to call 911 and report an injured child! But it was only the distraction of moon beams after chocolate. The small ones were entranced and their parents appreciative. They were surprised by our offering of the Moon, and were openly and vocally impressed enough by the Newt that it will undoubtedly be insufferable for a lunation or two. I had a small girl, who needed a lot of help getting to the eyepiece, kiss me on the cheek as a way of saying 'thank you.' I had parents shaking my hand and thanking me for a "wonderful" experience for their children. And then there were the two teenage girls who asked surprisingly astute questions about the formation of lunar impact craters. They sounded like science geeks, although they certainly didn't *look* like science geeks...

If you want to really feel good about being an amateur astronomer, try setting up a telescope in the path of trick-or-treaters next year. They won't be expecting it, and no matter who is handing out what manner of treat on your street for Halloween, it will be the stop at your house they remember longest.

More Halloween Sharing

By Terri Lappin

Gary and I have set up telescopes on Halloween, weather permitting, for 17 years. In the past couple of years the nearby elementary school has held a special party which has really cut back on the number of door-to-door trick-or-treaters. From easily over 100 ghouls and goblins in most years, we were lucky to have 50 this year. We were certainly discouraged by the end of the night and had a bucket full of candy left over. But, just moments before we started taking the scope down we heard a young man calling out from around the corner, "Honey, you got to see this!" As the young couple and their toddler son approached the scope, the young man said, "I just knew you'd be here – I didn't even have to look!" He and his wife saw the moon, and she was impressed. He then proceeded to tell us how he'd first looked through our scopes 13 years before, when he was 7 or so years of age, and clearly retold of that first view of Saturn and how he was so appreciative he gave us candy! Some years he made sure he came back around our house on his way home so he could get a second or third view. As discouraging as the evening was for us, his story and excitement made our night!

Items of Interest

Websites: Trips On The Internet Super-Skyway

By Rik Hill

It's heeeeeerree!

For those of you who do imaging of any sort, there are some new versions of old freeware that have come out recently that should be brought to your attention.

First of all, and most importantly, Registax4 has been released. It has significant improvements over the old Registax3. Basically, this is a piece of freeware produced by Cor Berrevoets, that will take an AVI (the output of many webcams and/or videocams) and a number of other formats, apply dark and flat field frames, then allow you to select the frames to be used in a final image. After selection, it aligns all the selected images, allows you to apply a number of adjustments in the alignment, and finally produces an image that you can then adjust with wavelet settings, contrast, brightness, gamma and numerous other final tweaks. I cannot possibly go into all the details here but can encourage you to get this if you do imaging. You can get your free copy at:
http://registax.astronomy.net/

One of the real beauties of this version is the manual that you can download too! All this is free! Amazing. He could probably get a couple hundred bucks a pop for this software!

One of the frustrations of webcam imagers is the smallness of the field. In order to see a large crater field on the moon you have to take a few images. But how to knit them together in a mosaic? Enter iMerge, another piece of freeware.
http://www.geocities.com/jgroveuk/iMerge.html

This one allows you to open image in one window and then overlap them until the registration is what you want. Then all you do is save the result and you have a mosaic. It is important that the images are all processed identically and that their gray values be the same. This can be facilitated by either a program like PhotoShop, Gimp or Irfanview. This latter freeware can be obtained from:
http://www.irfanview.com/

Ostensibly an image viewer, this has some very convenient and easy-to-use controls on image gray levels and cropping. It's fast and easy to save the result, unlike the programs with all the bells and whistles.

These three programs are reviewed and some starting suggestions are given in Robert Reeves' book "An Introduction to Webcam Astrophotography". You can order it from Willmann-Bell or his website at:
http://www.robertreeves.com/

I have a copy and have enjoyed it immensely. It's full of very helpful tips and suggestions but as with anything technical that is published these days, it's already fallen a tiny bit out of date…it has instructions for Registax3. Still there is a lot to glean from its pages on getting the most out of a webcam or even a CCD camera. I highly recommend it.

All this will keep you more than busy for the next month!

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As always, if you know of a particularly good website you would like mentioned here, or some web topic you like covered, drop me a line at: rhill@lpl.arizona.

Member Events

TAAA Star Party at Las Cienegas (Empire Ranch)

Saturday, December 16.

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.

TAAA and Beginner's SIG Star Party at TIMPA

Saturday, December 23.

Come on out and enjoy the winter 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.

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.

