

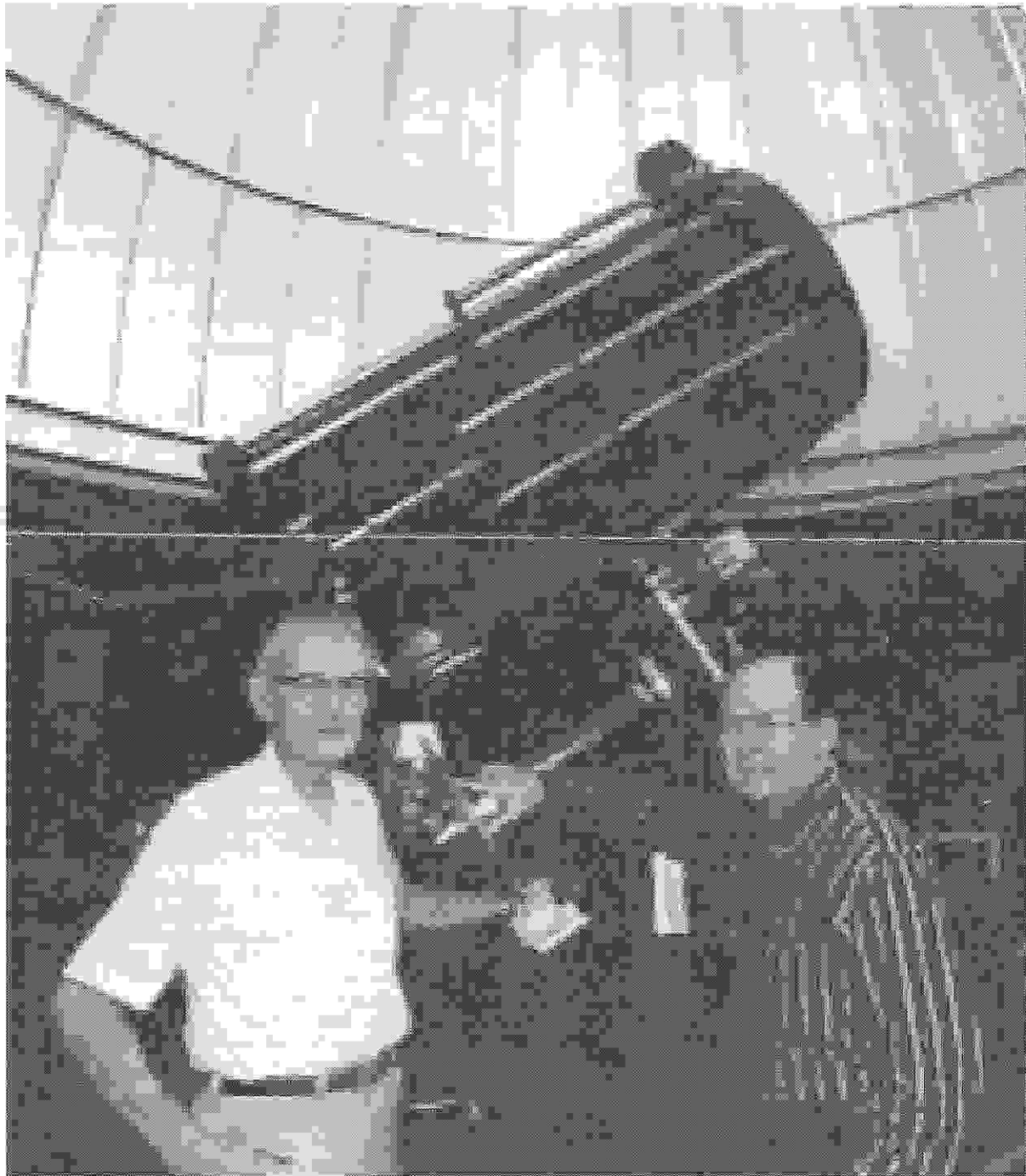


Desert Skies

Tucson Amateur Astronomy Association

Volume L, Number I

January, 2004



Dr. Ed Vega, 1939-2003

Cover Photo: Optics designer Max Bray (left) and Dr. Ed Vega near the computerized 20" f10 Maksutov-Cassegrain reflector telescope at the Vega-Bray Observatory. Image from www.skywatchersinn.com.

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.....	\$ 23
Family	\$ 28
Senior (over 60) membership.....	\$ 21
Senior Family (at least one over 60)	\$ 26
Student membership (over 18 years old).....	\$ 15

Family Membership includes two adults plus minor children. Persons under 18 may join at a special Reduced Family Membership rate (\$15/yr) upon parental or guardian acknowledgement of participation in TAAA activities. Call the Treasurer to request the required form.

Options (add to above membership rates)

Tucson society of the Astronomical League (TAL) dues\$	3.50
Sky & Telescope Magazine.....	\$ 32.95
Astronomy Magazine	\$ 29.00
Postage for New Member Pack.....	\$ 3.50

Donations are accepted for any of the TAAA funds: SA-IDA/Light Pollution, TIMPA, Education, 30" Telescope & Land, or General Fund.

Renewal Information

- Membership expires the last day of the month indicated on your mailing label. You will receive a renewal notice when they are due.
- TAAA members may join the Tucson society of the Astronomical League (TAL). TAL expiration will match your TAAA expiration.
- Discounted Sky & Telescope or Astronomy magazine subscriptions are available to members and can be started or renewed at anytime. Only single year subscriptions are accepted. Allow at least 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, send the above subscription amounts and your magazine renewal notice to the TAAA treasurer.

- To ensure proper credit to your account, 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 changes to the above address or email the treasurer.

