

East Valley Astronomy Club

November 2000

www.eastvalleyastronomy.org

Scottsdale, Arizona

EVAC Picnic

"Rain rain go away...." Due to weather the October EVAC/SAC joint picnic had to be postponed until a later date.

Once a new date has been sent we'll let everyone know, and have new sign-up sheets at an upcoming general meeting.

Important Notice

The November Meeting will be held in Room PS170 (south side of the Science Bldg). The December meeting will be in the auditorium (see announcement below), and then starting in 2001 we will be back in Room PS172 again. Thanks!

Adopt-A-Highway Report

By Martin Bonadio

First of all I'd like to thank everyone who helped with the trash cleanup this Fall.

Those in attendance were: Martin Bonadio, Jerry Matsukado, Steve Aggas, Win Pendleton, David Coshov, Ken Levy, Don Burrows, Harold Judson, Bill Dellinges, Don

Wrigley, Pedro Jane', Jon Christensen, and John and Cathy Mathews. If I've left out any names I apologize.

There were 29 bags of trash collected this time. 22 bags were filled on the North side of the road, and another 7 on the south side. Not a bad job!!

No highway cleanup would be complete unless I announced the winner of the treasure hunt contest. While I'd like to take credit this time for finding a really clean hubcap (that I intend to use for all-sky photos), the real winner this time was Don Wrigley. Don located a pristine collection of hard rock CD's in a nice case. Jon Christensen stepped in by immediately,

EVAC & Other Events: 2000/2001					
	New Moon	Meet	Local	Deep Sky	Other
Oct	27 th	11 th	21 st	NA	10/21 SAC/EVAC Picnic 10/28 All-AZ Star party - AZ City
Nov	25 th	8 th	18 th	NA	Elections
Dec	25 th	13 th	16 th	23 rd	12/9 Christmas Party Slide Show Meeting
Jan	24 th	1/10	1/20	1/27	New Officers EVAC Board Meeting
Feb	23 rd	2/14	2/17	2/24	
Mar	25 th	3/7	3/17	3/24	3/24 Messier Marathon

buying all the CD's. Great find Don, and rock on Jon!!

So if on your next star party you hear loud sounds coming from the direction of Jon's telescope you'll know why!!

Lunch was held at the Village Inn, where EVAC member Randy Peterson, the manager, joined the group in some great telescope talk until about 12 noon.

In closing, I just want to thank the group again for their efforts. You all did a very great job and, and as always I enjoyed myself!! Our next clean-up effort will be organized in the spring around April or May.

December Meeting Location Change

By Joe Orman

At the December 13 EVAC meeting, Rick Scott and Joe Orman will present a special slide show with two computer-controlled projectors and a synchronized musical soundtrack. This 30-minute show, titled "The Sky We Share," will showcase the photography of club members Rick, Joe, Tom Polakis, Randy Peterson, and Chris Schur.

For December 13 only, the meeting location will be changed to the Auditorium (Building PA). Park in parking lot B, located in the southwest corner of the SCC campus. Refer to the campus map on the EVAC web site:

<http://www.eastvalleyastronomy.org/mtg.html>

From The Vice- President

By Chuck Crawford

GUEST SPEAKER

Our guest speaker for November will be Steve Coe of the Saguaro Club. His talk will be concerned with Dark Nebulae. As observers of the night sky, we spend much of our time on things that glow in the dark: galaxies, nebula and clusters. This talk will introduce the dark nebulae and discuss their origins and how to observe these objects to best advantage.

Steve has been an Arizona amateur astronomer for over 20 years. He teaches electronics at DeVry Institute when not out observing. He is the proud owner of a Pierre Schwaar 13 inch Newtonian telescope, on a Bigfoot mount and has a backyard observatory for viewing the Moon and planets that contains a Meade 7 inch Maksutov.

Steve recently published a book about his astronomical adventures, called "Deep Sky Observing: The Astronomical Tourist". It contains many tips and techniques he has used over the years. There is also a collection of observations, drawings and some photos of a variety of deep sky objects to view.

Steve will have some of the books available to sell at a cost of 30 dollars each and would be honored to sign a book for any and all who would like to purchase one at the meeting.

DINNER WITH OUR GUEST SPEAKER

We will again have a pre meeting dinner at the Black-eyed Pea located across from the fountains of the Pavilions in Scottsdale. Dinner is at 5:30 pm and the location is just west off the 101 on Indian Bend Road. Any member who wishes to attend is invited to join us.

