

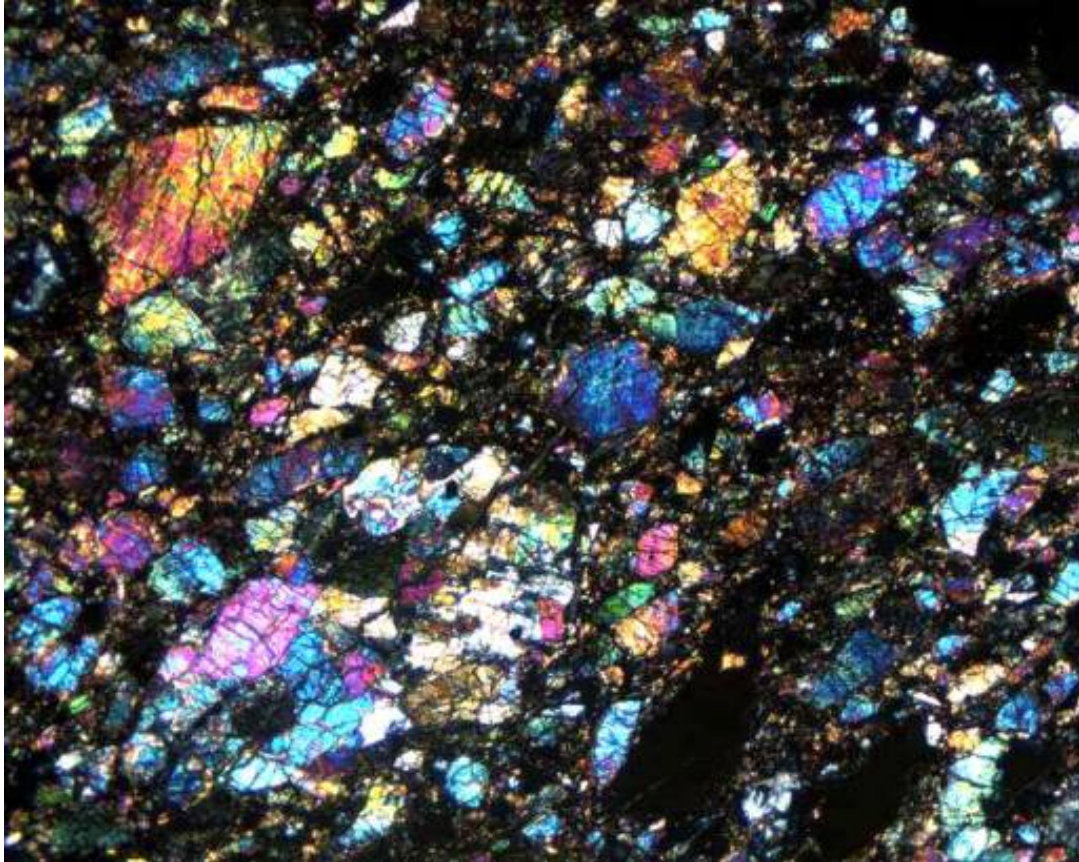


# Desert Skies

Tucson Amateur Astronomy Association

Volume LII, Number 6

June, 2006



**Meteorite slices help us learn the origin of the solar system.**

- ♦ Learn about meteorites
- ♦ School and TAAA star parties
- ♦ Grand Canyon Star Party
- ♦ Beginners and AstroPhoto SIG meetings
- ♦ Even more Unusual observatories
- ♦ Comet 73P Schwassmann-Wachmann
- ♦ Object of the Month
- ♦ Constellation of the month

**Cover Photo:** Meteorite Thin Sections. Meteorite NWA 773 "Dchira". Image from [http://www.meteorite-lab.com/thin\\_sections2.htm](http://www.meteorite-lab.com/thin_sections2.htm)

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TAAA Phone Number: (520) 792-6414

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### Membership in the TAAA

#### Annual Fees

- Individual membership .....\$25.00
- Family (includes two adults plus minor children).....\$30.00
- Youth under 18 years must join as a family upon parental or guardian acknowledgement of participation in TAAA events. Ask the Treasurer for the required form.

#### Discounts (one discount allowed, subtract from above rates)

- Seniors (over 60 years) .....\$2.00
- College Students, Teachers (K - 12) .....\$8.00
- Youth under 18 yrs (form required, contact the treasurer) .....\$13.00

#### Options (add to above membership rates)

- Tucson society of the Astronomical League (TAL) fees\$ 5.00
- Sky & Telescope Magazine 1 year (12 issues).....\$32.95
- Astronomy Magazine 1 year (12 issues).....\$34.00
- 2 years (24 issues).....\$60.00
- Postage for New Member Pack.....\$ 4.05

**Donations** are accepted for the following funds: SA-IDA/Light Pollution, TIMPA, Education, 30" Telescope & Land, and General/Undesignated.

#### Renewal Information

- Your membership expires as indicated on your mailing label.
- TAAA members may join the Tucson society of the Astronomical League (TAL) at the time they join or renew.
- Discounted Sky & Telescope or Astronomy magazine subscriptions are available to members and can be started or renewed at anytime. Rates are given above. Allow 3 months for processing. Subscriptions must be sent through the TAAA. *Do not send money directly to the magazines.* To change an individual subscription to the group rate, pay the

subscription amount to the TAAA treasurer. Include your magazine renewal notice.

- Please include a note explaining what you are paying for. Credit cards are not accepted. Write one check or money order for fees plus any options or donations. Make it payable to TAAA and send to:

Tucson Amateur Astronomy Association  
PO BOX 41254 Tucson, AZ 85717

**Mailing Address or Email Changes** - Send to address above or email the treasurer.

**TAAA Mission Statement** - The mission of the Tucson Amateur Astronomy Association is to provide opportunities for members and the public to share the joy and excitement of astronomy through observing, education and fun.

**Desert Skies Publishing Guidelines** - All articles, announcements, news, etc. must be submitted by the newsletter deadline. Materials received after that date will appear in the next issue. The editor retains all submissions unless prior arrangements are made. 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

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## President's Message

### Past President's Message

I can't thank enough the current and past Board members with whom I have been associated. These include, but certainly are not limited to, Steve Peterson, Michael Turner, Jane Tongate, Terri Lappin, Bill Lofquist, Ray Toscano, George Barber, Ken Wheelock, Steve Marten, Ken Shaver, Tom Watson, Andrew Cooper, Robert Callanan, John Kalas, and of course, Ed Finney.

After two years as Vice President and three years as President, I have one more year on the Board of Directors, as past president, and I will continue to work on the club's goals.

We are extremely fortunate to have Bill Lofquist as our new President. He brings a high degree of dedication and unsurpassed leadership abilities to the office. Our new Board with its incumbents and new blood will provide good continuity from one administration to the next and new ideas and perspectives as well.

Thanks to everyone for so many memorable years.

Thom Peck

### A Note From The President-Elect

Fellow TAAA Members:

I appreciate very much the opportunity to continue working with TAAA for the coming year as president. It promises to be a very exciting year. The level of activity is as high as I have seen it in the ten or so years that I have been a member. There is much strength to build on. A great deal has been accomplished during the three years of Thom Peck's tenure as president. We have a very involved Board of Directors, knowledgeable leaders in a number of different areas, and a strongly active membership. So the immediate future looks bright for enjoying astronomy.