TAAA Mission Statement - We are a resource for anyone interested in astronomy. It is our mission to nurture a person's natural curiosity about the night sky. By giving people a knowledge and understanding of astronomy, we enhance their enjoyment of the sun, moon, and stars. Through our public activities and school evening observing sessions, we bring astronomy to persons of all ages. Our regular meetings and observing sessions offer members a forum to meet others with similar interests and experiences and to learn from one another.

Desert Skies Publishing Guidelines - All articles, announcements, news, etc. must be submitted by the newsletter deadline noted above. 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

We have a new star in the heavens to look up to. With the loss of Ed Vega, and our other astronomy companions in recent years, we can take comfort in knowing that their memories live on because of their accomplishments, personalities, and enthusiasm. See David Levy's note about Ed Vega elsewhere in this newsletter.

The 50th Anniversary Banquet is this month. Get your tickets now. And don't forget to buy raffle tickets for the Meade LX 200 GPS scope. It's a good one. There are also T-shirts available to commemorate our club's first 50 years. Lots to do this month.

Please consider helping with the School Star Parties. We seem to be constantly short on scopes and fresh input. It's quite a worthwhile thing to help school children see what is in our skies. Besides, the kids have the best questions.

I hope everyone had a great holiday season and here's to our next 50 years.

Thom Peck

Meeting Information and Calendar of Events

TAAA MEETING DATE: Friday, Jan. 2 at the Steward Observatory Auditorium - Room N210.

BEGINNERS LECTURE: 6:30 pm

Title: Objects for January Observing
Speaker: Terri Lappin

Terri will discuss objects in the sky this month suitable for beginners to observe using small telescopes and binoculars. She will cover the planets Jupiter and Saturn as well as Comet C/2202 T7 (LINEAR), which will become brighter and more comet-like over the next few months. It is currently running about 9th magnitude and will be at its brightest, estimated at magnitude 1 or 2, this May for southern hemisphere observers.

GENERAL MEETING: 7:30 pm

Title: The Accessible Universe
Speaker: Adam Block

Adam Block will present a lecture about the various examples of astronomy, especially CCD imagery, in which amateurs have "access" to the Universe. It will cover everything from the expansion of the Crab Nebula to Cepheid variables in other galaxies. A small telescope and a CCD

camera is all that is necessary to investigate these wonders of our universe.

Adam Block is the Lead Observer for Kitt Peak's Nightly Observing Program and the Advanced Observing Program...in other words, he gets paid to observe! Both programs are fully described, along with some of Adam's images, on the Kitt Peak website at <http://www.noao.edu/outreach/> (see "Visiting Our Observatories").

BOARD OF DIRECTORS MEETING: Wednesday Jan 14 6:30 pm at Steward Observatory Conference Room N305.

STAR PARTIES AND EVENTS:

08 Jan - AstroPhoto SIG
17 Jan - TAAA Star Party at Las Cienegas
23 Jan - TAAA 50th Anniversary Banquet
24 Jan - TAAA Star Party at TIMPA
26 Jan - Cornerstone Christian Academy Star Party

NEWSLETTER SCHEDULE: Deadline for articles: Sat, Jan 24. Printing: Mon, Jan 26. Folding Party: Tues, Jan 24. Mailing: Wed, Jan 28. 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: John Croft, Jim Haleem, and James Hennessy. 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 regular meetings, so pick one up if you need it.)

The TAAA recently lost a very special member. Ed Vega passed away on December 16th of complications from brain cancer. David Levy has written an obituary which you will find elsewhere in this newsletter. Ed will be truly missed. Our thoughts are with his wife, Pat, and his

extended family.

Astro-photo SIG Meeting

8 January, 7pm
China Rose, NE corner Speedway/Rosemont

The astrophotography special interest group will be holding its usual meeting at the China Rose on the 8th. We've had some incredible images lately, from advanced CCD images, to some good ol' film images of star trails and everything in between. Come join us to enjoy the images, or don't be shy to jump up and show us what you've got!

Club News (cont.)

TAAA 50th ANNIVERSARY DINNER

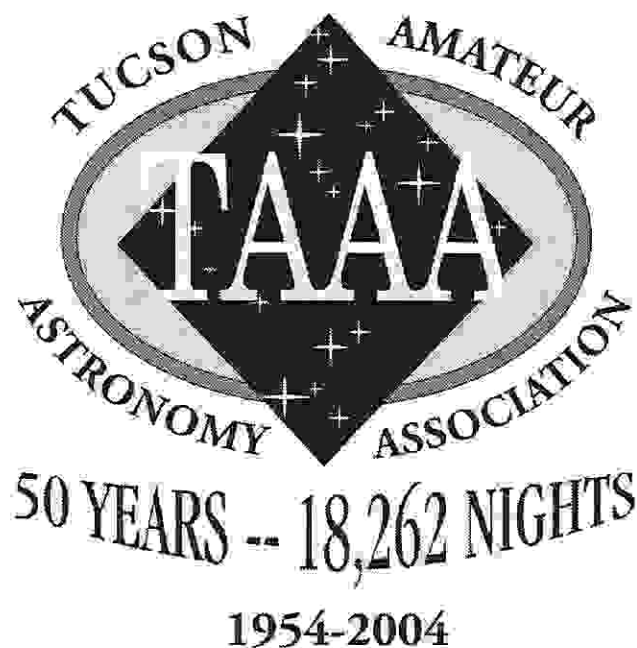
Yes, the countdown continues! By the time you read this, TAAA's 50th Anniversary Banquet will be less than 30 days away. Set aside the evening of Friday, January 23, 2004, and let us know to set a place for you at the table at Hidden Valley Inn Restaurant. The blue flyer in this newsletter will give you all the details.

