East Valley Astronomy Club

March 2002 www.eastvalleyastronomy.org **Scottsdale, Arizona**

President's Message

By Martin Bonadio, 2002 EVAC President

I hope everyone is well and enjoying the start of nice clear spring skies. I am excited about my honeymoon in Hawaii partly because I get to go to Mauna Kea observatory while there. And, I'm also glad to finally be moving into my new home and can soon start enjoying the darker east Mesa skies there. Ok, so East Mesa isn't *that* dark, but it beats the giant street light across from my backyard in Gilbert!! I can actually still see a hint of Milky Way from my new house. So in a month I'll be spending more time doing backyard observing of Messier, Comets, Binaries, and of course planets, etc. I also hope to finally start spending more time playing with my CCD camera in the months coming up. This should prove to be fun. To boot, our Florence observing site is now only 20 minutes away from home – so there are no excuses for a trek out to the desert for a few hours of deep-sky treasure hunting. My observing to-do list has now topped 200 objects that I really need to see. I'm going to be busy!

Derrick Lim started a comet SIG, and a few of us have started talking about comet Ikeya-Zhang. Starting in April, the comet skirts north of the Sun and enters the morning sky and we'll get some nice views as the comet makes a slow trek from Cassiopeia into Cepheus and then Draco. That makes it a decent target for early morning observing during this time of year. I hope this one makes it to naked-eye brightness while it is in our neck of the woods.

There are some great events coming up so be sure to get out and have fun. The EVAC adopt-a-highway cleanup is on March 30th. The Messier Marathon is in April, and Astronomy Day activities at the Science Center are planned for May. These are 3 activities that I really plan to enjoy. Keep your eyes open and join us.

Dave Kelley has really started to get our website improvements going, and continue to watch the changes. Once the membership database and events calendar are online things should smooth out a lot. Thanks Dave for all your efforts here.

Well, That's about all I have for this month, as I'm really swamped right now. I appreciate everyone's patience as I get through these major life events. All I have left to do now is have children and discover the next memorable comet or asteroid…(haha!)

Clear Skies!

EVAC Meeting Minutes
February 13, 2002
Tom Polakis, EVAC Secretary

President Martin Bonadio opened the meeting with some "quick tips" on selecting eyepieces for your telescope. Announcement of upcoming events followed. They are mentioned elsewhere in this newsletter. Note that the local star party of March 9 coincides with SAC's Sentinel Schwaar Star Gaze. Our Adopt-a-Highway is on March 30. Mark your calendars for a star party at Scottsdale Community College for April 16. David Coshow announced again that he hosts the star party line.

After visitor and Board member introductions, Jack Grbcich discussed the history team, which is looking for input from veteran club members. Silvio Jaconelli is interested in carpooling to the RTMC Astronomy Expo held in California on Memorial Day Weekend. Howard Lester discussed the Arizona Science Center's Astronomy Days, which are May 4 and 5.

After the break, Randy Peterson asked about interest in denim EVAC shirts. He needs 8 to order. He also asked if somebody else might want to take over as shirt vendor at the meetings.

In photo minutes, Chris Schur showed his latest images, this time on the digital projector. Some of his images included NGC 1999, NGC 2438, and the obscure Waterfall Nebula. Rick Scott showed video and stills of Saturn taken with a $70 WebCam. Finally, Gene Lucas presented information about the M74 supernova.

The main speaker was Steve Odewahn from Arizona State University. He discussed automated methods of galaxy classification. Using a neural network technique, thousands of distant galaxies are classified in a very short time. Making this system work involved many interesting techniques that resulted from the hard work of Odewahn and his colleagues.

His home page is at: http://www.public.asu.edu/~asusco

Tom Polakis
Tempe, AZ
Arizona Sky Pages http://www.psiaz.com/polakis/

If it's clear...

by Fulton Wright, Jr.
Prescott Astronomy Club for March 2002

Shamelessly stolen information from Sky & Telescope magazine, Astronomy magazine, and anywhere else I can find data. When gauging distances, remember that the Moon is 1/2 a degree or 30 arcminutes in diameter.

It is a quiet month for astronomical events. I am kind of reaching for the only ones I could find.

On Tuesday, March 19, about 7:30 PM you can see an asteroid near a planet. With a small (6 inch) telescope look 55 degrees above the west horizon for Saturn (mag 0). 2 arcminutes below the planet is Titan (mag 8), Saturn's brightest satellite. 6 arcminutes up and somewhat to the left is 4 Vesta (also

See Clear Page 3

Clear Cont'd from page 2

mag 8). With your unaided eye you can also see a nice group of Saturn, Aldebaran, and the Moon.

On Saturday, March 23, at 7:31 PM, you might see Venus very close to a star. With a medium or big (6 or 12 inch) telescope look 5 degrees above the west horizon for Venus (mag -4) and 88 Psc (mag 6) only 8 arcseconds away. This will be an extremely challenging observation. They are very close. They are very different in brightness. They are very low in the sky. The sun has set only 45 minutes ago. 6 minutes before or after this time, they will be separated by twice as much distance.