Let's hope we get a lot of rain during the day, but good clear skies at night throughout the year.

Bill Lofquist

## Meeting Information and Calendar of Events

**TAAA MEETING DATE:** Friday, June 2, at the Steward Observatory Auditorium - Room N210

### **ASTRONOMY ESSENTIALS: 6:30 pm**

Title: Beginner's SIG Observing Program

Speaker: Tom Watson

This program will allow beginners to sample some of the many aspects of amateur astronomy, with the goal of acquiring basic observing skills.

### **GENERAL MEETING: 7:30 pm**

Title: Meteorites, Southwest Meteorite Center

Speaker: Dante Lauretta, Lunar and Planetary Laboratory

Dr. Lauretta will speak to us about meteorites at our June 2nd lecture. Dr. Lauretta learns about the origin of the solar system by analyzing meteorites. He is Director of the Southwest Meteorite Center at the University of Arizona's Lunar and Planetary Lab. The Southwest Meteorite Center was established for the preservation of meteorites for the benefit of both scientific and commercial purposes. More can be learned about the Southwest Meteorite Center at <http://www.lpl.arizona.edu/swmc/>.

Dr. Dante received his PhD from Washington University in St Louis, MO in 1997. His undergraduate studies were at the University of Arizona.

**BOARD OF DIRECTORS MEETING:** Wednesday, June 14, 6:30 pm at Steward Observatory Conference Room N305

### **STAR PARTIES AND EVENTS:**

03 June - Star Party at Whipple Observatory Visitors Center

08 June - AstroPhoto SIG at China Rose

14 June - BSIG at China Rose

17 June - TAAA Star Party and BSIG at TIMPA

17 - 24 June - Grand Canyon Star Party

23 June - Benson School Star Party

24 June - TAAA Star Party at Las Cienegas

28 June - Jacobs YMCA Star Party

**NEWSLETTER SCHEDULE:** Deadline for articles: Sat, June 24. Printing: Mon, June 26. Folding Party: Tues, June 27. Mailing: Wed, June 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: Christopher Bohlman (a 3rd grade Science Fair award recipient), Nancy Campbell & family, Brandon Clayton (a 1st grade science fair award recipient), Sharon Merchant & family, Renita & Jesse Nealon, and Susan & Dennis Riley. Glad to have all of you join! New members should pick up a members pack at a meeting if they didn't request it by mail. Hope you'll make it to our star parties or meetings so we can all get to know you. (Updated membership lists are available online at either YahooGroups list server websites under Files, or at most meetings.)

### Astro-photo SIG Meeting

June 8, 7pm

China Rose, NE corner Speedway/Rosemont

Our presentations feature CCD images, planetary webcams, and film. Come see some of the state of the imaging art over some Chinese food. Just show up and enjoy the show!

### TAAA Apparel

Looking for a special gift, or a way to make that fashion statement? Try on something from our fine line of club apparel. We've got hats, T-shirts, denim shirts, and patches. We take cash and checks.

### Paid Star Parties – April was Amazing

by John Kalas

In the April newsletter, I reported that the club experienced a great first quarter regarding paid star parties; seven events bringing in nearly \$3900. In the single month of April, the TAAA supplied astronomy services for seven more events netting \$3740. An incredible month! All but one event were for the J.W.

Marriott Resort & Spa. The following volunteers supported these events and their dedication is greatly appreciated.

Michael Turner  
Andrew Cooper  
Thom Peck  
Robert Crawford  
Jim O'Connor  
Nick Applegate  
Tom Rolfsmeyer  
Steve Marten

### How can I learn more about the Astronomical League?

Amateur astronomers from across the country benefit from perusing the many pages of the Astronomical League's website, [www.astroleague.org](http://www.astroleague.org). Naturally, this is the place to go if you're looking for information about upcoming events and League news. But there is so much more...

Want to learn all about one of the great League observing programs? Go to [www.astroleague.org/observing.html](http://www.astroleague.org/observing.html).

Do you know of a worthy candidate for one of the many League awards? Look at <http://www.astroleague.org/al/awards/awards.html>.

Are you interested in buying a particular book about our fascinating hobby? Then go to [www.astroleague.org/al/bookserv/bookserv.html](http://www.astroleague.org/al/bookserv/bookserv.html).

There is even something to help your club function better. Try [www.astroleague.org/al/socaid/socaidid.html](http://www.astroleague.org/al/socaid/socaidid.html)

Make the most of your Astronomical League membership! To find out more about what the Astronomical League offers you, why not log on to [www.astroleague.org](http://www.astroleague.org) today?

## Member's Events

### BSIG in June

Even with so many members off to the Grand Canyon Star Party in June, BSIG will hold its usual pair of meetings. The weekday gathering will take place June 14 at 6:00pm at the China Rose Restaurant, northeast corner of Rosemont and Speedway Blvd. The TIMPA gathering will be, as usual, the following Saturday night/Sunday morning (6/17-18), weather permitting. If the Monsoon jumps on us early this year, this might very well be our last TIMPA opportunity for a while, so plan to take advantage of it! (And if I'm wrong about this, no one will be happier...)

Meeting content will revolve around the usual list of suggested objects. In addition, please bring along whatever

you use for recording your observations. I intend to talk a bit on the how's and why's of keeping an observing log. The more examples we have to share of how this can be done, the better. So come to dinner at China Rose in June and be prepared to compare notes. So to speak...

Tom Watson  
BSIG Committee

### TAAA Star Party at TIMPA

Saturday, June 17

Come on out and enjoy the summer skies! TIMPA star parties are great for both beginners and experienced ob-

### Member's Events (cont.)

servers. Our novice members can get help with observing issues or equipment problems, as there are many experienced members there who would be happy to help. If you don't own a telescope, come anyway, because there are lots of telescopes set up and everyone is invited to look through them. This is a great way to check out different telescope designs before you make that all-important decision to buy. 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 cool temperatures after sunset. It's also a good idea to bring insect repellent. Directions to the TIMPA site are located on the outside flap of this newsletter.

#### Grand Canyon Star Party

17-24 June 2006

North and South Rims

Well, Star Party time is upon us! I'm hoping to e-mail fee waivers, last minute info, map and a letter just after the 1st of June (trying to save postage this year), so look for that and if you do not see it, drop me an E-mail. If you don't have access to a printer to print out your fee waiver, I might have to mail it to you, so also let me know. Mostly just let me know if you plan to come and don't hear from me before the star party!

Construction is still going on at the Yavapai Point Parking lot, but only one or two parking spots are removed from our use, so we are "go" for a star party there. The lower field is open and available, and also, for the first time the oversize bus parking on the east side of the lot will be unused, so we can park on that side of the lot as well.

We have great t-shirt artwork and I will be putting in an order for that also just after the first of June. The issue this year is that the artwork is a jpeg, so it won't be a silk-screened shirt, which is fine, but the quality of the printed results depends on the shirt quality, and the results are quite dramatic. So I've decided not to scrimp, so expect to pay a couple dollars more than last for this year's shirts. If we go back to screened art, the price will come down next year - I don't make any money from this, just pass the cost along. So for last minute orders, if you need

over-sizes (larger than 2XL), let me know ASAP!

