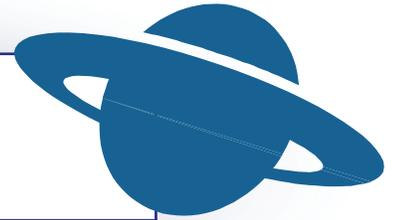


June 2006

# The Voyager



East Valley Astronomy Club

Volume 20 Issue 6

## From the Desk of the President by Steven Aggas, 2006 EVAC President

Comets are cool. Comet breakups are even cooler.... We were expecting a great comet apparition of Comet Schwassmann-Wachmann 3 this last May and we were not let down. Multiple fragments are visible and will be for the next month or so. Make sure you take the time to check it out.

Something else high overhead in June is the constellation Coronae Borealis, with three interesting observing challenges to be found there, two variable stars R and T Coronae Borealis and Abell 2065, a very remote galaxy cluster.

R Coronae Borealis' claim to fame is that it stays around 6th magnitude most of the time and then unexpectedly drops to mag 14, while T Coronae Borealis is the opposite, it will hover around 10th magnitude and then suddenly rocket to 3rd magnitude, sometimes 2nd magnitude. The data thus far suggests that a carbon molecule cloud condensing that obscures the star causing the drop for R and T is a recurring nova. Either of these can be glimpsed in binoculars to a moderate scope. At the other end of the visibility scale, requiring a some-

what large telescope to observe, is the galaxy cluster Abell 2065. At a distance of just over 1 billion (with a 'b') light-years away, the brightest galaxies of the roughly 500 estimated members shines at 15.5 magnitude with most at 16th and fainter. I personally have seen this object several times and have seen 18 galaxies in my 20" scope on the best of nights.

As summer kicks in with warm nights and good 'seeing', try to track down these bright variable stars or faint elusive galaxy clusters.

## The Backyard Astronomer Stars with Two Names by Bill Dellings

Just what we need, a star with two names. As if it isn't bad enough that we're asked to remember 88 constellations with Arabic, Greek, and Latin star names! We then find that a star name may be different from one atlas to another. Mercifully, this nomenclature duplicity is rare. Things have pretty much settled down during the past century after a long and convoluted 5000 year

history of star lore. Nevertheless, a few stars still refuse to get with the program and be identified with a single name. I speak here of the star's proper name as opposed to the numerous catalog designations such as Bayer Greek letter, Flamsteed number, SAO number, etc. Below are ten examples:

**Polaris** (Alpha Ursae Majoris): Polaris, the North

Star, is also known as **Cynosura** or **Alrucaba**, though you're not likely to see these names on your star charts. The former is from a Greek word meaning "dog's tail" or possibly Euphratean for "high in rising." The latter from an Arabic description, "the knee of the Greater Dog" (Theta Ursae Majoris), mistakenly transferred to Ursa Minor.

(Continued on page 2)

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### June Events:

- *Butler Elementary Star Party - June 2*
- *Public Star Party in Gilbert - June 9*
- *General Meeting at Southeast Regional Library - June 16*
- *Grand Canyon Star Party - June 17 - 24*
- *Local Star Party at Boyce Thompson - June 17*
- *Deep Sky Star Party at Vekol Road - June 24*

# The Backyard Astronomer

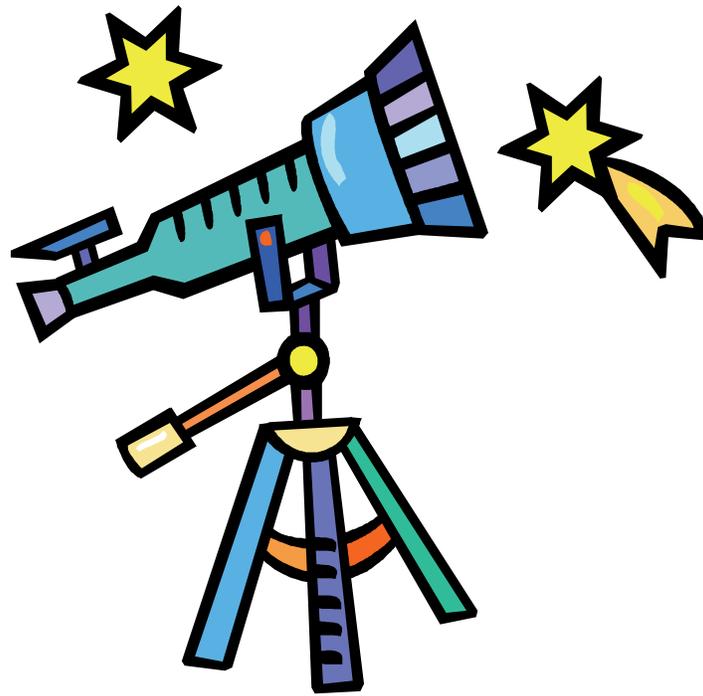
(Continued from page 1)

**Sirrah** (Alpha Andromedae): This star was shared by Pegasus and Andromeda until 1928 when Belgian astronomer Eugene Delporte broke the two constellations apart for the International Astronomical Union. Prior to that point, it had been known as Sirrah or **Alpheratz** and completed the upper left corner of the “Great Square of Pegasus.” Sirrah is from the Arabic “horse’s navel.” Alpheratz is from the Arabic “horse’s shoulder.” So apparently, thanks to the labyrinthine nature of constellation history, the head of Andromeda, Sirrah, is a “horse’s navel or shoulder” and there isn’t a Great Square of Pegasus unless you borrow Alpha Andromedae to create it.

**Deneb Kaitos** (Beta Ceti): Arabic for “southern branch of the sea monster’s tail.” Deneb Kaitos is a case where a constellation’s brightest star is not the Alpha star in J. Bayer’s 1603 Greek letter designation system. About 30% of the constellations do not have Alpha assigned to their brightest star. Beta Ceti is also shown in some atlases as **Diphda**, Arabic for “second frog.” At some point in the past, this area, as well as Fomalhaut to the west, was considered frogs to the Arabs in this “watery” region of the sky (Cetus, Pisces, Aquarius, Pisces Austrinus, and Capricornus). Note however, the more common meaning for Fomalhaut is the Arabic “Mouth of the Fish.”

**Caput Trianguli** (Alpha Trianguli): Yet another case where the Beta star (mag 3.0) outshines the magnitude 3.4 Alpha star! Latin for “Head of the Triangle”, this star name was translated by the Arabs into **Rasal Mothallah**, “the triangle”. Rarely, it can be found on some star charts as simply Mothallah.