Here are the times of some interesting events with Jupiter's moons:

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Mar 13 (there is a mag 6 star just south of Jupiter tonight)
        7:15 PM Ganymede's shadow falls on Jupiter (1 shadow)
        8:58 PM Io moves in front of Jupiter
       10:13 PM Io's shadow falls on Jupiter (2 shadows, barely)
       10:25 PM Ganymede's shadow leaves Jupiter (1 shadow)
       11:12 PM Io moves from in front of Jupiter
    14 12:28 AM Io's shadow leaves Jupiter

Mar 20  9:10 PM Ganymede moves from in front of Jupiter
       10:52 PM Io moves in front of Jupiter
       11:15 PM Ganymede's shadow falls on Jupiter (1 shadow)
    21 12:08 AM Io's shadow falls on Jupiter (2 shadows)
        1:06 AM Io moves from in front of Jupiter
        2:15 AM Jupiter sets

Mar 21  8:11 PM Io disappears behind Jupiter
       10:06 PM Callisto's shadow falls on Jupiter (rare)
       11:44 PM Io appears from Jupiter's shadow
    22  1:35 AM Callisto's shadow leaves Jupiter
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Web URL Listings

Gene Lucas
(17250)

Here is a useful listing of current web resources on the new, bright SN2002ap in M74 = NGC 628. Have Fun! These first two web pages provided two of the pix I showed at the meeting.

There is an absolutely spectacular color shot of M74 (last October, without the SN, natch!) on the Gemini North web site: http://www.gemini.edu/project/announcements/press/2001-2.html

And here is a great color shot with the SN by Philip Keller and Christian Fuchs on 2002/02/04 http://www.astrooptik.com/Bildergalerie/PolluxGallery/M74.htm

My tag line is that "The SN is bright and easy to identify.....it's the one with the ARROW pointing at it!"

The ISN web pages have lots of links:
http://www.RochesterAstronomy.org/sn2002/sn2002ap.html
IAUC circulars (so far; only 7810 is posted on the web): 7810, 7811, 7816, 7817, 7820, 7821, 7822, 7825, 7826 http://cfa-www.harvard.edu/iau/cbat.html

See URL's page 4

URL's Cont'd from page 3

SEDS pages (photo of SNe in M74) plus many links!
http://www.seds.org/messier/more/m074_sn2002ap.html

Index of images of SN2002ap with many links!
http://www.RochesterAstronomy.org/sn2002/sn2002ap.html

KAIT image (Berkeley automated SNe survey at Lick Obs.)
http://astron.berkeley.edu/~bait/2002/sn2002ap.gif

AAVSO New Flash 904
http://www.aavso.org/newsflash/nf904.shtml

AAVSO CCD Views Special Edition SN2002ap
http://www.aavso.org/ccdviews/ccdviewsspecial-sn2002ap.shtml

AAVSO Charts for SN2002ap
http://www.aavso.org/charts/PSC/SN2002AP/

Reinder Bouma chart (with nice magnitude sequences)
http://www.shopplaza.nl/astro/vs-charts/sn2002ap.htm

IAU Circular No. 7810 SN2002ap Discovery notice --
http://cfa-www.harvard.edu/iauc/07800/07810.html#Item1

Latest Supernova web pages (many images)
http://www.RochesterAstronomy.org/supernova.html#2002ap

Reference image of M74 = NGC628 with magnitudes
http://www.RochesterAstronomy.org/snimages/reference/n628.jpg

AUDE (French language) pages on SN2002ap with spectra, photometry, etc.
http://www.astrosurf.com/snaude/02aphome.htm

Maurice Gavin -- Worcestor Park Observatory in UK -- spectra
http://www.astroman.fsnet.co.uk/

JUPITER AND SATURN FROM THE BACKYARD WITH A 6" TELESCOPE

By Silvio Jaconelli

This is the next in a series of articles I am writing about backyard observing with modest aperture. I am taking a break for the constellations to focus on the two giant gas planets - Jupiter and Saturn - that are still in peak viewing position, although (especially for Saturn) not for too much longer. The viewing conditions for these two planets this year is especially favorable - Jupiter is as close to Earth as it can get (and is therefore bigger than usual), while Saturn's rings are close to maximum tilt. At this point I must give the usual caveats that the views expressed in this article are based on my experiences with my equipment and with my physical limitations - your results may well differ!

FILTERS

I have found filters to be of limited value for the gas giants with my 6" aperture telescope. Only for Mars - a red

See Jupiter Page 5

filter - do I see any improvement in the images. However, with larger apertures, I have found that filters do make a difference, especially yellow filters; I suspect that the improvement is due to the moderate dimming effect that these filters have in reducing glare - remember that Jupiter can get close to magnitude -4, every bit as bright as Venus, while Saturn can approach the same magnitude as Sirius !

EQUIPMENT

I have obtained the best results with longer focal ratio telescopes - f/7 and higher. Longer focal ratios entail lesser demands on collimation and wider tolerances in focus accuracy. Shorter focal ratio telescopes will do just fine so long as the optics are good, the collimation is accurate, and precise focusing is possible. The magnifications that work the best for my 6" fall within the range of 240x to 280x on an average night. And do not forget to allow your mirror/lens to get as close to ambient temperature as possible - this may entail putting the telescope outside hours before the start of observing, with the possible use of a fan to help in the cooling process.