It is going to be great, as usual, all of the regulars are going to be there, and we'll likely add some new ones to the mix as well. Again, drop me an e-mail if you have not heard from me recently concerning the star party.

Dean Ketelsen

gcsp@tucsonastronomy.org

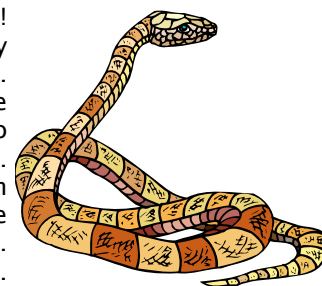
#### TAAA Star Party at Las Cienegas (Empire Ranch)

Saturday, 24 June

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. And, there are now restroom facilities at the site. Las Cienegas is at 4000 feet so be prepared for cool temperatures after sunset. It's also a good idea to bring insect repellent. 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.

#### Rattlesnake Alert!

Be alert for rattlesnakes! Rattlesnakes are generally aggressive only if disturbed. If you see one, keep a safe distance and DO NOT try to interact with it in any way. Snakes are much faster than our reflexes, and should be handled only by professionals. Wear boots and long jeans. For more information, go to <http://www.friendsofsaguaro.org/rattlesnakes.html>.



## Our Sponsors

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### Member's Events (cont.)

Along with rattlesnakes, other desert critters, such as gophers and ground squirrels, make their home at TIMPA. These residents can leave holes and other potential tripping hazards, so be careful when walking.

Finally, the Tucson water department has declared the water at TIMPA is NO LONGER POTABLE. It is highly advised that you bring your own water.

### Items of Interest

#### WEBSITES: TRIPS ON THE INTERNET SUPER-SKYWAY

By Rik Hill

##### Gimmie Shelter! Pt. 3

This thread has really surprised me in the positive response it has gotten. I'm glad they are being enjoyed. The main points to all this is that any shelter protecting a telescope is an observatory and a telescope in an observatory near your house will get more use. With that in mind....

Perhaps one of the strangest designs and names, for an observatory is the Oil Region Astronomical or ORAS Observatory: <http://www.oras.org/obsphoto.htm>

It's a split roll-off roof on a round building! Only once before have I seen this design and that was on Kitt Peak, next to the Burrell Schmidt of Case Western Reserve Univ. In that case an old 12" Schmidt telescope was sent to another location and the dome went somewhere else. Massachusetts Inst. Of Technology wanted to set up a optical gamma ray burst detecting system of cameras in that building and put a simple square roll-off roof on the round building.

As I said above, "any shelter protecting a telescope is an observatory". Well this next one certainly tests that hypothesis! The Outhouse Observatory and the "Silo" Observatory, owned by the same person, are a type of rollaway observatory: <http://www.noomoon.com/noomainastroOH.htm>

It presents a novel solution to a problem of an elevated deck observatory housing some handsome equipment.

Dennis and Jean Whitmer have come up with an unusual design for a rooftop roll-away shelter at their Eagle's Nest Digital Observatory (ENDOR) near Sierra Vista, Arizona: <http://c3po.cochise.cc.az.us/astro/observatories14.htm>

Basically, it's a roll-off building, on top of a larger building and a very stable design that has withstood over 100 mph winds!

A dome is usually expensive (though check out this column next month for some affordable ones) so this amateur made a 'roll-around roof' observatory at the Whitepeak Observatory, Tacoma, WA: <http://www.cityastronomy.com/observatory.htm>

It's a beautiful building, very well built and designed for

specific challenges of the site. The interior photos are a testament to quality craftsmanship.

Taking this idea one step further the Possum Observatory in Gisborne, New Zealand rotates the whole building about the telescope: <http://www.possumobservatory.co.nz/12-00Observatory1.htm>

This design is remarkably similar to the one built by Leslie Peltier of Delphos, Ohio back in 1937. He called it the Merry-Go-Round Observatory. You can see a photo of it in the short biography at:

<http://aavso.org/aavso/membership/lcpeltier.shtml>

Another amateur inspired by this same design made some modifications to keep the weather off the observer completely using an alt-azimuth design in a roll-around observatory:

<http://www.dim.com/~ashe/merrygoround.html>

In a colder climate this design might be handy but I think you would suffocate in Tucson!

Another attractive building takes advantage of some unusual visibility problems where only the south and east horizons are usable: <http://www.wagar.org.uk/astro/my.htm>

This amateur lists a whole bunch of tips at the bottom of the page so that others may avoid the pitfalls he experienced. Clearly, he overcame them and made an observatory that looks for all the world like a garden shop in his yard.

I can't end this without pointing out one of the more beautiful dome observatories, the Silvercreek Observatory in Scurry, Texas: <http://members.aol.com/dbaker1047/SCO/obs.htm>

While it may not be the most practical from a heat standpoint, it sure is 'purdy'!

As always, if you know of a particularly good website you would like mentioned here, or some web topic you would like to see highlighted, just drop me a line at: [rhill@lpl.arizona.edu](mailto:rhill@lpl.arizona.edu)

#### NOAO Imaging Workshops

Imaging workshops at NOAO offer amateurs expert advice on taking and processing images with web cams, digital



**Items of Interest (cont.)**

cameras, and CCDs. Information on the following workshops is available at <http://www.noao.edu/outreach/kpvc/events.html>:

Web Cam Imaging. Presented by Robert Reeves, June 17

CCD-Image Processing with Photoshop. Presented by Dr. Travis Rector, June 24, 25

Digital Astrophotography. Presented by Robert Reeves, September 16

Reservations are available at 318-8726. A credit card is required to hold a reservation. Take advantage of these workshops to refine your imaging skills or to get started in astro-imaging.

**New Ownership, New Name...**

By Rob Nelson

Same great place to stay and observe! I recently heard that there has been some Forum discussion as to what the status of The Skywatcher's Inn in Benson is. I have been a member of TAAA for about three years now, albeit somewhat less than active than I would like to be, but more importantly, I was the listing agent for the sale of this property.

I can tell you that the property has new ownership as of March 15, 2006. With the exception of a few cherished personal items, the entire contents (over 59 pages of inventory) were conveyed to the new owner. The staff remains the same with the exception of two who had to move on due to full time job requirements. As of this writing, the rates are the same as well.

The new name is *Astronomer's Inn* and it is anticipated that a new website should be up and running soon. It is my understanding that the new owner intends to keep the facilities open, reservations are very strong, and this should be a very good year for the Inn.

It is quite possible that at some future date, the property status will become a nature conservancy, thus ensuring its immediate surroundings from localized light trespass. However, as a REALTOR®, I can tell you that the anticipated growth in the area over the next twenty years is going to be huge.

It is my understanding that TAAA has had a close relationship with the Inn for a long time. I hope this will continue, and that as individuals, each of you has the opportunity to experience this remarkable treasure we have in our own backyard.

If you have any further questions about this matter, I can be reached at [Rnelson@longrealty.com](mailto:Rnelson@longrealty.com). I can only answer those questions that are considered "public knowledge".