The dinner will be the kick-off to a year-long celebration of TAAA's 50th birthday. Fill out and mail the blue flyer with your check (address at bottom of the flier) or bring check and flier to January's general meeting and put them into Sheila's waiting hands. Cutoff date for dinner reservations is January 9, 2004.

A reminder to Past Presidents; if you haven't yet sent your written histories/recollections to Sheila Conrad, you've missed the deadline, and they are needed ASAP. Address is given at the bottom of the blue flier.

LIMITED EDITION TAAA 50th ANNIVERSARY T-SHIRTS STILL AVAILABLE!!!

We still have a good supply of our Limited Edition TAAA 50th Anniversary T-Shirts. The shirts are nice quality 100% cotton Beefy T's in Deep Royal Blue, with a logo designed by Ken Wheelock. The design features a golden-yellow oval outlined in silver behind a black star-studded



diamond with "TAAA" in large white letters; "TUCSON AMATEUR ASTRONOMY ASSOCIATION" in black lettering surrounds the oval; and the years "1954-2004" and the slogan "50 YEARS -- 18,262 NIGHTS" appear in black below the logo. The price of the shirts is \$13.00 each, in adult sizes Small to XXLarge. Plan to get yours now!

Twila Peck will be selling them at the January meeting; if you cannot be there, give Twila a call (520-327-7825) or email (twilap@email.arizona.edu) and we'll work something out.

THANKS to Ken for his work on this great design, and to Gerlinde Sheppard at Sunrise Silkscreen for her generous assistance in getting it ready for production!

TAAA Telescope Raffle

As part of the TAAA 50th anniversary celebration, the club will be raffling off a Meade 10 inch LX200GPS telescope. The tickets are on sale now and can be purchased now through January meetings or by mail. The price of each ticket is \$5.00. You must be a member of the TAAA to purchase the tickets and they are not transferable. The winning ticket will be drawn at the 50th anniversary party held on the 23rd of January at the Hidden Valley Inn. **YOU NEED NOT BE PRESENT TO WIN.** The winner is responsible for shipping/pick up. The telescope is valued at \$2730.00. If you are unable to attend the meetings and want to purchase the tickets by mail, please call Liz Kalas at 620-6502.

If you have purchased your tickets but not completed the portion of the ticket with your name, address, and phone number you need to do so by 23 January 2004. You may give them to Liz Kalas at the January meeting, or mail them to her at 34710 W. Red Court, Tucson, AZ 85745.

Support TAAA with Basha's Thanks a Million Program

Basha's shoppers can now designate the TAAA to receive up to \$1 for each \$100 spent when they use their Basha's "Thank You" card. We now have 12 members participating in the program and our donation is growing each time they buy groceries. We appreciate your support! To participate, Basha's shoppers should give the cashier our 5-digit number (23178) when they check out. After doing this once, your very first receipt will state that the TAAA has been linked to your card purchases. Save that first receipt and bring it into a meeting for \$1 off club apparel, calendars, or membership dues. You only need the number once; future purchases will automatically be linked to the TAAA. (You can link up to 3 of your favorite groups to your purchases and the 1% will be evenly distributed among those groups.) If you have questions contact Terri Lappin at 579-0185, tklappin@earthlink.net.

Basha's Thanks a
Million
TAAA number
23178

Club News (cont.)

You Asked For and Now It's Here...The TAAA Forum

Many members have asked that there be a way to easily contact other TAAA members via email. We have answered this request by opening a list server called the TAAA Forum on Yahoo! Groups. This list is only for TAAA members. Any one on the list server will be allowed to post messages which will be distributed to all others on the list server. Replies will go to everyone, so let's be careful about what we type! Initially, everyone with an email address in our records will receive an invitation to join the list. If you do not want to join, then just delete the invitation. If you want to join, follow the directions given in the message (use your reply button, essentially). You can unsubscribe from the list at anytime. If you do not receive an invitation by January 5th, you can contact Terri Lappin at tklappin@earthlink.net and ask to be added to the TAAA Forum.

Members who are registered users of Yahoo! Groups will have access to additional features such as an area to upload photos and files. Registering with Yahoo! Groups is voluntary and not required if you only want to send or receive the emailed messages. Before registering with Yahoo! Groups, you are encouraged to read the Yahoo! Groups Privacy Policy. Links to this policy can be found throughout the Yahoo! Groups website. Once you are registered, remember to check your account settings to make sure your "Marketing Preferences" are as you want them.

For additional information about this Forum list server or the TAAA Email list server, contact Terri (579-0185 or tklappin@earthlink.net).

Meeting to Discuss TAAA 30" Telescope

A meeting has been scheduled for Wednesday, January 7th at 7pm to discuss the TAAA 30" telescope. This meeting will take place in the TAAA meeting lecture hall at Steward Observatory.

We have the opportunity to temporarily put the 30" mirror into a Steward Observatory telescope that is already in existence on Mt Lemmon. Roger Tanner has spent a considerable amount of time designing the mechanical structure to mount our mirror in the Steward telescope. We will be discussing if this is the direction the TAAA wants to go or if there is an alternative location where the telescope could be built.

The original optical design of the telescope was formulated many years ago with the belief that the telescope would be used mostly for visual observing and some camera photography. The optical design we decided on was a Newtonian/Classical Cassegrain with focal ratios of f/3.8 and f/16. Since CCD cameras have become so popular we decided to shorten the Cassegrain focal ratio to f/12. Due mostly to safety considerations if the telescope goes up to Mt Lemmon it will be used in the Cassegrain optical configuration. If we choose to put the telescope at a different location we would be able to use the scope as originally envisioned as a dual purpose Newtonian or Cassegrain.

