



Desert Skies

Tucson Amateur Astronomy Association

Volume LI, Number 3

March, 2005



Ready for a Star Party!

Cover Photo: TAAA members set up for one of our many public star parties. Later that evening, U of A Optical Students enjoyed a clear night of stargazing at Red Rock Visitor Center. Photo by Thom Peck.

TAAA Web Page: <http://www.tucsonastronomy.org>

TAAA Phone Number: (520) 792-6414

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Membership in the TAAA

Annual Dues

Individual membership.....	\$ 25.00
Family.....	\$ 30.00
Senior (over 60) membership.....	\$ 23.00
Senior Family (at least one over 60).....	\$ 28.00
Student membership (over 18 years old).....	\$ 17.00

Family Membership includes two adults plus minor children. Persons under 18 may join at a special Reduced Family Membership rate (\$17/yr) upon parental or guardian acknowledgment of participation in TAAA activities. Call the Treasurer to request the required form.

Options (add to above membership rates)

Tucson soc. of the Astronomical League (TAL).....	\$ 5.00
Sky & Telescope Magazine 1 year rate.....	\$ 32.95
Astronomy Magazine 1 year rate.....	\$ 29.00
2 year rate.....	\$ 55.00
Postage for New Member Pack.....	\$ 3.85

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 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 - 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. Partial page submissions should be submitted in Word compatible files via e-mail or on a floppy disk. Full-page articles, artwork, and photos can be submitted camera ready. All material copyright Tucson Amateur Astronomy Association or specific author. No reproduction without permission, all rights reserved. We will not publish slanderous or libelous material! Send submissions to:

George Barber
TAAA/Desert Skies Editor
15940 W Ridgemoor Ave
Tucson AZ 85736
or by e-mail barbergj@flash.net

President's Message

It seems the weather has put a damper on many of our star parties, so be prepared for a heavy load in March and April. We could use all the help we can get, especially for school star parties, so please pitch in and volunteer.

TAAA Board of Directors elections are at the May meeting. If you wish to run for office, or want to suggest a member who would be willing to serve on the 2005 board, contact someone on the nominating committee, or a current board member, who will forward the information.

We are still looking for a Publicity person and/or committee. This is an appointed position, so you need not be elected to the post.

We are also looking for someone who will manage the 16-foot dome project at TIMPA. There is still the issue of bringing the Ash Dome down from Kitt Peak this spring and erecting the structure. We also need to confirm what-

ever city and county rules are necessary to follow to build the structure. Please contact me if you are interested. It would be nice to have our TIMPA site more useful.

The 30-inch telescope project is proceeding nicely and we are getting much needed engineering help from Brian Cuerden, probably the best there is at doing Finite Element Analysis. Drafting plans for conversion of the telescope on Mt Lemmon from the current 40-inch to our 30-inch is the next phase. The optics are being worked on as machines and time permits.

So, please help out in any way you can. Especially needed are star party volunteers.

Hoping for clearer skies,

Thom Peck

Meeting Information and Calendar of Events

TAAA MEETING DATE: Friday, March 4 at the Steward Observatory Auditorium - Room N210

ASTRONOMY ESSENTIALS: 6:30 pm

Title: Astronomical League Observing - objects with new observations

Speaker: Nick Demesa

Nick will discuss the Astronomical League Observing Programs with emphasis on pictures of new findings of extra solar planets, and other observations.

GENERAL MEETING: 7:30 pm

Title: Sustainable Lighting - Energy, Dark Skies and the LEED Rating System

Speakers: Hyman Kaplan and Joyce Kelly

The issue of light pollution and light trespass affects us all in many different ways.

This presentation will show the interrelationship of light pollution on wasted energy, costs and the pollution generated. Now energy Codes are starting to address the issue of wasted light. This lecture will look at the Dark Sky issues and the International Dark-sky Association. Finally, we will show how this all relates to the voluntary LEED rating system for new building construction and the Green Buildings Council (USGBC).

The presenters are Hyman Kaplan, IALD, PE, LC, who is a professional lighting designer, and Joyce Kelly, LEED AP, LC, who is a lighting consultant.

Also at this meeting, Terri Lappin will review the newest Outreach Toolkit, which we received as members of the

NASA Night Sky Network. This one is called "Our Galaxy - Our Universe". This toolkit lays out a handy model of the scale of the universe. Anyone doing star parties with the public will want to hear about this toolkit. It could add "depth" to the descriptions of deep sky objects you give to the public.

BOARD OF DIRECTORS MEETING: Wednesday, March 9 6:30 pm at Steward Observatory Conference Room N305

STAR PARTIES AND EVENTS:

- 02 Mar - Patagonia Elementary School Star Party
- 03 Mar - Robison Elementary Star Party
- 05 Mar - TAAA/TIMPA Cookout and Star Party at TIMPA
- 08 Mar - Booth-Fickett Magnet School Star Party
- 10 Mar - Dodge Middle School Star Party
- 10 Mar - AstroPhoto SIG
- 11 Mar - Our Mother of Sorrows Star Party
- 12 Mar - TAAA Star Party at Las Cienegas
- 12 Mar - All Arizona Messier Marathon
- 15 Mar - Lineweaver Elementary School Star Party
- 16 - 18 Mar - Math, Science and Technology FunFest
- 19 Mar - Girl Scout SMART Event
- 25 Mar - Cienega High School Star Party
- 28 Mar - Cross Middle School Star Party

NEWSLETTER SCHEDULE: Deadline for articles: Sat, March 19. Printing: Mon, March 21. Folding Party: Tues, March 22. Mailing: Wed, March 23. The newsletter is mailed at least one week prior to the following month's General Meeting.

Club News

Member News

We welcome the most recent members to join the TAAA: Lynn Crew, Victor Herrero, Bob and Charlotte Hill, David Jones, Charles Peterson, and Kathy Salfinger (This includes two more Project ASTRO teachers!) Glad to have all of you join! New members should be sure to pick up a new members pack at a meeting. Hope you'll make it to our star parties or meetings so we can all get to know you. (Updated membership lists are available to any member at most meetings, so pick one up if you need it.)

TAAA Elections 2005

Attention members: The election for the 2005 TAAA Board of Directors is rapidly approaching in May. Your newly elected Nominating Committee has been hard at work (OK sitting around a table at Johnny Rockets...) seeking out TAAA members to represent the TAAA and provide stewardship as we continue into our second 50 years of observing the skies together.

Please note that the positions of President, Vice President, Treasurer, Secretary and 3 Members-At-Large are open for candidates. The current club officers are listed on page 2 of the Desert Skies newsletter. Nominations for elective offices must be submitted prior to the published deadline of April 1, 2005 to be officially included on the ballot. However, nominations for write-in candidates shall be accepted from the floor at the May 6, 2005 General Meeting. Write-in candidates must accept their nomination in person or in writing before the vote is taken. The qualifications for becoming a member of the Board of Directors are listed in the TAAA Constitution, Article III, Section 5. The voting process is explained in Article IV, Section 6 of the TAAA Constitution. (<http://www.tucsonastronomy.org/constitution.html>).

Please come out and cast your vote for the next leaders of the TAAA.

The Nominating Committee:

Valerie Grindle (Valerie@InsideTucsonHomes.com)

Steve Marten (taaastarparty@yahoo.com)

Michael Turner (mrmgtturner@earthlink.net)

Astrophoto SIG: CCD Image Processing Workshops

Preparations are underway for the two remaining sessions. These workshops are intended for those imaging with dedicated astronomical CCD cameras such as SBIG and Starlight Xpress. Webcam imaging and processing require different software and techniques that will not be covered in these workshops.

Saturday February 26th – Workshop 3: Color image acquisition and processing

Saturday March 5th – Workshop 4: Other image processing techniques

Each session runs 5-6 hours and is split between lecture and hands-on lab work. You'll need your own laptop and software to follow along. Workshop 3 will primarily utilize Maxim DL, while Adobe Photoshop will be used for the 4th workshop.

These workshops are limited to TAAA members and advance sign-up is required. For more information or to register contact Ray Toscano at ray_toscano@earthlink.net or 529-3074. Questions can also be posted to the TAAA's Member forum. <http://groups.yahoo.com/group/taaaforum/>

Astro-photo SIG Meeting

March 10, 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!