**Positions open at Astronomer's Inn**

Astronomer's Inn is looking for applicants to hire who have a strong knowledge of the night sky and the ability to impart that knowledge in an easy to understand format to inexperienced individuals. "Starguides" should be enthusiastic and personable, and have good customer skills. They also need to be adaptable to handle any situation. They will teach basic astronomy principles and theories to interested guests, all the while showing them planets, galaxies, nebulae, etc., through facility telescopes. Astronomy sessions are approximately 4 hours long.

Astronomer's Inn will provide training on 20" telescope and setup of solar filters, etc. Contact Kathleen Burch, manager of Astronomer's Inn, at 520-586-7906 or by email at [vegasky@earthlink.net](mailto:vegasky@earthlink.net), for further information about requirements of the position and compensation for services rendered as a Starguide. Astronomer's Inn is located in Benson, Arizona, at 1311 S. Astronomers Road. To learn more about Astronomer's Inn, visit their website at [www.astronomersinn.com](http://www.astronomersinn.com).



***Look Great!  
with TAAA  
Apparel.***

## Public Star Parties and Community Events

All members of are asked to support the TAAA School Star Party program and other community events listed below. TAAA either sponsors or co-sponsors these events. These are great opportunities for beginners as you may only need to know a few objects in the sky. Even without a telescope, you can be valueable in other capacities. Sign up sheets for many events can be found at the meeting or contact a TAAA officer.

### Whipple Observatory Visitors Center

Saturday, June 3

The Smithsonian Institution's Whipple Observatory will present an Open House and Star Party on Saturday, June 3. Observing will begin after 7:45 p.m. courtesy of telescopes provided by the Tucson Amateur Astronomy Association and Sonora Astronomical Society.

6:00 p.m. Visitors Center opens  
 7:15 p.m. Informal lecture on astronomy by Observatory staff  
 ~7:45 pm. Observing begins (in parking area next to Visitors Center)

Seating is limited, so you may wish to bring a lawn chair. Dress for cool evening temperatures. Small flashlights and binoculars are useful to bring.

Please cooperate with staff directing parking when you arrive. The parking spaces nearest the building are reserved for TAAA/SAS members and their telescopes. Visitors should park along the driveway or in the parking area outside the gate or along the road as directed. (Please note: Visitors will be allowed to park cars next to the building in the space usually reserved for telescopes until 5 p.m. At that time, visitors will have to move their cars to other parking spaces so that telescopes may be set up.)

For more information call 670-5707. In case of threatening weather, call 670-5707 after 5 p.m. on the 3rd for information about star party cancellation.

The Whipple Observatory, Tucson Amateur Astronomy Association, and Sonoran Astronomical Society present this opportunity to see the stars under dark Southern Arizona skies.

<http://cfa-www.harvard.edu/flwo/visitcenter.html>

The administrative complex for the Fred Lawrence Whipple Observatory is 43 road miles south of Tucson and 38 road miles north of Nogales, Arizona.

From Tucson, drive south on Interstate 19 to exit 56 (Canoa). At the bottom of the exit ramp, turn left and drive under the freeway to the frontage road on the east side. Turn right and drive south three miles to Elephant Head Road. Turn left and drive east, crossing the Santa Cruz River on Elephant Head Bridge. One mile east of the river, turn right on Mount Hopkins Road. Drive southeast about seven miles to the Observatory Office (end of pavement).

From Nogales, drive north on Interstate 19 to exit 48 (Amado/Arivaca Junction). At the end of the exit ramp, turn right and then left onto the frontage road. Drive

north for about two miles to Elephant Head Road. Turn right and drive east, crossing the Santa Cruz River on Elephant Head Bridge. One mile east of the river, turn right on Mount Hopkins Road. Drive southeast about seven miles to the Observatory Office (end of pavement).

Dan Brocius  
 Smithsonian Institution  
 Whipple Observatory  
 P.O. Box 6369  
 Amado, AZ 85645 USA

520-670-5706 Voicemail  
 520-670-5714 Fax

### Benson School Star Party

Friday, 6/23/2006

**East**

No. Of Scopes: 3

Benson School will be planning Astronomy and Light Pollution at 360 S. Patagonia St. I-10 to Exit 303, go to second light (Patagonia St) Turn right. Go past 6th street, school will be on your right. Viewing will be on the Football field. Contact person Anita Choate can be reached at 586-2213, ext 629 or email [achoate@bensonsd.k12.az.us](mailto:achoate@bensonsd.k12.az.us) Set-Up Time: 7:30pm. Observing will be from 8:00 pm to 10:00 pm. Sunset: 7:34pm, Dark Sky: 8:37pm Moon Phase: Late Crescent.

### Jacobs YMCA Star Party

Wednesday 6/28/2006

**North-Central**

No. Of Scopes: 3

Jacobs YMCA will be holding YMCA Family Fun Night at 1010 W. Lind. From SPEEDWAY go north on ALVERNON 1mi., Turn left on GRANT RD. go west 4 mi., Turn right on N. ORACLE RD go 0.7 mi., Turn left on W. MIRACLE MILE STRIP go 0.5 mi., Turn right on N. FAIRVIEW AVE go 0.4 mi., Turn left on N. ERMA AVE go 0.1 mi., Turn right on W. LIND ST go 0.1 mi. Viewing will be on baseball fields behind Jacobs YMCA in Jacobs Park. Contact person Berlin Loa can be reached at 888-7716 or email [jacobs@tucsonymca.org](mailto:jacobs@tucsonymca.org) Set-Up Time: 8:00pm. Observing will be from 8:30 pm to 10:30 pm. Sunset: 7:34pm Dark Sky: 8:37pm Moon Phase: Crescent after New Moon.



## Opportunity to Volunteer

We are looking for a few members to take on positions that have recently been vacated. Here's your chance to help our club. Either one member, or a team of members can fill each position.

### Star Party Volunteer Coordinator

Want to be a key person in the success of our community outreach Star Party Program? Occasionally, the Star Party Volunteer Coordinator (SPVC) is asked to work with our Star Party Coordinator Paul Moss in finding an extra scope or two for an upcoming event. The SPVC emails Star Party Volunteers who are kept on a regularly updated list. This usually matches a scope and event in the same general area. The TAAA Announcements list server and possibly the TAAA Members Forum list server can be used to match the scope with the opening. Other than the interested star party scope list, there is nothing to maintain. Please consider doing your small part for TAAA and one of our great community outreach programs!

### Equipment Loan Coordinator

The Equipment Loan Coordinator is in charge of the TAAA Loaner Telescope Program. Generally, this means storing the telescopes until a member requests them. We are looking for someone who resides in central Tucson. The person in this position should be familiar with telescope and mount designs so they can train a beginner on the correct operation of these telescopes. (The Meade GPS telescope training is more intensive and is currently performed by Michael Turner.) The ELC is responsible for knowing who has borrowed the telescopes and maintains the loaner records for the program. Occasionally the TAAA board requests reports on the loaner program.

If you're interested in either position, contact the board at [taaabod@tucsonastronomy.org](mailto:taaabod@tucsonastronomy.org) or speak with a board member.