THE SKY WE SHARE PROGRAM

Our December 13 meeting will be located in the Scottsdale CC Auditorium where we will be entertained by the expert presentation of slides to music as developed over the past few months by Rick Scott and Joe Orman. Many of you will remember a similar show presented very early in the year by both which was outstanding. We look forward to this performance with much anticipation and encourage all members to attend.

This event is open to outside guests and other clubs so spread the word.

CHRISTMAS PARTY

Our annual Christmas Party is December 9 at the Alta Vista Apartments Clubhouse beginning at 5:00 pm until? The location is 1444 North Recker Road (between Brown and McKellips). The club will provide subs and pizza. The rest of the goodies are potluck.

Parking is ample but please do not park in covered spaces. There are shuffleboard courts, a putting green, pool

table, card tables, large heated pool and Jacuzzi that will be available to us. There is no charge for the use of the facility and the only requirement is that we clean up after ourselves before we leave.

A few smaller telescopes could be set up if someone wishes to bring theirs although there is some lighting that may interfere with observing and not a lot of open space due to trees.

Mark this date on your calendar, as the facility will accommodate a large number. Sign-ups will be available at the November meeting. Hope to see you there!

REFUNDS FOR LOWELL TRIP

If you have not received your refund yet for the deposit made when you signed up for the ill-fated Lowell trip please contact Silvio. He has the list of those who paid cash and those who wrote checks and will be handling the refunds. No check has been cashed so if you just want it destroyed merely notify him of this.

EVAC Meeting Minutes

10/11/00

By Tom Mozdzen

7:32pm

Don Wrigley called the meeting to order. There were about ~70 people in attendance, ~10 more than last meeting.

Announcements:

NGC

By Joe Goss

- Sat Dec 9th Christmas Party @Recker and Brown in Mesa.
- Wed Dec 13th EVAC Christmas meeting with Rick and Joe's marvelous slide show with music at the SCC auditorium.
- Arizona Science Center Adult Nights: 1st Wednesday of each month. 5:30 -9:00pm \$5. Additional charges: IMAX \$3, Planetarium \$3. Free lectures on various topics. EVAC liaison requested. J. Nelson signed up.
- Sign up sheets for Six different **Special Interest Groups (SIG)** were presented:
 1. Lunar observing
 2. Solar observing
 3. Telescope Making
 4. Double stars
 5. Astrophotography
 6. Deep sky observing

7:50 – 8:25 Show and Tell

- Bill Peters showed us slides of his meteorite find on a dry California lake bed near Blythe.
- Rick Scott displayed and explained his new 10" Lurie-Houghton telescope. It has a flat field over 1.5 arc-seconds (13ft radius). It has two spherical lenses in the front to correct aberration, with a spherical primary mirror to converge the image. For more information see: <http://memers.homenet/rmscott>

8:25-9:30 Swap Meet, Refreshments, and socializing.

... Meeting end

Have you ever wondered what does NGC stand for, who compiled it, and how were the numbers organized? All these questions ran thru my mind while I was compiling my observations of the Herschel 400 list. I had started compiling my observations one Sunday morning and by noon I was ready for a break. After lunch I decided to try and find some answers to my questions about the NGC.

The letters "NGC" stand for New General Catalog, which is a listing of nearly 8000 non stellar objects, including galaxies, star clusters (globular and open), and nebulae. The catalog was compiled over 100 years ago by J. Dreyer. The catalog was organized by R.A. starting with zero hours. If you look at a star chart you can see the constellations Andromeda, Cassiopeia, Cepheus, Cetus, Pegasus, Pisces, and Sculptor fall along the zero R.A. This explains why fall is a good time to start observing the Herschel 400, as the first object is NGC 40, by starting here you can observe the list in sequence during the year.

You will find that "NGC 1" has an R.A. of almost zero and the last NGC object should have a R.A. of 23 hour, 59 minutes. If two objects have the same R.A. then the one with the most northerly declination has the lower NGC number. Once in a while you will find a NGC number followed by a letter (A-Z) this would indicate two or more objects with the exact same R.A. and declination. As with any rule there are always exceptions, you can find a few objects that do not seem to follow the rules, most likely their position was not correct when first cataloged.

When observing NGC objects, it will save you time, if you observe by constellations rather than sequentially. If you have a computer-aided telescope, with the go-to function, then it doesn't make that much difference in observing time.

If it's clear...

**Fulton Wright, Jr.
Prescott Astronomy Club
for November 2000**

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.