Basha's Thanks A Million Program

The Basha's Thanks A Million for Friends and Neighbors program ends on March 31st. We are set to receive a donation of over \$50. Thanks for all the Basha's shoppers who have made this donation possible. It's still not too late to sign up. Just ask the cashier to link your "Thank You" card to the Tucson Amateur Astronomy Association. Our ID # is 23178. (Basha's customer service also has a list of ID numbers if you forget this number.)

Basha's Thanks a Million
TAAA number 23178

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.

Sad News

The TAAA has lost a long time member. Jeff Brydges died on Saturday, Feb 5 at the very early age of 45 after a six-month bout with cancer. Jeff got into astronomy as a teenager in Illinois. He worked part time at Stellar Vision and full time at La Cima Middle School. He joined the TAAA in 1991. For six years (1993 to 1999) Jeff wrote

Club News (cont.)

articles in Desert Skies mostly about binary and double stars. That was his passion. He was a very kind person and always patient when someone (especially at public star parties) was looking through his telescope. The largest telescope he had was a 12" Meade LX-200, but I will always remember him for his way of making the most out of small telescopes. He had a way of seeing far more than most could with a 3" refractor. Special thanks to Randy Quiroz for providing details for this article. - Terri Lappin

A LETTER OF THANKS TO TAAA

6 February 2005

Thomas W. Peck

Tucson Amateur Astronomy Association

Dear Thom,

I want to thank you and your TAAA colleagues for your assistance with the education and public outreach event "*Descending to a New World*," held 15 January 2005. Clearly the university community and general public were thrilled with the opportunity to learn more about the exploration of Titan and to view Saturn. As you may know, we hosted between 600 and 700 guests inside the exhibit and lecture halls, which was nearly twice the size of the largest group we hosted in the past.

It was spectacularly generous of you and your colleagues to set up your telescopes, operate them for the public, and answer their questions. I could see (and was told!) that the opportunity to view the Saturn-Titan system with telescopes was a spectacular bonus to the evening. People having seen the first spacecraft images of Titan's surface at LPL were thrilled to then be able to see that part of the solar system with their own eyes.

Thank you again for helping make the evening such a huge success. Please forward my appreciation to the entire TAAA.

Best regards,

David A. Kring

Associate Professor of Planetary Sciences

Associate Professor of Geosciences

Director, NASA/University of Arizona Space Imagery Center
Tucson, Arizona

TAAA TO INITIATE A NEW SPECIAL INTEREST GROUP FOR BEGINNING ASTRONOMERS

Bill Lofquist

The TAAA Board of Directors is initiating a new Special Interest Group (SIG) for members new to astronomy. The first event for this SIG will be held at TIMPA on March 5. This is the regular observing night at TIMPA. It also happens to be the day of a joint gathering with TIMPA members.

The TIMPA club members will be flying their airplanes in the afternoon, we will have a joint picnic, and we will share our telescopes with them after dark.

For those interested in this new SIG, there will be a variety of telescopes available for observing. There will be experienced TAAA members there to make several brief presentations at an introductory level. They will also help those who might have new telescopes, and who want assistance in setting them up. We will be interested in the questions people have that can be explored at future sessions.

Members who have been around a while may recognize that this was part of the purpose of TIMPA when we first joined forces with the airplane club. In the spring during our strategic planning discussions there was strong interest in a beginners group. So we hope this new effort will encourage and help people get into astronomy.

Please come with your questions, bring your new telescopes and binoculars, and help us shape the new SIG to meet your interests.

If you are interested in participating in this new SIG on March 5, please send me an email with some of the questions you would like to see us discuss.

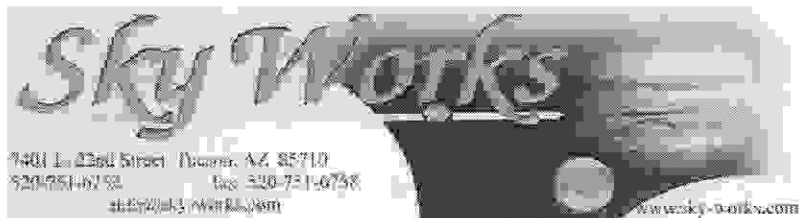
My email address is wlofquist@comcast.net.

STARIZONA

ADVENTURES IN ASTRONOMY AND NATURE

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Club News (cont.)

Directions to the TIMPA site are on the back of each issue of Desert Skies. An announcement about the joint event with TIMPA will be coming to you on the TAAA Forum.

We hope to see you there,
Bill Lofquist

Cookout + Observing + TIMPA Members + Flying = GREAT FUN! March 5

On March 5th we will be joining the TIMPA people for a joint event out at the TIMPA field (see directions on the outside of the newsletter). They let us fly their airplanes and we let them look through our telescopes. It's a fun event so come on out. The entire family is invited.

The flying will begin at 3pm. Usually special insurance is required to fly at TIMPA but we will be allowed to fly on "trainers". This is like a car with two steering wheels so the owner of the plane can take over and save it from certain destruction. (These are radio controlled model planes - not real ones, of course.)

We will fire up the grills around 5:00 pm and turn them off at 6:30 pm. There will be a special gathering of the newly created Beginning Astronomers special interest group. TIMPA people will be encouraged to sit in on this meeting if they want to learn some astronomy. As it gets dark TIMPA people will want to look through our telescopes. They most likely will not stay late, so we'll have the rest of the night for our own observing.

Bring a dish to share and a main course for yourself. Also, you need to provide your own drink and eating utensils/plates/etc.. The TAAA and TIMPA will provide all that's needed for grilling (all except for that secret seasoning you like so much - so you better bring that, too.)

TIMPA - Special Notice

March 12 - 13

There will be no astronomy permitted at TIMPA on March 12 and 13. TIMPA will be holding their annual Jet Rally and there will be many, many RVs on the field that weekend.

2005 All Arizona Messier Marathon

March 12, 2005 - Arizona City

It is time again for our yearly exercise in speed observing, a Messier Marathon! Maybe finding all of the Messier objects in one night is a little crazy, but it is also a lot of fun, and a great exercise for old and new observers. This allows you to practice skills such as learning the sky, recognizing magnitudes, star hopping and using your equipment.

It looks like it will be possible to do 108 or 109 objects this year with the tough ones being M77, M74, M39 and M29 with M30 being next to impossible. Since the new moon is early in Messier season this year the evening objects should be well up at twilight, but a setting moon will increase the challenge.

Sunset 6:37pm
Twilight 7:55pm
Moonset 9:19pm and is 2.68 days old
Twilight 5:18am
Sunrise 6:36am

If you don't want to MM, and only about half the participants do, it is still a great star party with good company, dark skies and lots of scopes. Either way, come up and join us at the Farnsworth Ranch south of Arizona City. I suspect that with all of the recent rains the site will be less dusty than normal.

Directions... (32d27'45.2"N 111d43'53.2"W)

- 1) Take I-10 to Exit 200, Sunland Gin Road
- 2) Turn south after exiting the freeway
- 3) After about 15 miles the road turns sharply to the west
- 4) After another four miles the road will turn south just after the "Silverbell Estates" signs
- 5) Three miles past the signs, the road will veer off to the west
- 6) Continue on the main road for another five miles, where it passes through an open gate
- 7) Take an immediate left after the gate and continue for 0.7 miles
- 8) Take the next right onto a road that leads into an abandoned field

Complete information and map at <http://www.saguaroastro.org/content/messier.htm>. Site information and directions can also be found at <http://www.slow.com/ObservingSites/html/obsarizonacity.html>

I enjoy reading Charles Messier's original descriptions of these objects and comparing them to the view in my own scope as I go. Even a small modern scope (like my MM veteran 6" RFT Newtonian) will put shame to the descriptions. The text of Messier's original article as published in 1784 (with the additions) can be found at <http://www.seds.org/messier/xtra/history/m-cat.html>. Print them out, it's only a few pages, and bring them with you.

See you there!
Andrew Cooper

**Look Great!
with TAAA Apparel.**

Club News (cont.)