**Mirfak** (Alpha Persei): From the Arabic “Elbow”, this star can occasionally be found labeled **Algenib** (Arabic: “the side”) in atlases. Gamma Pegasi, the lower left star in the Great Square of Pegasus, is also called Algenib. “Doctor, I have a pain in my Algenib”.



**Tejat Prior** (Eta Geminorum): Below M35 are three stars. The middle one is Eta. Tejat is from an Arabic word of uncertain meaning. The star is also known as **Propus**, from the Greek “Forward foot” (of Castor). William Herschel discovered Uranus near Eta Geminorum in 1781. Just east of this star is Mu Geminorum, Tejat Posterior

**Coxa** (Theta Leonis): Located in the triangle of stars representing the Lion’s hind quarters, Coxa is from the Latin “in coxis” or “in the hips.” The star can also be identified as **Chertan** from the Arabic “the small two ribs”.

**Alkaid** (Eta Ursae Majoris): From the Arabic “The leader”, this is a reference to the end star in the Big Dipper being the “leader” of the “daughters of the Bier” – the three

Big Dipper handle stars. The Arabs considered this constellation to be a bier (stand for a coffin) rather than a bear. Alkaid is sometimes shown as **Benetnasch**, from an Arabic word of uncertain meaning but likely a combination of al nash (“the bier”) and al banat (“the daughters”), thus “daughters of the bier.” Ian Ridpath in *Universe Guide to the Stars and Planets* states both names refer to “chief of the mourners.” Take your pick – it’s still a funeral procession.

**Izar** (Epsilon Bootis): The noted double star in Bootes ( $\Sigma$ 1877, ADS 9372) is composed of magnitude 2.6 and 4.7 stars separated by 2.9” (arc seconds). Noted double star observer, F.G.W. Struve (1793-1864), found the orange and blue pair so stunning that he coined them **Pulcherrima**, Latin for “most beautiful.” The name stuck and is occasionally used as an alternative name for this star.

**Gemma** (Alpha Coronae Borealis): The brightest star in the Northern Crown. Many books, like Ridpath’s *Universe Guide to the Stars and Planets*, use Gemma for this star (Latin for “the gem or jewel”). It’s often called **Alphecca** (Arabic, “to break up”), inferring this star has something to do with the constellation not being a complete circle. Sky Atlas 2000 spells it Alphekka.

References:

*Short Guide to Modern Star Names And Their Derivations*. Paul Kunitzsch.

*Star Names, Their Lore and Meaning*, Richard Allen.

*Star Tales*, Ian Ridpath.

*Universe Guide to the Stars And Planets*, Ian Ridpath and Wil Tirion.

# A Couple Steps Up the Ladder

by Peter Argenziano

As many of you may know, I have been observing the last couple of years with an 18" Obsession. I could have happily observed with that scope forever... but, I've always had a desire to own larger aperture.

So, in April I decided to see if I could sell my 18 and use the proceeds toward a 25. I figured I'd give it a shot - if it didn't work out I'd happily continue on with the 18.

After placing my ad on Astromart, I began doing the calculations relative to owning and using a 25" Dobsonian reflector. I quickly realized that I would either need a larger vehicle or a trailer. Since I like my truck just fine, I opted for the trailer. But first I would need to sell the 18 and acquire a 25.

Selling the 18, I discovered, was the easiest part of the whole process. The new owner, Dan, is a fellow EVAC and SAC member. So, I'll still get to see the 18 at star parties!

One down, two to go. I placed a 'wanted' ad on Astromart and received numerous replies. The only problem was that the available instruments were in Pennsylvania, Virginia, Minnesota, Wisconsin... locations further away than I had hoped for. One offer, from a fellow in Minnesota, was for a 25" Obsession that was the first commercially-built 25" Obsession - a claim I verified with Dave Kriege himself. Dave had built a 25 for himself in the late 80s. A good friend liked it so much that Dave built one for him (it was the tenth Obsession built overall). Poor health had forced its sale. An interesting bit of history, but I was looking for something a little newer.

My searching discovered a 25" F5 Obsession in Rodeo, New Mexico. This tiny town is located about five miles from Arizona Sky Village. This

specimen (#620) was built in 2002 and was configured identically to the 18. After emails and phone calls I decided to make the trip to see it, and hopefully bring it home.



*Obsession #10 at Okie-Tex Star Party*

As my road trip was imminent, I decided it was time to turn my attention to the trailer. My research quickly determined the proper configuration for my new trailer: torsion suspension, side door, rear ramp door, white in color, 5'x8' in size. It would also need to fit inside my garage, meaning that the overall height had to be less than the 81" opening. Armed with my requirements, I set out on a trailer shopping adventure. I soon realized that the standard trailers (read: dealer inventory) had leaf spring suspensions and were a minimum of 84" tall. Almost all manufacturers could accommodate my requirements as a special order. So, I did my shopping and settled on a local builder, TNT Trailers in El Mirage. They could accommodate all of my requests and they were willing to construct a trailer to any specified height. OK, trailer ordered.

Early on a Saturday morning, I picked up a rented U-Haul trailer and hit the road for Rodeo. Five hours later I was inspecting my new telescope. On my trip south, I discovered that I would need some practice

backing up with a trailer attached to my truck. One stop at a gas station near Benson proved to be amusing to those in attendance. The trip back home was pleasantly uneventful.

Three weeks later, as promised, my trailer was ready. The dealer called me to arrange a pickup date, and while we were talking he commented that it 'sure was a nice looking black trailer'. After an ensuing conversation and a visit to the dealer, we confirmed that my trailer was indeed black, not the white that I had ordered.

The factory apologized profusely and said they would begin work on the new trailer immediately. The next day I received a call informing me that the requisite torsion axle was no longer in stock and would have to be ordered, meaning a six week delay.

My 25 has been occupying a space in my garage for over a month now as I anxiously await delivery of my trailer. Hopefully, by the time this issue is published I'll have both trailer and telescope at my beck and call. I can hardly wait to get out under the stars again.



*My new Obsession in New Mexico*

# SOFIA Political Letters

## by Dr. Ted Dunham

Dear All,

Thanks very much for your offer to write letters of support for SOFIA to Senators Kyl and McCain and to your representative. I have attached a few letters as samples. The first is a generic sample letter that refers to a space.com article (the second attachment). If you want to get into more detail you can use the other three letters, all from SOFIA instrument teams or their institutions, as examples. The letters need to be short (1 page, 1 side), make it clear that you are a constituent, say what the issue is (SOFIA being zeroed out in FY2007 and beyond in the President's budget request for FY07), make sure you say clearly what you want them to do, and thank them for their attention. At this point the main thing is to restore SOFIA to the FY2007 budget. There is also great value in reducing the cut in FY06 (the current fiscal year), but this requires NASA action. All Congress can do is make life miserable for the NASA people in the hope that they will fix the FY06 problem. If you want to use a number to describe how far along SOFIA is, the project's official number is that they are 89% done and the first test flights are scheduled for Oct-Nov of this year. This schedule is based on the originally planned, un-cut FY2006 budget. The German development contribution (approximately \$100M for the telescope) is wrapped up, installed in the airplane, and was used in ground tests almost 2 years ago. They will be sorely distressed if the US blows them off. SOFIA is the largest current bilateral (i.e. not ESA) project for Germany. It isn't small potatoes.