POSITION OF THE PLANETS

Firstly, due to the turbulence effects of the atmosphere, the best viewing will be when the planet is at it's zenith (due south), where there is the least amount of air to be looked through. My experience has been that a couple of hours either side of zenith works just fine, but do remember that the further away from zenith then the more image degradation to expect. At four hours (60 degrees) away from zenith you should not expect any decent images. Secondly, you will get the best views when the planet is at it's opposition as this is when it is closest to Earth. This means that the perfect time to view a planet is at 12 midnight on the night that it is at opposition. However, three months either side of opposition will still give good views, but the images will be showing some progressive degradation the further away you are from opposition.

JUPITER

Jupiter - currently in Gemini - is huge, having a volume thousands of times that of Earth. It has been called a star that didn't quite make it - had it been much bigger, then gravity would have triggered nuclear fusion and created a star. It has been likened to a giant vacuum cleaner as its huge gravitation field attracts many asteroids that may otherwise have slammed into Earth. At its current magnitude of -2.2, it is the fourth brightest object in the sky (after the Sun, the Moon, and Venus), and is 10 times brighter than Saturn which is currently at magnitude zero.

The first thing that I notice about Jupiter is its obvious oval shape, caused by its very rapid axial rotation rate of 10 hours; the centrifugal force causes the planet to bulge in the middle. This rapid rotation is responsible for the next obvious feature of Jupiter - the cloud bands created by the hurricane force winds. Two cloud bands are visible through almost any telescope - the north and south equatorial bands - while bigger telescopes and better optics will reveal more cloud bands. At best, my 6" has revealed up to 5 different cloud bands. Imbedded in the northern band you may see dark spots and light ovals, while festoons may be evident dangling towards the equatorial regions. My 6" will show some of these phenomena around 50% of the time. Easier to spot is the Great Red Spot (GRS) in the southern equatorial band, although the 'red' looks more like 'light pink' to me. ! The GRS is a huge storm that has been raging for many hundreds of years. The 'Calendar Notes' section of Sky and Telescope lists the

See Jupiter on page 6

Jupiter from Page 5

times when the GRS will cross Jupiter's meridian.

Let me digress here for a moment - at one time Earth also had a rotation period of 10 hours, and huge wind storms also prevailed at that time. Over the eons the Moon has slowed our rotation period down to 24 hours, allowing much more moderate wind patterns to prevail. Were it not for the Moon, then higher life forms would never have had a chance to develop on Earth in the constant hurricane winds that would have otherwise prevailed. So without the Moon, the human race would not have evolved - I will leave it up to the reader to decide whether this was a positive or negative occurrence.

Getting back to Jupiter, you will next notice how the edges look soft and fuzzy; this is due to the gaseous nature of the planet. The edges also may appear dimmer than the center, due to a combination of Jovian twilight and the dimming effect of the thicker Jovian atmosphere we are looking at from our vantage point here on Earth. Next, we can observe the four Gallilean moons - Io, Europa, Ganymede and Callisto, closest to furthest in that order. Tom Polakis told me the way to remember the sequence was to use the initials from the phrase "I Eat Green Cheese". These Moons are visible through binoculars, and I have been told that they are even visible to the naked eye if you can somehow block out Jupiter itself with some sort of obstruction (like the edge of a tree branch); I concur with this, since they are around 5^{th} and 6^{th} magnitude except for Ganymede which is actually 4^{th} magnitude. At 300x, these Moons will resolve into tiny disks, and on a good night my 8" has managed to do this. Frank Kraljick has gone one step further - his Spooner 10" has actually allowed him to see detail on Io, when it transits across Jupiter's surface (the reduced contrast during a transit apparently facilitates resolving surface detail). The reduced contrast between the moons and Jupiter makes spotting the moon tough since they are both similar in color and brightness; such transits are easier to spot when the moons transit over the darker equatorial bands. Accompanying such transits are the shadows that the moons cast on the planet's surface - these are neat and very easy to spot, and look as if a hole has been punched in the planetary disk. Another phenomenon to look for is the moons disappearing and re-appearing from behind Jupiter's disk - the climax is the half minute or so immediately before and after the occultation, when the Moon looks like a microscopic bump on Jupiter's limb. Finally, there are the eclipses where the moons disappear into the shadow that Jupiter casts into space; these eclipses are weird - the moons are fully visible at normal brightness, then gradually over the space of 5 minutes (remember, they are extended objects rather than point sources) they dim down until they finally disappear. Several hours later the exact opposite sequence of events occur as the moons leave Jupiter's shadow - a tiny point of light begins to become visible and over the space of 5 minutes or so it gets brighter until normal brightness is achieved once the moons are fully out of Jupiter's shadow.