Sonoran Science Academy Star Party **Northwest**
Monday, 12/4/2006 No. of Scopes: 3

Sonoran Science Academy will be planning Night Sky of the Ancients and Mythology at 2255 W Ina Rd. Go west on Ina and turn left (south) onto LaCholla; take first right (west) into the Academy parking lot. Viewing will be on the basketball court. Contact person Carrie Adair can be reached at 744-4971 or email carrieis@yahoo.com. Set-Up Time: 5:45pm. Observing will be from 6:15pm to 8:15 pm. Sunset: 5:19pm Dark Sky: 6:16pm Moon Phase: near Full Moon.

Cub Scout Pack 231 Star Party **Northwest**
Wednesday, 12/6/2006 No. of Scopes: 2

Cub Scout Pack 231 will be hosting Cub Scout Stars at Butterfield E.S. I-10 north to Ina. East past the Fry's grocery store to Meredith. North on Meredith. You will see signs for Butterfield. Viewing will be on the playground. Contact person Maelee Fuehrer can be reached at 579-8732 or email bsfmkf@comcast.net. Set-Up Time: 6:00pm. Observing will be from 6:30 pm to 8:30 pm. Sunset: 05:19pm Dark Sky: 06:17pm Moon Phase: near Full Moon.

Painted Sky ES Star Party **Northwest**
Friday, 12/8/2006 No. of Scopes: 6

Painted Sky ES will be celebrating Night of Lights at 12620 N Woodburne Ave. Go north on Oracle to 1st Ave and turn left (west). Continue as road curves north, past second stoplight at Tangerine (Safeway on right) to the next street, Woodburne and turn left (west). School is 1/8th mile further on right. Viewing will be on the athletic field. Contact person Lorraine Morgan can be reached at 520 203-6565 or email tabash@aol.com. Hot Chocolate and Cookies will be available for TAAA volunteers! Set-Up Time: 6:00pm. Observing will be from 6:30 pm to 9:00 pm. Sunset: 5:20pm Dark Sky: 6:17pm Moon Phase: near Full Moon.

Borton Primary Magnet School SP **South-Central**
Monday, 12/11/2006 No. of Scopes: 3

Borton Primary Magnet School will be preparing Night Sky Adventure at 700 E. 22nd. From Speedway, turn south on Euclid, and continue, as it becomes Park. At 22nd St., turn right, or west. Our school is one block west of Park on the south side of 22nd St. The office is located on the Tyndall side of the school. Telescopes will need to enter on the west side of the school, off Euclid. There is a drive through gate onto the playground area, in the parent pick-up area. Viewing will be on the basketball court on the south side of the school. Contact person Caryl Crowell can be reached at 225-1058 or email caryl.crowell@tusd1.org. Set-Up Time: 6:00pm. Observing will be from 6:30 pm to 8:30 pm. Sunset: 05:20pm Dark Sky: 06:18pm Moon Phase: (no moon during viewing).

Twin Peaks ES Star Party **Northwest**
Tuesday, 12/12/2006 No. of Scopes: 4

Twin Peaks ES will be holding Star Gazing at 7995 W. Twin Peaks. Take I-10 north. Take exit #246. Turn left on W. Cortaro Farms Rd. W. Cortaro Farms Rd becomes Cortaro Rd. Turn right on N Silverbell Rd. You will be traveling northwest. Continue past Coachline. Turn right when you reach Twin Peaks Rd. This road goes directly east. If you end up at Scenic Drive or White Stallion, or heading north or west, you have gone too far. Watch for the school on the right. Viewing will be in the courtyard. Contact person Monica Baden can be reached at 579-4750 or email m.f.baden@maranatusd.us. Set-Up Time: 5:45pm. Observing will be from 6:15pm to 8:15 pm. Sunset: 5:20pm Dark Sky: 6:18pm Moon Phase: (no moon during viewing).

SAIDA NEEDS MORE HELP FROM MORE TAAA MEMBERS. AFTER ALL, WE WILL ALL BENEFIT FROM DARK SKIES IN OUR AREA !!!

For more information, go to: www.sa-ida.org

Or feel free to contact:

John Polacheck
President of SAIDA
E-mail: jpolach@dakotacom.net
Telephone: 743-1362

SAIDA meets on the second Wednesday of each month from 5:30 to 7:30 PM in the IDA office located at 3225 N. First Ave, just North of Ft. Lowell. And.....

WE USUALLY HAVE PIZZA !!!