We hope this meeting will allow all interested members a chance to discuss the plans and make suggestions for the future of our telescope.

Grand Canyon Star Party

12-19 June, 2004

The National Park Service has approved the 14th annual Grand Canyon Star Party. With the arrival of the new year, these dates are being made public so that our members and friends can plan their vacation or reservations at the park to join us. The largest crowds (of astronomers and public) are at the south rim, but don't forget that we've got a group of Utah astronomers that also operate a north rim star party if you feel like checking out that side of the Canyon. For questions you can call Dean Ketelsen - 293-2855.

STARIZONA

ADVENTURES IN ASTRONOMY AND NATURE

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Club News (cont.)

Vicki Ketelsen Memorial

10 January, 2004

As noted in the December newsletter, Vicki, wife of Dean Ketelsen, passed away on 29 October. Some of her family from South Carolina will be returning for a memorial on 10 January at the SS Peter and Paul Catholic church on Campbell across from University Medical Center at 1 pm.

Farewell Ed

By David Levy

Of all my memories of Ed Vega, my favorite took place at the banquet of the International Dark Sky Association a few years ago. I asked the assembled guests to rise, as if to take a break. As the hundred or so people stood up, I then asked all those who were not from Arizona to be seated, then all those who were under 50, and in this way the number of people left standing shrunk rapidly. Finally I asked all those who did not have an astronomical Bed and Breakfast in the Benson area to sit down. I will never forget the puzzled faces of Ed and Pat Vega, the only ones left standing, and then their look of utter shock and delight as I announced that asteroid 8494 had been officially named Edpatvega by the International Astronomical Union in their honor. I will never forget that moment.

Most of us know Ed Vega, who passed away on December 16, 2003 from complications related to a brain tumor, as the founder of the Vega-Bray Observatory and Skywatcher's Inn down in Benson, Arizona. When Wendee and I spent an evening there, we hardly got to say a word to Ed, who was busy talking with a reporter, explaining the work of the observatory's telescopes to one of his many guests, and actually trying to get some observing, all on that memorable night. We also remember the strains of *Also Sprach Zarathustra*, the theme music from 2001, playing whenever the observatory opened to the stars. Ed did this partly out of humor, but more so, I believe, because he felt that nightfall, with the opening of his observatory to the stars, deserved a majestic opening.

Ed's work in astronomy far exceeds his work with the Inn. With his wife Pat, he has been very active in promoting astronomy in any way he could, to children, families, and groups of all sizes and types. As one of the founders of the Southern Arizona section of the International Dark Sky Association, he has been passionately committed to the preservation of our precious night sky.

In February 2000, Ed's book *Comet Dis'Aster* was published by Regent Press. Based on the impact of Comet Shoemaker-Levy 9 on Jupiter, this fascinating tale recounts the story of a shower of comets impacting the Earth. What separates this book from the other comet yarns is that Ed effectively brought his experience as a pathologist to bear in his imaginative descriptions of the medical problems in the aftermath of these impacts. For these and his other activities, Ed was subsequently

awarded the TAA's Bart and Priscilla Bok award.

A regular presence at almost every TAA function, Ed will be missed. On August 12, 2003, Ed and Pat were guests for the second time on our radio program *Let's Talk Stars*. In that invigorating hour we talked about his love of astronomy, his Skywatcher's Inn, and his hope for the future. You can listen to that interview anytime on www.letstalkstars.com. We were all richer for having him around, and I feel privileged to have known him.

TAA Equipment Loan Program

Jerry Penegor

Equipment Loan Coordinator

Here is the current list of telescopes available for Equipment Loan and listing in the Newsletter. Four are serviceable and the fifth, a Meade 10-inch Newtonian, needs a brace/lock on the polar axis elevation (I'm working on that), eyepiece(s), and 1 1/4 pounds added to the tube for balance. One and a quarter pounds is 30 feet of clean, un-crimped, blue-black steel strapping such is used to bind large boxes or lumber.

The five telescopes are:

Sears Discoverer 4, 60mm f/15, equatorial head on tripod. With — finder scope, 3 eyepieces: 22mm Kellner, 0".965 9mm Huygens, 4mm Ramsden. Also includes 2X Barlow, right angle "star diagonal", lunar filter, erecting prism, carrying case.

Unitron Model 128, 62mm f/14.5, equatorial head on tripod. With finder scope, 5 eyepieces: 25mm Huygens, 0".965 18mm Kellner, 12.5mm Kellner, 9mm, and 7mm. Also includes right angle "star diagonal", erecting prism, wooden boxes. Plus 60mm f/11.66, 0".965 9mm, star diagonal; 60mm f/8.33, 1 1/4 40mm, star diagonal.

Meade ETX-90EC, 90mm f/13.9. With Meade 26mm Super Plossl, Meade hand-set (control paddle), JMI Megapod Wedge, Meade ETX AutoStar computer + cord, handbooks and original box

Coulter Optical Inc Odyssey 8 8-inch f/4.5 or f/5, Dobson mount. With variable focus eyepiece (Japan), 28 or 30mm.

Meade 10-inch f/4.46 equatorial head and base, motorized for 110VAC, 2" focuser (rack&pinion) with 1 1/4 inch adapter, MISSING: eyepieces.