Let me digress and re-ignite an old argument that I had some years ago with Martin Bonadio. I believe that an eclipse happens when a smaller body enters the shadow of a larger body, and the resulting solar light loss causes it to stop reflecting the Sun's light. An occultation, I think, is when one celestial body moves in front of another and obscures it from our view. It is all a matter of what causes the disappearance - the shadow or the object. Given this premise, then what we commonly refer to as a 'solar eclipse' is no such thing, and is really an occultation of the Sun by the Moon. So I appeal to the

See Jupiter Page 7

Jupiter from Page 6

membership at large for their views on this question of not inconsiderable importance. By the way, I will readily concede that a 'lunar eclipse' is correctly titled since here we are observing the Moon passing into the shadow of Earth; shadows cause eclipses, bodies cause occultations.

Now let's get back to Jupiter. All of these 'moon events' are listed monthly in Sky and Telescope under the heading "Jupiter's Satellites". I recommend that you take the time to study how these charts work and to understand the underlying mechanics involved - you will have enhanced viewing pleasure if you understand what it is that is causing these events to occur. Finally, let me add that I always start an observing session by looking at Jupiter to see where all the moons and surface detail are. At the end of the session, I will observe Jupiter once more to see how much the positions have changed. Jupiter is one of the few celestial objects where changes in detail are readily apparent over several hours.

SATURN

I just had to agree with Bill Dillenges when he ranked Saturn as one of his favorite all time objects - those rings are really something else! I find that Saturn takes magnification better than Jupiter - while Jupiter looks best at just over 200x in my 6", I find that I can push Saturn closer to 300x and still look sharp. Don't ask me why - that is just my experience at the eyepiece.

My 6" never fails to show clean views of the Cassini Division that separates the outer 'A' ring from the inner 'B' ring. However, I have never been able to resolve the Encke Division, a division in the 'A' ring approximately 20% in from the outer edge. Rich Peters thought that he may have seen it about 25% of the time one night at the ansae (ring tips). Then Tom Polakis happened to mention that Frank Kraljic often resolves it with his 10". I should add that both of these gentlemen have eyesight capabilities far better than mine! Now that the rings are close to maximum tilt, now is the time to look for Encke - once the tilt begins to flatten out, things will just get far more difficult. Much easier to resolve is innermost ring 'C', sometimes referred to as the Crepe Ring, a dark dusky ring located just inside ring 'B'. My 6" resolves the Crepe Ring almost every time that Saturn is within an hour or so of Zenith. Another feature to look for when the Saturn is at least a few months away from opposition is the shadow that the disk casts onto the backside of the rings. Again, I suggest that you try to understand the mechanics involved in order to figure out why the further away you are from opposition then the more pronounced will be this shadow.

And now that the rings are near full tilt you may also be able to see the planet's surface between the Cassini Division - you will need high magnification for this. Let me talk about the tilt of Saturn's ring system. The planet revolves around the Sun once every thirty years, so twice during that time (every 15 years) the rings will be edge on and almost invisible to us; conversely, we also see the rings at full tilt every 7 years or so after we saw the rings edge on. So every 7.5 years we will see the rings at either full tilt or edge on. Right now, we are close to maximum tilt.

Another feature that I have noticed regularly is a faint glow on the north side of the planet equal to about 25% of the planet's visible surface area. I am not too sure what this glow is - could it be reflected sunlight ? - it's something that I notice when I observe the disk. A feature that I have never spotted are spokes on Saturn's B Ring - thought to be composed of dark dust - that look like dark blotches; others have told me that

See Jupiter Page 8

Jupiter from Page 7

they have seen these spokes on good nights using large apertures, but for now I have just to content myself by looking at Voyager photographs of them.

I have recently adopted a new practice of always checking Sky and Telescope before each observing session to determine the positions of the 5 brighter Saturnian moons. About 90% of the time I get the four brighter moons, but 12th magnitude Enceladus always escapes me. I guess that 6" of aperture from my backyard just cannot pull in 12th magnitude objects. Titan, on the other hand at around 8th magnitude is very easy to resolve, while the other three - at just over 10th magnitude - require a bit of work on my part; for these three, I find that averted vision usually works, and from then onwards direct vision will pull them in. For all but Titan, though, large apertures really work better; I recently looked for the moons through Sam Herchak's 20" and all the moons were just so easily visible. This mirror had just been refigured by Mike Spooner and Mike had done his usual superb job, so the views had the advantages of both excellent optics and large aperture - an unbeatable combination.

I have made no mention above of the 6th Saturnian Moon - Iapetus; this Moon is an enigma. It has a very wide orbit 2.5 million miles wide, which compares to 0.8 million miles for Titan and around 0.5 million miles for the other three Moons. This makes Iapetus' orbital period an extremely long 80 days. Additionally, one side of Iapetus is considerably darker than the other, and given that Iapetus keeps the same side always facing Saturn (just as our Moon always shows the same side to us) then during it's orbit we will see the lighter side at magnitude 10 during it's western elongation, then 40 days later we will see it at 12 magnitude at eastern elongation when it's darker side is facing us. Iapetus is not shown in the Sky and Telescope charts, which explains why one evening I saw a Moon around Saturn that was not supposed to be there. Now, it could have been a background star, but then again maybe it was Iapetus. 'The Sky' software program does show Iapetus, so I now know where to go to find out where it is in relation to Saturn itself.