Desert Skies Classified

For Sale	CELESTRON NEXTAR 8i, 2002, Mint condition, 25 mm Plossl 1.25 inch eyepiece. Computerized hand control gives GOTO slewing to over 40,000 objects. $975. I also have Tele Vue® Nagler 4.8 mm 1.25 inch eyepiece $90; as well as University Optics 9 mm, and Meade 12 mm, 1.25 inch eyepieces with illuminated reticles $40 ea. and Celestron Star Diagonal, 1.25 inch $35. Jim Jondrow, 529-0933 or jjondrow@dakotacom.net
For Sale	Meade ETX-70AT w/883 heavy duty tripod, 495 Autostar handbox; PL4, PL6, MA9, MA25, 124-2X Barlow lenses, LPR filter, 670 dewshield, 827-8 x 25mm right angle view finder, 07379-T mount for Olympus OM 35mm camera, 2 flexible shutter release cables, extra battery pack. OM Olympus camera, 9 vdc adapter mounted on 883 tripod frame w/ 100 ft 3-wire outdoor power cord (to substitute for use of a battery pack, where 110 V power is available), (used 3 evenings) – valued over $1500, asking $750. Harland Beckman, 520-722-5070. [02/07]
For Sale	TeleVue TV-102 4" APO Refractor and optional accessories. Excellent condition, reasonable price. Email J.D. Metzger at jayhawk68@cox.net for details. [02/07]

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.

TAAA Board of Directors Meeting - November 1, 2006

Attending: TAAA Board Members present: Bill Lofquist, presiding, Ken Shaver, Steve Marten, Terri Lappin, George Barber, and Teresa Plymate. Members present: Loretta McKibben, Richard Dougall, John and Elaine Croft. President's Call to Order: 6:35PM

October Minutes. Accepted. Unanimous.

Member Feedback None.

Announcements

Discussion of speaker scheduling; possible coordinated scheduling system with multiple schedulers.

Administrative Business - Terri Lappin

Terri reported that she is very satisfied with tax forms prepared by Keith Schlottman (at no charge to TAAA). The Board acknowledges, with appreciation, Keith's contribution of time and effort to TAAA. The Board accepts completed IRS Form 990 and State Form 99.

Website Redesign – Loretta McKibben

Loretta reported that our internet service provider is changing their software language and structure. This will affect the redesign and functionality of our revised website. Discussion followed on positioning of certain features (e.g., Beginner's SIG) and archive of general meeting and special event presentations. Loretta is looking for a knowledgeable TAAA member to occasionally assist in the revision and act as back-up In the future if when she is away. Next step: posting of portions of prospective website for Board evaluation.

TIMPA Observatory – George Barber

George reviewed several plans for a roll-on/roll-off (RO/RO) observatory that could be constructed without government regulation. To allow for more viewers to assemble near the scope, he proposes a RO/RO structure that moves off the viewing pad vs. a mobile RO/RO roof. He will continue to formulate suitable plans with Steve Ratts and John Kalas.

Telescope Storage Shed – Teresa Plymate/Richard Dougall

Teresa reviewed features of Mobile Mini storage containers including security and costs. Secure door units start at $4,200. After discussion, Teresa will obtain additional information for review at the December Board meeting. Richard suggested retail heavy-duty plastic movable storage shed; cost approximately $1,300. By the end of November, Richard will not need additional units for scope storage; however, he would prefer a dedicated, movable storage unit for TAAA scopes. Richard will collect additional data necessary for Board decision at the December Board meeting.

Master Schedule – Steve Marten

Steve presented the 2007/2008 Master Schedule for Board review. Several organizations have not yet announced event dates but they are expected before December 1.

Dark Sites on County Land – Ken Shaver

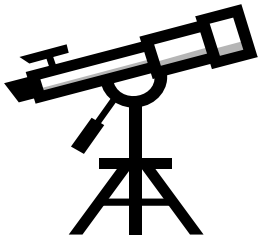
Ken presented a prioritized list of desirable features including darkness, accessibility, facilities, etc. Ken discussed recent contacts with county representatives associated with land management and upcoming meetings. The Board accepted Ken's features list and encouraged further contacts to begin formulating plan for new dark site.

Basha's Incentive Program – Terri Lappin

Terri suggested that TAAA take better advantage of the Basha's Incentive Program by assigning a coordinator to help remind members of this benefit for TAAA and to coordinate public star party events at some Basha's stores around Tucson area.