## Dark Skies for June 2006

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

We/Th 31/ 1	23:41 - 3:40	Su/Mo 11/12	- - -	Th/Fr 22/23	21:15 - 3:14
Th/Fr 1/ 2	0:12 - 3:39	Mo/Tu 12/13	- - -	Fr/Sa 23/24	21:15 - 3:38
Fr/Sa 2/ 3	0:40 - 3:39	Tu/We 13/14	21:12 - 21:57	Sa/Su 24/25	21:15 - 3:38
Sa/Su 3/ 4	1:05 - 3:39	We/Th 14/15	21:12 - 22:42		
		Th/Fr 15/16	21:13 - 23:20	Su/Mo 25/26	21:15 - 3:39
Su/Mo 4/ 5	1:29 - 3:38	Fr/Sa 16/17	21:13 - 23:53	Mo/Tu 26/27	21:15 - 3:39
Mo/Tu 5/ 6	1:53 - 3:38	Sa/Su 17/18	21:13 - 0:23	Tu/We 27/28	21:37 - 3:39
Tu/We 6/ 7	2:19 - 3:38			We/Th 28/29	22:11 - 3:40
We/Th 7/ 8	2:48 - 3:37	Su/Mo 18/19	21:14 - 0:53	Th/Fr 29/30	22:40 - 3:40
Th/Fr 8/ 9	3:21 - 3:37	Mo/Tu 19/20	21:14 - 1:23	Fr/Sa 30/ 1	23:06 - 3:41
Fr/Sa 9/10	- - -	Tu/We 20/21	21:14 - 1:55	Sa/Su 1/ 2	23:30 - 3:41
Sa/Su 10/11	Full Moon	We/Th 21/22	21:15 - 2:32		

Weekend	Sun	Sun	Mercury	Venus	Mars	Jupiter	Saturn	
Sa/Su	Set	Rise	Set Vi	Rise Vi	Set Vi	Set Vi	Set Vi	Vi=Visibility
3/ 4	19:25	5:16	20:51 4	3:19 -2	22:43 2	3:32 -2	23:05 1	-3 brilliant
10/11	19:28	5:15	21:11 3	3:16 -2	22:30 2	3:03 -2	22:40 1	0 conspicuous
17/18	19:31	5:15	21:15 3	3:15 -2	22:17 3	2:34 -2	22:15 1	3 moderate
24/25	19:32	5:17	21:06 4	3:15 -2	22:03 3	2:05 -2	21:50 2	6 naked eye limit
1/ 2	19:33	5:19	20:44 7	3:18 -2	21:49 3	1:37 -2	21:25 3	9 binoculars limit

By Erich Karkoschka

## Desert Skies Classified

For Sale	Celestron Pixcell255 320x240 CCD, use for guiding or entry imager \$450. Meade ETX60 with tripod plate and power supply \$100. Vixen LV 12mm eyepiece \$75. Orion 7-21mm zoom eyepiece \$60. 14mm Ifocus for SBIG 237 \$80. Contact Richard Schulze at 721-0694 or email at <a href="mailto:richard.schulze@cox.net">richard.schulze@cox.net</a> . [09/06]
For Sale	7" Maksutov LX200 GPS UHTC coatings for sale. This is BRAND NEW still in the box NEVER USED. Call Joe if interested, 520-908-3393. [09/06]

Your ad will run for 4 months unless specified. Month and year of last appearance is last item of ad. For additions or changes to this list, call or e-mail the newsletter editor.

### TAAA Board of Directors Meeting - May 10, 2006

Attending: TAAA Board Members present: Thom Peck, presiding; Bill Lofquist, Steve Marten, Terri Lappin, Ken Shaver, Tom Watson and George Barber. Board Members (elect) present: Teresa Plymate, J.D. Metzger. Members present: Bob Gilroy, Jim and Karen Telewski. President's Call to Order: 6:40PM

**April Minutes.** Accepted, Unanimous.

**Announcements.**

- Ken Shaver learned that most people at recent Las Cienegas meeting were equestrians, more concerned about water and road conditions than the old runway.
- Terri is intending to pay website fee (Crystal Tech) \$101.71 for next 365 days.
- Terri will purchase business cards
- Terri received 8" Meade Schmidt-Newtonian donated by Dick Hoye soon to be added to TAAA Loaner Program.
- The Members-at-Large will be responsible for TAAA Information Line on rotating basis.

**Results of Election for 2006-2007 Board of Directors Report - Bill Lofquist**

The following officers will begin their term on June 1, 2006:

President - Bill Lofquist	Vice President - Ken Shaver
Secretary - Steve Marten	Treasurer - Terri Lappin
MAL 1 - George Barber	MAL 2 - J.D. Metzger
	MAL 3 - Teresa Plymate

**Star Party Scheduling, Volunteer Coordinator, ASDM Replacement - Steve Marten**

Steve proposed establishing star party scheduling policy to update and confirm current star party guidelines and suggested that he provide the policy for Board approval at the next meeting; so directed. Some scheduling guidelines suggested were no Friday or Saturday nights mid-March to mid-May (avoid T4T conflicts), no school star parties on any SIG night or General Meeting Night. Steve suggested that the Secretary be designated as TAAA official responsible for the Master Schedule (instead of Star Party Coordinator) that is to be posted on Yahoo Announcements to allow de-conflicting for TAAA coordinators. Steve proposed a Senior Star Party Coordinator in place of Volunteer Coordinator to manage volunteer demand for paid, public and school star parties; each of these coordinators report to Senior Star Party Coordinator; Steve will draft for Board approval and inclusion in TAAA By-Laws. Jim and Karen Telewski initiated discussion resulting in general approval for two regular public star party locations, one east and the other central or west-central Tucson (as replacements for ASDM semi-annual event). Library sites are preferred over parks in general for access to facilities, bulletin board announcements and to attract library patrons. These public star parties should be scheduled to observe moon and planets (due to ambient light conditions). Thom requested Jim and Karen manage proposed public star party events and that they collect information on selection of two primary sites, preferably libraries, establish liaison with city and county contacts and report status by email or at next meeting. The Board agreed that Bill, Steve, and Terri would meet with John Kalas and Paul Moss in early June to discuss star party operations and policy.

**TAAA Insurance Coverage - Terri Lappin**

Robert Crawford advised Terri to pay the current insurance bill and draft letter to Janet Parrish, our agent, to clarify coverage of only 150 TAAA members at any one event. We are not covered for liability for Forum content; we need to establish policy designed to prohibit statements that could result in liability. Also our liability coverage does not protect us from contractor-associated liability at TIMPA. Teresa will research that the construction company has proper licensing and coverage.

**TIMPA Dome** - Board discussed current FEMA requirements and how to best respond to flood plain requirements. Bill will ask Steve Ratts to report on current status and estimate of completion of FEMA requirements by email or at next meeting.

**Web Site Redesign** Meeting with Webmaster will be scheduled and completed before next meeting.

Adjourn 9:45 p.m. 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.