In the House at the moment there is a letter being circulated by Rep. Ralph Hall addressed to the chair and ranking member of the subcommittee of the House Appropriations Committee that deals with the NASA budget (among others). It is open for co-signers through Friday April 28. It would be terrific to get as many co-signers of this letter as possible, so your letter should ask your representative to sign the letter before 4/28 if at all possible. The contact person in Ralph Hall's office is Ms. Leslee Gilbert. I have attached a fairly old draft of the letter (last attachment) so you can see what it says. Something similar will happen in the Senate, but their appropriations activity happens later on. I'll be rattling your cages again, if that's OK with you. If it isn't, please say so! We expect to have things to do off and on until the FY07 budget is a done deal, possibly after the election this fall, possibly even after the new Congress is sworn in early next year, depending on how the elections go.

The AAS website has a lot of good information on it about how to contact your rep. and senators, address, phone, fax, email, URL, what their voting records are, what committees they are on, ... To look at this start your web browser at:

<http://www.aas.org/policy/Contact.html>

The zip-to-it thing lets you find out who your rep is (if you don't know already) and get their address, phone number, fax etc. The AIP (American Institute of Physics) Communicating with Congress link is full of good information. These days a lot of Sena-

tors and Representatives work mostly by email using web submission forms. Fax works too. Since the anthrax debacle US mail is so slow (can be months of delay) that it is nearly useless.

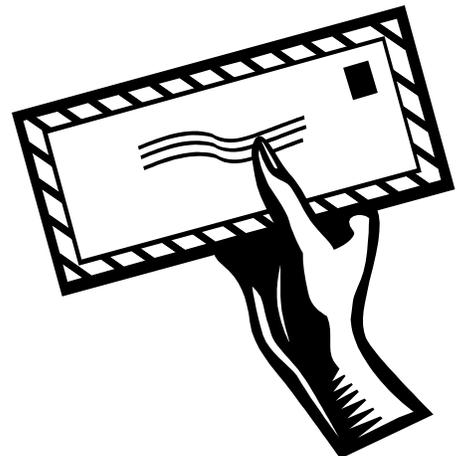
Please let me know if I can answer any questions for you or provide any additional information. There are very large forces at work here - including us! It has been astonishing to me that I've been able to get pretty close attention from my Rep's science staffer just from an email. I think the main point is that Americans are generally so apathetic that any glimmer of interest from a constituent is seen as something to be dealt with. Your letters, especially if there are several of them from different people with a similar message, carry more clout than you imagine, and definitely won't go into the trash can.

Thanks again for your support.

*Ted*

*The sample letters referred to in Ted's letter can be found here:*

*<http://www.saguaroastro.org/content/sofia/SOFIA.htm>*



## June Guest Speaker : Tom Polakis



Tom's interest in astronomy dates back to his Michigan childhood. As a teenager, Tom struggled with a 4" Selsi reflector before moving on to a Criterion RV-6, with which he observed half of the Messier catalog. In high school he used a C-8, a telescope that allowed him to hone his observing skills.

After college and an employment opportunity in Connecticut, Tom answered the call of Arizona's dark skies. Armed with a 13" reflector and the mentoring of fellow amateur astronomers, Tom observed everything north of  $-50^\circ$  declination in Burnham's Celestial Handbook, a project he completed in 1990.

Tom has been on six observing trips to the southern hemisphere.

Tom began writing for Deep Sky magazine in 1990, and has been published in both Sky & Telescope and Astronomy, most notably his Celestial Portraits series which spanned six years, 46 articles and 88 constellations.

In addition to astronomy, Tom also enjoys the physical sciences: roller hockey and ultimate Frisbee. His interests also include meteorology and scenic night photography.

Tom is employed as an aerospace engineer and lives in Tempe with his wife Jennifer and her daughters Ruby and Mary.

The title of Tom's presentation is *Return of Sky Photography*.

## 2006 Grand Canyon Star Party

### June 17 - 24

It's that time of year again... time to pack up your family and your telescope and head for the cooler country of northern Arizona. Whether you choose the South Rim or the North Rim, an outstanding early summer getaway awaits you.

This event, in its 15<sup>th</sup> year, is sponsored by the Tucson Amateur Astronomy Association

The Grand Canyon makes for an ideal star party location. The nearest city, Flagstaff, is 80 miles away; Phoenix and Las Vegas are twice that distance. This ensures very dark skies. The elevation at the South Rim is 7,000 feet, and the North Rim is 8,000 feet. The skies are generally clear with very good seeing conditions.

Unlike most large

star parties, the Grand Canyon Star Party is a public event. The observing location on the South Rim is Yavapai Point. On the North Rim telescopes are set up on the terrace behind lodge.

Obviously, there are many more people to share the night sky with on the South Rim.

After the public has had its fill of the celestial wonders, you are welcome to do some observing of your own. Since Yavapai Point is a popular daytime vista, all telescopes must be taken down at the end of the night.

All those who wish to take part in this grand event will be granted free access into the park.

For South Rim information:

Dean Ketelsen  
1122 East Greenlee Pl.  
Tucson, AZ. 85719  
520-293-2855  
gcspt@tucsonastronomy.org

For North Rim information:

Marjory (Margie) Williams  
P.O. Box 176  
Crown King, AZ 86343  
602-321-MARG (6274)  
or 928-632-8012  
gcsppnorthrim@tucsonastronomy.org