On Saturday, November 4, about 2:00 AM you can see three of Jupiter's satellites in a vertical line. With a small (3 inch) telescope look almost overhead in the south for Jupiter. Europa, Ganymede, and Callisto will be lined up east of the planet.

On Sunday, November 5, at 10:13 PM you might see an asteroid occult a star. Asteroid 381 Myrrha is predicted to move in front of a 9th magnitude star as seen along a path that passes through Prescott. Asteroid occultation paths are usually revised at the last minute, sometimes by hundreds of miles. If you want to observe this event, check the article in Sky and Telescope, November 2000, p.108 or call Fulton Wright, (520) 445-4967.

On Tuesday, November 7, in the evening you can see a lot going on around Jupiter. Here is the schedule:

6:44 PM Jupiter rises in the east-northeast

6:48 PM Io disappears in Jupiter's shadow (hard to see)

9:28 PM Ganymede disappears in Jupiter's shadow

9:30 PM Io comes out from behind Jupiter

9:45 PM That 9th magnitude star which has been lurking near Jupiter is now only 4 arcseconds north of the planet

11:32 PM Ganymede moves out of Jupiter's shadow just northwest of the planet

11:43 PM Ganymede moves behind Jupiter

1:26 AM Ganymede moves out from behind Jupiter

On Wednesday, November 8, during most of the night you can see the northwest part of the moon at its best. Look up in the sky for the almost full moon. Libration tips the northwest toward us. The day before and after should also be good.

On Wednesday, November 15, at about 6:00 AM you can see Mercury at its best. With binoculars or a small (3 inch) telescope look 5 degrees above the east-southeast horizon for the magnitude -0.5 planet. A few days before and after should also be good.

On Friday and Saturday, November 17 and 18, between midnight and 6:00 AM you might see some Leonid meteors. The last quarter moon will interfere and some people

say that nothing special will happen. Then again, meteor predicting is not an exact science yet and one persons says it could be flashy. So my prediction is a small chance of something big.

On Monday, November 20, about 4:33 AM you might be able to see an asteroid occult a bright star. The asteroid 752 Sulamitis (magnitude 13.5) is predicted to move in front of Mu Geminorum (magnitude 2.9) as seen in a 40-mile wide path from Parker to Tucson to the southeast corner of the state. Asteroid occultation paths are usually revised at the last minute, sometimes by hundreds of miles.

If you want to observe this event, check the article in Sky and Telescope, November 2000, p.108 or call Fulton Wright, (520) 445-4967.

On Tuesday, November 28, in the morning hours you can see an unusual transit of Io on Jupiter. Because Jupiter is so close to opposition and the sun is "shining over our shoulder", Io's shadow is almost directly behind the satellite. When Io moves in front of Jupiter at 3:11 AM its shadow will fall on the planet, barely above Io, at the same time. The situation lasts till 5:21 AM when Io and its shadow leave the planet.

On Wednesday, November 29, during the evening and next morning you can see some interesting events with Jupiter's moons. Here is the schedule:

5:07 PM Jupiter rises in the east-northeast

5:19 PM Sun sets

5:30 PM (approximately) Io, Ganymede, and Callisto are in a North-south line, east of Jupiter

9:30 PM (approximately) Ganymede and Callisto now in a line with Europa

9:37 PM Io moves in front of Jupiter

9:40 PM Io's shadow falls on Jupiter

11:47 PM Io moves out from in front of Jupiter

11:50 PM Io's shadow leaves Jupiter

Software Review

By Martin Bonadio

I've been using a particular astronomy software package for about 1 year now called Deepsky 2000 (formerly DS 99). It's a great program for amateur astronomers because it includes many great functions. While I know there are plenty of programs out there such as Megastar, The Sky, Red Shift, Starry Nights (I wish I could name them all!!!) this one has always been my personal favorite.

One of the reasons is because the Author, Steve Tuma, is so tuned into the needs of amateurs. For this I thank his efforts, and would like to suggest to the membership that you take an opportunity to review this software yourself if you have a chance. The program is shareware, and can be evaluated for 30 days. After which there is a \$45 cost to purchase (\$25 if you download it).