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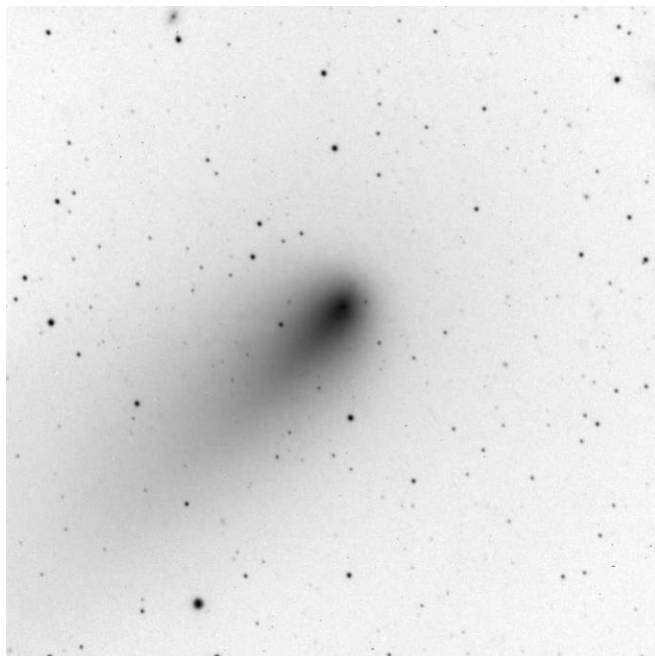
**Member's Forum**

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**Comet 73P Schwassmann-Wachmann**

Imaged by Steven Peterson

This is Fragment C of Comet 73P Schwassmann-Wachmann recorded 23 April 2006; 2:51 am Mountain Standard Time as it travels through the constellation Corona Borealis. It was imaged by Steve Peterson with a Fingerlakes "DreamMachine" CCD camera (Tektronix thinned back-illuminated chip with 24micron pixels arrayed 1024x1024; and coupled to the Cassegrain focus of a Celestron C-14 @ f/11. It is a single 2-minute exposure recorded from his backyard observatory.



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**Star Party Reports**

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**Telescopes for Telethon 2006**

Photos by Wendee Levy

On Friday, April 28, the 2006 Telescopes for Telethon kicked off at five Tucson area Wal-Mart stores. Our members set up their telescopes in front of the Wal-Mart stores showing Saturn, Jupiter, and other objects.





### Star Party Reports (cont.)

Then, on Saturday, observing started around 3:00 pm. Members with solar telescopes were kept busy showing sunspots, prominences, and other solar features.

As evening drew near, even more members arrived with their telescopes. Members of the public were treated to views of Saturn, Jupiter, Mars, binary stars, nebula, and other fascinating night sky objects.

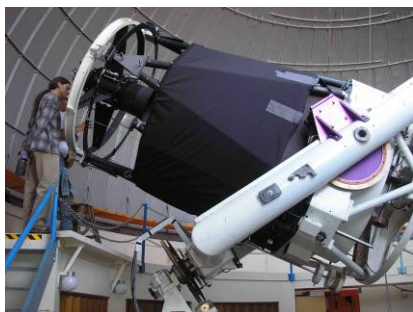
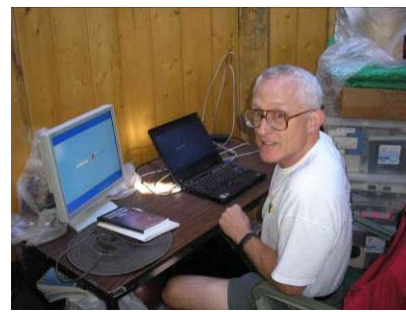


A BIG THANKS to all of the hard working volunteers who made this a successful event. Corporate donations, pledges from individuals and the doubling of the donations collected at the Wal-Mart stores are still being finalized. Watch for the final donation amounts in an upcoming edition of *Desert Skies*.

### Mt. Lemmon Star Party

Photos by John Croft

On Saturday, May 20, our members enjoyed an evening on Mt. Lemmon. We observed visually with the University of Minnesota 60", the UofA Jamieson 20", the UofA Astronomy Camp 12", and about 15 scopes owned by TAAA members. The UofA 60" (pictured below) was available for imaging using a 4K x 4K CCD at prime focus—giving a 1 degree field of view. Images taken using the UA 60" were posted to <http://www.lpl.arizona.edu/css/starparty>. About 150 people from TAAA, Steward Observatory, and the Lunar & Planetary Lab attended the event.



### Object of the Month by Alfredo Garcia

I was reading the May 2006 issue of Astronomy Magazine and found an article on an object that I had already written about in a recent OTM. As such, I decided to write about that object one more time and provide some updated data since it has proved to be a very interesting celestial treat indeed. This month, the OTM is a visitor to our solar system that has broken into many fragments and maybe in its celestial death throws. The ancient Greeks referred to such visitors as "aster kometes" or longhaired stars. These longhaired stars are referring to the class of objects we know as comets.

Without any further introduction, I present to you the June 2006 OTM, Comet Fragments 73P/Schwassmann-Wachmann 3 Fragments B and C. Arnold Schwassmann and Arno Arthur Wachmann (Hamburg Observatory, Bergedorf, Germany) co-discovered the original comet on 2 May 1930. The comet was found on photographs they exposed during a minor planet survey. At the time of discovery, the comet was described as a diffuse object of about magnitude 9.5. This comet also goes by "SW-3". The comet has an approximate 5-year orbital period.

Like all comets, all of Comet 73P/Schwassmann-Wachmann 3's fragments will loop around the Sun. As they approach the Sun, gas and dust will burn off at an increasing rate. Sunlight reflecting from this material will make the comet's coma, grow brighter. The gas and dust will be pushed away by charged particles known as the solar wind, forming tails. Dust particles form a yellowish tail and ionized gas makes a bluish ion tail. The diagram at Figure I below shows these various phenomena and features. SW3-C will reach perihelion date on 7 June 2006 and the comet passed within 0.0735 AU from Earth on 13 May 2006. As a point of interest, this distance from Earth was only slightly farther away than that from the original discovery in 1930.



SW-3 has had an interesting history since its discovery. You can read all about its early history and its more recent 1995 and 2001 visits on the Internet at Gary Kronk's Comet Homepage at <http://www.cometography.com/>. Its visit in 2006 has proven to be very interesting indeed. I have been observing the fragments since they were first visible and June 2006 may well be the last month you get to observe them at least from the Northern Hemisphere. April and May 2006 have proven to be exciting months indeed for observing the comet's two brightest fragments. You can find a real good description of the history from mid-April to late May at <http://www.skyhound.com/sh/73P.html>.

The comet has now broken into as many as 67 fragments (just imagine that!!) as of the time I wrote this article (20 May 2006). Ephemeris data on the fragments can be found at <http://neo.jpl.nasa.gov/cgi-bin/db?name=73P>. Fragments B and C have undergone some very interesting "changes" in the past month or so and continue to do so to as of the date I wrote this article (20 May 06). One of the more spectacular changes for me was when Fragment B was found to have a double nucleus as early as 21 April 2006. The image at Figure II is my imagery evidence recording the double nucleus event in the late evening hours of 24 April 2006. This image was taken with through my 80mm f/5 Orion ShortTube (OST) refractor using my Starlight Xpress SVXH-9 CCD camera. I

was thrilled when I first saw the image appear on my laptop's screen. Further processing revealed that indeed I had captured the double nucleus event even with my 80mm OST. This was the first time I had recorded such a comet event so that made the image even more special to me. As a matter of fact, I submitted a collage of the image to the Spaceweather.com website for posting and it was posted along with others on 25 April 2006 at <http://spaceweather.com/swpod2006/25apr06/garcia.jpg>. So I was glad I was able in a small way to make my own contribution to the comet's image history!