Finally, let me leave you with an observing treat. On page 61 of the March 2002 edition of Astronomy Magazine is a feature on how on the evenings of March 18 and March 19 the 8th magnitude asteroid Vesta will pass a few arc minutes south of Saturn. Titan, also at 8th magnitude, will be in the same eyepiece field of view so you will have a good brightness reference guide. However, Vesta will be zipping along at high speed, and this is one time where a few hours will show a noticeable shift in Vesta's position relative to Saturn. An event not to be missed ……

CONCLUSION

We still have some weeks of excellent planetary viewing ahead of us. I hope that I have given you enough cause to make you haul your telescope out to your backyard and start observing.

WANTED

Your articles, ideas and items you wish to sell for the EVAC Newsletter. Do Not be bashful, be creative, show off your knowledge. Your submissions make this YOUR newsletter. The articles can be mailed, emailed or handed to Don Wrigley. The snail mail address is 423 W 5th Ave, Apache Junction, AZ 85220. Email DJWrigley@Earthlink.net. Deadline for the April newsletter is March 27. Articles should be limited to two (2) pages. If you have a long article, place it as a two or three part series.

East Valley Astronomy Club History

By Jack Grbcich, Board Member

As you sit here reading this, remember yourself looking down that eyepiece through your telescope seeing stars, planets and galaxies: Revealing their light into your eye; Showing their past into our present; Enlightening our minds through these visions and illuminating us of their past events. We enjoy and marvel at the thought of what might have been, and wonder at what could be. These stars and things that we see are our present.

As we marvel at the night sky, we are living the past and looking into the future. The history of these stars making our present and we wonder what is ahead. The future that is part of our past and some of our present time might tell the future.

This is our history. They are telling us their story. We, our club EVAC, will reveal our past and present, telling these stories and revealing our history. Past events and the present activities will show our pleasure of seeing our night sky as a club.

We might come from different parts and different places but we share these stars under this Arizona night sky. This club of ours has a past that we will share like our night sky. We are stars and we have something to say. Our past, present, and future will be our history.

Have a pleasant evening under our stars. Seeing you in the dark. Looking for our future. See the shooting star. Oh yes, our history is present. We have stories to tell, pictures to see, and facts to present.

Just Talking Trash

(Clean-up That Is)

Once again It's time to have some fun picking up trash! Our Club has scheduled its semiannual cleanup of the EVAC Mile scheduled for Saturday, March 30th at 8:00 AM. Our task is to pick up trash from the shoulder of the highway to the right-of-way fence (State crews are responsible for the median dividing the highway). Look for a sign up sheet at the February & March monthly meetings, or call me and let me know you want to attend. With 10 volunteers, we can finish by around 10:30am. We meet at Florence Junction (Intersection of Highway 60 and 89) on the north side in the far west corner of the parking lot (closest to the radio tower).

As in the past your reward for helping will be a free **club-sponsored** lunch at the Village Inn in Apache Junction (our own Randy Peterson is the manager) following the cleanup! These cleanups have always been a great time. On every one someone manages to find a very **interesting** “treasure”! So, come out, get some exercise, and get to know each other in the daylight. As well, the conversations at lunch revolve around telescopes, telescopes, and more telescopes.

Contact me (Martin Bonadio) at 480-926-4900 or email: mabastro@aol.com if you want to help or have questions. Thank you.

RTMC
Memorial Day Weekend

I am asking the membership at if there is any interest in organizing a car pool for EVAC members for the combination of Star Party/lectures/swap meet/get-away-from-it-all event held in the high mountains of Big Bear in Riverside, California. I had a sign-up sheet at the February EVAC meeting, but not much interest was shown, so if this article does not stimulate more interest in such a pooling arrangement then we will drop the idea.

Please email me at silvioj@msn.com if you are interested.

I will need to know which Phoenix departure time suits you (choose from Thus PM, Fri AM, Fri PM), which RTMC departure time suits you (choose from Sun AM, Sun PM, Mon AM), whether you want to Camp or Motel, and the number of passengers you would be willing to take if you choose to drive. The idea is that the passengers will pay the gas cost and the drivers pay nothing for gas.

Each traveler will be responsible for their own accommodation and meal arrangements, as well as their own RTMC reservation.

For Sale

Discovery EQ telescope with a 4.5" parabolic mirror for sale-- set up only once. $340 New. Selling for $150. Call Ted Thomason 602-230-1360, or email me tthomaso1@msn.com

EVAC's New Web Features

Dave Kelley, EVAC Webmaster
Presenceknown.com

The EVAC website is undoubtedly one of the best astronomy web sites on the net. It's full of great information and fun to navigate. What could make it even better?

Automation.

- Let's give the members the ability to maintain their own information.
- Make the membership list come from that same database so that the changes appear instantly.
- Give the volunteer staff the ability to maintain members who are not on the web.
- Have a way for the staff to email everyone at once, and not just those on the list server

And that's what we've done…at least so far. If you go to the site and select the Email Directory you'll see the new format. It now displays each member, and if they have an email addresses their name is a link to their email. If they have a web site it's displayed as a link. And all of the interests are also listed so it's easier to find others who have the same interests as you in the hobby. All of this information is coming from a database dynamically so any changes are instant.

