



Desert Skies

Tucson Amateur Astronomy Association

Volume XLVIII, Number 4

April, 2002



Comet C/2002 C1 Ikeya-Zhang

Cover Photo: Photo taken by Andrew Cooper on 20 March 2002 at the TIMPA site with a 25cm SCT with a f/6.4 focal reducer. Field is about 1 x 1 degree with north at the right.

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

TAAA Phone Number: (520) 882-1950

Office/Position	Name	Phone	E-mail Address
President	Andrew Cooper	795-3585	acooper@pobox.com
Vice President	Thom Peck	327-7825	thomas.peck@optics.arizona.
Secretary	Jane Tongate	623-4056	triton@dakotacom.net
Treasurer	Terri Lappin	579-0185	tklappin@earthlink.net
Member-at-Large	Robert Callanan	818-1315	tucsonbac@aol.com
Member-at-Large	Bill Lofquist	297-6653	wlofquist@aol.com
Member-at-Large	Steve Peterson		swpeterson@theriver.com
Chief Observer	Wayne Johnson	586-2244	mrgalaxy@juno.com
AL Correspondent (ALCor)	Doug Smith	889-3675	dsmith71@ix.netcom.com
Astrophotography SIG	Dean Ketelsen	293-2855	ketelsen@as.arizona.edu
Computers in Astronomy SIG	Roger Tanner	574-3876	rtanner@seds.lpl.arizona.edu
Newsletter Editor	George Barber	822-2392	barbergj@flash.net
School Star Party Scheduling Coordinators	Maggie & Jeff Buzek	760-4578	jeffbuzek@aol.com
School Star Party Volunteer Coordinator	Rob Wilson	744-0263	rasjwilson@aol.com

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 acknowledgment 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.....	\$ 29.95
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. 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

Spring is here! The calendar may say the equinox occurred on the 20th of March, but for me spring started on the 21st. Late that morning I walked to lunch down the street from where I work. The air just shouted, "Spring is here!" Something in the scent on the breeze, the birds singing around me, or the first hint of summer's hot breath, it just felt like spring.

This means the nights of shivering at the eyepiece are nearly over. When I'm all bundled up in ski pants, hat, gloves and insulated boots and still shivering, the one thing that keeps coming to mind is the nights of May and June, when I observe all night in shorts sleeves, shorts and sandals. Now that is Tucson observing! The only usual problem are the insects, but this year's lack of rain is a mixed blessing, with the good news being the resulting low population of mosquitoes and other pests of the night. Yes! Spring is here.

The year has started very well and with a very pleasant surprise. Discovered on February first, comet Ikeya Zhang has exceeded expectations and become a beautiful binocular and telescopic object. And very suddenly, it is not like we had a year's notice like so many comets, discovered while in the outer solar system and we wait for a year

for the show. No, this time a comet crept in close before we found it and less than a month after discovery is an unaided eye object. With a telescope or particularly in photos the tail is a beautiful sight with streamers braided back and forth along its length.

By the time you read this, the comet will be gone from the evening sky, but around the start of the month it will swing above the sun (from our earthbound vantage point) and pop up in the morning sky. Around the mid-month new moon it will be well up and probably not much fainter than it is now. I highly suggest you make a point of observing it, particularly if you have not already done so.

Two other big events are fast approaching. April hosts both our annual picnic and our large public star party at Sabino Canyon in support of Telescopes for Telethon. More information on both events in this newsletter.

So take advantage of the warmer weather! The balmy spring and summer observing nights we enjoy so much here in Tucson are just ahead!

Andrew

Meeting Information and Calendar of Events

TAAA MEETING DATE:

Friday, April 5 at the Steward Observatory Auditorium - Room N210

BEGINNERS LECTURE: 6:30 pm

Title: William Herschel and the Beginning of the NGC Catalog

Speaker: Andrew Cooper

Last time I gave a history of several star atlases and catalogs, this time we will concentrate on William Herschel, his sister Caroline and their work that became the start of the NGC catalog.

GENERAL MEETING: 7:30 pm

Title: Southern Sky Observing

Speaker: Tom Polakis

The speaker for the April meeting will be Tom Polakis, from Tempe. As a veteran of five trips to the Southern Hemisphere to view the southern skies, he will speak to us about how to best enjoy such a trip yourself. Additionally, you will see some of his personal highlights from trips to Chile and Australia.

BOARD OF DIRECTORS MEETING:

Tuesday, April 2, 7:00 pm at Steward Observatory Conference room N305.

STAR PARTIES AND EVENTS:

- 04 Apr - Astrophoto SIG Dinner
- 06 Apr - TAAA Annual Picnic
- 07 Apr - Heritage Highlands Star Party
- 10 Apr - Holladay Intermediate School Star Party
- 11 Apr - Coyote Trail Elementary School Star Party
- 14 Apr - UofA Science Students Star Party
- 16 Apr - Agua Caliente Elementary School Star Party
- 16 Apr - Erickson Elementary School Star Party
- 18 Apr - Copper Creek Elementary School Star Party
- 19 Apr - Telescopes for Telethon Public Star Party
- 20 Apr - Kitt Peak Tribal Night

Newsletter Schedule:

Deadline for articles: Mon, April 15. Printing: Mon, April 22. Folding Party: Tues, April 23. Mailing: Wed, April 24. 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 who have joined the TAAA: Kerit D McCaslin, George McGee, J D and Mary Lou Metzger, Fred Rentzel, John D Rockefeller, and Tom Sarko. Glad to have you join! If you haven't already, 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 at the regular meetings, so pick one up if you need it.)

Club Officer Elections are Coming

At the February monthly meeting, Steve Peterson, Shiela Conrad, and Thom Peck were nominated and unanimously approved as members of the nominating committee. Their task has been to seek out the qualified candidates for the slate to be voted upon at the May monthly meeting. Any member of TAAA in good standing who has been a member for at least 1 year is eligible and encouraged to run for office.