The program features the following:

- Spreadsheet Database of 426,000 Deepsky Objects
- Star Charts with Stars to Magnitude 15.5 !
- 18 Million Stars - HGSC ver 1.3
- Super Tycho Star Catalog
- Observer's Logbook
- Observing Planner
- Integration With Cartes du Ciel software
- 600+ Images
- Sync your PC to an Internet Time Server
- 4,000 Observations from Amateurs
- What's Up Wizard
- LX200, Ultima, Autostar, and Nexstar Telescope Control
- Telescope Slide Show (Tour) Feature
- Image Processing
- Solar System Information
- Link to Digital Sky Survey, NGC On-Line, & Skyrover
- Query, Reports, Herschel List, Messier Lists
- Finder Charts

In particular I use the planner, charting, logging, and telescope control features. I find the software useful because of the powerful searching and selection engine that Steve has built into it. I can specify my observing goals, and have a list

of objects presented to me in a spreadsheet fashion. I can then tag the ones of interest into my observing plan, and print custom star charts. While this program isn't a planetarium, it does fill many other needs, and I encourage you to check it out.

Visit www.deepsky2000.com to get more details, and download the software. Feel free to contact me if you have any other questions about it.

mabastro@aol.com

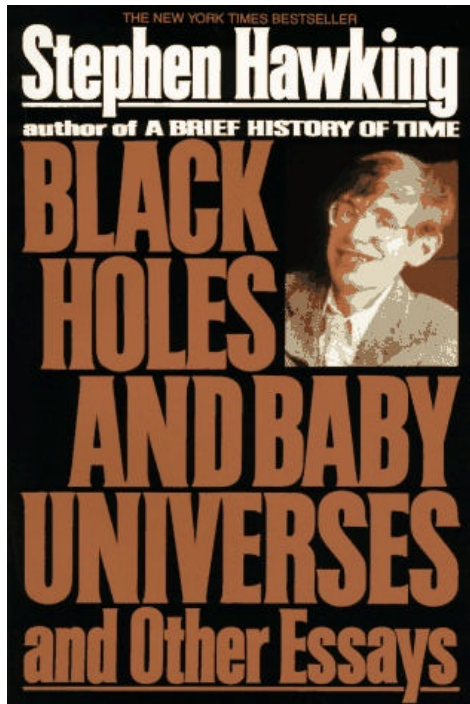
Library Focus

By Joe Orman

This month's review: ***Black Holes and Baby Universes, and Other Essays*** by Stephen Hawking.

For those who were intimidated by Hawking's previous book, *A Brief History of Time* (famous for being a best-seller that few people actually read), this book may prove easier going. It consists of 13 pieces written between 1976 and 1992, and although most are based on university lectures, they are all written in a concise and very readable style.

Hawking may be the most famous living cosmologist, and much of his fame stems from his physical condition, which he candidly discusses in the first few chapters. As a student at Cambridge, he was diagnosed with the degenerative neural disease amyotrophic lateral sclerosis (also known as Lou Gehrig's disease), and given only a few years to live. That was almost 40 years ago. He is now confined to a wheelchair, communicating by a computerized voice synthesizer operated by the movement of one finger.



Ironically, the fact that Hawking's muscles no longer work has freed his mind to investigate the physics that makes the cosmos work. The remaining chapters take us on a mental journey from the Big Bang (matter appearing from nowhere) to black holes (matter disappearing back into nowhere) -- both being singularities, places where the standard laws of physics break down. Hawking describes how the theory of quantum mechanics led him to realize that black holes actually give off what is now known as "Hawking Radiation," and must gradually evaporate. Curiously, as the size and mass of a black hole decrease, its temperature and radiation increase dramatically; the final instant of evaporation would be a "tremendous explosion," producing a "massive outpouring of high-energy gamma rays." I wonder if this could be the source of the mysterious gamma ray bursts that are now being detected.

The book's final chapter is the transcript of a radio interview Hawking did for the BBC's "Desert Island Discs." The interviewer

makes the insightful comment that Hawking is "already familiar with the isolation of a desert island, cut off from normal physical life and deprived of any natural means of communication." Hawking resists the notion, and perhaps, in the big picture, he is no more isolated than the rest of humanity. We are all castaways on this island Earth.

To check out a book from the EVAC library, contact properties manager Rick Scott at rmscott@home.com or (480) 821-5721.

For Sale

Celestron Advanced Astromaster module, 1 year old, only used for period of 1 month. Excellent condition, \$225. Encoders and hardware for C14, \$50. Bill Dellinges (480) 983 6651, mrcomet@uswest.net

Your Article Here!!