Comet Fragments 73p/schwassmann-Wachmann 3-B and C will be marginally placed for observation during this month of June in the early morning hours just before dawn. Finding them will not likely be difficult if you observe them around the 0400 to 0500 MST timeframe from Tucson, AZ. Look for the fragments in the constellation of Cetus, the Whale as the month progresses. The fragments will be in the north by north east sky near the horizon. My Pluto GUIDE 7.0 software shows the fragments at about 13 to 14 degrees above the horizon at the beginning of the month and at about 19 to 20 degrees above the horizon during the above Tucson, AZ observation timeframe. As an added treat, the two fragments will be within about 48 arc minutes of each other by month's end having started out the month within about 1.9 degrees of each other. If you wish see the fragments' projected paths in the sky for June 2006 and star hop to them, there is real nice finder chart on the Internet at: [http://www.yo-connect.net/~mmatti/images/73P\\_jun-jul06.gif](http://www.yo-connect.net/~mmatti/images/73P_jun-jul06.gif). You can also go to the NASA Ephemeris Generator on the Internet at: <http://ssd.jpl.nasa.gov/horizons.cgi>. It is easy to use and provides you



## Object of the Month by Alfredo Garcia

Details: 80mm f/5 refractor.  
5minute exposure  
SLX SVX-H9 CCD camera.

April 24, 2006

Comet 73P-B

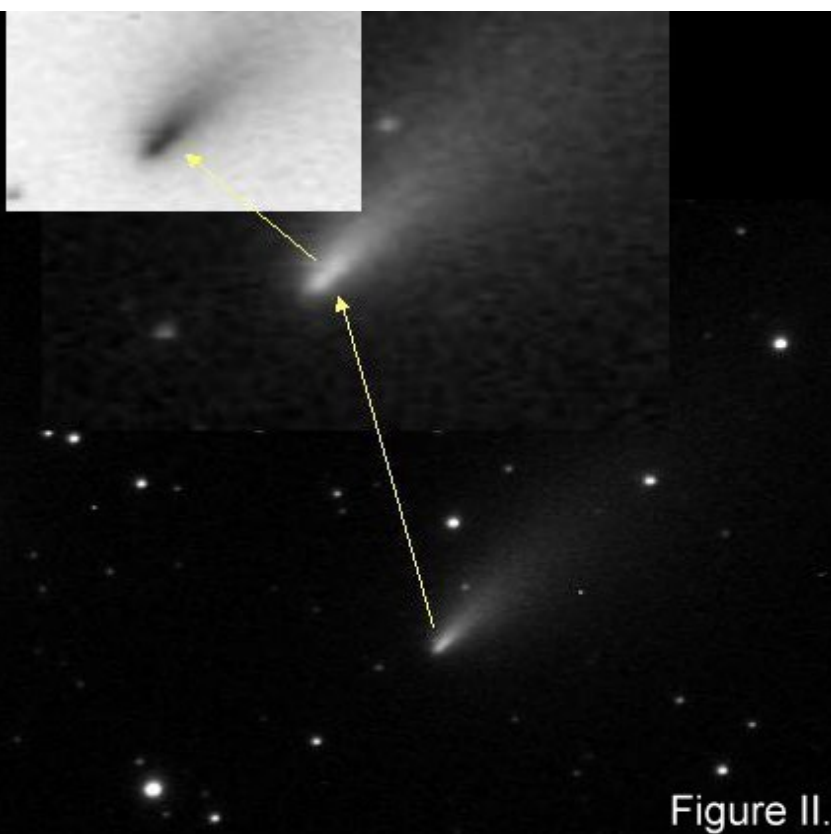


Figure II.

with a wealth of data on the comet to include positions, brightness estimates, etc. Give it a try! The best time to observe the comet fragments during the month is of course when they are highest above the horizon and as soon as possible before dawn.

Though Comet Fragments 73P/Schwassmann-Wachmann 3-B and C will present itself themselves nicely in a telescopic field of view, they will be an even greater view in an astro-photograph or CCD image par-

ticularly towards month's end when they will be closest to each other. The image at Figure IV is the one of the latest images I have taken and it shows a nice comparison of Fragments B and C. If you have the equipment, do get out and image this piece of astronomical history for yourself. I think it will be very exciting! Good luck and success in your own imaging endeavors.

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

For more information, go to: [www.sa-ida.org](http://www.sa-ida.org)

Or feel free to contact:

John Polachek  
President of SAIDA  
E-mail: [jpolach@dakotacom.net](mailto:jpolach@dakotacom.net)  
Telephone: 743-1362

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

WE USUALLY HAVE PIZZA !!!

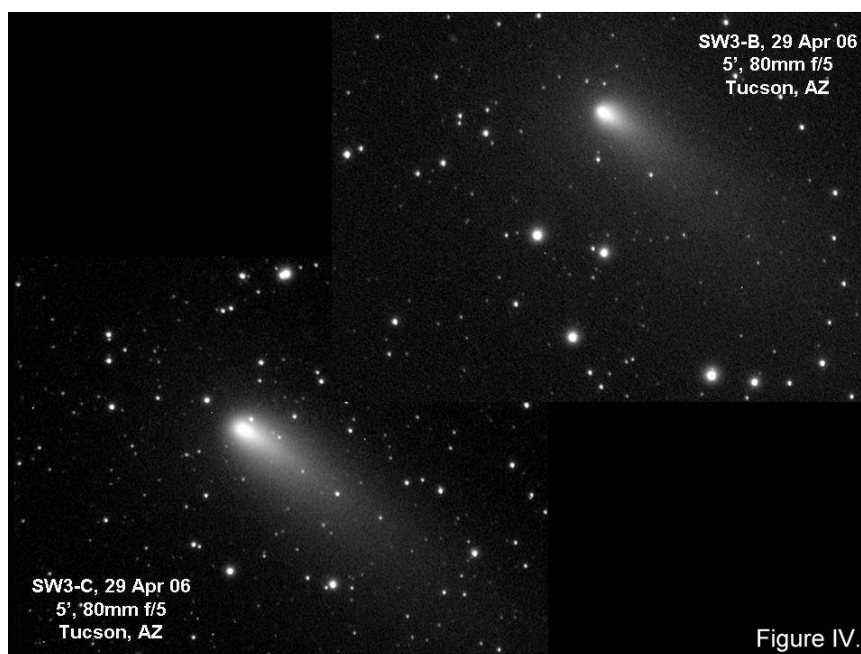


Figure IV.