Now, look at the bottom of the list. There's a small form there asking you if you'd like to update your own information. All you need to do is enter your email address exactly as it's listed in the link on your name above and press the button. You'll be told if something is being emailed to you or if it couldn't find your email address in the database. If your email address has changed you'll still have to ask one of the staff to update it for you since email is how we allow you to edit your own information. So, I encourage anyone changing email addresses to go here before changing and enter their new address.

Provided your email address is correct, and you submit the form, you should see an email arrive within seconds. In that email is a special coded web link. If you click on that link your browser should pop up with a form all filled in with your information. Make any changes you'd like and press save. Done…your information is up to date instantly.

This is very secure since the only way someone can get that 'magic' link is if they also have access to your email. And, occasionally I'll be resetting the magic numbers to other magic numbers just to make life interesting for anyone who is into hacking. (grin) This means, don't book mark this link because it might not work next week. Just go back to the directory page and request a new access link via email.

Why the changes? Well, I believe the web should be published to and maintained by the people who use it. It's just a tool, not magic.

This is just the first of many changes. The events system is next to become automated. The links page and even the reviews will become automated where the authors will have the ability to publish instantly. If a web site is done up right a webmaster will be as busy as a Maytag repairman. Next month I hope to have a message explaining how the new events system works and how you can ask it to email you once a week with all of the upcoming events.

More to come….

Orion Trapezium Eclipse

By Paul Dickson

On Friday evening, April 5th, star A of the Trapezium (a.k.a. Theta Orionis A) will be eclipsed by a unseen companion star. This will cause the magnitude to drop near a full magnitude (6.8 down to 7.7).

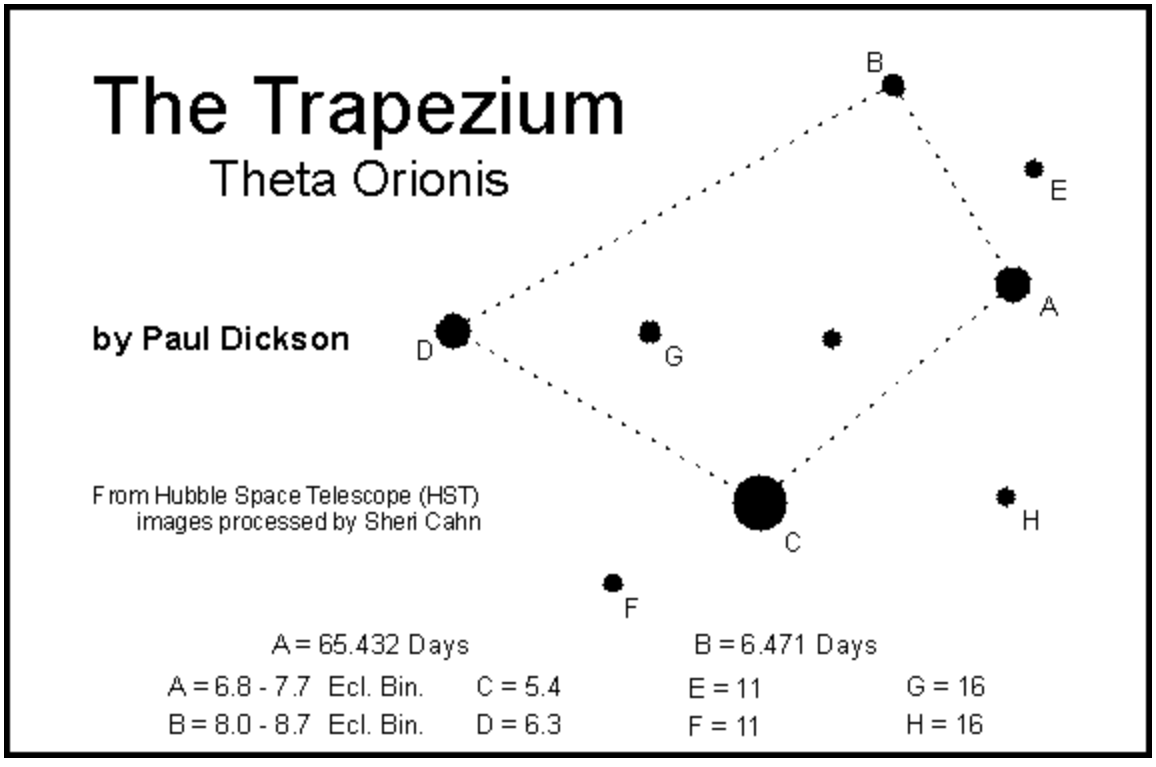
This event will be mid-eclipse at 18:26 Phoenix time, and the star will stay at minimum for 2.5 hours (the entire eclipse takes 20 hours) so you should be able to see a difference even though the minimum portion will end 20 minutes before it's dark (20:02 = sun dip of 15 degrees).