Math, Science and Technology FunFest

Wednesday, 3/16-18/2005

TAAA is looking for 5 volunteers per-day to help support the Math, Science and Technology FunFest March 16-18 at the Tucson Convention Center. This is mostly a daytime event, with one evening session this year.

Daytime Sessions

Session A: Wednesday 16 March 9am-1pm.

Session B: Thursday 17 March 9am-1pm.

Session C: Friday 18 March 9am-1pm

Evening Session

Session D: Wednesday 16 March 5pm-8pm.

We are looking for people to man tables displaying interactive/fun Exhibits for grammar school children as well as volunteers to bring scopes for day (solar) and night viewing. We usually have some TAAA members who regularly bring their scopes for these events, but we also need individuals to display exhibits. They do not have to be elaborate. Last year we used a projector and Starry Night Pro to display the solar system and beyond. The students were fascinated by the size of our solar system, its location within the Milky Way, and the universe. Some just enjoyed watching the planets rotate around the sun. Create your own multimedia display, use one of the Science projects from PlanetQuest (see Terri Lappin to borrow these), or just display photos and posters of various deep sky images. It's a wonderful experience to share your passion and enthusiasm of the sky with students. You don't have to volunteer for the entire event; just one of the sessions would be appreciated. It would be great if TAAA can get several display volunteers or more each day for this entire event. If you have any questions on this event contact Nora Toscano at 529-3074, or see her at the March meeting. There will be sign up sheets at the March meeting for this event.

Science Fair Judges Needed

Tuesday, March 15

The Southern Arizona Regional Science and Engineering Fair will take place March 14 - 19 at the Tucson Convention Center. For the past several years the TAAA has given awards to promising young people who have an interest in astronomy and related sciences. We need judges to help select the student projects that will receive an award from the TAAA. Judging takes place on Tuesday, March 15th at the TCC (parking is usually free), beginning at 7:30 am with a great breakfast being served while we get organized. We review the displays after breakfast and continue until we complete the job. We usually stick around long enough to talk to the senior high students who arrive at 1 pm. Lunch is also provided. Yes, it's a good part of a day, but it's important to the students and a great way to encourage young people to pursue their scientific and engineering interests. Contact Terri Lappin, tklappin@earthlink.net, 579-0185 if you can volunteer some time for this year's judging.

Girl Scout SMART Event

Pima College Desert Vista Campus

March 19th 9am to 4pm

The annual Girl Scout Science, Math, and Related Technologies (SMART) event will take place at the Pima Community College Desert Vista campus located near Irvington and I-19. The girls will be making comets in one of the classrooms. This event is a lot of fun and reaches girls from all levels of scouting. If you would like to volunteer for this event, please contact Terri Lappin (tklappin@earthlink.net, 579-0185). The event is split into a morning session and an afternoon session, so you can volunteer for the full day or just one session. The girl scouts provide lunch at noon.

Telescopes for Telethon 2005

By John Kalas

The TAAA will be supporting the Muscular Dystrophy T4T activity again this year on Friday and Saturday, April 29th and 30th. The activity on Friday, April 29th involves two-telescope teams at each of six different Wal-Mart stores around Tucson from 6:00 to 9:00 pm. Saturday's activity will have solar viewing taking place from 3:00 to 6:00 pm with evening observing running from 6:00 to 10:00 pm at the University of Arizona Mall across from the Flandrau Science Center. David and Wendee Levy will be hosting the event. It is anticipated that Starizona, Sky Works, Stellar Vision and Flandrau Science Center will also be participating.

John Kalas is the TAAA coordinator for the event. There will be signup sheets at the March and April meetings. Many volunteers will be needed to operate telescopes (solar and evening), staff donation areas and assist in general public support. Please consider supporting this worthwhile event. If you are unable to attend the meetings to sign up, please contact John at 620-6502 or via e-mail at jckalas@cox.net.

Last year, the T4T committee initiated corporate sponsorship as a means of increasing donations and it was very successful. Sponsor forms will be available at the March and April meetings. If you know of a company interested in supporting this great event, please pick up a sponsor form or contact John Kalas.

Grand Canyon Star Party

4-11 June 2005

North and South Rims

By Dean Ketelsen

I've been told this is the greatest star party in the world (really!) -- though I'm biased a little since organizing it the last 15 years -- but it is a lot of fun. We set up scopes at the Canyon and let the public there look thru them, and while it sounds like work to me, the skies are so

Club News (cont.)

incredible and the people there on vacation are so appreciative that it is pure joy to be there. In any case, the event is held during the Canyon's busiest season, so if you've ever thought about attending the event, you should be well on your way to making plans, including already holding reservations for rooms if that is what you need. Those on the north rim literally need to make their reservations a year ahead! There are more choices at the south, but still fill up about this time of year.

If camping sounds like fun, that is much easier to do. And the main intent for this month's note is that when March 1 rolls around, I take names for those looking to score a spot for one of the free campsites. They set aside 12 or 16 campsites for our group, but usually we get 25 to 30 requests. We're a friendly bunch so we double up and share the sites. However we are limited to 2 cars and 9 people per site... I restrict these free sites to those staying at least 6 of the 8 nights of the star party. When we started doing this, it was way too much work to organize the comings and goings of folks and make sure the campsites were all utilized. So grab one only if you are staying all week. If you only want a couple nights, make your own reservations and we can try to get you assigned near us if you let me know you are doing this. If you meet the above restrictions (sharing, at least 6 nights) call or e-mail me on or after the 1st of March, and we'll get you in. My e-mail is ketelsen@as.arizona.edu; my phone is 293-2855. After a couple months of being down, our website is back up again, and if you need to look for a motel room, check out www.tucsonastronomy.org/gcsp.html for more information, or whip me off an e-mail. Hoping to see you there!

Steward Observatory Lab Tours

We had a great opportunity last month when Steward Observatory opened up some labs for our members. By about 6 pm we had far more people than we could accommodate. About 50 members were able to see the four labs (Infrared Detector Testing, Adaptive Optics,

Infrared (ground based instruments), and Sub-millimeter/Millimeter/Astrochemistry). Another 45 members saw far less with some not even seeing anything as we just couldn't get that many people into the labs. We hope to do this again and will iron out some of the problems we encountered. We thank Dr. Eric Young, Dr. Don McCarthy, Dr. Michael Lloyd-Hart, Dr. John Codona, Dr. Lucy M. Ziurys, Dr. Aldo Apponi, Professor Laird Close, Craig Kulesa and DeWayne Halfen for making the possible. We also had many TAAA members helping with setting things up, serving as tour guides, serving pizza, giving out nametags, and finally cleaning up our mess. Everyone involved did a great job.

Upcoming Lecture Schedule

Below is our upcoming lecture schedule. Topics under consideration: Mars/Spirit & Opportunity, Saturn & Titan, and Arizona weather patterns for observing. If you have a suggested topic or speaker in mind send an email to Terri

Date	Lecture	Speaker	Topic
Mar 4	Essentials	Nick DeMesa	Astronomical League Observe Program
	Invited	Hyman Kaplan	Sustainable Lighting
Apr 1	Essentials	Mary Turner	Single Mirror Telescopes
	Invited	Open	
May 6	Essentials	Open	
	Invited	Open	
Jun 3	<i>Members Night (No Astronomy Essentials Lecture)</i>		
Jul 1	Essentials	Open	
	Invited	Open	

Items of Interest

WEBSITES: TRIPS ON THE INTERNET SUPER-SKYWAY

By Rik Hill

The Voyage of Exploration

Over the last month we have been left speechless by the amazing images coming back from Cassini/Huygens. Not since Venera has a world seen but almost completely unknown, been revealed in such startling clarity. Much of this is being run from your own backyard, right here at the University of Arizona, Lunar & Planetary Lab!

As this is being written "Titan Flyby Number Four" is

taking place. (See: <http://ciclops.lpl.arizona.edu/view.php?id=757>) When this mission is through most of this strange world and several others in the Saturnian system will be known places with topography and histories that can start to be understood. A good place to start enjoying the totality of what is taking place here is at the European Space Agency Cassini/Huygens website:

<http://www.esa.int/SPECIALS/Cassini-Huygens/>

Here there are press releases and photo releases every couple of days that will keep you up to date. There is a wealth of information about the spacecraft and even wallpapers and screensavers of the images that you can

Items of Interest (cont.)

download free.