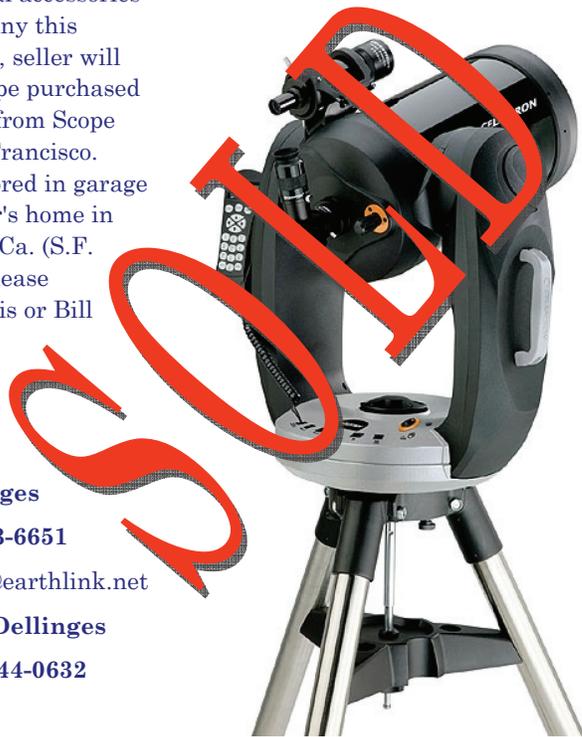
# Classified Advertisements

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Contact the editor

## Celestron CPC 800 Schmidt-Cassegrain Telescope

Celestron CPC 800 (8") with XLT coatings, never used, still in box. Scope, tripod, normal accessories that accompany this model. \$1500, seller will ship. Telescope purchased last October from Scope City in San Francisco. Currently stored in garage of my brother's home in Burlingame, Ca. (S.F. Bay Area). Please contact Dennis or Bill Dellinges for more information.



**Bill Dellinges**

**(480) 983-6651**

welovestars@earthlink.net

**Dennis Dellinges**

**(650) 344-0632**

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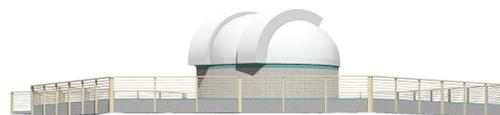


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Advertisements for astronomical equipment or services will be accepted from current EVAC members only. Ads will be published as space permits and may be edited. Ads should consist of a brief text description and must include a current member name and phone number. You may include your email address if you wish. Ads will be published until canceled (as space allows), so please inform the editor when your item has sold.

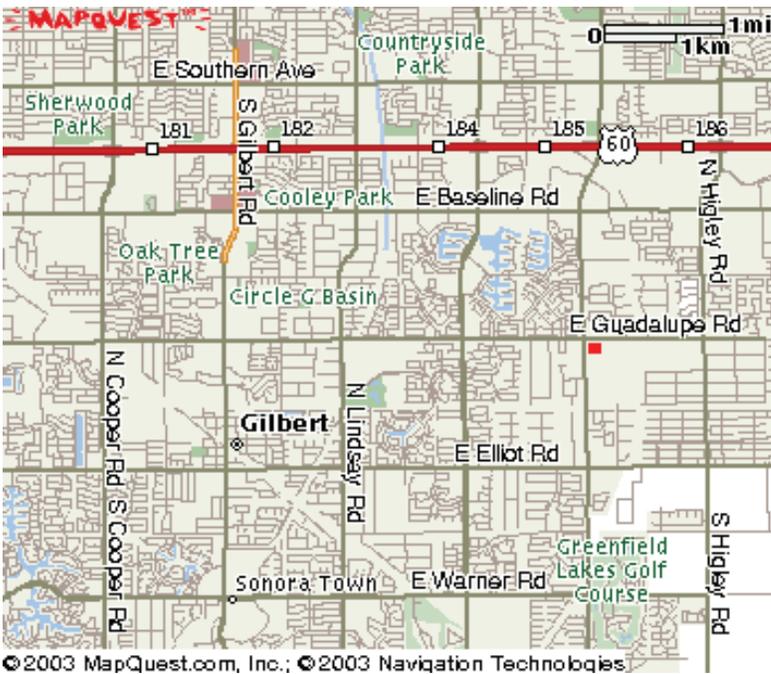
Ads should be emailed to: [news@eastvalleyastronomy.org](mailto:news@eastvalleyastronomy.org)

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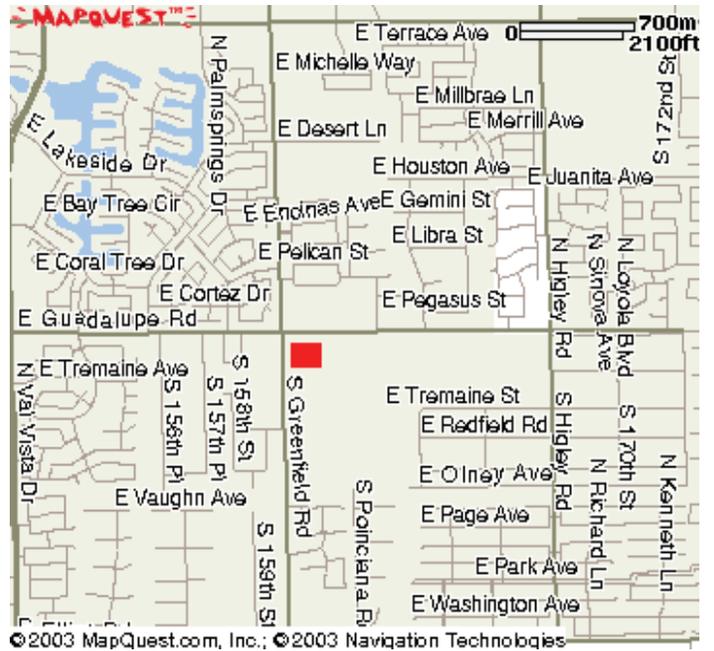
**[www.starizona.com](http://www.starizona.com)**



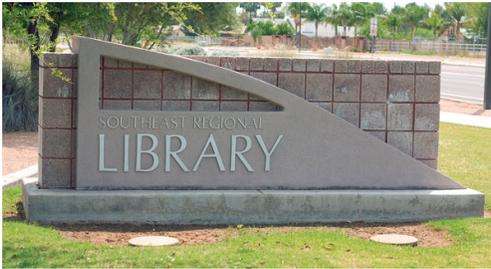
The monthly general meeting is your chance to find out what other club members are up to, learn about upcoming club events and listen to presentations by professional and well-known amateur astronomers.

Our meetings are held on the third Friday of each month, at the Southeast Regional Library in Gilbert. The library is located at 775 N. Greenfield Rd., on the southeast corner of Greenfield and Guadalupe Roads. Meetings begin at 7:30pm.

Visitors are always welcome!