As of this writing, the slate of candidates is as follows:

President	Andrew Cooper
Vice President	Thom Peck
Secretary	Jane Tongate
Treasurer	Terri Lappin
Members-at-Large	Robert Callanan
	Steve Peterson
	Bill Lofquist

Any member interested in running for an office may contact Steve Peterson at swpeterson@theriver.com, Shiela Conrad at 529-1750, or Thom Peck at 327-7825. Nominations are open until the May meeting, at which time floor nominations will also be accepted before the vote is taken.

Astrophoto SIG Dinner

4 April, 7pm

China Rose, Speedway/Rosemont

As is our usual custom, we'll be meeting the evening before the April general meeting to discuss astronomical imaging. No rules to speak of, we like film and CCD images. A laptop and video projector as well as a slide projector is available. So bring your favorite images and show them off! With a bright comet (Ikeya/Zhang) I'm hoping for some nice images. See you there!

TAAA Annual Picnic

Apr. 6 (Saturday)

This year's annual picnic will be held at the TIMPA Site and all TAAA Members and their families are encouraged to come. This is the first time that the club is holding its annual picnic at this location and we are looking forward

to a great turnout! Members are invited to arrive early and enjoy some solar viewing starting at 3:30 pm. There will be a potluck barbecue starting at 5:30 pm with telescope observing taking place after dark. Bring your own food, plates, utensils and a dish to share (salads, snacks, desserts, etc.). The TAAA will supply soft drinks and barbecue grills. A card table and chairs or a camping table could be handy. This should be a super event. Won't you join us?

Telescopes for Telethon Public Star Party

Apr. 19 (Friday)

By John Kalas

It's that time of the year again for the 3rd annual Telescopes for Telethon public star party in support of the Muscular Dystrophy Association. Wendee and David Levy have requested the support of the TAAA to make this event even better than last year (and last year was outstanding!). The activity will be held at the Sabino Canyon Recreation Area on Friday, April 19th. The \$5.00 parking fee has been waived for this event. Solar viewing will be provided to Sabino Canyon visitors from 3:00 pm to sunset. Set-up for the evening viewing session will begin no earlier than 5:00 pm when the Sabino Canyon Recreation Area closes for business and must be completed by 6:00 pm. Starting at 5:00 pm, telescopes will be positioned around the tram loop near the ticket booth area and then down the tram roadway leading away from the loop toward the canyon. Telescope equipment will have to be carried to the tram loop and roadway from the main parking lot access loop. Public observing runs from 6:00 to 10:00 pm. Along with the normal solicitation of donations from the public, there will be two special donation promotions: "Rename a Star" and "Rename a Constellation", so brush up on the major stars and constellations out that night. Volunteers will be permitted to do personal observing until 11:30 pm. Everyone must leave the complex by midnight.

In case of bad weather, Saturday, 4/20, and Sunday, 4/21, have been reserved as potential rain/cloud dates. Volunteers are needed, not just for the telescopes, but to assist with the collection of donations, helping carry telescope equipment to the set-up locations and general public support duties, so please consider attending even if you don't bring a telescope. This will be a fantastic, fun activity. Please help out. John Kalas is the TAAA coordinator for this event. David and Wendee Levy, developers and national coordinators of the Telescopes for Telethon campaign, will be attending. There will be a sign-up sheet at the April monthly meeting. If you are unable to attend the monthly meeting and would like to help, please contact John at 620-6502 or jckalas@aol.com.

TAAA Library Moved

The TAAA thanks Steward Observatory for providing us a more convenient location for our loaning library. No

Club News (cont.)

longer will our librarians (Teresa and Claude Plymate) need to haul books into the meetings. The TAAA has purchased two cabinets on wheels that will be moved into the lecture hall during our meetings. Our members will now be able to peruse the entire collection of books during the meeting breaks.

This came about after something of a disaster. Our books had been kept in a set of cabinets at Steward Observatory for about 7 years. One night last month, between midnight and 1am, the entire wall of cabinets came tumbling down. How do we know the time so accurately? Well, a student was fortunate enough to have left the room during that hour and discovered it upon returning. The pile of our books was found lying right where this student had been working. We are grateful that no one was hurt in the mishap.

The TAAA thanks the Plymates and Sam and Phyllis Turner (the last librarians) for dutifully hauling selected books to our meetings each month. This had been a real chore for them...one we are sure they are glad to not perform again.

Girl Scout SMART Day a Huge Success

A grand time was had by 800 Girl Scouts at the annual Science, Math And Related Technologies (SMART) event. The TAAA provided two programs about astronomy to go along with the other 22 programs provided by several organizations around Tucson. We heard reports that the astronomy presentations were the best ones there, so Kudos to TAAA!! John Kalas had about 500 girls view the sun through his solar H-alpha and sunspot filters. A cloud passed by here and there, but solar observing continued through the day, so John left with a bit of sunburn. He was helped by Andrea Urban, who is an astronomy major at the University of Arizona. Terri Lappin and TAAA member Debra Davis made comets for over 200 girls. Each comet was named after three girls from each group, based on correct answers to astronomy trivia questions. The girls observed the behavior of comets and learned of the

materials found in comets. The comet presentation was enhanced this year by a slide program about woman astronomers who have discovered comets. Debra, who runs the Woman Astronomer newsletter (see www.womanastronomer.com), brought a display about woman astronomers and provided much of the information used in the slide program. Everyone involved hopes to have inspired some young female minds to think about astronomy and look up!