These eclipses happen every 65.432 days, but the circumstances are such that it's not very often that you can see one. Things like the constellation not being up or it being daylight make it difficult to see this event.

A table of these events can be found at John Sabia's web page:

http://members.aol.com/sabiajohn/lasnews.html#headmarker5

There is also a table there for star B (Theta Orionis B).



Review from Club Library of the Video's "Understanding the Universe: An Introduction to Astronomy"

Written by Craig M. Dokken

As I sit in my easy chair, I'm learning about astronomy. This series of tapes consist of nine tapes produced by the Teaching Company. I checked out the first set of three tapes from the club. These tapes have numerous lectures on topics in Astronomy. Part one has eight lectures; each one forty five minutes. Listed below are the topics covered.

Lecture 1. "Grand Tour of the Cosmo"
Lecture 2. "Journey through Space and Time"
Lecture 3. "Light the Supreme Informant"
Lecture 4. "The Fingerprints of Atoms"
Lecture 5. "Tools of the Trade"
Lecture 6. "Space Telescopes and the Celestial Sphere"
Lecture 7. "Our Sun - the nearest Star"
Lecture 8. "Lunar Phases and glorious Eclipses

Each part of three videos has a guidebook that has an outline and summary for each lecture. There are also objectives and a reading guide and questions to consider in this book. Each lecture has many multimedia items like charts, diagrams and pictures of astronomy objects. These items come from Hubble Space Telescope, planetary probes and other modern tools.

The lecturer, Professor Alex Filippenko of the University of California at Berkley has a BA in Physics and a Ph.D in astronomy from other schools. He has written numerous articles and books on this subject and produced numerous educational videos. His research interest has been supernovae, active galaxies, black holes and robotic telescopes.

The other parts of this video series deals with studies of our solar system, properties of the planets and their moons. The life of a star and how it generates energy. Other subjects discussed are galaxies, black holes, the search for aliens and the fate of the universe.

Watching these tapes are just like a lecture in college, a lot of information is given, the nice thing is you can stop a tape and think about something he said. I would recommend having a notebook to write down facts or information. Out of five stars, I would give these tapes four stars.

This is one item available from our club library, the club has many books and two telescopes available for check out from our club properties officer Gary Finnie.

EVAC EVENTS CALENDAR - 2002

	New Moon	Meeting	< -- Members only -- > Local	Deep Sky	Gilbert	Other Events	Club Meeting Speaker
Mar	3/13	3/13	3/9	3/16	3/8	3/30 Adopt-a-highway 3/8&9 Sentinel Star Gaze	Brian Skiff
Apr	4/12	4/10	4/6	4/13	4/12	12/13 Messier Marathon 4/16 SCC Star Party	David Burstein (Cosmology)
May	5/12	5/8	5/4	5/11	5/10	5/4&5 Astronomy Day 5/24-26 RTMC Astro Expo	Warren Kutok (Telescopes)
Jun	6/10	6/12	6/1	6/8	6/14	6/8-15 Grand Canyon Star Party 6/10 Partial Sol Eclipse	

NOTE : The Local and Deep Sky parties are for members and by invitation only.
The public are welcome to attend the Gilbert Star Parties which are held at the Gilbert Library at Greenfield/Guadalupe, and which start at dusk on the dates shown.

East Valley Astronomy Club
Membership Form

Please complete this form and return to the club treasurer at the next club meeting OR mail to EVAC, P.O. Box 2202, Mesa, AZ 85214, with a check or money order made payable to EVAC.
IMPORTANT: ALL memberships expire on December 31 of each year.

New Member Only - select month joining:
( ) $20.00 January – March
( ) $15.00 April – June
( ) $10.00 July – September
( ) $25.00 October – December & next year

Membership Renewals:
( ) $20.00 January – December

Name Badges:
( ) $7.00 each Name:_____

Magazines: if renewal, customer #_____
(New) (Renewal)
( ) ( ) $29.00/yr Astronomy Magazine
( ) ( ) $30.00/yr Sky & Telescope

Newsletter delivery option, check one:
( ) E-mail (saves club postage/printing)
( ) U.S. Mail

Total enclosed $_____

Name:_____

Address: _____
_____

Phone # (___)_____

E-mail _____

URL: _____

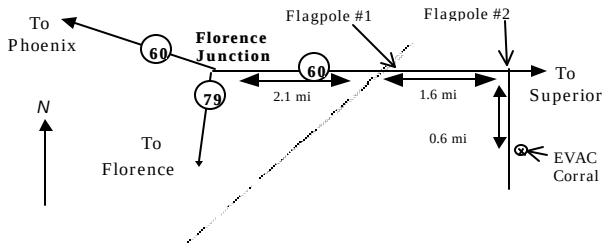
EVAC Star Parties

Local Star Party: Florence Junction Site

General Information: The Florence Junction site is the official site for the East Valley Astronomy Club's Local Star Party, typically held on the Saturday closest to Last Quarter Moon. Florence Junction offers reasonably dark skies within a short drive of most east Valley locations. (Report gunfire or illegal activity: 800/352-3796; Land use permit number: 26-104528.)