**Southeast Regional Library**  
 775 N. Greenfield Road  
 Gilbert, AZ 85234



## 2006 Meeting Dates

**June 16**

**July 21**

**August 18**

**September 15**

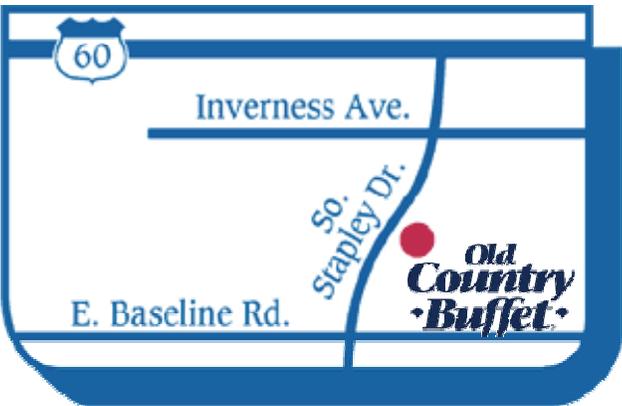
**October 14 *Special Date***

**November 17**

**December 15**

All are welcome to attend the pre-meeting dinner at 5:30 PM. We meet at **Old Country Buffet**, located at 1855 S. Stapley Drive in Mesa. The restaurant is in the plaza on the northeast corner of Stapley and Baseline Roads, (near the Walmart Supercenter) just south of US 60.

**Old Country Buffet 1855 S. Stapley Drive in Mesa**



# June 2006

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				<b>1</b>	<b>2</b>	<b>3</b>
<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>
<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>
<b>18</b>	<b>19</b>	<b>20</b>	<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>
<b>25</b>	<b>26</b>	<b>27</b>	<b>28</b>	<b>29</b>	<b>30</b>	

## Schedule of Events

- June 2 - Butler Elementary Star Party
- June 9 - Public Star Party at Riparian Preserve in Gilbert
- June 16 - General Meeting at Southeast Regional Library in Gilbert
- June 17 - Local Star Party at Boyce Thompson Arboretum State Park
- June 17 - 24 - Grand Canyon Star Party
- June 23 - 24 - Five Mile Meadow Star Party
- June 24 - Deep Sky Star Party at Vekol Road
- June 24 - First Annual Braeside Observatory Star Party (near Flagstaff)

### Minutes of May General Meeting

Meeting date: Friday, May 19, 2005

Meeting location: Southeast Regional Library in Gilbert

The meeting was opened by President Steven Aggas.

The May meeting was attended by 50 people. After introductions of officers and Board members, two visitors introduced themselves. Randy Peterson followed with the event announcements, including the local and deep-sky star parties.

Win Pendleton gave an update on the status of the Riparian-Rotary Observatory. Additions include a wall and door frame. Work on the dome is imminent, and members may sign up to help with this project. Also, it is possible to sign up to be an observatory user.

After Wayne Thomas gave the report from the Treasury, Howard Israel began a new beginners' question-and-answer session. This month's session was brief, so don't hesitate to bring questions for future sessions.

As a JPL Ambassador, Peter Argenziano showed a nice, 3-D view of the Huygens probe descent onto Titan. Next up was a slide show with musical accompaniment put together by Jenn Polakis.

Following the break, the main speaker was introduced by Silvio Jaconelli. Ted Dunham from Lowell Observatory gave EVAC a thorough description of the SOFIA airborne telescope project. This 2.5-meter telescope will fly in a Boeing 747 SP at elevations as high as 45,000 feet chiefly to do infrared observing. While the project is 85% complete, it has also been zeroed out in the 2007 budget. Please write to Congress and NASA administrator Michael Griffin with your concern.

To assist any willing letter writers, Dr. Dunham has provided background information, instructions and letter templates. They are available on the website of Saguaro Astronomy Club at the following URL:

<http://www.saguaroastro.org/content/sofia/SOFIA.htm>

# SOFIA

Stratospheric Observatory For Infrared Astronomy  
Managed for NASA by the Universities Space Research Association (USRA)



# East Valley Astronomy Club -- 2006 Membership Form

Please complete this form and return it to the club Treasurer at the next meeting or mail it to EVAC, PO Box 2202, Mesa, Az, 85214-2202. Please include a check or money order made payable to EVAC for the appropriate amount.

**IMPORTANT: All memberships expire on December 31 of each year.**

Select one of the following:

- New Member
  Renewal
  Change of Address

**New Member Dues** (dues are prorated, select according to the month you are joining the club):

- |   |   |
|---|---|
| <input type="checkbox"/> <b>\$30.00 Individual</b> January through March  | <input type="checkbox"/> <b>\$22.50 Individual</b> April through June       |
| <input type="checkbox"/> <b>\$35.00 Family</b> January through March      | <input type="checkbox"/> <b>\$26.25 Family</b> April through June           |
| <input type="checkbox"/> <b>\$15.00 Individual</b> July through September | <input type="checkbox"/> <b>\$37.50 Individual</b> October through December |
| <input type="checkbox"/> <b>\$17.50 Family</b> July through September     | <input type="checkbox"/> <b>\$43.75 Family</b> October through December     |
- Includes dues for the following year*

**Renewal** (current members only):

- \$30.00 Individual**
 **\$35.00 Family**

**Magazine Subscriptions** (include renewal notices):

- \$34.00** Astronomy
  **\$33.00** Sky & Telescope

**Name Badges:**

- \$10.00** Each (including postage) Quantity: \_\_\_\_\_

Name to imprint: \_\_\_\_\_

**Total amount enclosed:**

*Please make check or money order payable to EVAC*

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  Payment was remitted separately using my financial institution's online bill payment feature

Name:

Phone:

Address:

Email:

City, State, Zip:

- Publish email address on website

URL:

How would you like to receive your monthly newsletter? (choose one option):

- Electronic delivery (PDF) *Included with membership*
 US Mail **Please add \$10 to the total payment**

**Areas of Interest** (check all that apply):

- |  |   |
|--|---|
| <input type="checkbox"/> General Observing   | <input type="checkbox"/> Cosmology        |
| <input type="checkbox"/> Lunar Observing     | <input type="checkbox"/> Telescope Making |
| <input type="checkbox"/> Planetary Observing | <input type="checkbox"/> Astrophotography |
| <input type="checkbox"/> Deep Sky Observing  | <input type="checkbox"/> Other            |

Please describe your astronomy equipment:

Would you be interested in attending a beginner's workshop?  Yes  No

How did you discover East Valley Astronomy Club?

**PO Box 2202**  
**Mesa, AZ 85214-2202**  
[www.eastvalleyastronomy.org](http://www.eastvalleyastronomy.org)

All members are required to have a liability release form (waiver) on file. Please complete one and forward to the Treasurer with your membership application or renewal.

# Liability Release Form

---

In consideration of attending any publicized Star Party hosted by the East Valley Astronomy Club (hereinafter referred to as "EVAC") I hereby affirm that my family and I agree to hold EVAC harmless from any claims, liabilities, losses, demands, causes of action, suits and expenses (including attorney fees), which may directly or indirectly be connected to EVAC and/or my presence on the premises of any EVAC Star Party and related areas.