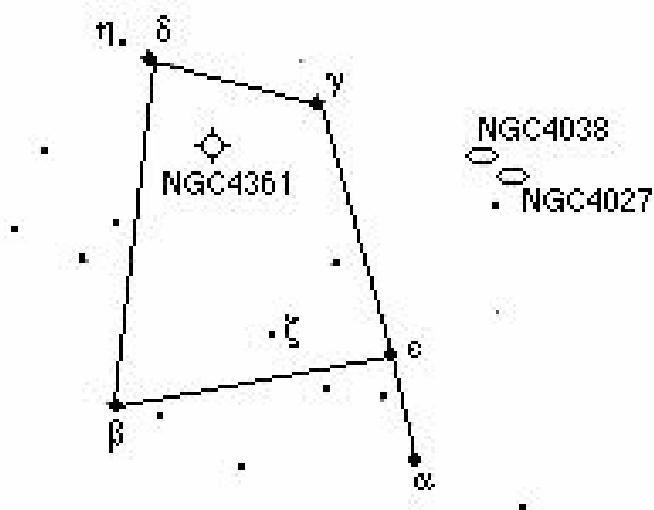
## Constellation Report by Chris Lancaster

### Corvus

The Crow, or Raven

Zoologists know the term "Corvus" as the genus to which crows belong. Astronomers are also familiar with the term since a constellation by the same name makes its appearance in the mid-evening hours this time of year, reaching the meridian at 11pm during the middle of April. If you look southwest of Spica in Virgo you will see an irregular quadrilateral of stars that is the constellation of Corvus. It is one of the smaller constellations, measuring 184 square degrees (Orion, by comparison, occupies 594 square degrees.)

One legend states that the god Apollo gave Corvus a cup to fetch some spring water. Along the way, a fig hanging from a tree tempted the crow. But, since the fruit was still green, the crow couldn't resist waiting for it to ripen. When he returned, Corvus explained his tardiness by bringing back a water snake along with the full cup of water, saying the snake had attacked him. Apollo was too wise to believe the foolish bird and banished Corvus, the cup (Crater), and the water snake (Hydra) to the sky. Another legend says that Apollo was suspicious that Coronis, with whom he was having an affair, was being unfaithful, so Apollo sent Corvus, who then was a silver bird, to spy on her. Corvus reported back that Apollo's suspicions were correct, so the god slew Coronis and sent Corvus to Hades where his feathers were burned black.



The Arabs saw the four bright stars of Corvus as a tent. In fact, Alpha Corvi is named Alchiba, the Arabic word for "tent." This is a relatively nearby star lying 68 light years from Earth. Delta Corvi, named Algorab (an Arabic derivative meaning "raven's wing"), is a pleasant double star which has a primary of magnitude 3.1 and spectral type of B9 V, and a dimmer secondary shining at magnitude 8.4 and having a spectral type of K2 III. The two are separated by a comfortable 24.2 arc seconds, so splitting them is an easy task. You could even consider Delta forming a visual double with nearby Eta Corvi, 37 arc minutes away and of magnitude 4.3.

The most intriguing deep sky object in Corvus undoubtedly has to be NGC4038, also known as the ringtail galaxy. The coordinates are RA: 12h 01.8', Dec: -18d 51.3', or about 14 minutes in RA west and 1.2 degrees south in Dec from Gamma

Corvi. This is a magnitude 11 galaxy measuring 2.5 arc minutes on each side. Through medium sized telescopes, this galaxy exhibits a heart shaped structure that results from what is apparently a collision between two separate galaxies. Although too dim to see through a telescope, two long filaments extend tens of thousands of light years on each side of the main body of the galaxy. It has been determined that these long trails of stars are the result of tidal interaction from the combined gravity of the two systems. You may remember that a Hubble telescope image showed vast regions within the two halves of the merging pair where stars are forming at an incredible rate because of the forces involved with this process.

A short hop of 0.7 degrees to the southwest will reveal another galaxy with a similar brightness of magnitude 11.6 and a size of 2.0 x 1.7 arc minutes. This is NGC4027 (RA: 11h 59.5', Dec: -19d 15.3') which, at an actual distance of only about a million light years from NGC4038, appears to be a third member of this small group. In fact, it is an irregularly shaped spiral that also seems to be distorted by the gravity of its interacting neighbor. Through a telescope it shows little overall detail other than a smooth oval.

A fairly easy planetary nebula floats within the heart of Corvus at RA: 12h 24.6', Dec: -18d 43.3'. With the designation of NGC4361, this 10.5 magnitude planetary can also be found by moving 5 minutes west in RA and 2.3 degrees south of Delta Corvi. The diameter of this nebula is about 80 arc seconds (or almost exactly the same size as the often observed M57 in Lyra) and, depending on the size of your telescope, gives you a decent opportunity at glimpsing its central star shining at magnitude 13. The nebula is almost perfectly round with a hint of an oval shape, and its surface is smooth with no apparent mottling.

If you can tear yourself away from the galaxy clusters of Virgo and Coma Berenices, look southward to Corvus where you can find more individual treasures.



Tucson Amateur Astronomy Association  
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Please consider renewing your membership on time. Renewal month and dollar amount appears on your address label. Magazine subscriptions are not included. TAL fee is included if participating in TAL. See details on page 2.

### Directions to TIMPA and Empire Ranch

#### Directions to TIMPA Site

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

##### **From the North:**

1. Take Ina Rd. west about three miles past I-10.
2. Turn left (south) on Wade Rd.. Wade Rd. becomes Picture Rocks Rd. when the Rd. bends to the right (west).
3. Take Picture Rocks Rd. west to Sandario Rd..
4. Turn left (south) on Sandario Rd. to Manville Rd..
5. Turn right (west) on Manville Rd. to Reservation Rd..
6. Turn left (south) on Reservation Rd. (dirt Rd.) and go about two miles. The entrance to TIMPA will be on the left.

##### **From the East:**

1. Take Speedway Blvd. west and it turns into Gates Pass Rd..
2. Go over Gates Pass and continue west to Kinney Rd..
3. Turn right (north) on Kinney Rd. and continue past the Desert Museum.
4. Kinney Rd. bends left at the entrance to Saguaro National Park West and becomes Mile Wide Rd..
5. Take Mile Wide Rd. west about five miles to Reservation Rd.. Mile Wide Rd. ends at Reservation Rd. and you must turn right (north) onto Reservation Rd..
6. Take Reservation Rd. north about one mile. The entrance to TIMPA will be on the right.

#### **NOTE**

Please DO NOT ask the caretakers for access to the TIMPA SITE. Contact a board member to arrange access to TIMPA. For scheduled TIMPA star parties, a designated TAAA representative will provide access to the site.

#### Directions to Las Cienegas (Empire Ranch)

GPS coordinates: 31 deg 47.356' N, 110 deg 37.913' W

Take I-10 East from Tucson and turn off at Exit 281 (Route 83 Sonoita-Patagonia Highway South). Travel south on Route 83 for about 19 miles and watch for the green and white milepost 40 sign along the right side of the road. Approximately ¼ mile past milepost 40, turn left into Las Cienegas. The road is dirt and has some "washboarding" so don't go too fast. At about the 2.9 mile point there will be a fork in the road. Stay to the right. When the road ends in a "T", take a left. You will cross a concrete section of the road down in a wash. Just up the hill from the wash (about .2 mile), turn left. Just ahead of you (.1 mile) will be the end of an abandoned airstrip with a covered ramada. The club members have been setting up several tenths of a mile down the runway. If you arrive after dark, as a courtesy to other members, use only your parking lights to approach the set-up location.