School Star Party Program

By John Kalas

By far, the School Star Party Program is the biggest, most beneficial and most rewarding of all club activities. And it should be. The TAAA is the most active club in Arizona and probably the entire west in its effort to share the science and beauty of astronomy with school children and their families. The TAAA's history of public outreach is long and rich. The success of the school star party program lies with the generous members who volunteer their time and equipment, as well as our dedicated coordinators Jeff Buzek and Robert Wilson. So far in the first three months of 2002, the club has accepted requests for sixteen school star parties, requiring about 84 scopes. Despite a few weather-related cancellations, most of the activities were very well supported and highly successful. The following 34 members dedicated their efforts to make them happen: Nick Applegate, George Barber, Kevin Bays, John Bianchi, Jeff Brydges, Jeff Buzek, Robert Callanan, Alan Clark, Andrew Cooper, Sydney DeGon, Chuck Dugan and his son, Nick, Phil Hollis, John Kalas, Terri Lappin, Bill Lofquist, Harold Mechler, Derald Nye, Bill Owens, Thom Peck, Claude & Teresa Plymate, Randy Quiroz, Steve Ratts, Gary Rosenbaum, Luke Scott, Terry & Alexis Secory, Byron Skinner, Jim Smith, John Paul Sosville, John & Deb Soule, Michael Thompson, Sam & Phyllis Turner, Ken Wheelock, Jim Wilmot and Robert Wilson. The TAAA and all of the schools that were serviced by these members thank them very much.

With this kind of success come increased responsibilities.

STARIZONA

ADVENTURES IN ASTRONOMY AND NATURE

5201 N. Oracle Rd. www.starizona.com
Tucson, AZ 85704 292-5010

Sky Works

7401 E. 22nd Street Tucson, AZ 85711
520-751-6752 fax 520-751-6758
info@sky-works.com

www.sky-works.com



Kitt Peak
National
Observatory
Visitor's
Center

SINCE 1986

Stellar-Vision Astronomy Shop

1835 S. Alvernon #216
Tucson, AZ 85711
(520) 971-0877
Credit Cards accepted

StarPads
starpads@home.com

Chart Markers
<http://www.members.home.net/chartmarker>

1514 and Arden Johnson
Tucson AZ

Club News (cont.)

The program has become so popular and well received that the number of requests for school star parties continues to grow. Last year, the club instituted a policy for a maximum of six school star parties per month. This sounds like a lot, but in years past we have handled up to 8 - 10 school star parties per month in peak season (Feb. thru April). This year, the club has had to turn away several schools due to our self-imposed maximum. Telling a teacher that we are unable to help them with their astronomy program is very difficult and somewhat embarrassing. With a total membership of 380, the TAAA should be able to field enough volunteers to handle more than six events per month. Our objective is to build up the volunteer list so that, if each volunteer offered to attend just one activity per month, we would be able to handle most requests. We would like you to consider adding your name to the volunteer list and actively supporting this worthwhile project. If you are interested, please contact Robert Wilson at 744-0263 or <rasjwilson@aol.com>. Thanks.

Grand Canyon Star Party

8-15 June, 2002

North and South Rims

Well, the arrangements have been made, now we wait for June to get here! While the requests for campsites came in a rush, we can likely still fit a few in if you don't mind

sharing - most are this year, so space is still available. In addition, if you've always been interested in attending but were not a camper and can't afford the lodging, have I got an offer for you! An attendee named Kim Colter (male, non-smoker, non-snorer (his description!)) has reservations at Yavapai lodge and is looking to share his room. You can contact him at coltmenk@hotmail.com or call him at 636-239-6968.

Think also about giving a twilight talk - get your chance in the spotlight and entertain the public while it gets dark enough to observe. I'm looking for talks for the general public aimed for the typical 4th grader! Let me know if you are interested. Talks should be about 30-45 minutes long, but if you've a shorter one, perhaps I can combine several talks.

I was just at the Canyon, bringing my sister and niece up to check out the most scenic spot on earth, and believe me, it is a different sight with 3 inches of fresh snow on the ground! But it did bring back what a memorable place it is - don't forget that after 11 years, I've spent something like 80 days there just for the star party. It is a memorable place, whether or not you are there for the star party, but it is a great star party too. Let me know if you have any questions regarding this event.

Dean Ketelsen, 293-2855.

Items of Interest

Lost and Found

Found after the Desert Museum Star party, one dob mat. Contact Andrew to claim.

WEBSITES: TRIPS ON THE INTERNET SUPER-SKYWAY

CELESTIAL DUPLICITY

By Rik Hill

Spring is a great time for double star observing. There are a number of wonderful star systems available to the amateur instrument be it a 2.4" refractor or a 20" Dobsonian. Star systems such as Iota Cnc, Zeta Cnc, Beta Mon, Gamma Vir (components getting very close now) offer delightful views to both the advanced amateur and the tyro. If you have been watching the last star, also known as Porrima, over the last decade or so, you've seen the two stars approach each other and change in position angle quite rapidly. YOU CAN ACTUALLY SEE THE CHANGE IN THESE STARS! Two years ago they were an easy split for my little ETX90 but now they cannot be separated cleanly.

There are also a lot of good websites to guide your observing of these stellar multiples. To get you started there's a nice article that fills you in on the lexicon of the

double star observer at:

http://www.soft.net.uk/hanwell/double_stars.htm

The U.S. Naval Observatory has an on-line library of resources to help you plan double star observing at:

<http://ad.usno.navy.mil/wds/dsl.html>

The highlight of that website is the full Washington Double Star Catalogue (WDS) which is searchable at:

<http://ad.usno.navy.mil/wds/wds.html>

Here you will find tabular information on essentially all double stars, for free!

If this kind of observing catches your fancy then I would recommend that you visit the The Spirit of 33 website:

<http://whuyss.tripod.com/33.html>

This site came to prominence with the article "Double stars: The Spirit of 33" in the Sky & Telescope February 2000 issue by 33-doubles organizer Luis Argüelles of Oviedo, Spain. He's also started an email list-group called 33-doubles@yahoo.com. It's the most active double star observing list in the world with observers from all over the world and well worth joining.

Lastly, there are several other double star databases that are worth a look.

ALCOVE Database <http://members.aol.com/astroalcove/double.html>

SAGUARO ASTRONOMY CLUB DOUBLE STAR DATABASE

Items of Interest (cont.)