Adjourned at 9:14p.m.
Respectfully Submitted,
Steve Marten, Secretary

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 December 2006

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

Th/Fr	30/ 1	3:23 - 5:40	Su/Mo	10/11	18:47 - 23:03	Th/Fr	21/22	18:51 - 5:54
Fr/Sa	1/ 2	4:33 - 5:41	Mo/Tu	11/12	18:47 - 23:59	Fr/Sa	22/23	19:39 - 5:54
Sa/Su	2/ 3	- - -	Tu/We	12/13	18:47 - 0:53	Sa/Su	23/24	20:48 - 5:55
			We/Th	13/14	18:48 - 1:47			
Su/Mo	3/ 4	- - -	Th/Fr	14/15	18:48 - 2:42	Su/Mo	24/25	21:55 - 5:55
Mo/Tu	4/ 5	Full Moon	Fr/Sa	15/16	18:48 - 3:39	Mo/Tu	25/26	23:02 - 5:56
Tu/We	5/ 6	- - -	Sa/Su	16/17	18:49 - 4:38	Tu/We	26/27	0:07 - 5:56
We/Th	6/ 7	18:46 - 18:56				We/Th	27/28	1:13 - 5:56
Th/Fr	7/ 8	18:46 - 20:01	Su/Mo	17/18	18:49 - 5:40	Th/Fr	28/29	2:20 - 5:57
Fr/Sa	8/ 9	18:46 - 21:04	Mo/Tu	18/19	18:50 - 5:52	Fr/Sa	29/30	3:30 - 5:57
Sa/Su	9/10	18:47 - 22:05	Tu/We	19/20	18:50 - 5:53	Sa/Su	30/31	4:40 - 5:57
			We/Th	20/21	18:51 - 5:53			

Weekend	Sun	Sun	Mercury		Venus		Mars		Jupiter		Saturn		
Sa/Su	Set	Rise	Rise	Vi	Set	Vi	Rise	Vi	Rise	Vi	Rise	Vi	Vi=Visibility
2/ 3	17:17	7:07	5:40	3	17:50	6	6:06	8	6:23	7	22:46	0	-3 brilliant
9/10	17:17	7:12	6:02	5	17:59	5	6:02	7	6:03	4	22:18	0	0 conspicuous
16/17	17:19	7:17	6:26	7	18:09	4	5:58	6	5:43	2	21:50	0	3 moderate
23/24	17:22	7:20	6:50	-	18:22	3	5:54	5	5:22	0	21:22	0	6 naked eye limit
30/31	17:27	7:23	7:13	-	18:36	1	5:51	5	5:02	0	20:53	0	9 binoculars limit

By Erich Karkoschka

MEMBER'S FORUM

A Successful Red LED Light Workshop

By Andrew Cooper

Another red LED lamp workshop has been a success! About fifteen club members arrived at Bill Lofquist's to convert inexpensive desk lamps into red LED lamps to be used at observing tables and personal observatories. Bill's back patio was a very pleasant place to work in mid November as Tucson gave us a beautiful fall day. Jokes and jibes flew back and forth as everyone enjoyed learning a little electronics and soldering in good company. I was struck how well everyone helped each other at the tables, mutually sharing skills and knowledge as well as tools and solder; this really made it easy on the instructor. All the lamps were working at the end of the day (except one member who had to leave early, but given his competence we can assume that his will work just fine as well). This brings the tally of completed lamps over sixty. Let us hope that this fall will give us more days like this weekend to get out and use the new lamps.

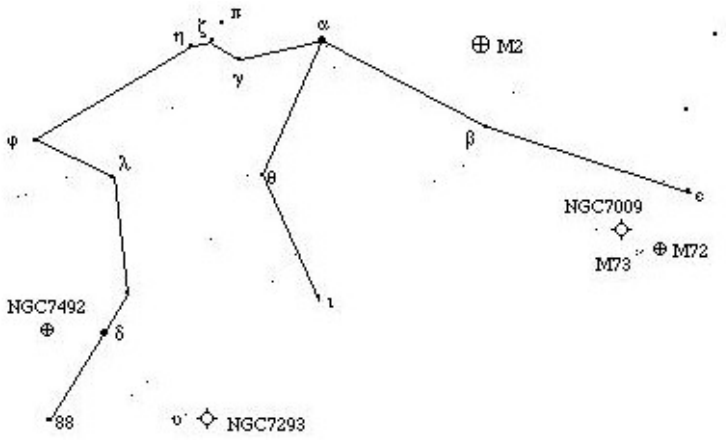
Constellation Report by Chris Lancaster

Aquarius

The Water bearer

This constellation shares a part of the heavens that was seen as a celestial sea in ancient times. Nearby we see other constellations that have ties with water such as Cetus, Pisces, Capricornus, and Delphinus. Aquarius depicts a human figure pouring water from a jar, an act which some cultures considered to be the source of the river Eridanus, or responsible for the global flood of Biblical times. Conversely, Aquarius has also been seen as Zeus pouring life-giving waters from the sky.