I have enjoyed a lot of the articles talking about conditions on Titan. Some I've enjoyed for the silliness in comparing Titan to Earth. For example the article bylined: "Titan 'much like Earth'" at:

http://www.news24.com/News24/Technology/News/0,,2-13-1443_1650556,00.html

Titan is like the earth in only the most superficial geologic morphology, and the popular article at:

<http://www.csmonitor.com/2002/1212/p25s02-stss.html>

does a very good job at explaining this. But even they said: "Not that you could breathe Titan's air, though. The composition of Titan's atmosphere is not totally unlike Earth's". That would not be a problem on Titan. You would not live long enough to even take a breath. In fact you would not even be able to live for one second, literally, on the surface of Titan. You would freeze that quickly, faster than if you were dipped in liquid nitrogen. Remember those science class demonstrations? In just a few seconds after your death your body would become a pillar of ice as the water in each cell froze and burst the cell walls. Gives a whole new meaning to freeze-dried, huh? I heartily recommend this article.

But Titan is just one place Cassini is exploring. Check out the images from the Ciclops (Cassini Imaging Central Laboratory for Operations)

<http://ciclops.lpl.arizona.edu/index.php>

Not only are the images astounding but the website is very nicely constructed so loading is quick and easy. For all images you have a selection of resolutions and size to fit your bandwidth.

Enjoy this historic voyage as it happens through the Internet!

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

Kitt Peak Celebrates Albert Einstein's Birthday

The general public is invited to a special event at the Kitt Peak Visitor Center on Saturday, March 12, 2005, to celebrate the World Year of Physics and commemorate the birthday of Albert Einstein, the world-renowned physicist whose work 100 years ago earned a Nobel Prize for Einstein and led to a century of amazing progress in our understanding of matter and light.

Save the Date: Saturday, March 12th for Albert Einstein's Birthday Celebration Event, 10am to 3pm.

- Free
- Lectures

- Birthday Cake
- Hands-On activities for Kids
- Special Tour of the WIYN Telescope
- And much more, details to follow...

To reserve your spot call 520-318-8726 or online KPinfo@noao.edu.

Space is limited so RSVP today!

"EINSTEIN"

Editor's note: Items in *italics* are direct quotes from the Skirball source. Items in *italics and bold* are a direct quote from Einstein's writing.

Albert Einstein 50th Anniversary Exhibit at the Skirball Cultural Center, Los Angeles.

There is little debate over the fact that Albert Einstein (1879-1955) was, and is, one of the greatest minds of the 20th Century. Einstein's voyage into the realm of imagination was not bound by the conventional social and political climate of his time. His perennial personal reflection, relentless exploration into creative thought, confrontational political analysis, and spiritual convictions, propelled him ever forward in his lifelong pursuit of truth. In remembrance, and on the 50th anniversary of his death, "EINSTEIN" is a comprehensive exhibit of Albert Einstein's extraordinary life, his revolutionary theories, and extensive writings on many subjects not limited to mere science. This touring exhibit's debut was in September of 2004, and will run until May 29, 2005. For contemporary amateur astronomers, this is a must see exhibit that doubles for an historical event not to be missed.

The Skirball's presentation of Einstein coincides with the international centennial celebration, in 2005, of Einstein's annus mirabilis, his "miracle year" of 1905, when, at the age of 26, he proved the existence and sizes of molecules, explained light as both particles and waves, and created the special theory of relativity, part of which links matter and energy in the revolutionary equation $E=mc^2$.

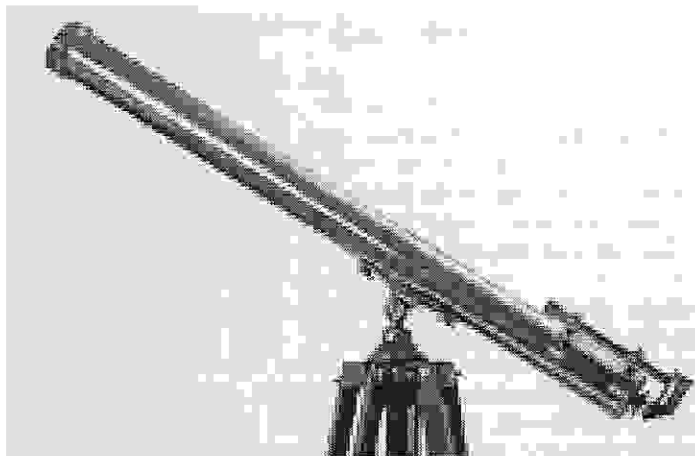
Visitors to the exhibit are treated to many photos, original handwritten pages from his manuscripts, as well as professional and personal letters; many on loan, from Hebrew University of Jerusalem. This exhibit is the quintessential immersion into all things Einstein.

Albert Einstein's own personal refractor is also on loan for the exhibit.

THE TELESCOPE AND LETTER OF TRANSMITTAL ARE ON LOAN FROM THE FAMILY OF LEO MATTERS DORF WITH THE COOPERATION OF THE CHABOT SPACE AND SCIENCE CENTER. Leo Mattersdorf was Einstein's tax accountant, close friend, and president of the Amateur Astronomers Association. In a letter from Princeton, which describes

Items of Interest (cont.)

the gift to Mattersdorf; Einstein conveys, with characteristic humor, his appreciation for everything the accountant had done for him, calling the I.R.S. the "great dragon". Einstein writes to Mattersdorf: "For years you have waged the war with the great dragon on my behalf. You have done so successfully and tirelessly. In addition you are an astronomer. I have in my study a



beautiful telescope..."

Interactive displays, that bring some of Einstein's theories to life, make the event memorable for school age children, and kids 50+. Both Matthew and Michael attended the exhibit opening week, and will accompany me to the center again this spring. They said it was definitely worth the trip to LA to see this exhibit. For the "action toy" minded child or adult in your life, Audrey's Museum Shop has an Albert Einstein action figure, with lifelike hair, and complete with the best weapon of persuasive discourse, chalk in hand. Einstein is warmly remembered for his exhaustive chalkboard discussions.

In my opinion, Albert Einstein was, and still is, a real life action hero, who challenged everyday complacency, with masterful insight into the ordinary.

For exhibit location, hours, and other details go to: <http://www.skirball.org>

Skirball Cultural Center
2701 North Sepulveda Boulevard, Los Angeles, CA 90049
Telephone: (310) 440-4500

Einstein is organized by the American Museum of Natural History, New York; The Hebrew University of Jerusalem; and the Skirball Cultural Center, Los Angeles.

Shalom Aleichem
Laurel Sparks Dunlap

SKY WATCH

By Lou Faix

The modern English word "planet" is derived from the ancient Greek word "planos" which meant "a wanderer". Ancient peoples recognized five star-like objects that,

unlike the multitude of fixed stars, wandered about the sky in predictable but seemingly mysterious manners. Occasionally, two or more of these objects would temporarily come close together in an event we now call a planetary conjunction. In 2005, sky watchers will be treated to three significant planetary conjunctions. Mark your calendars for the following events.

For early risers, the morning of June 5th will see Mars and Uranus come together in the constellation Aquarius. Orange-ish Mars will be easily recognized at 0.5 magnitude brightness but you'll need at least binoculars to see the much fainter pale blue Uranus about one degree away. At 4:00 AM look to the ESE and twenty-three degrees above the horizon.

In the early evening of June 25th there will be a triple conjunction of Saturn, Venus and Mercury just east of Gemini. Again, binoculars may be the best observing tool, as the planets will be bunched in a circle almost three times the diameter of the Moon. Look to the WNW and nine degrees above the horizon at 8:15 PM. There will still be twilight but Venus will be bright.

On September 1st, Jupiter and Venus will join as they leave the constellation Virgo. Be prepared at sunset as best observing will be at 7:15 PM when the planets will be only twelve degrees above the WSW horizon. Both planets will be brilliant with Venus at -4.0 magnitude and Jupiter at -1.7, so it should be a good show even in the twilight. Since they will be separated by 1.1 degrees, a small rich field telescope would be a good viewing aid.