VERSION 2.1

<http://www.virtualcolony.com/sac/star-search-form.html>

The Visual Binaries List: The Widest 100 <http://www.cyburban.com/~mrf/c.htm>

Armed with this you can have not only an enjoyable observing session, but a whole future of rewarding observing of these duplicitous stellar systems.

***** + *****

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

Steward Observatory Public Evening Lecture

Since 1924 Steward Observatory has hosted public evening lectures in astronomy. The Steward Public Evening Lectures are held twice a month at 7:30pm in the Steward Lecture Hall (N210), the same room we hold our meetings. Following each lecture, the 21-inch telescope will be available for viewing the night sky (weather permitting). The lectures and the use of the telescope are free of charge and open to the general public. The entire schedule is available at http://viking.as.arizona.edu/~taf/pubeve/pub_lect.html. The last lecture this semester is listed below.

Apr.15 Dr. Eric Bell Stardust: A Voyage of Discovery

2001 All Arizona Messier Marathon

Arizona City, AZ
April 13/14, 2002

Find all the Messier objects in one night? Yes it is possible, just barely if the Sun and Moon are in just the right positions. If you decide to participate be sure to read and follow all of this information. First arrive at the site early, don't plan on arriving by sunset. Give yourself time to setup your telescope and for it to reach thermal equilibrium. Also give yourself time to meet old friends and make new ones. Directions to the Arizona City site can be found at <http://aecooper.home.att.net/obssites.html>.

If you are not going to stay all night, then park near the entrance so you don't disturb others when you depart. Please give a shout a few minutes before leaving and then as you are about to depart. This will give observers time to hide so the light doesn't interfere with night vision.

There will be a check off list available at the site to record your observations. Be sure to pick one up, preferably before you start marathoning and fill in the top portion so awards can be made. It is important to remember that you must turn in your form to one of the Coordinators before leaving the site or by sunrise. We cannot accept any after these times.

If you plan on participating, then doing some homework ahead of time will pay dividends. If interested the check off list can be made available prior to the marathon for your reference. Study the list, or use your own sequences. Be prepared for the extremely unlikely case it should become cloudy.

The marathon this year has been scheduled for a somewhat later time than normal for several reasons. First the earlier date in March has interference from the moon well after astronomical twilight. The selected date has no interference of this type, is the day after new moon and will give marathoners a chance to brush up on the late risers, particularly M30!

For the selected date the following will not be available at all; M74, M77 and M33. Only M34 and M76 will only be available in the evening. Whereas M39, M31, M32 and M101 will only be available in the morning. That leaves an easy 101 objects, or 107 if you really work at it!

Concerned that you can't get a high count? Don't worry, set your own goals and don't be bothered about the high counts. The important point is for you to have a good time and not become frustrated. This is supposed to be a fun time - enjoy it!

Your efforts will not go unnoticed as there will be awards in recognition of your participation. People observing 50 or more objects will receive an 8 1/2 X 11 certificate. For first, second and third place there will be plaques suitable for mounting on your telescope. Duplicate awards will be made in case of ties.

If you don't care to marathon, don't worry - come anyway! You can do your own deep sky or planetary observing or astrophotography. There's always the chance to just relax under a clear dark sky or just socialize to your hearts content.

AJ Crayon, e-mail - acrayon@mindspring.com
Jack Jones, e-mail - spicastar@msn.com
Messier Marathon Coordinators
Saguaro Astronomy Club
saguaroastro.org

THOUGHTFUL LIGHTING BENEFITS TAA

On Feb 19, the Southern Arizona Chapter of International Dark-skies Assn presented Budget Car and Truck Sales SA-IDA's good lighting award for relighting their lot at Oracle and Orange Grove with 90-degree cutoff fixtures. Mr. Bob Rockov received the award on behalf of Budget. The ceremony was witnessed by all Budget sales and office personnel working at the opening of that business day, and appeared on KUAT-TV later in the day.

John Polacheck VP of the chapter, made the presentation, supported by Byron Skinner treasurer, Josie DeFalla, Joe Franea and Ingrid Saber. Liz Alvarez represented IDA International and Sara Rachel represented the National

Items of Interest (cont.)

Audubon Society. Representing the political sector were former AZ state senator George Cunningham, previously administrator of the UofA mirror lab, and Lisa Menerick mayor of Ferrysburg Michigan. The commercial sector was represented by Dean and Donna Koenig of Starizona.

Doug Isbell of NOAO Kitt Peak and Fr. Chris Corbally of the Vatican Observatory represented the professional astronomy sector. Robert Callanan, member at large attended on behalf of TAAA. Increased awareness of effective non-obtrusive lighting and responsible actions by members of the business community improve the quality of our viewing and photography. Support those who support your interests.

Robert Callanan

DR. VEGA HONORED

Dr. Eduardo Vega former TAAA member at large and regular spring star party and picnic sponsor, founder of the Southern Arizona Chapter of IDA, lifetime member of IDA, ex board member of the Tucson Symphony and contributor to many other civic undertakings was given a recognition dinner in his honor at China Rose restaurant. Dr. Vega was accompanied by his wife Pat, son Eddy Jr.

and daughters Jenny and Maria.

Emcee John Polacheck introduced various celebrities who knew and worked with Ed. Principal speaker David Levy recalled fifteen years of friendship with the Vegas and how his first encounter with TAAA was a request for \$1000 earmarked to provide dark sky viewing for members. Other early dark sky-viewing contributors attending were past president Tim Hunter and Valerie Goff, widow of Bob Goff.

Other speakers included David Crawford co-founder of IDA with Tim Hunter, Mike Terrazoni of Flandreau and Ingrid Saber. Carol Hunter expressed her warm feelings by exceeding a request for a banquet with a nine entree Chinese feast fit for an emperor. Maria Vega eloquently thanked the packed room on behalf of her father and the Vega family.