In addition, there are some items that are needed and perhaps TAA members could donate the items or help by fabricating some wooden boxes:

- the big-tube reflectors have one or no 1 1/4 inch eyepieces. Anything in the range of 10mm to 40mm would be useful;
- cases or pouches for 1 1/4 inch eyepieces are needed;
- and the big-tube reflectors lack boxes for the optical

Tucson Amateur Astronomy Association

50th Anniversary Banquet

Keynote Speaker
Guy J. Consolmagno, S.J.

Brother Guy divides his time between Tucson, where he observes asteroids and Kuiper Belt comets with the Vatican's 1.8 meter telescope on Mt. Graham, and Castel Gandolfo, Italy, where he serves as curator of the Vatican Meteorite Collection. He has been a visiting scientist at the Goddard Space Flight Center, and has authored four astronomy books, among them *Turn Left at Orion* and *Brother Astronomer, Adventures of a Vatican Scientist*.

Friday, January 23, 2004

6pm No Host Bar 7pm Dinner

Hidden Valley Inn

4825 N. Sabino Canyon Road

★Dinner Choices★

Teriyaki Chicken Breast 8 ounce Prime Rib Half Rack BBQ Pork Ribs

★Vegetarian Choices★

Quesadilla w/Green Chiles Veggie Kabob Plate

★Children's Choices★

Little Bronco Burger Cowpoke Chicken (Nuggets)

Reservations Only

Adults \$25.00

Child's Plate \$10.00

.....cut here.....

Adults _____ x \$25.00 Circle: Chicken Prime Rib BBQ Quesadilla Kabob
Children (12 and under) _____ x \$10.00 Circle: Burger Nuggets
Total enclosed _____

Please enclose payment. Make checks payable to TAAA. Deadline is January 9, 2004.

Name _____ Phone _____

Address _____

City _____ State _____ Zip _____

Return to: TAAA Banquet c/o Sheila Conrad 7254 E. Crystal Mist Dr. Tucson, AZ 85750.

Call (520) 529-1750 (before 9pm, please) for information.

Club News (cont.)

tubes,

If someone could fabricate thin-walled wooden boxes for transporting the tubes that would be very useful.

Amateur Astronomers Support Astronomy Outreach through the Night Sky Network

NASA, the Jet Propulsion Laboratory, and the Astronomical Society of the Pacific (ASP) recognize that amateur astronomers are a valuable asset and have asked us to "share the science, technology and inspiration of NASA's missions with the general public through star parties, presentations, and special events". This is according to the website for the new Night Sky Network. This online network was developed by the ASP to support Planet Quest, a set of activities designed to explain the search for extrasolar planets.

The Night Sky Network currently consists of 29 amateur astronomy clubs from 23 states. The TAAA is a charter member of the network, having participated in the Planet Quest project for the last year. Just this month the network was opened to other astronomy clubs. It's hoped that a force of 50,000 volunteer amateur astronomers will join the network through their local astronomy clubs. Amateur astronomy clubs benefit because NASA issues them with an Outreach Toolkit consisting of activities that can easily be incorporated into their normal outreach activities. The Planet Quest Toolkit is the first of a series of activities that will help amateur astronomers who want to share their interest in the night sky with others. With continued support from the amateur community, NASA will consider fund additional Outreach Toolkits covering other topics, hopefully at no cost to amateur clubs.

"We're very excited to be working on this wonderful outreach program with JPL," said Mike Bennett, executive director of the Astronomy Society of the Pacific. "It aligns so perfectly with our mission -- to increase the understanding and appreciation of astronomy -- and our experience in working with amateurs who like to do outreach activities. Amateur astronomers represent a huge source of public outreach expertise and energy, and the Night Sky Network is a great way to catalyze and amplify that energy."

Since star parties are a major element to astronomy club outreach activities, the ASP developed the Planet Quest Outreach Toolkit for use in a star party setting. The TAAA received our toolkit a few months ago and tested some of the activities at our school star parties and Project ASTRO classroom visits. With input provided by TAAA members and those from the other astronomy clubs in the network, the ASP is now putting the final touches on the Planet Quest Outreach Toolkits and will distribute them to all clubs in the network this March. The activities include a model solar system (our most popular activity), a model of the Milky Way, and an explanation of the methods used to detect planets around stars. There are also star charts showing the location of the brighter stars known to have planets, a "telescope tour" of the night sky, and a demonstration of the advantages of placing a telescope in space.

It is hoped that more TAAA members will join the network, allowing us to incorporate more of these activities into our outreach programs. There is no cost to join the network. The online network can be found at <http://nightsky.jpl.nasa.gov/>. To join the network or to learn more about the kits, contact Terri Lappin at 579-0185 or tklappin@earthlink.net.

Items of Interest

WEBSITES: TRIPS ON THE INTERNET SUPER-SKYWAY

By Rik Hill

The Universe for cheap, a Holiday gift for you.

Once in a while I come across a chunk of software that is a must-have for every amateur astronomer. This month I will tell you about just such a program. This is Hallo Northern Sky or HNSky written by Han Kleijn.

HNSky is a planetarium/sky atlas software program that is FREE and will equip you as well as some of those software packages that sell for over a hundred dollars. It is designed for the Windows environment from 3.1 to present, comes complete with the SAO, PPM and Tycho star databases, taking you to 12th magnitude, and a deep sky database that contains 26,000 objects that includes real images of some of these objects that can be plotted TO SCALE on the atlas. Images of the Moon and planets

are used in the same manner. If this is not enough for you there's the ability to use the Guide Star Catalog (available from the Space Telescope Institute for a small cost) and the USNO star catalog both from CDROM. This will take you down to something like 16th magnitude.