YOU HAVE ONE MORE MONTH TO WIN THE CASH PRIZE FROM SA-IDA

We all know how important it is to keep the sky dark. Here's a way to save money as well, and maybe win a prize.

Have you ever stepped over to your neighbor's property at night and looked back at your house, to see how your outdoor lights look from their perspective? Have you ever thought about whether any of your outdoor lights are offensive? Does light "trespass" from your property onto theirs?

The Southern Arizona section of the International Dark-Sky Association (SA-IDA) will award a **\$25.00 cash prize** for the best improvement in outdoor lighting by a TAAA Member during the contest. This is part of SA-IDA's challenge to all TAAA Members, to look at outdoor lights at your home and change out any glaring bulbs or fixtures to fully shielded (full cut off, i.e. no light exiting above the lowest part of the fixture).

This is also a great opportunity to share good outdoor lighting information with your neighbors and businesses, and let them know that you are concerned about good outdoor lights. After all, how can we be critical of others

Items of Interest (cont.)

when we don't lead the way by example?

Be sure to mention that poor outdoor lights might not only be in violation of outdoor lighting codes, but they also steal the beauty above, for all to enjoy. Research has shown that they can also cause harm to human health, wildlife, plant life, and our safety. And every kilowatt of electricity generated in our area consumes two thirds of a gallon of water, not to mention the airborne pollutants and other environmental concerns.

Here's a suggestion: Use motion sensors on outdoor lights to save energy. When they turn on, they not only surprise a burglar, they may also catch someone's attention, to see why the lights turned on. By contrast, lights left on all night illuminate items that may be valuable for others to steal. So use outdoor lights only when needed, and keep the wattage down, too. Often 60 watts or less will do the job. Or use compact fluorescent, which uses 13 watts or less.

Ace Hardware now sells the Glare Buster fixture, and Lowes has a couple of full cut off fixtures for sale. For more Dark Skies information, see the SA-IDA web site (www.sa-ida.org) or the IDA web site (www.darksky.org).

To be considered for the prize, please contact John Polachek, SA-IDA President, by E-mail, telephone or mail (jpolach@dakotacom.net; 743-1362; 1701 W. St. Mary's Rd., Suite 102, Tucson AZ 85745). Please include a brief description of the changes that you made (before and af-

ter). Pictures are not necessary, but are encouraged. The deadline for submission has been extended to March 31st. The decision of the judges will, of course, be final.

Reduce your outdoor lighting pollution, and just maybe you'll win the prize.

Written by Joe Frannea and Dave Bilgray. Submitted by John Polachek

STAR PARTY LIST

By Pat and Arleen Heimann

A comprehensive listing, by month and state, of all the major U.S. Star Parties for amateur astronomers can be located at <http://www.chartmarker.com/>

Please contact us at chartmarker@cox.net if we missed any. If you sponsor a Star Party, send us your dates and URL so we can update our list.

We will also list and link to selected special events in the Southwest area on our homepage. Send information about your event and URL for a listing.

Pat and Arleen Heimann
ChartMarkers and More

Star Parties & Events

Patagonia Elementary School Star Party Patagonia Wednesday, 3/2/2005 No. of Scopes: 3

Patagonia Elementary School students are very enthusiastic about their upcoming "Walk Around the Night Sky" at 100 School St in Patagonia. Come on out to see the truly dark skies of southern Arizona. Take I-10 East to exit 281, take Hwy 83 south 25 miles to Sonoita. Take a right onto Hwy 82. Go 1.2 miles to Patagonia. Once into Patagonia take a left onto 4th Ave (Patagonia Market on right). Go two stop signs and make a left. Follow signs to viewing area. Contact person Patty Cooper can be reached at 520-394-3070 or email pattycooper@excite.com. Star Party Leader for this event is Steve Marten 906.0049. Refreshments will be available for TAAA volunteers! Set-Up Time: 6:30pm. Observing will be from 7:00 pm to 9:00pm. Sunset: 6:23pm Dark Sky: 7:16pm Moon Phase: (no moon during viewing).

Robison Elementary Star Party South-Central Thursday, 3/3/2005 No. of Scopes: 5

Robison Elementary "Astro Science Night" at 2745 E. 18th Street promises to be a fun evening for students, parents and volunteers. Go south on Tucson Blvd to 18th street, then east on 18th one block. School is at corner of 18th

and Treat. Viewing will be on the school playground and activities will be held in the adjacent new building. Contact persons Elizabeth Fulcomer and Roberta Toussaint PhD can be reached at 232-7865 or email fulco@frontiernet.net. Please consider being a Star Party Leader for this event. Set-Up Time: 6:30 pm. Observing will be from 7:00 pm to 8:30 pm. Sunset: 6:23pm Dark Sky: 7:16pm Moon Phase: (no moon during viewing).

TAAA Star Party at TIMPA Saturday, 3/5/2005

See *Club News* section of newsletter for details. This is a joint activity with the TIMPA club. The model airplane flying starts at 3:00 pm, grills are lit from 5:00 pm to 6:30 pm, and the star party begins at sunset.

Booth-Fickett Magnet School Star Party Central Tuesday, 3/8/2005 No. of Scopes: 6

Dedicated students and teachers at Booth-Fickett Magnet School will be preparing for "Exploring the Night Sky" at 450 S. Montego Dr. Head east on Broadway to Kolb, turn right (south). Go 2 blocks to Calle Arturo (first street that you can turn left on off of Kolb-- you'll see the big school

Star Parties & Events (cont.)

marquee), turn left (east), go about 2 blocks. There will be a marked gate on your right. Viewing will be in the open area due south about 200 yards. Contact person Deanna Harris can be reached at 731-3952 or email Deanna.Harris@tUSD.k12.az.us. Please consider being a Star Party Leader for this event. Set-Up Time: 6:30 pm. Observing will be from 7:00 pm to 8:45 pm. Sunset: 6:27pm Dark Sky: 7:49pm Moon Phase: (no moon during viewing).

Dodge Middle School Star Party **East**
 Thursday, 3/10/2005 No. of Scopes: 5

Dodge Middle School will be planning "A Night With the Stars" at 5831 East Pima. From Pima and Craycroft go east about ½ mile. Dodge is on the left (north) side of the street and across the street from Tucson Boys Chorus. Please follow signs to the viewing area. Contact person Laura Graham can be reached at 731-4100 or email laural-graham@earthlink.net. A Star Party Leader for this event is needed. Set-Up Time: 6:00pm. Observing will be from 7:00 pm to 8:45 pm. Sunset: 6:29pm Dark Sky: 7:22pm Moon Phase: Crescent after New Moon.

Our Mother of Sorrows Star Party **East**
 Friday, 3/11/2005 No. of Scopes: 4

The enthusiastic students and teachers at Our Mother of Sorrows will be hosting their annual "Night Sky With the Planets" at 1800 S. Kolb Road. Some students will be working on planet reports and others will be preparing for the "Challenger Mission" project at the Pima Air Museum and Challenger Center. Go East on Speedway to Kolb. Turn South (right) on Kolb, go past 22nd street. OMOS School is on the right between Calle Denebola and Calle Ileo (Calle Ileo is the next light after 22nd street). Viewing will be on the basketball court. Contact person Susan Tek can be reached at 747-1027 or email suetek@cox.net. Star Party Leader for this event is Paul Olson. Pizza & coke will be available for TAAA volunteers! Set-Up Time: 7:00pm. Observing will be from 7:30pm to 8:45pm. Sunset: 6:29pm Dark Sky: 7:51pm Moon Phase: Crescent after New Moon.

TAAA Star Party at Las Cienegas (Empire Ranch)
 Saturday, 12 March

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 astrophotos. 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. There are no restroom facilities at the site, so be prepared. 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.