The event was a special occasion for my wife Barbara and I, as we spent our first three nights at Vega Bray observatory five years ago while we looked by day for a home in Tucson. Our first friends in Tucson were the Vegas. We, like all those whose lives crossed theirs, love them dearly.

Robert Callanan

Star Parties & Events

TAAA Annual Picnic

Apr. 6 (Saturday)

See article in the Club News Section of this newsletter.

Heritage Highlands Star Party (Paid)

Apr. 7 (Sunday) No. of Scopes: 8

The TAAA has been invited to provide an evening of observing for about eighty members of the residential community of Heritage Highlands at Dove Mountain. This is a great club fundraiser! Volunteers and their spouses are invited to enjoy a buffet dinner starting at 6:00 pm. The club has been asked to make a presentation to the guests at 7:00 pm. Set-up will be between 5:30 and 7:00 pm (depending on your attendance at dinner) on the patio of the clubhouse. Viewing is from 7:30 to 9:30 pm. Take I-10 north to Tangerene Rd. Go east on Tangerene for about 4.5 miles to Dove Mountain Rd. on the left. Turn left (north) onto Dove Mountain Rd. and go about 2 miles to the Heritage Highlands guard shack on the left. Proceed a few hundred feet past the guard shack to the clubhouse on the left. Telescope equipment will have to be transported through the main clubhouse entrance to the patio at the rear of the clubhouse. John Kalas is the Star Party Leader for this event. There will be a sign-up sheet at the April monthly meeting. If you would like to support this activity but are unable to attend the meeting, you must contact John at 620-6502 or <jckalas@aol.com>

to confirm dinner reservations.

Holladay Intermediate School Star South-Central

April 10 (Wednesday) No. of Scopes: 6-7

This will be a large star party held in conjunction with the school's science fair. The school is located at 1110 E. 33rd St. Take 22nd St. west to Park Ave. Turn left (south) on Park and proceed approx. 0.8 mile to 34th St. Turn left on 34th St. and cross over Fremont. On the north side of 34th St. there will be a back entrance gate to the school's field and basketball court. This is the set up area. Set up is at 6:45pm with observing from 7:15pm and to 9:00pm. A star party leader is needed for this event, and a sign up sheet will be available at the April meeting.

Coyote Trail Elem. School Star Party Northwest

April 11, (Thursday) No. of Scopes: 5-6

The students are from the fifth grade class. The school is located at 8000 N. Silverbell Road. Take Interstate 10 west to Cortaro Road and turn left (west) on Cortaro Farms. Proceed approximately 1.5 miles to Silverbell Road and turn right (north). Proceed approximately ¼ mile on Silverbell Road. The school will be on the right past the Fry's food store. The set up area is on the common area inside the school grounds by the courtyard. Set up is around 6:45pm to 7:00pm with viewing running

Star Parties & Events

from 7:30pm to about 9:00pm. A star party leader will be needed for this event. A sign up sheet will be available at the April meeting.

UofA Science Students Star Party

Apr. 14 (Sunday) No. of Scopes: 10+

The TAAA has been invited again this year to support a star party for UofA Students taking a variety of science courses. The activity will be held at Saguaro National Park West in the parking lot in front of the visitor's center. There will be an area reserved for telescope operators and their vehicles in the parking lot away from the visitor's center (not up close to the visitors center). Viewing is from 7:30 to 9:30 pm, so set-up should be before 7:30 pm. Between 80 to 100 students are expected to arrive by vans from the UofA at 7:30 pm. John Kalas is the Star Party Leader for this event. There will be a sign-up sheet at the April monthly meeting. If you would like to support this activity but are unable to attend the meeting, please contact John at 620-6502 or <jckalas@aol.com>.

Erickson Elementary School Star Party **East**

April 16, (Tuesday) No. of Scopes: 4-5

The school is located at 6750 E. Stella Road. Take Kolb Road south to Stella and turn right. Go about 0.5 mile west to Mann. The school is located on the SE corner of Stella and Mann. Enter through a gate on the west side of the school (just south of Stella) and drive across the playground to the NE corner and set up on one of the concrete pads. Set-up is at 7:00 pm with observing from 7:30 pm to about 9:00 pm. Terri Lappin (home - 579-0185) is the star party leader for this event. A sign up sheet will be available at the April meeting.

Agua Caliente Elementary School **Northeast**

April 16 (Tuesday) No. of Scopes: 5-6

Take Tanque Verde Rd. east to Catalina Hwy. Turn left on Catalina Hwy and proceed approx. 1.5 miles and turn right on Prince Rd. Pass Houghton Rd, Wendell Rd and Melpomene Rd. Prince Rd. will end and take a left on Homestead Rd. The school's athletic field will be on the left. Enter the gate on Homestead and drive to the north side of the field. Set-up begins at 7:00 pm. Observing starts at 7:30 pm, and ends approximately at 9:00 pm. Jeff Buzek will be the star party leader. A sign up sheet will be available at the April meeting.

Copper Creek Elementary School **Northwest**

April 18 (Thursday) No. of Scopes: 8-10

This large (200-300 people expected!) activity is in support of Project Astro. Take La Canada Drive north past Lambert Ln. and Naranja Rd.. Turn right on Silverleaf and follow it until it dead-ends at the playground. Turn right down a driveway and then turn left into a gate that leads to the basketball courts. Set-up begins at 7:00 pm. Observing starts at 7:30 pm, and ends at 9:00 pm. A Star Party leader is needed for this event. A sign up sheet will be available at the April meeting.

Telescopes for Telethon Public Star Party

Apr. 19 (Friday)

See article in the Club News section of this newsletter.