The program can be used for telescope control using the ASCOM package. Recently I even talked the author into including the General Catalog of Variable stars in the software. He tells me this has now been done. Buried in all this are some astrophotography helps including a spreadsheet to help you get organized. There is a lot that this package can do and a lot of documentation to go with it. Han even includes his email address on the website and will answer questions in 24 hours in most cases. There's the obligatory FAQ available in the form of "answers to problems with...." for the various versions for different operating systems. There's even a help file in ASCII format, and a newsletter that you can sign up for that will keep you up on changes to the software.

Items of Interest (cont.)

So what's the catch? Downloading. There's a lot to this program and it will take you at least one full evening to download it all. But it is definitely worth it, especially if you don't own one of the packages like The Sky, or MegaStar.

To get this go to Han's website at: <http://www.hnsky.org/software.htm>

I can't begin to tell you all this can do. It's been a labor of love for Kleijn for some time and it is time well spent. Take the time to learn all about what this FREE software can do for you. You will be amazed!

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

New Vistas In Astronomy

Smithsonian Institution
Fred Lawrence Whipple Observatory

The Fred Lawrence Whipple Observatory takes pleasure in presenting its 34th year of public lectures on astronomy and astrophysics for the Southern Arizona community. The series presents recent discoveries in astronomy, local research projects, and modern methods used to explore the universe.

Thursday, January 22, 2 p.m.
The Truth About VERITAS
Deirdre Horan, Fred Lawrence Whipple Observatory

Thursday, January 29, 2 p.m.
Collapsed Stars, Megamagnetism, and the MMT
Gary Schmidt, MMT Observatory

Thursday, February 19, 2 p.m.
The Dark Side of the Universe
Trevor Weekes, Fred Lawrence Whipple Observatory

Thursday, February 26, 2 p.m.
Life in the FAST Lane: Galaxies Galore
Emilio Falco, Fred Lawrence Whipple Observatory

All lectures are held in the Green Valley Recreation Center West Auditorium, Green Valley, Ariz. Each 45-minute illustrated lecture is nontechnical and intended for the interested layperson. A question-and-answer period follows each lecture. Admission is free and open to the public. For more information, call the Whipple Observatory Visitors Center at 670-5707. Co-sponsored by Green Valley Recreation, Inc.



Star Parties & Events

Cornerstone Christian Academy Star PP Foothills
Monday, 26 January 2004 No. of Scopes: 4

Cornerstone Christian Academy will be hosting "Night Sky With the Planets" at 2150 E. Orange Grove. Take Campbell north to Sunrise and turn left (west) to Camino Miraval—just before Orange Grove. Turn left (south), and take first left into the extended school parking lot. Viewing will be on the east of the parking lot or the adjacent grassy play area. Contact person Kathy Lemay can be reached at 529.7080 or email jklemay@copper.net Set-Up Time: 6:00pm. Observing will be from 6:30 pm to 8:00pm. Sunset: 5:51pm Dark Sky: 9:16pm Moon Phase: Crescent.

TAAA Star Party at Las Cienegas (Empire Ranch)
Saturday, 01/17/04

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 very cold temperatures after sunset. 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.

Star Parties & Events (cont.)

TAAA Star Party at TIMPA

Saturday, 01/24/04

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 anyways, 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. There is no scheduled talk for this activity, just come out and enjoy. 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.

Dark Skies for January 2004

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

We/Th 31/ 1	2:11 - 5:58	Su/Mo 11/12	19:05 - 21:42	Th/Fr 22/23	19:13 - 5:58
Th/Fr 1/ 2	3:07 - 5:58	Mo/Tu 12/13	19:05 - 22:43	Fr/Sa 23/24	20:01 - 5:58
Fr/Sa 2/ 3	4:04 - 5:58	Tu/We 13/14	19:06 - 23:45	Sa/Su 24/25	21:06 - 5:57
Sa/Su 3/ 4	5:01 - 5:58	We/Th 14/15	19:07 - 0:49	Su/Mo 25/26	22:06 - 5:57
Su/Mo 4/ 5	5:58 - 5:59	Th/Fr 15/16	19:08 - 1:55	Mo/Tu 26/27	23:05 - 5:57
Mo/Tu 5/ 6	- - -	Fr/Sa 16/17	19:09 - 3:05	Tu/We 27/28	0:01 - 5:56
Tu/We 6/ 7	Full Moon	Sa/Su 17/18	19:09 - 4:17	We/Th 28/29	0:58 - 5:56
We/Th 7/ 8	- - -	Su/Mo 18/19	19:10 - 5:29	Th/Fr 29/30	1:55 - 5:55
Th/Fr 8/ 9	- - -	Mo/Tu 19/20	19:11 - 5:59	Fr/Sa 30/31	2:52 - 5:55
Fr/Sa 9/10	19:03 - 19:40	Tu/We 20/21	19:12 - 5:58	Sa/Su 31/ 1	3:49 - 5:54
Sa/Su 10/11	19:04 - 20:41	We/Th 21/22	19:13 - 5:58		

Weekend	Sun	Sun	Mercury	Venus	Mars	Jupiter	Saturn		
Sa/Su	Set	Rise	Rise Vi	Set Vi	Set Vi	Rise Vi	Set Vi	Vi-Visibility	
3/ 4	17:29	7:24	6:04 5	20:07 -3	0:24 0	22:34 -2	7:12 0	-3 brilliant	
10/11	17:35	7:24	5:45 3	20:21 -3	0:17 0	22:06 -2	6:42 0	0 conspicuous	
17/18	17:41	7:23	5:46 3	20:35 -3	0:10 1	21:37 -2	6:13 0	3 moderate	
24/25	17:48	7:20	5:56 4	20:47 -3	0:03 1	21:08 -2	5:43 0	6 naked eye limit	
31/ 1	17:54	7:16	6:09 5	20:59 -4	23:57 1	20:38 -2	5:14 0	9 binoculars limit	