Lineweaver Elementary School Star Party Central
 Tuesday, 3/15/2005 No. of Scopes: 3

Lineweaver Elementary School will be holding "Solar System Slumber Party" at 461 S. Bryant Ave. Head East on Speedway and make a right (south) on Columbus. Make a right turn onto Brown Ave (just after the church). Proceed to Bryant, turn left (south) and you will be right in front of the south playground viewing site. Contact person Shannon Turnage can be reached at 232-7755 or email SHS2312@aol.com. A Star Party Leader is needed for this event. Set-Up Time: 7:00 pm. Observing will be from 7:30 pm to 8:30 pm. Sunset: 6:32pm Dark Sky: 7:54pm Moon Phase: First Quarter.

Cienega High School Star Party **Vail**
 Friday, 3/25/2005 No. of Scopes: 5

Cienega High School will be having a Star Party at 12901 E. Colossal Cave Rd. Take I-10 East to exit 279, Wentworth/Colossal Cave Rd. Turn left and go under the freeway, continuing about ½ mile to the school. Viewing will be on the football field. Contact person Megan Summers can be reached via email summersm@vail.k12.az.us. A Star Party Leader is needed for this event. Set-Up Time: 6:30pm. Observing will be from 7:00 pm to 8:30 pm. Sunset: 6:39pm Dark Sky: 7:32pm Moon Phase: Full Moon.

Cross Middle School Star Party **Northwest**
 Monday, 3/28/2005 No. of Scopes: 6

Cross Middle School's "Night Sky of the Ancients and Mythology" at 1000 W. Chapala promises to be an interesting evening of combining ancient folklore and mythology with astronomy. Take Oracle Rd. North, turn left at Ina Rd., and proceed west. Turn right at Paseo del Norte (the first stop light). Travel north to the stop sign and turn left at Chapala. Cross is a little ways west on the right side. The observing location is behind the library/administration building. Contact person Toby Drakulich can be reached at 696-5963 or email tdrakuli@amphi.com. Star Party Leader for this event is needed. A "Pot Luck" dinner will be available for TAAA volunteers! Set-Up Time: 7:00 pm. Observing will be from 7:30 pm to 9:30 pm. Sunset: 6:41pm Dark Sky: 8:04pm Moon Phase: near Full Moon.

Basha's Thanks a Million
TAAA number 23178

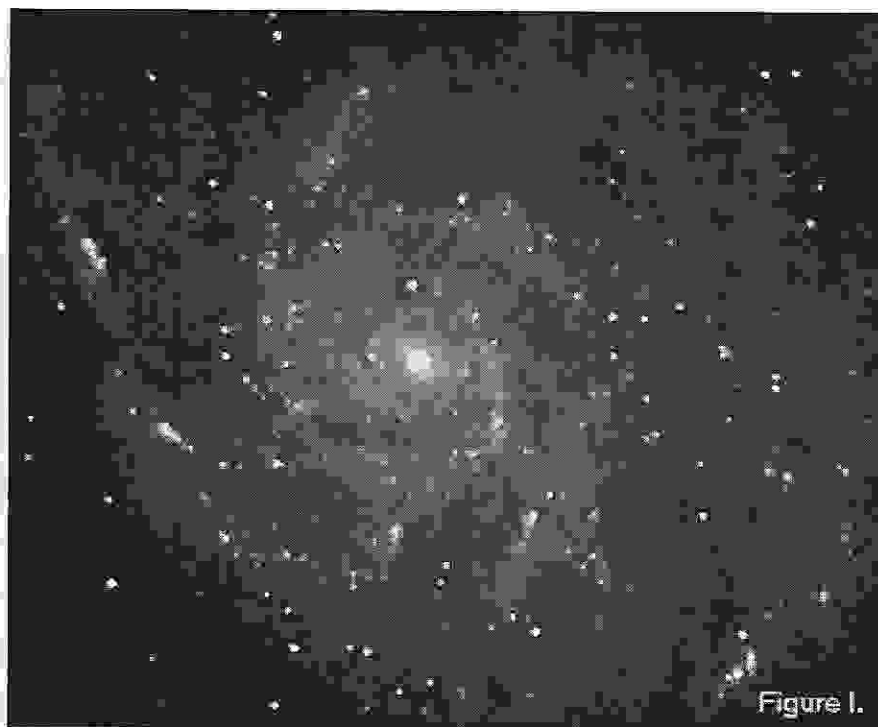
Object of the Month by Alfredo García, Jr.

Wow, was February a fast month or what! I hope you were able to get out and observe last month's OTM trio though we didn't have very many clear night skies during February. Hopefully, March will provide us with more clear observation nights.

For this month, I am going to switch to the class of objects known as galaxies and in particular spiral galaxies. There are many outstanding spiral galaxies such as M31, the Great Andromeda Galaxy; M51, the Whirlpool Galaxy; M33, the Triangulum Galaxy; and the list goes on and on. At this time of year, there is another excellent spiral galaxy to observe. To the northeast, you will find the larger of the two long-tailed bear constellations known as Ursa Major or the Big Bear. Of course, we all recognize this constellation of the Big Bear by an asterism it contains known as the "Big Dipper". The Big Bear's "long-tail" is well placed for observation in the northeastern horizon all month long being in the range of 33 to 50 degrees in altitude as seen from Tucson, AZ.

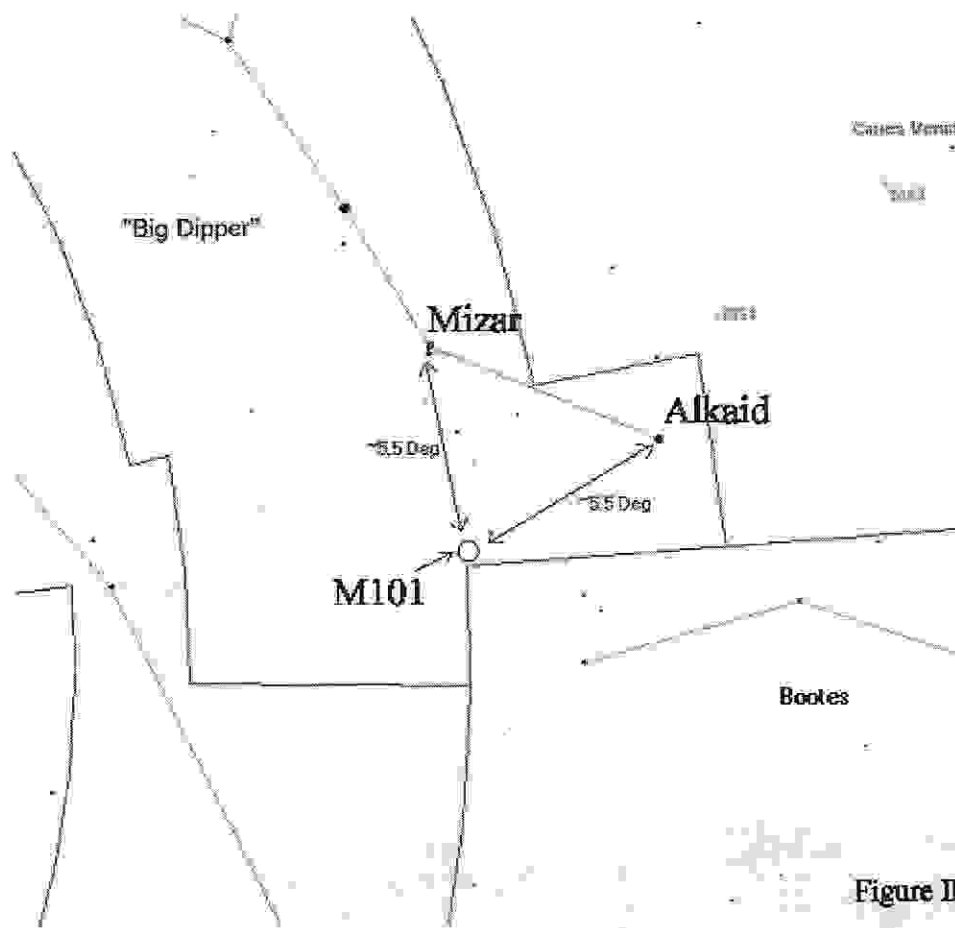
Our March OTM resides in this part of the sky near the end of the "handle of the Big Dipper" and just north of the border of the constellation, Bootes. It is perhaps one of the most astrophotographed and CCDed objects in the sky. A quick search on the Internet using either the Google or Yahoo Image search engines will literally reveal hundreds and hundreds of images of this object. The OTM is none other than the beautiful spiral galaxy known as Messier 101 (NGC5457) or the Pinwheel Galaxy. This galaxy is certainly worthy of all the notoriety it receives.