Kitt Peak Tribal Night

April 20 (Saturday) No. of Scopes: 4-6

Kitt Peak is hosting Tohono O'odham Tribal night. Set up is at 5:00 for those who can do solar observing, and the event will last until 8:30. The set up area is the south side of the 36-in. parking lot, the same place we set up for family night last October. To get to Kitt Peak, take I19 to Ajo Way and proceed west for 56 miles. After you pass Pan Tak, look for the sign indicating highway 386. At the junction of 86 and 386, turn left and proceed 12 miles up the mountain to the Visitor Center parking lot. Members may drive their cars to the set up area and then return them to the parking lot at the Visitor Center. Please try to arrive before dark.

Dark Skies for April 2002

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

Su/Mo 31/1	20:06 - 22:24	Th/Fr 11/12	20:16 - 4:34	Su/Mo 21/22	3:09 - 4:20
Mo/Tu 1/2	20:07 - 23:31	Fr/Sa 12/13	20:17 - 4:33	Mo/Tu 22/23	3:49 - 4:19
Tu/We 2/3	20:08 - 0:34	Sa/Su 13/14	20:18 - 4:31	Tu/We 23/24	- - -
We/Th 3/4	20:09 - 1:31			We/Th 24/25	- - -
Th/Fr 4/5	20:10 - 2:21	Su/Mo 14/15	20:50 - 4:30	Th/Fr 25/26	- - -
Fr/Sa 5/6	20:10 - 3:06	Mo/Tu 15/16	21:48 - 4:28	Fr/Sa 26/27	FULL MOON
Sa/Su 6/7	20:11 - 3:44	Tu/We 16/17	22:48 - 4:27	Sa/Su 27/28	- - -
		We/Th 17/18	23:47 - 4:26		
Su/Mo 7/8	20:12 - 4:18	Th/Fr 18/19	0:44 - 4:24	Su/Mo 28/29	20:32 - 21:10
Mo/Tu 8/9	20:13 - 4:38	Fr/Sa 19/20	1:37 - 4:23	Mo/Tu 29/30	20:33 - 22:17
Tu/We 9/10	20:14 - 4:37	Sa/Su 20/21	2:26 - 4:21	Tu/We 30/1	20:34 - 23:19
We/Th 10/11	20:15 - 4:35			We/Th 1/2	20:35 - 0:14

Weekend	Sun	Sun	Mercury	Venus	Mars	Jupiter	Saturn	
Sa/Su	Set	Rise	Rise Vi	Set Vi	Set Vi	Set Vi	Set Vi	Vi-Visibility
30/31	18:40	6:12	6:01 -	20:05 0	21:52 2	1:25 -2	23:22 0	-3 brilliant
6/7	18:45	6:03	Set	20:19 -1	21:48 2	1:00 -2	22:57 0	0 conspicuous
13/14	18:50	5:54	19:24 8	20:33 -1	21:44 2	0:36 -2	22:33 0	3 moderate
20/21	18:55	5:46	20:06 4	20:47 -2	21:39 2	0:13 -2	22:09 1	6 naked eye limit
27/28	19:00	5:39	20:37 3	21:01 -2	21:34 3	23:49 -2	21:45 1	9 binoculars limit

By Erich Karkoschka

Object of the Month by Alfredo Garcia, Jr.

Well, I hope you enjoyed some of the clear skies we had last month and were able to get out and do some observing. There were some cold, but clear nights for sure! But do not fear the cold anymore, the warmer nights are here at last! So get out under the warm skies of April and enjoy the sky and in particular this month's OTM.

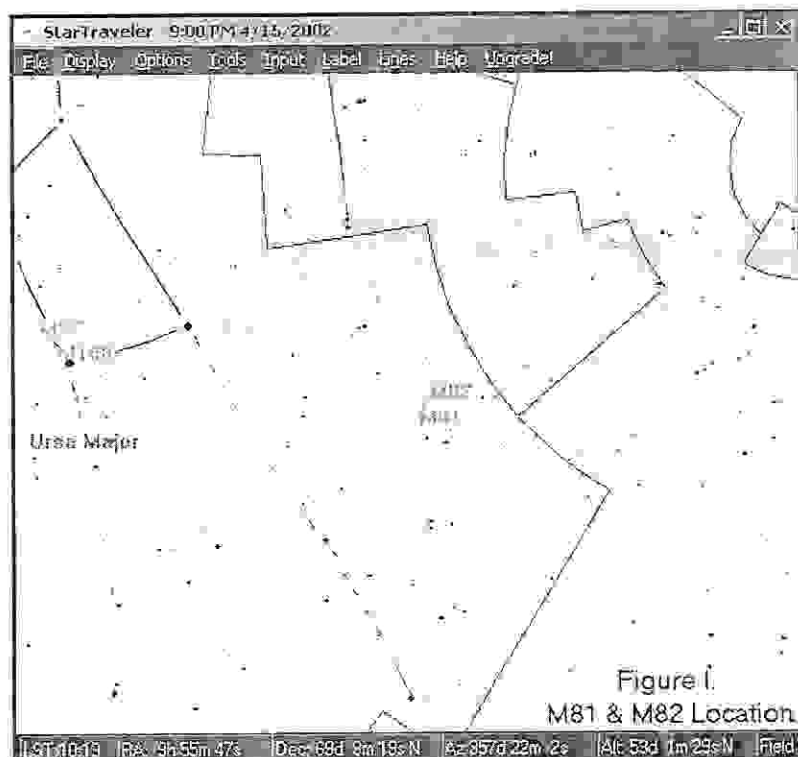
The April OTM is made up of two objects that go hand in hand when observing them. They were discovered in 1774 by Johan Elert Bode and belong to the class of objects known as spiral galaxies. In particular, one is a spiral galaxy and the other an irregular spiral galaxy. There are many fine examples of galaxies to observe, but these two galaxies are certainly one of the better pair to observe with telescopes. So without any further introduction, I present to you the April 2002 OTM: Messier 81 and Messier 82.