Location: N 33° 14' 40" W 111° 20' 16"

How To Get There: Take US 60 east to Florence Junction. Go past Florence Junction. 2.1 mi past FJ are railroad tracks, and on the right will be a flagpole. Do not turn there. Continue on for another 1.6 miles until you find the second flagpole on the right. This is your turn. Turn right, and continue on the dirt road for 0.6 miles. The corral is on the left, just before a gas-line sign.

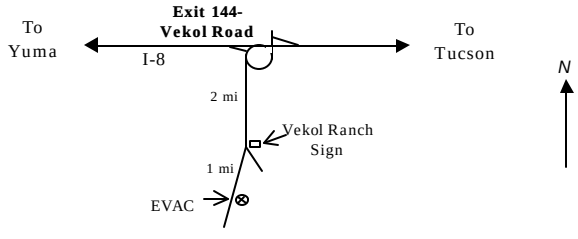


Deep Sky Star Party: Vekol Road Site

General Information: The Vekol Road site is the official site for the East Valley Astronomy Club's Deep Sky Star Party, typically held on the Saturday closest to New Moon. Vekol Road offers dark skies despite prominent sky glow from Phoenix to the north. The site is within 1½ hours drive time from most east Valley locations.

Location: N 32° 47' 55" W 112° 15' 15"

How to Get There: Take I-10 south and exit onto Maricopa Road. Continue through the town of Maricopa to SR 84, about 25 miles from I-10. Turn right on SR 84, after about 5 miles the road merges with I-8. Continue west and exit I-8 at Vekol Road—Exit 144. Turn left and cross the highway overpass. Before looping back onto I-8 take the dirt road to the left. Go south for 2 miles. At the Vekol Ranch sign bear right and continue south for another mile until reaching a large, open area on the left.



EVAC Officers

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(480) 926-4900

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(480) 833-2002

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(480) 947-4557

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PROPERTIES
Gary Finnie
(480)

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Don Wrigley, Editor
(480) 982-2428

Silvio Jaconelli,
Coordinator
(480) 926-8529

East Valley Astronomy Club—2002 Scottsdale, Arizona
EVAC Homepage—http://www.eastvalleyastronomy.org/

Membership & Subscriptions: $20 per year, renewed in December. Reduced rates to *Sky & Telescope* and *Astronomy* available. Contact Randy Peterson. PO Box 2202, Mesa, AZ. 85214. Email: rgp14159@aol.com

Club Meetings: Second Wednesday of every month at the Scottsdale Community College, 7:30 p.m. Normally Room PS 170 or PS 172 in the Physical Sciences Building. See map below.

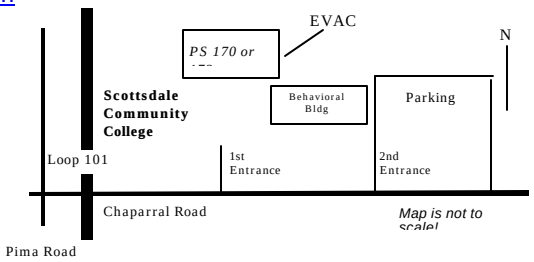
Address Changes: Contact Randy Peterson. Email: rgp14159@aol.com or PO Box 2202, Mesa, AZ. 85214.

Newsletter: Contact Don Wrigley or Kathy Woodford, 423 W. 5th Ave, Apache Jct, AZ 85220. The Newsletter is mailed out the week before the monthly Club meeting. An electronic version is available in Adobe PDF format in lieu of a printed copy. Please send your contributions to Silvio Jaconelli SilvioJ@msn.com or Don Wrigley DJWrigley@earthlink.net. Contributions may be edited.

EVAC Library: The library contains a good assortment of books, downloaded imagery, and helpful guides. Contact Gary Finnie for complete details gfinnie@kam-az.com

Book Discounts: Kalmbach and Sky Publishing offer a 10% Discount to EVAC members on books and other items from their catalogs! When ordering, notify the person on the phone that you would like the "Club Discount." When ordering by mail, there is a line to subtract the 10% club discount.

EVAC Party Line: Let other members know in advance if you plan to attend a scheduled observing session. Contact Dave Coshow (480) 730-1132.



Deadline for the April Newsletter is March 27th

East Valley Astronomy Club

EVAC
PO Box 2202
Mesa, AZ 85214

Don Wrigley & Kathy Woodford, Co-Editors
Silvio Jaconelli, Coordinator
423 W 5th Ave, Apache Junction, AZ 85220

EVAC on the Internet
EVAC Homepage: www.eastvalleyastronomy.org

E-mail Mailing List:
AZ-Observing is a fairly general mailing list about observing in Arizona. Included are star party information, who is going, as well as the latest observations and astronomical events.
To join, send E-mail with the "Subject: subscribe" to AZ-Observing@freelists.org

Although EVAC is a private club not open to the public, we do encourage potential new members to initially join us at our club meetings and/or star parties to help them determine the suitability of the club to meet their needs.

Reminder: Next EVAC Meeting Wednesday, March 13, 2002