And speaking of M101 images, shown in Figure I. is my own rendition of this majestic, swirling galaxy. I was amazed at what detail I was able to acquire with my equipment set-up (120mm f/5 Orion ShortTube Refractor piggy-backed on a Meade 10" f/6.3 LX200 SCT using a SXV-H9 CCD camera, 30' composite image) thus proving that CCD cameras are opening avenues only dreamed of before by amateur astronomers. So, let's here one for CCD technology...Hip, hip, hooray!! :-)



This galaxy is fairly easy to find and is located within ~5.5° of the two stars, Mizar and Alkaid, located at the end of the Big Bear's tail (See Figure II.). For those of you with settings circles or automated GOTO scopes, M101 can be found at RA: 14hrs 03.2mins and DEC: +54deg 21 mins. A good dark sky location like that at our Las Cienegas Ranch Site is best to find and observe M101. Though the galaxy has a magnitude of 7.9 and is over 22 arc minutes in apparent size, it is sensitive to light pollution especially the outer spiral structure. Scopes as small as 4 inches in aperture reveal the central part of the galaxy just fine, but only hint at the spiral structure. My 10" f/6.3 LX200 does a good job on it, but the views are simply awesome in 18" or larger scopes leaving no doubt that you have found M101.

Object of the Month by Alfredo Garcia, Jr. (cont.)



The French astronomer Pierre Mechain first discovered the galaxy in 1781. The Pinwheel Galaxy was one of Charles Messier's last entries in his original Messier Catalog. Of the galaxy he said this: "(March 27, 1781) 'Nebula without star, very obscure & pretty large, of 6 or 7 minutes [of arc] in diameter, between the left hand of Bootes & the tail of the great Bear [Ursa Major]. It is difficult to distinguish when one lifts the [graticule] wires.' (diam. 7')". Another interesting historical note on M101 is that this galaxy was the first spiral nebula identified as such by William Parsons, the Third Earl of Rosse, known as Lord Rosse. For those of you with access to the Internet, images of his M101 drawings can be found at this web site: http://www.seds.org/messier/more/m101_rosse.html.

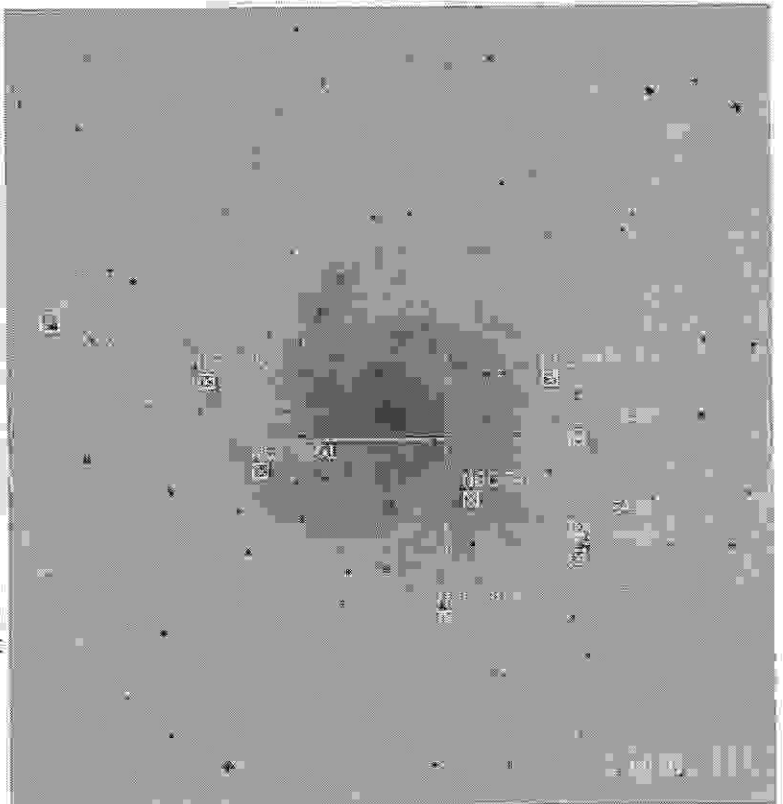
M101 is the brightest member of a galaxy group containing at least 9 galaxies. The latest accepted distance to the Pinwheel is about 27 million light-years.

Figure II

At this distance, its diameter is approximately 170,000 light-years making it one of the biggest of the spiral galaxies. In contrast, our own Milky Way Galaxy is about 100,000 light-years in diameter. The galaxy contains several extremely luminous star-forming regions in the outer spiral arms. As a matter of fact, some of the larger and brighter ones were assigned their own NGC numbers resulting in nine NGC-numbered regions within M101. Figure III shows the general location of these star-forming regions. A good observation project and challenge would be to see how many of these regions you can find with your telescope...good luck and happy hunting!

And one final note about M101 is that three colossal stellar explosions that we know as supernovae have been observed in its recorded history. These supernovae were discovered in 1909 (SN 1909A), 1956 (SN 1956H), and the brightest (SN 1970G, magnitude 11.5) in 1970. Maybe it's time for someone to get credited with another Pinwheel supernova discovery...perhaps it could be you?

Clear Skies,
Alfredo



Desert Skies Classified

For Sale	Meade 6" ED APO refractor (OTA), FL 1380mm. Essentially new and has seen little use. Comes with Meade mounting saddle with Losmandy mounting plate, and an Orion 60mm guide scope mounted on top of the saddle with three point adjustable rings. \$2400. Steve Aragon 909-792-0072 [06/05]
For Sale	SBIG STV deluxe camera/guider with FR-237 and E finder assembly. \$2000, Steve Aragon, 909-792-0072 [06/05]
For Sale	Cannon 10D digital camera, body only. 1yr old, 6.3 megaPixel, 2 batteries, batt grip, 640K memory card, EF mount, all cables, charger, manuals incl. \$1000, contact: Jerry Farrar at 520-731-1104 or 520-404-9858. e-mail jandkfarrar@earthlink.net [06/05]
For Sale	Canon 12 X 36 IS Binoculars with Canon's "Vari-Angle Prism" Image Stabilization system. Image remains steady with the press of a button, no need for a tripod. Includes hard case, neck strap, removable switch lock, and manual. Rubberized (not water-proof) body. Great for both astronomy (Messier objects like M51 and M81/82 visible) and bird watching (close focus of ~12 feet). Excellent color correction. Clean, well cared for optics. \$350.00 Terri Lappin, 579-0185, tlappin@earthlink.net. [05/05]

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 George Barber at 822-2392 or e-mail at barbergj@flash.net.

Dark Skies for March 2005

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

Mo/Tu 28/ 1	19:43 - 22:57	Fr/Sa 11/12	20:12 - 5:17	Mo/Tu 21/22	4:59 - 5:03
Tu/We 1/ 2	19:43 - 0:02	Sa/Su 12/13	21:16 - 5:15	Tu/We 22/23	- - -
We/Th 2/ 3	19:44 - 1:10			We/Th 23/24	- - -
Th/Fr 3/ 4	19:45 - 2:19	Su/Mo 13/14	22:20 - 5:14	Th/Fr 24/25	- - -
Fr/Sa 4/ 5	19:46 - 3:24	Mo/Tu 14/15	23:23 - 5:13	Fr/Sa 25/26	Full Moon
Sa/Su 5/ 6	19:46 - 4:22	Tu/We 15/16	0:25 - 5:11	Sa/Su 26/27	- - -
		We/Th 16/17	1:24 - 5:10		
Su/Mo 6/ 7	19:47 - 5:12	Th/Fr 17/18	2:18 - 5:09	Su/Mo 27/28	20:03 - 20:49
Mo/Tu 7/ 8	19:48 - 5:22	Fr/Sa 18/19	3:07 - 5:07	Mo/Tu 28/29	20:04 - 21:55
Tu/We 8/ 9	19:49 - 5:21	Sa/Su 19/20	3:49 - 5:06	Tu/We 29/30	20:05 - 23:03
We/Th 9/10	19:49 - 5:19			We/Th 30/31	20:06 - 0:11
Th/Fr 10/11	19:50 - 5:18	Su/Mo 20/21	4:27 - 5:05	Th/Fr 31/ 1	20:07 - 1:17