I further agree to indemnify any party indicated above should such party suffer any claims, liabilities, losses, demands, causes of action, suits and expenses (including attorney fees), caused directly or indirectly by my negligent or intentional acts, or failure to act, or if such acts or failures to act are directly or indirectly caused by any person in my family or associates while participating in an EVAC Star Party.

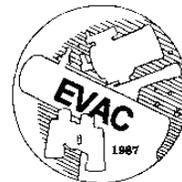
My signature upon this form also indicates agreement and acceptance on behalf of all minor children (under 18 years of age) under my care in attendance.

EVAC only recognizes those who are members or invitees and who also have a signed Liability Release Form on file as participants at an EVAC Star Party.

\_\_\_\_\_  
*Please print name here*

\_\_\_\_\_  
*Date*

\_\_\_\_\_  
*Please sign name here*



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## Not a Moment Wasted by Dr. Tony Phillips

The Ring Nebula. Check. M13. Check. Next up: The Whirlpool galaxy.

You punch in the coordinates and your telescope takes off, slewing across the sky. You tap your feet and stare at the stars. These Messier marathons would go much faster if the telescope didn't take so long to slew. What a waste of time!

Don't tell that to the x-ray astronomers.

"We're putting our slew time to good use," explains Norbert Schartel, project scientist for the European Space Agency's XMM-Newton x-ray telescope. The telescope, named for Sir Isaac Newton, was launched into Earth orbit in 1999. It's now midway through an 11-year mission to study black holes, neutron stars, active galaxies and other violent denizens of the Universe that show up particularly well at x-ray wavelengths.

For the past four years, whenever XMM-Newton slewed from one object to another, astronomers kept the telescope's cameras running, recording whatever might drift through the field of view. The result is a stunning survey of the heavens covering 15% of the entire sky.

Sifting through the data, ESA astronomers have found entire clusters of galaxies unknown before anyone started paying attention to "slew time." Some already-known galaxies have been caught in the act of flaring—a sign, researchers believe, of a central black hole gobbling matter from nearby stars and interstellar clouds. Here in our own galaxy, the 20,000 year old Vela supernova remnant has been expanding. XMM-Newton has slewed across it many times, tracing its changing contours in exquisite detail.

The slew technique works because of XMM-Newton's great sensitivity. It has more collecting area than any other x-ray telescope in the history of astronomy. Sources flit through the field of view in only 10 seconds, but that's plenty of time in most cases to gather valuable data.

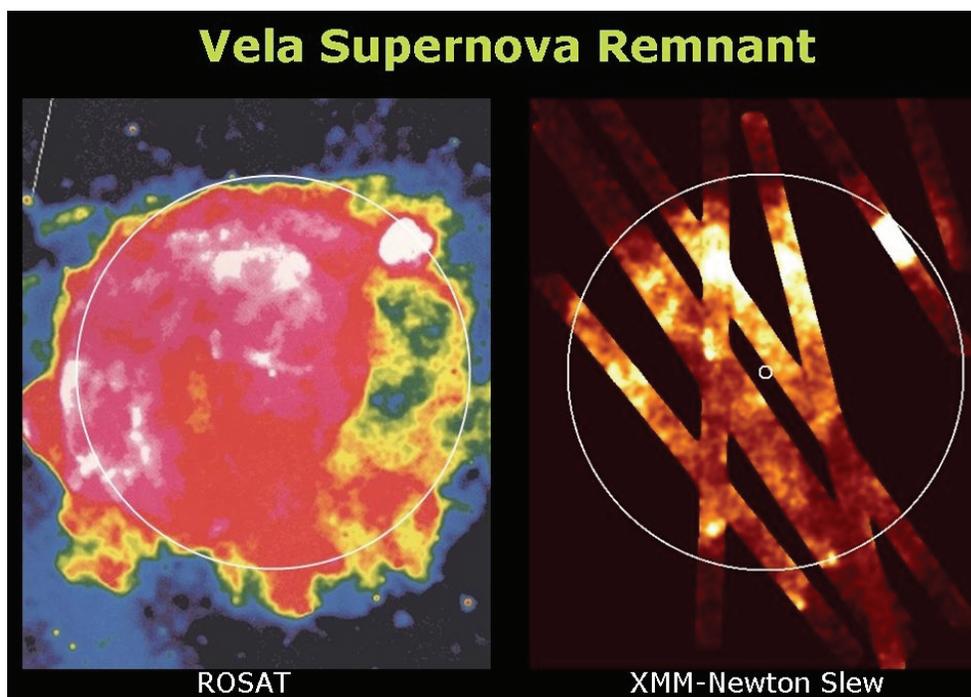
The work is just beginning. Astronomers plan to continue the slew survey, eventually mapping as much as 80% of the entire sky. No one knows how many new clusters will be found or how many black holes might be caught gobbling their neighbors. One thing's for sure: "There will be new discoveries," says Schartel.

Tap, tap, tap. The next time you're in the backyard with your telescope, and it takes off for the Whirlpool gal-

axy, don't just stand there. Try to keep up with the moving eyepiece. Look, you never know what might drift by.

See some of the other XMM-Newton images at <http://sci.esa.int>. For more about XMM-Newton's Education and Public Outreach program, including downloadable classroom materials, go to <http://xmm.sonoma.edu>. Kids can learn about black holes and play "Black Hole Rescue" at The Space Place, <http://spaceplace.nasa.gov/>, under "Games."

*This article was provided by the Jet Propulsion Laboratory, California Institute of Technology, under a contract with the National Aeronautics and Space Administration.*



*The image on the left is the Vela Supernova Remnant as imaged in X-rays by ROSAT. On the right are some of the slew images obtained by XMM-Newton in its "spare" time.*

# If it's Clear...

by *Fulton Wright, Jr.*  
*Prescott Astronomy Club*

June 2006

If it's clear...

by *Fulton Wright, Jr.*  
*Prescott Astronomy Club*

Shamelessly stolen information from *Sky & Telescope* magazine, *Astronomy* magazine, and anywhere else I can find info. When gauging distances, remember that the Moon is 1/2 a degree or 30 arc minutes in diameter. All times are Mountain Standard Time unless otherwise noted.

On Friday, June 9, almost all night, you can view the northwest (upper left) part of the Moon at its best. Libration tips that part toward us.

On Sunday, June 11, at 8:19 PM, the full Moon rises, so forget the faint fuzzies for tonight.

On Saturday, June 17, about 8:15 PM, you can see 2 planets near each other. With a small (3 inch) telescope look 25 degrees above the west horizon for

Saturn (mag 0) and Mars (mag 2) about 1/2 degree apart. There is also a mag 4 star (Delta Cancr) lined up with them.