M81 and M82 form a physical pair of galaxies that are part of a nearby galaxy group called the M81 group. Several tens of million years ago, a close encounter occurred between these galaxies we now know as M81 and M82. During this cosmological event, the larger and more massive M81 dramatically deformed M82 by gravitational interaction with it. The encounter left traces in the spiral pattern of the brighter and larger galaxy, M81. The galaxies are still close together with their centers being separated by a linear distance of only 150,000 light years.

M 81 (NGC 3031), is a nearly face on spiral galaxy and is the brightest galaxy in the north galactic hemisphere. It has a magnitude of 6.8 and spans a nice 25 x 12 arcminutes in the sky. Current distance estimates place Bode's Galaxy at a distance of 12 million light-years. The galaxy is large and diffuse, but large aperture scopes with wide fields of view reveal the wispy spiral arms that surround the bright portion of the galaxy. An interesting note on M81 is that on Sunday, March 28, 1993, a type II supernova (1993J) occurred in M81. This supernova was discovered by the Spanish amateur astronomer Francisco García Díaz from Lugo (Spain) and reached a maximum brightness of about magnitude 10.5.

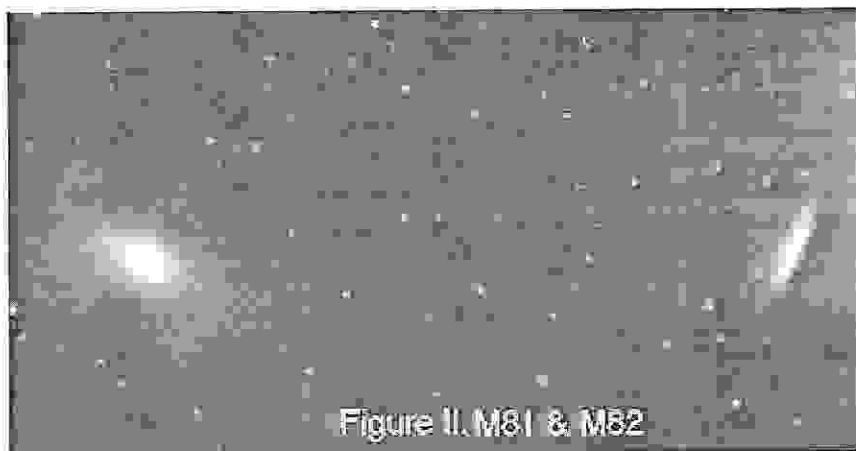
M 82 (NGC 3034) is a nearly edge-on irregular spiral galaxy. It spans 10 x 5 arcminutes in the sky and has a magnitude of 9. It is also at a distance of 12 million light-years. In telescopes smaller than 10" this galaxy appears to be a normal spiral. However, larger instruments reveal bright knots cut by dark lanes. There is also something interesting to note on M82: Its core seems to have suffered dramatically from the close encounter with M81, being in a heavy starburst and displaying conspicuous dark lanes. This turbulent explosive gas flow makes M82 a strong source of radio noise. In addition, M82 is the brightest galaxy in the sky in infrared light.

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



M81 and M82 are well placed for observation in mid-April being almost due north at 53 degrees in altitude. Look for the pair in the constellation of Ursa Major, the Larger Bear. For those with setting circles and automated go to scopes, you can find M81 at RA: 09h 55.6 min/DEC: +69 deg 04 min and M82 at RA: 09h 55.8 min/DEC: +69 deg 41 min. If you don't have either, you can find M81 and M82 by using the map at Figure I. It shows the galaxy pair's position in the sky from Tucson, AZ, on 15 Apr 2002 at 2100 MST. To locate the duo, start by finding the two stars on the outer edge of the bowl of the Big Dipper known properly as Merak and Dubhe. These are the stars that are often referred to as the "Pointer Stars" as they point to Polaris. Then proceed toward the northwest by about twice the separation (or about 10 degrees) of the two "Pointer Stars" and there you will find the large and diffuse galaxy, M81 with M82 to the north of its larger sibling.

Though both galaxies present themselves as good views in a telescopic field, they are even a greater view in a wide field astrophotograph or CCD image. They also make great individual astrophotographs and or CCD images. This author took individual CCD images through a 127mm f/6 Orion ShortTube Refractor (piggybacked on a 10" f/6.3 Meade LX 200) using a Starlight X-Press MX5C CCD camera and combined them into the composite shown at Figure II. Due to their size and good brightness, they are excellent targets for beginning and advanced astrophotographers and CCDers alike. So snap away!!



One more comment on this fine pair of spiral galaxies. Each has their own proper name though amateur astronomers do not commonly use the names when referring to them during observing sessions. You always hear of them as M81 and M82. But, M81 is also known as Bode's Galaxy or Bode's Nebula and M82 is named the Cigar Galaxy. So next time you are out observing, refer to them by their proper names and see how many folks know what objects you are talking about.