Do you have a great idea for the next newsletter? Perhaps you had a night of fantastic observing, or some interesting tips to share with the rest of the club? Maybe you even have a favorite piece of astronomical hardware that you use? Tell us all about it!! The newsletter is a great way to communicate with the rest of the club. We're always welcoming new articles and ideas. So if you are interested just drop Martin Bonadio an email: mabastro@aol.com



East Valley Astronomy Club

Membership Form

Please complete the information requested. Return at the next club meeting or to the address below, with a check made payable to EVAC for the appropriate amount due. *IMPORTANT!* Please note that ALL memberships expire on December 31 of each year.

1. Check one of the following: () New Member () Renewal

2. Select appropriate dues options:

Send To:

New Member select month joining:

- () \$20.00 January - March
- () \$15.00 April - June
- () \$10.00 July - September
- () \$ 5.00 October - December

EVAC Treasurer
P.O. Box 2202
Mesa, Arizona 85214-2202

Member Renewals (current Members ONLY!)

- () \$20.00 Annual Renewal (January - December)

Magazines: Provide renewals notices with payment.

- () \$29.00 Astronomy Magazine
- () \$30.00 Sky & Telescope

Name Badges

- () \$7.00 Each

_____ **Total Enclosed**

3. Complete requested information below. Please Print.

Name:

Address:

EVAC on the Internet

EVAC Homepage: www.eastvalleyastronomy.org

E-mail Mailing Lists

EVAC-mls is a mailing list for club announcements and quick notification of astronomical events.

To join, send E-mail with the "Subject: subscribe" to EVAC-mls-request@psiaz.com

EVAC-Board is for EVAC business. All club members are welcome to participate.

To join, send E-mail with the "Subject: subscribe" to EVAC-Board-request@psiaz.com

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-request@psiaz.com

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.

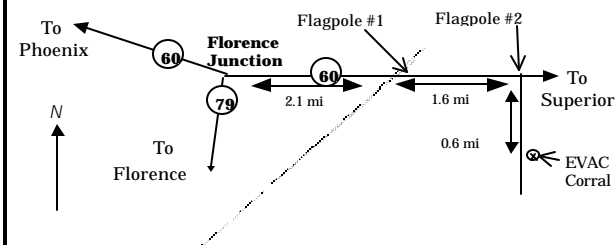
EVAC Star Parties

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 right before a gas-line sign.

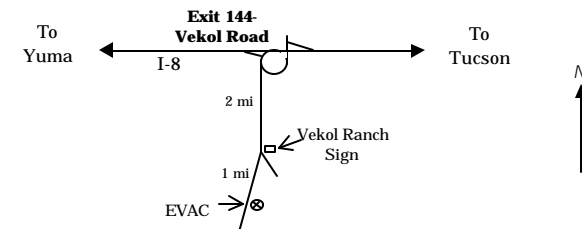


Deep Sky Star Party: Vekol Road Site

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) 926-8529

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(480) 735-8042

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(480) 497-5703

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DATABASE**
Martin Bonadio
(480) 926-4900

East Valley Astronomy Club—2000
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 Martin Bonadio. Email—mabastro@aol.com

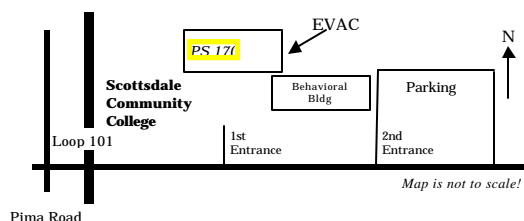
Club Meetings: Second Wednesday of every month at the Scottsdale Community College, 7:30 pm. Normally Room PS 170 or 172 in the Physical Sciences Building. See map below.

Newsletter and Address Changes: Contact Martin Bonadio 921 North Kingston Street, Gilbert, AZ 85233, 480/926-4900. mabastro@aol.com. Contributions may be edited. The Newsletter is mailed out the week before the monthly Club meeting. An electronic version available in Adobe PDF format in lieu of a printed copy. Please contact Martin with delivery your preferences.

EVAC Library: The library contains a good assortment of books, downloaded imagery, and helpful guides. Contact Rick Scott for complete details, 480-821-5721

Book Discounts: Great savings through Kalmbach and Sky Publishing. Contact Martin Bonadio.

EVAC Party Line: Let other members know in advance if you plan to attend a scheduled observing session. Contact Stan Ferris, 480-831-7307.



East Valley Astronomy Club

Martin Bonadio, Editor
921 North Kingston St. Gilbert, AZ 85233

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Reminder: Next EVAC Meeting
Wednesday, November 8, 2000
ROOM PS170 THIS MONTH