On Wednesday, June 21, in the evening, you can see a complete transit of Io across Jupiter. Here is the schedule:

8:43 PM Io moves in front of Jupiter

9:42 PM Io's shadow falls on Jupiter

10:51 PM Io moves from in front of Jupiter

11:51 PM Io's shadow leaves Jupiter

Also on this date you can see that Jupiter is approaching a pair of stars which are about the same brightness as its 4 big moons. Over the next 3 weeks or so you can see Jupiter get quite close to them (less than 1 arc minute, June 29), pass them, turn around (retrograde motion changes to direct, July 5), and pass the stars at a greater distance going the other direction (4 arc minutes, July 11).

On Sunday, June 25, it is new Moon,

so you can hunt for faint fuzzies all night.

On Tuesday, June 27, about 8:15 PM, you can see 4 solar system objects in the same region of the sky. With binoculars look in the west for Mercury (mag 1, very low), the crescent Moon (2 1/2 days old), Saturn (mag 0), and Mars (mag 2). The Beehive cluster (M 44) is between the Moon and Saturn.

On Thursday, June 29, in the evening, you can see Jupiter near 2 stars (as mentioned in the June 21 entry). The dimmer star (mag 7) is about 40 arc seconds above the north pole of Jupiter, the brighter star (mag 6.5) is about 20 arc seconds above the dim one. As an extra challenge, look for a much dimmer (mag 9) star about 20 arc seconds below Jupiter's south pole. That night you can also see Ganymede go in front of Jupiter (9:42 PM), Io come out of the planet's shadow (10:55 PM), and Ganymede emerge from in front of the planet (11:37 PM, now Jupiter looks like it has 6 moons in an unusual arrangement).



**First Quarter Moon on June 3 at 16:06**



**Full Moon on June 11 at 11:03**



**Last Quarter Moon on June 18 at 07:08**



**New Moon on June 25 at 09:05**

# Potential Summertime Dark Sky Site

On the evening of May 20, Doug Simons, Wayne Thomas, Gerry Rattley and Marty Pieczonka went up to investigate a dark sky site 17 miles north of Globe. The site is an unmarked campground in the Tonto National Forest at an elevation of approximately 4500 feet with good horizons and very small light domes to the west from Globe and Phoenix. The campground is quite large and is fairly level. You can see photos of the site here:

[http://www.eastvalleyastronomy.org/globe\\_site.html](http://www.eastvalleyastronomy.org/globe_site.html)

According to the light pollution map for Arizona on

<http://www.cleardarksky.com>, the site has class 2 skies where class 1 is the best. For comparison Vekol Road is a 3 and Boyce Thompson is a 4.

Marty provided this synopsis of the site: "The skies are much better than Boyce Thompson and the equal of or better than Vekol Road. The limiting magnitude was approximately 6.5. For someone with better eyes, it could be a bit better. The sky was black from 45° up to the zenith instead of the usual gray we're used to seeing at lower elevations. The temperature when we arrived was about 85° and about 60° when we left a 2:00



AM. Since the site is 2.2 to 2.3 miles off US 60 there was no traffic or headlights to contend with. There were no snakes or other large critters."

The turnoff to the site is just past mile marker 268 on US 60. On the right is a sign for the Jones Water campground. Turn left instead onto Forest Road 303 /Griffith Ranch. Go 2.2 to 2.3 miles north along the dirt

road to the camp site which is on the left. Griffith Ranch is approximately a mile in. Boyce Thompson is around mile marker 222 on US 60. This is roughly a two hour drive from our meeting location in Gilbert.

Site coordinates:

Longitude 110° 39' 44" W

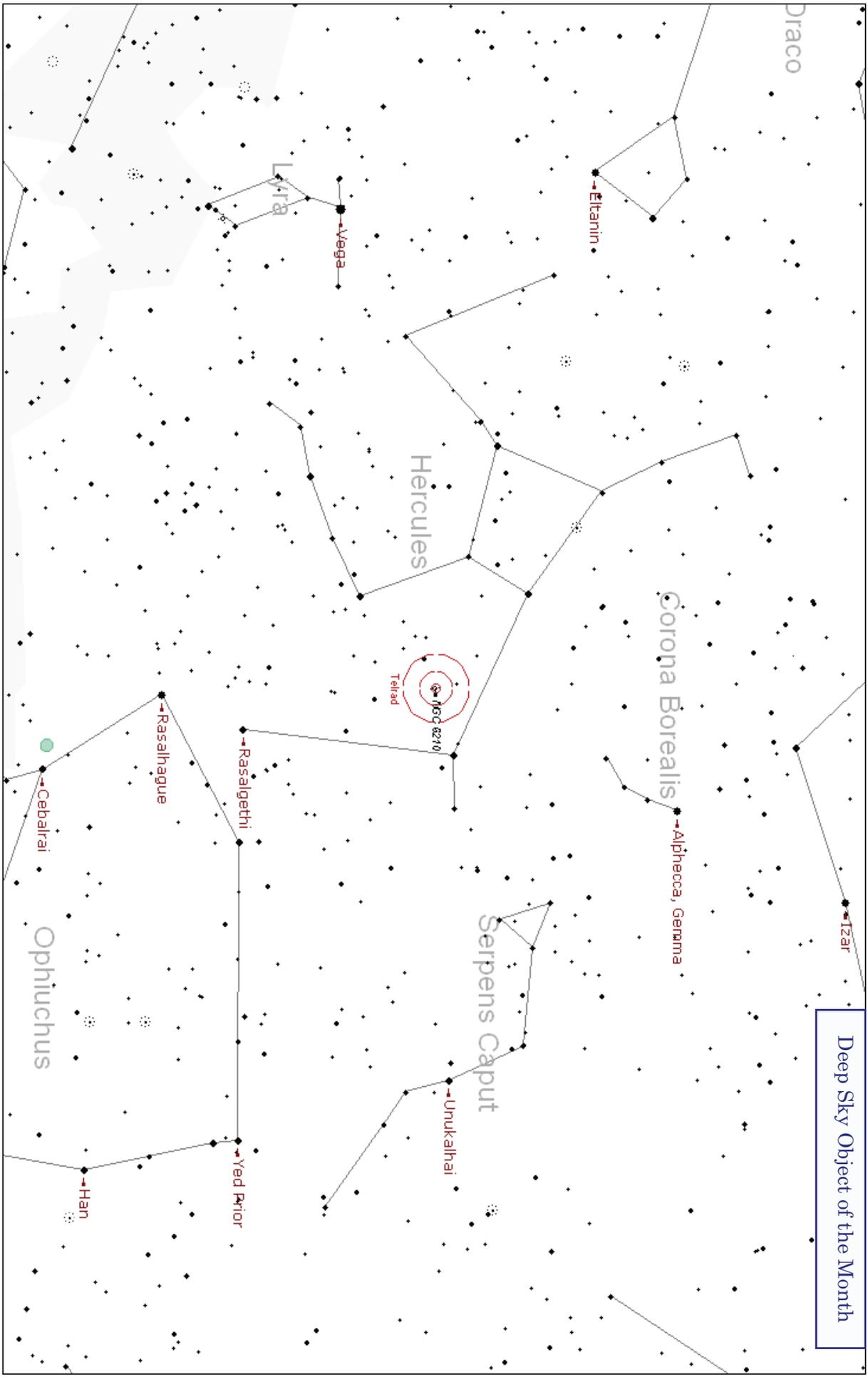
Latitude 33° 37' 07" N

This site is being evaluated for use as a star party site during the warmer months. At an elevation of 4500' it may not be suitable for year-round use. Also worth noting is that this site serves as overflow for the nearby Jones Water campground, so it may not be astronomically available on popular camping weekends.

A Clear Sky Clock has been created for this site, with a link on the EVAC website (on the Arizona Clear Sky Clocks page) - look for Griffith Ranch.

<http://cleardarksky.com/c/GrfthRcAZkey.html>





Deep Sky Object of the Month

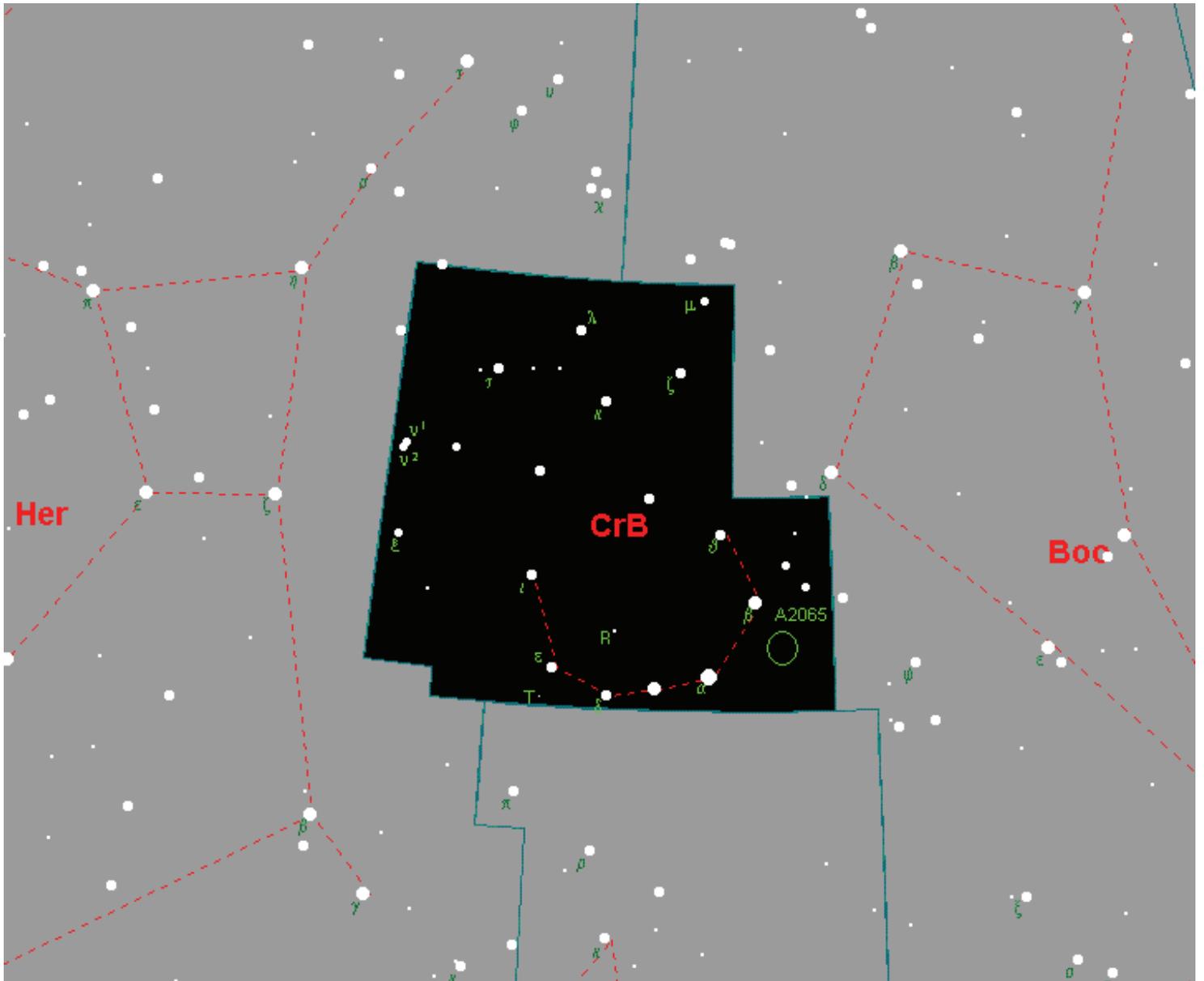
## NGC 6210 Planetary Nebula in Hercules

Magnitude: 9.3 Size: 30.0" Magnitude of Central Star: 12.6

RA 16h 44m 29.7s Dec +23° 47' 58"

Chart created with Starry Night Pro software.

## Chart Accompanying President's Article



Coming in July... our guest speaker will be Paul Scowen of the Physics and Astronomy department at Arizona State University. As of press time, Dr. Scowen had not finalized his topic for this presentation.

### *Star Party Disclaimer*

*The East Valley Astronomy Club (EVAC) is not responsible for the property or liability of any star party participant, nor will the club be held liable for their actions or possessions. EVAC is not responsible for any vehicular damage, theft, or mechanical difficulties that may occur while attending a star party. EVAC strongly recommends adherence to the doctrine of 'safety in numbers' when it comes to remote observing sites. In the interest of safety it is recommended that you don't go to remote sites alone and that someone knows where you have gone each time you go out observing.*

The Voyager is published monthly by the East Valley Astronomy Club and made available electronically (PDF) the first week of the month. Printed copies are available at the monthly meeting.

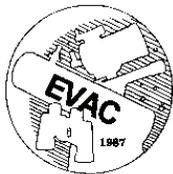
Please send your contributions, tips, suggestions and comments to the Editor (Peter Argenziano) at:

news@eastvalleyastronomy.org

Contributions may be edited.

[www.eastvalleyastronomy.org](http://www.eastvalleyastronomy.org)

**Keep Looking Up!**



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