Weekend	Sun	Sun	Mercury	Venus	Mars	Jupiter	Saturn	Vi=Visibility	
Sa/Su	Set	Rise	Set Vi	Rise Vi	Rise Vi	Rise Vi	Set Vi		
5/ 6	18:23	6:43	19:37 3	6:33 -	3:49 2	20:43 -2	3:56 0	-3	brilliant
12/13	18:28	6:34	19:54 3	6:29 -	3:41 2	20:12 -2	3:28 0	0	conspicuous
19/20	18:33	6:25	19:42 6	6:25 -	3:32 2	19:41 -2	3:00 0	3	moderate
26/27	18:38	6:16	19:01 -	6:21 -	3:22 2	19:10 -2	2:33 0	6	naked eye limit
2/ 3	18:43	6:07	18:20 -	6:17 -	3:12 2	18:38 -2	2:06 0	9	binoculars limit

By Erich Karkoschka

TAAA Board of Directors Meeting - February 9, 2005

Attending: TAAA Board members Thom Peck, Michael Turner, Steve Marten, Terri Lappin, Ed Finney, Ray Toscano, Bill Lofquist, Nora Toscano, Ellen Finney, Gary Rosenbaum, and Dean Salmon. The meeting was opened at 6.42pm.

1. January Minutes. Accepted/unanimous.

2. Announcements.

- Discussed and rejected April 2 and 30 dates for Spring Picnic. Conflicts with scheduled events.
- Four potential member buyers to look at 6' dome.
- Member Dave Bilgray found 83 broken links (139 pages) from TAAA web site.
- Ray displayed Explorer newspaper "Calendar Feedback" section; good place to post upcoming TAAA events.
- Thom mentioned that Wal-Mart will be supporting MDA T4T as they did last year.
- Pima Partnership High School Class Star Party for novice event, basic astronomy for two classes of about 30 was announced by Bill.

3. Member Feedback

- Positive emails regarding recent Members Night
- John Crawford completed TAAA LX-200 T0" Training Program
- Lab Tour; many good anecdotal comments
 - Terri sending thank you cards to the four labs
 - Ray suggested sign up sheet for next Lab Tour
- Laser Policy will be drafted by Bill and Michael in response to recent discussion on Forum [ACTION]
- Ray will post the BOD's response to a recent forum message regarding a Movie Night and associated DVD donation (possible copyright issue). [ACTION]

4. TAAA Website. Dean Salmon and Board discussed website capabilities and possible features.

- New website is capable of extensive database capabilities and live streaming. Following features were discussed: Member log-in available, bulletin board, current and past newsletters in PDF format, previous month newsletter on a public events page, upcoming Star Parties, Special Interest Group events, Info Box, Banner or "crawler" on home page to announce immediate events or last minute updates (cancellations etc.) Dean will draft proposed web pages and make available to Board for review. [ACTION]
- Terri will draft thank you letter to SEDS for their years of support and send to Board for review [ACTION]

5. Novice Astronomers SIG at TIMPA March 5 Joint Event and Workshop. Bill is organizing; Board consensus that joint event is good time for Novice SIG and will probably attract TIMPA participation. Terri will assist. [ACTION]

6. Science Fair Awards Tue, March 15; Terri looking for judges. Board authorized Terri to put \$150 towards Starizona gift certificates (unanimous).

7. TIMPA Board Meeting. Michael reported meeting was uneventful except questions regarding our uncompleted 16' dome structure. TIMPA gate system may be upgraded or changed.

8. SHARE Project. TAAA will not accept the possible SHARE equipment gift on March 31 until the following is determined: Storage cost and location and that donor agrees that the gift is permanent and non-binding to TAAA regarding disposition. Ray noted that the SHARE web page is still up, requesting donations. Steve will discuss defined project objectives and proposal for above requirements with committee and report to the Board at the March Board meeting. [ACTION]

Adjourned at 9.06pm

Respectfully Submitted,

Steve Marten

Secretary

Telescopes for Borrowing



Don't own a telescope?
The TAAA Loaner Program is your answer!
There's no cost to you.
We have the following telescopes:

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 10-inch f/4.5 on equatorial mount
Meade 10" LX200 GPS (requires training session)

New members, here's your chance to begin learning and observing the sky before buying any equipment. Loaner Program is available to any current member after meeting requirements detailed in the TAAA Loan Policy. Contact the Equipment Loan Coordinator listed in the "Desert Skies" for details about the telescopes.

Constellation Report by Chris Lancaster

The Lynx

The American Heritage Dictionary defines a lynx as "a wildcat with thick, soft fur, a short tail, and tufted ears," and this is the animal Johannes Hevelius chose in 1687 for a constellation to fill in an area between the front of Ursa Major and the adjacent constellations of Gemini and Auriga farther west. It's not so much the pattern of stars that brought a lynx to his thoughts, but their dimness. The brightest star of Lynx is magnitude 3.1, and most others are dimmer than 4. Mr. Hevelius remarked that to observe this constellation, one would need the visual sensitivity of this nocturnal cat.

To find Lynx, you can start at the Big Dipper. Follow the body of Ursa Major to its snout, and then look within the triangle formed by the bear's nose and the bright stars of Capella in Auriga and the twin stars of Castor and Pollux in Gemini. The stars of Lynx are sprinkled here in a line going toward the southeast to just above the head of Leo the Lion.

There are few deep sky objects in Lynx that could be called comparatively bright, and without any conspicuous guideposts to point the way; some can be difficult to hunt down. However, the best ones are well worth the effort.

All by itself (both in terms of its place in our celestial sky and also its actual location in space) is NGC2419. This globular cluster has been nicknamed the "Intergalactic Wanderer" since it is far removed from the group of other globulars that huddle in the Milky Way's halo. While a typical globular might be between 20,000 and 50,000 light-years away, this recluse keeps its distance at approximately 290,000 light-years. Despite its remoteness, it can be viewed fairly easily in amateur telescopes. It glows at magnitude 10.4 and measures 4.1' in diameter. A 5-inch scope will just bring out the round smudge, and while 8 to 10 inch instruments will make it more obvious, don't expect to see any individual stars. The brightest ones can't manage more than a 17th magnitude glow. But, to be seen this well overall must mean that it is quite a large and bright cluster, and would

be quite an impressive sight if it were at a closer distance. NGC2419 is at RA 7h 38m 6s Dec +38d 53' 00".

Lynx's brightest galaxy, NGC2683, is an edge-on spiral of magnitude 10.4 and a size of 9.3'x 2.2'. It has a bright core and very dim, hazy outskirts. You'll see a sharp, thin oval contrasting very well with the background space. Point to RA 8h 52m 41s Dec +33d 25' 03", or start at Alpha Lyncis, move 1.2 degrees southwest to a 7th magnitude star, then just over 5 degrees due west of here to this fine galaxy.

NGC2537 is a different kind of galaxy. At first glance it may look like a globular cluster. Its round shape of magnitude 12.1 is 1.7'x 1.5' across, and various toe-like extensions on one side has led to the nickname of the "bear claw galaxy." Look to RA 8h 13m 15.1s Dec +45d 59' 29", or 3.3 degrees NNW of 31 Lyncis.

A great double star is found in 19 Lyncis. It's in the northern half of the constellation at RA 7h 22m 52s Dec +55d 16' 53". Here is a primary star of magnitude 5.6 with a secondary of magnitude 6.5. They have a separation of 14.8" and a p.a. of 315 degrees. Any telescope can find and separate this double, but if you have the aperture and dark skies, you can see two other stars that are a part of the same system. Turning to a p.a. of 3 degrees and 4' away is a magnitude 8.9 star, and 72" from the primary at a p.a. of 287 degrees is a faint 11th magnitude star completing this quadruple system.