By Erich Karkoschka

TAAA Board of Directors Meeting - December 2003

The Board: absent: Andrew Cooper

Members present: Ellen Finney, Steve Marten, Gary Rosenbaum, Nora Toscano

President's Call to Order: 6:28PM

1. Agenda Changes
2. Announcements: there are password difficulties w/ the website; eyepiece sets from Meade; Aaronson Lecture within TAAA meeting.
3. Star Parties: Steve Marten reports of plans to get more participants; January schedule discussed.
4. Treasurer's Report: an extension from the Nov. 15 tax submission; CD maturity on the near horizon; Steve M. will check on the R. James interest rate; effort by Terri to get the club a credit card; investigate the formation of a fellowship of the NightSky Network (TAAA is a charter member) with a loaner scope and mentor for a year.
5. TAAA Forum: list server will allow members to post; invitation to go out soon; newsletter announcement in Jan..
6. 50th Ann. Party: Bill motions to invite store owners to the party; a 2nd by Ray, and passes unanimously; discussion of opening up the party to the public via flyers; Ann. T-shirts have sold more than 2/3 out, and a second order will be made; 76 paid reservations, including 18 Past Presidents.
7. Loan Form/Policy: the equipment request will appear on the back of the policy; triplicate form; the Treasurer, the Equipment Loan Coordinator (ELC), and the approved member.

TAAA Board of Directors Meeting - - December 2003 (cont.)

8. Project Astro Scopes: after Steve Marten's report, Ray proposes getting scopes exclusively to be loaned to this program; Thom and Bill advise the Board that 6" Dobbs are most appropriate; Ed adds solar filters; Steve M. approved to provide a complete proposal with prices.
9. Moderation Panel: Steve M.'s critique and suggestions taken under advisement; Bill proposes different meetings be moderated accordingly; Ed and Ray point out that the moderator should repeat the member's question for clarity.
10. 30" Telescope: a meeting on 01/07 of R. Tanner, G. Rosenbaum, T. Peck to go over designs (zMax, ray tracings, superstructure printouts, etc.).
11. Las Cienegas: Ray has received BLM plans for improvements: gravel parking lot, runway changes, etc. \$80/yr permit fee for groups of >30.
12. LX200: Ray reports that the loaner scope needs a landing pad and a better case; Board approves a price search.

Adjourned: 9:23PM

Respectfully Submitted,
Ken Wheelock
Secretary

**Be sure to
register for the
50th Anniversary
Banquet**

Desert Skies Classified

For Sale	8" Celestron C8 "orange tube". Special coatings, AC/DC drive corrector, 4 orthoscopic eyepieces [4 mm - 28 mm], extra 8 X 50 finder, adjustable Orion counterweight system, many extras. All in excellent condition. Originally over \$1500, asking \$750. Call Don Southwick, (520) 378-2414 [Sierra Vista] [01/04]
For Sale	Olympus OM 1n (one of the best for astrophotography) with Zuiko 50 mm f=1.8 lens + case and manual + F adapter \$100. Right-angle viewer, Olympus, but fits Canon also, 1.2x/2.5 x \$45. Zuiko lens, wide-angle, 24 mm f=2.8 \$40. Zuiko lens, 200 mm f=4, \$40. Enlarger, Beseler 23C, with Komura 50 mm lens, with 35 mm and 2 1/4 glassless rotatable negative holders (these holders are \$60 each on ebay) and Premier borderless easel \$95. I also have free for anyone who wants it, a 40 inch F/8 Zoomar Reflector (Maksutov) telephoto lens, mostly OK but with a 1" chip in the front lens or protective cover. Jim Jondrow 529-0933, jjondrow@dakotacom.net [02/04]
For Sale	Celestron Nextstar 5 telescope for sale, 12.5, 25, 42mm plus a 12.5mm illuminated reticle eyepieces, star diagonal, 45 degree erecting prism, 2x barlow, red/white led flashlight, hard side carrying case, megapod tripod/wedge, Sun and Moon filters, located in Sierra Vista. Contact Martin Dayton at mart@outb.com [02/04]
Service	Laser Repair Works d'Arndt 11994 W. Vomic Rd. Dublin, Ca. 94586 (510) 816-2714 [02/04]
For Sale	Aluminum tube for 6" reflector up to about f/6. Brushed clean, ends squared. 38-3/4" long, 7-13/16" I.D., 1/16" thick. \$30. Howard Lester 621-3451 or 885-5479, hlester@mmto.org [02/04]
For Sale	Meade 10" LD200 telescope: F=10. Lens case with lenses. Telrad, Software for laptop operation, Heavy permanent mount. Asking \$2500. Jim Polk, Sun City West, AZ 85375. jpolkaz@msn.com 623-556-1377 [03/04]
For Sale	Orion 8x56 binocs, \$100, and stereo microscope \$150; both like new. Eric Schilling 323-8435 or erschilli@aol.com [03/04]
For Sale	Orion 9mm illuminated reticle eyepiece w/"target" cross hairs in cloth bag and original box. \$50 OBO Contact Gary Freiburger (Day) 520-626-6121 (Evening) 520-742-9494 or email to garyf@AHSL.arizona.edu [03/04]

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

Object of the Month by Alfredo Garcia, Jr.

