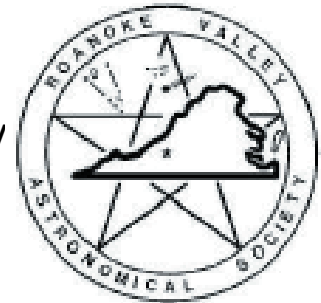




RVAS

Roanoke Valley Astronomical Society



News About Amateur Astronomy
In Southwestern Virginia
<http://www.roavas.org>

Vol. 22 - No. 4

April 2005

ETIQUETTE FOR AMATEUR ASTRONOMERS

By President, Katherine Hix

You are eating an olive at a party and you realize it contains an unexpected pit which now resides in your mouth. (Astronomers always get the olives with black holes in the middle, so it must be a non-astronomer's party.) Someone wants to talk to you, and you have this pit in your mouth - how do you get rid of it (the pit, not the person)?

The answer to this, and some other significant etiquette questions, will be answered below. The topic of this column is proper, or at least recommended, behavior for astronomers at star parties/club observing sessions, as compared with the requirements of public observings. Some of these rules I learned before ever attending an observing session, but some of them I have learned the hard way. I do not believe Miss Manners has ever addressed these issues, so if she is reading, she may learn something, as well. She already knows the olive pit rule.

Star Parties/RVAS (and other) Club Observing Sessions

These are the rules, as we know them, for observing where only amateur (or professional!)

astronomers are going to be present. If there are guests from the general public, they are guests and will be guided by the astronomers who are their hosts.

1. Hosts, keep your guests in line. No running, no flashlights, no loud music and other obnoxious behavior.
2. Acquisition and retention of night vision is paramount at star parties. No white lights. Red lights only.

Drive to the party before it gets dark, if humanly possible. If you know you'll get there after dark and you've never been to the site before, make plans to visit the site ahead of time so you know where the road is. You will need to drive in with your fog lights so as to minimize the disruption of others' night vision.

Some folks have replaced all the lights in their cars' interiors with red lights - this is a great idea. Others have spouses who wouldn't appreciate that spark of genius. For those of the latter variety, who arrive after dark - get your stuff out of the car as fast as you can. Then shut the door/trunk and leave it shut.

If you are going to be the first to leave, or if people are

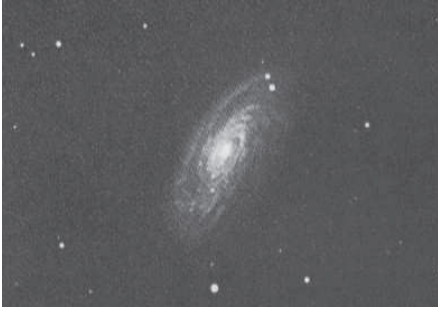
trickling out and you are in the vicinity of some people who are still observing, make an announcement that you are leaving so that people know your white lights will be turned on. They can close their eyes before you open your car doors or turn on your lights.

Don't shine your red flashlight/green laser into anyone's face. Make sure the thing is pointed properly before you turn it on. Conversely, don't wander up to someone who's using a red flashlight to read a chart and then complain about the flashlight. It was there before you were.

Find out if someone is doing astrophotography before waving green lasers around. If it's a nice dark sky site, you could ruin someone's shot by pointing at the object they are trying to image.

3. Try to visit with other people. That's why it's called a "star party." Lots of us are introverts, and it can be hard to make ourselves wander around, but try it. It's fun. Get your night vision first, though - smashing into people as soon as you get there isn't nice.

See Etiquette - Cont. on Page 4



MYSTERY OBJECT

This object was the first to reveal its non-gaseous nature.

Send your best guess to Dave Thomas, our Mystery Object Columnist, at

thomasde-ka8inl@worldnet.att.net

Hello

My name is Mike Overacker, and I am your RVAS Vice-President. I am also, currently, your RVAS Newsletter editor. I was an RVAS member in the early '70's, but was lured away from astronomy by the road to fame and fortune. In June 2003, I returned to astronomy with a vengeance, purchasing, then building a variety of telescopes. If you have anything to say, or articles for the newsletter, feel free to contact me at: mike@overacker.com

MARCH 2005 RVAS MEETING NOTES

By Secretary, Mark Hodges

There were 27 members present and the meeting was held in the planetarium this month.

Katherine Hix called the meeting to order, and asked for observing reports but due to the weather there was only one.

Katherine reported that she had observed the moon's occultation of Antares on March 3rd.

The club awarded **Clark Thomas** a gift certificate in appreciation of his service as the newsletter editor.