Clear Skies,
Alfredo

TAAA Annual Picnic
Saturday, April 6
TIMPA Observing Site



**Telescopes for Telethon
Public Star Party**
Friday, April 19
Sabino Canyon Visitor's Center

Desert Skies Classified

- FOR SALE: Mead 4" Schmidt-Cassegrain Model 2045. Clock drive with tripod table-top legs. Asking \$375. Please contact Mike Sagarich at 881-3919. (05/02)
- FOR SALE: Celestron 80mm f/5 "Short Tube" wide view spotting scope (no mount). With mounting rings, tripod plate, and 6x30 wide field finder; no eyepieces or diagonal. Telescope can be easily mounted on a lightweight tripod for nice wide field views. \$100.00, Howard Lester 621-3451 (work) or 885-5479 (home). (06/02)
- FOR SALE: Meade 10" SCT LX50 with standard Meade foam case. Asking \$1200 OR BEST OFFER. Phone# (520) 722-5351 (feel free to leave a message) Email: jtennantsprint@earthlink.net (07/02)
- FOR SALE: 8" Meade Equatorial Starfinder. Like new. Optics star test very good. Battery powered clock drive. Includes Telrad finder, 40mm, 25mm, 10mm eyepieces, 2X barlow, and 5 colored filters for planetary viewing. Scope alone costs 600 new. Selling for \$450. I'm in Mesa, but can deliver to Messier Marathon in Arizona City this April. Call 480-924-5981. (07/02)
- FOR SALE: Celestron SPC8W Schmidt-Cassegrain 8" telescope with equatorial mount, dual-axis drive and Advanced AstroMaster computer with V 1.38 software. Includes: Three Eyepieces, 2x Barlow, T-adapter, Mylar Solar Filter, Footlocker case for telescope tube, Case for mount, Heavy-duty wooden tripod, Asking price, \$1200. Contact Blair Kuropatkin at Blairy@earthlink.net. (07/02)
- FOR SALE: Odyssey 1 13.1" Dobsonian mount reflector with Telrad finder. Three-volume Telrad finder star maps. \$1000+ invested, sell for \$690. Also includes the 8/98 issue of Sky & Telescope with a (very favorable) review of this telescope. Tim Roelike 794-0527 (wk.) 663-1518 (hm.). (07/02)
- FOR SALE: 8" Odyssey Dobsonian with eyepieces, 12 years old in excellent condition. Asking \$400. Nima Smith, 743-1890. (07/02)

Constellation Report by Chris Lancaster

Leo Minor

The Little Lion

If you look to the well known and well formed constellation of Leo, the lion, and then move your gaze slightly north toward equally impressive Ursa Major, you'll come to one of the most uninteresting and uninspiring constellations to the eye that there is. Sorry to be so harsh, but the brightest star of Leo Minor, Beta (β) Leonis Minoris [Alpha (α) has somehow been dropped], is only magnitude 3.8, and the others are 4.5 or less. In fact, Leo Minor sits in an area of the sky which the ancient Greeks called *amorphotai*, meaning "undeveloped." Johannes Hevelius came along in the late 1600's to give these stars their present name to fill in this comparatively empty part of the sky.

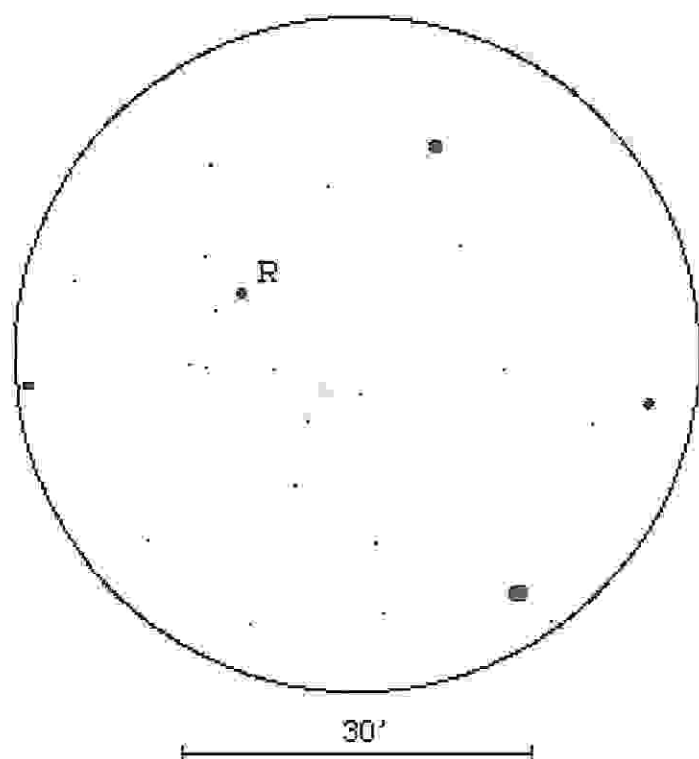
Leo Minor is a fair distance from the winter Milky Way, so what we expect to find here are no star clusters, and a good amount of galaxies and stellar objects. Looking to the west side of the constellation we find R Leonis Minoris, a cool M type star which is a long period variable (LPV) pulsing from magnitude 6.3 to a virtually invisible (depending on your telescope) 13.2 over a period almost matching a year — 372 days. Below is a representation of the field surrounding R. The brightest star to the lower right (southwest) is of magnitude 7.2. R is roughly 4.5 degrees west of 21 Leonis Minoris, or, specifically, RA 9h 45m 35s Dec +34d 30' 45".

There are several galaxies in Leo Minor. Most are small and in the vicinity of 12th to 13th magnitude. A couple are brighter and within the grasp of most backyard telescopes.

We find one of these galaxies, NGC3344, at RA 10h 43m 31s Dec +24d 55' 25". It's one of Leo Minor's brightest ones at magnitude 10.7. It spans an area of 7.0' x 6.5'. NGC3344 is a wonderful face-on spiral galaxy with a sharp nucleus and diminishing spiral arms. Its general orientation with respect to the Earth is similar to the nearer galaxies M33 in Triangulum and M51, the Whirlpool Galaxy, in Canes Venatici. While not as large as these two other galaxies, NGC3344 rivals their appearance nonetheless if we allow for the greater distance.

NGC3486 is of similar brightness (magnitude 10.7) a bit farther east at RA 11h 00m 24s Dec +28d 58' 33". This galaxy is of a very similar appearance, also being face-on to us and a size of 7.0' x 5.2'. You'll see a galaxy with a bright, broad nucleus.

Those of you with larger aperture can try for the interacting pair of galaxies NGC3396 and 3395. 1.4 degrees southwest of 46 Leonis Minoris. Both of these are of magnitude 12.5 and a small 3.0' x 1.2' for 3396 and 2.1' x 1.2' for 3395. The centers of these galaxies are only 1.7 arc minutes apart, and long exposure images show distinct nuclei, but their adjacent edges are being smeared together from gravitational interaction. You can find the pair at RA 10h 49m 53" Dec +32d 59' 10".



Field of R Leonis Minoris. North at top, East at left.