Well, Happy New Year to you all! Hope you had a very joyful holiday season and are ready to embark on a whole new year of stargazing opportunities. So, let's start out the New Year by observing an OTM that is classified as the brightest diffuse reflection nebulae in the sky.

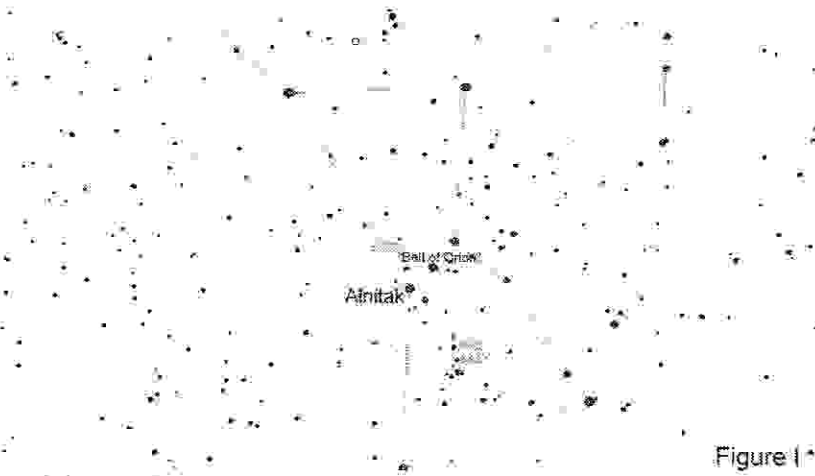


Figure I

This particular nebula was discovered by Pierre Mechain in 1780. Later in that same year, Charles Messier added it to his list so that other comet hunters would not mistake it for a comet, since it looked much like a small, dim comet when viewed through small telescopes. He assigned it as the 78th object in his list and it, of course, came to be known as M78. The true nature of M78 did not come about, however, till about 139 years later. In 1919, the astronomer Vesto M. Slipher of the Lowell Observatory used the astronomical techniques of the times to reveal that M78 was indeed a reflection nebula.

A diffuse reflection nebula is one in which most of the light that enables us to view it is reflected light from young, hot blue stars in and around the nebula itself. And as such, it "shines" with a characteristic blue color. M78 is one such reflection nebula and this is quite evident in color images of the nebula. Perhaps the most striking feature of the nebula, however, is a pair of bright, blue stars that lie just off the nebula's center. These stars are both of about 10th magnitude and are designated as HD 38563A and HDE 38563B. To me, they look like a pair of "ghostly eyes shining in the fog". As such, I frequently refer to M78 with my own made up name. I call it the "Ghost Eyes Nebula". See if you don't get the same eerie impression when you observe it.

But, there is nothing ghostly about M78 at all. It belongs to large cloud of interstellar dust and gas centered on Orion that is called the Orion Complex. In addition, M78 is the brightest part of a vast dust cloud that includes it and three other nebulae (NGCs 2071, 2067, and 2064). If you group M78 and these other nebulae with others including the Flame Nebula (from last month's OTM), the association is called a molecular cloud and given the designation of LDN 1630 (from Lynd's Catalogue of Dark Nebula).

The distance to M78 is about 1,600 light-years. At this distance, it extends over 4 light-years in space. Its apparent size in the sky is 8 x 6 arcminutes or just slightly over one quarter the size of the Full Moon at its longest dimension to just slightly under the same measurement in its shorter dimension. In addition to being of good apparent size, it has a visual magnitude of 8.3. As such, it is an easy target for small telescopes and binoculars.

M78 is well placed for observation on moonless or near moonless January nights. During the month, it will range from 40 to 60 degrees in altitude above the southeastern horizon at the beginning and end of the month respectively. Figure I shows the nebula's location in the sky with relation to the constellation of Orion, the Hunter. M78 is not difficult to locate by star hopping techniques. If you start with Zeta Orionis (Alnitak), the easternmost star of Orion's Belt, you will find M78 situated about 2 degrees north and 1 1/2 degrees east of this star (See Figure I). For those of you with setting circles and/or automated Go-To scopes, you can find M78 at RA: 05 hours 46.7 minutes and DEC: +00 degrees 03 minutes.

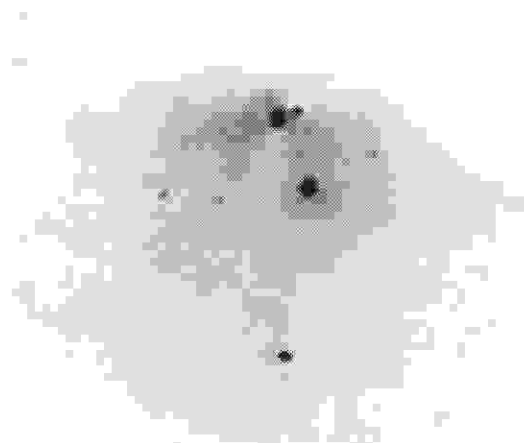


Figure II

Though M78 presents itself as a great view in a telescopic field, it is an even greater view in an astrophotograph or CCD image. Color imaging is the preferred technique so as to reveal the distinctive blue color of the nebula, but grey scale imaging will work just fine. This author took the grey scale CCD image shown at Figure II and it reveals plenty of detail. I used a 10" f/6.3 Meade LX 200 and a Starlight X-Press MX5C CCD camera and made a composite exposure of 6x3 minutes. There is no doubt that you can see the "ghostly eyes" that I was referring to earlier in the article. Due to its brightness and ease to locate, this is an excellent target for beginning and advanced astrophotographers and CCDers alike. You will be rewarded with your own image of the Ghost Eyes Nebula! Boooo!