To spy the rather dim stars of Aquarius, look due south near midnight at the beginning of September, or 10 p.m. near the end of the month. Aquarius is between the head of Pegasus to the north and the solitary 1st magnitude star Fomalhaut to the south. The most conspicuous feature of Aquarius is the "Y" shaped asterism of the water jar marked by Eta, Zeta, Pi, and Gamma Aquarii.



Aquarius abounds in diverse deep sky objects. The largest, but often the most difficult to see, is NGC7293, called the Helical, or Helix, nebula. The proximity of this planetary nebula (only about 450 light years) curiously adds to its elusiveness. It glows at magnitude 6.5, but that light is spread out into a circle that is 13' across, which is almost half the diameter of the moon. To find it, start at magnitude 3.7 88 Aquarii, then move 35 minutes in RA west to Upsilon, then another 5 minutes of RA, or 1.2 degrees, west to the Helix. You will want to try to observe this nebula in transparent, dark skies in a low power eyepiece capable of at least 0.5 degrees, but preferably more, field of view. This will give you some contrast between the edges of the nebula and the darker background. You will see a large, ghostly circle of light. In large scopes, you may notice that the Helix is slightly ovoid, shows a pronounced darkening near the center and you will have a chance to see the magnitude 13 central star.

Moving over to the western half of the constellation, we will find three targets within 3 degrees of each other. NGC7009, on the northeast corner of this triangle of objects, is another planetary nebula nicknamed the Saturn Nebula. It earned this name from the spikes which jut from the ends of its oval shape, thus resembling the rings of the planet Saturn. At magnitude 8.3, it is almost two magnitudes dimmer than the Helical Nebula, but it measures a compact 25" across. This means that its higher surface brightness stands out against the background sky. NGC7009 is located at RA 21h 41.2m, Dec -11d 22', or 1.3 degrees west of 4.5 magnitude Nu Aquarii.

Three degrees WSW of NGC7009, or RA 20h 53.5' Dec -12o 32', is globular cluster M72. It measures 6' across and shines at magnitude 9.4. In most telescopes, M72 shows little texture. Its 15th magnitude stars are difficult to resolve except in the largest aperture instruments, so most views will simply show a soft, round glow.

An interesting object 1.3 degrees east of M72 represents the third item in our trio. When Messier studied it in October of 1780, he described it as a cluster of three or four stars in a surrounding faint nebula, therefore he added it as the 73rd object in his catalog. Indeed it may look like a fuzzy spot if seen at low power with averted vision, but closer examination clearly reveals only a tight group of four 10th, 11th, and 12th magnitude stars in a general "Y" shape with no nebulosity. This little "cluster" can be hard to identify unless you know exactly what you are looking for. M73 is located at Ra 20h 59m Dec +12d 38'.

For a genuine challenge, you may want to search for globular cluster NGC7492. This is a small, magnitude 11.5 cluster at RA 23h 8.4' Dec -15d 37'. Its stars are extremely faint and sparsely scattered across a small area of 5'. If you start at Delta Aquarii, drop south one degree, then move east 15' in RA. NGC7492 will then sweep into view.

Very close to the celestial equator is the best globular in Aquarius, M2. It's 12' in diameter and a bright magnitude 6.5. It sits in a rather blank part of the constellation 4.8 degrees north of Beta Aquarii (RA 21h 33.5' Dec -00d 49'), so distinguishing it in your finder scope as a hazy spot is easy. Small telescopes will see a round, fuzzy glow. Medium to large scopes will begin to resolve stars deep within the core of the globular.

If the skies clear long enough to make setting up your telescope worthwhile, Aquarius makes a fine area to tour.

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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.
7.

NOTE

A gate card is required for TIMPA access. Please **DO NOT** ask the caretakers for entry to the TIMPA SITE. Contact a board member or the TIMPA Gate Card Controller to arrange access to TIMPA. 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.