It was announced that the club will be observing Astronomy Day on May 14th this year. We will be set up at 2 locations, downtown Roanoke on the Market and at the Explore Park overlook. Both locations will be evening events. More info on that later. A sign-up sheet was started and several people have already signed up for both sites, but more assistance would be appreciated. Contact Katherine Hix or Mike Overacker to sign up.

John Goss will also be at Mill Mountain Zoo on May 7th during the Zoo's Migratory Bird Day doing solar observing and publicizing the club.

John Goss gave a demonstration of one of the Night Sky Network's teaching aids dealing with explaining distances in the universe by using a Quarter to represent the size of our solar system. It is an excellent teaching tool, and very good at putting astronomical distances into perspective.

John also presented the Deep Sky Object of the Month; NGC 2903 a 9th magnitude galaxy in Leo. It can be found just southwest of Epsilon Leonis (the first star in the sickle).

Mike Overacker introduced our newest addition to the club, a Coronado Solar Telescope, the **SolarMax 40**.

Mike also gave a presentation on the correct pronunciation of the names of constellations, he used several different sources to come up with the correct pronunciations.

The main program for the night was a planetarium show called Star Stealers, provided for RVAS by **Mark Hodges**. The show follows an imaginary detective as he searches for some "missing stars" and during his search you learn how the stars in our universe are born and how they die.

The Roanoke Valley Astronomical Society is a membership organization of amateur astronomers dedicated to pursuit of observational and photographic activities. Meetings are held at 7:30 p.m. the third Monday of each month at Center in the Square Roanoke. Meetings are open to the public. Observing sessions are held one or two weekends a month at a dark-sky site. Yearly individual dues are \$20.00. Family membership is \$25.00; student membership is \$10.00. For information, call the RVAS Message Line at 540-774-5651. Articles, quotes, etc. published in the newsletter do not necessarily reflect the views of the RVAS, its editor, officers, or individual members.

RVAS web page: <http://www.roavas.org>

Officers/Executive Committee : **Katherine Hix**, President (334-2443); **Mike Overacker**, Vice President and Newsletter Editor (776-3092); **Mark Hodges**, Secretary (774-5039); **Lynn Slonaker**, Treasurer (774-5695); **Bruce Jones**, Executive Committee Member-At-Large (774-3844); **Paul Caffrey**, Immediate Past President (345-2847); **Dave Godman**, Past President / New Member Coordinator (774-3337); **John Goss** and **Genevieve Goss**, Outreach Coordinators (966-4606); **Frank Baratta**, Membership and Public Viewing Coordinator (774-5651); **Mahesh Tailor**, Web Master (776-5472)

THE LOCAL GROUP

By Genevieve Goss

Club members have two interesting dark-sky events coming up in the near future. The annual MERAL (Mid-East Region of the Astronomical League) meeting this year will take place at NOVAC's Almost Heaven Star Party, which will be held June 2-5, 2005, at the Mountain Institute in Spruce Knob, WV. The Star Party is a cooperative effort of NOVAC and the Virginia Outdoor Lighting Taskforce. Proceeds from the event will be used to fight light pollution. Spruce Knob holds the

distinction of being one of the premier dark sky sites in the East. In addition, the Mountain Institute provides civilized amenities like hot showers, meal service and internet access. Registration is now open; visit: <http://www.novac.com/AHSP/index.php>

Another dark-sky event is the Green Bank Star Quest which is scheduled for July 6-10, 2005, at the NRAO Green Bank (WV)

facility. A few RVAS members attended last year's event and were well-pleased. As an added plus, it's an easy drive from the Roanoke Valley. Check out the particulars at: <http://www.greenbankstarquest.org/>

Our Night Sky Network coordinators are looking for local volunteers to offer short talks on amateur astronomy for groups such as Scouts, Science Clubs, etc.

RVAS MEMBERS ATTEND TRI*STAR

By Dave Godman

On Saturday March 5th four members of the RVAS traveled to Greensboro, NC for an all-day astronomy seminar. **Paul Caffrey, Dave Godman, John Goss, and Clark Thomas** joined with other amateur and professional astronomers at the Triad Starfest or *Tri*Star* for short, hosted by the Greensboro Astronomy Club. All activities took place at the Guilford Technical Community College located in Jamestown, NC.

Topics presented included updates on the Rovers on Mars by a senior editor of S&T magazine, Young stars of the Orion Nebula, Research on "Dead" Stars, the Cassini/Huygens mission to Saturn and the Deep Impact Mission where a probe is now being sent to collide with Comet 9P/Tempel 1 on July 4th or 5th, 2005. see: <http://deepimpact.jpl.nasa.gov>.

During the lunch break they opened the doors of the new Cline Observatory located just across

the street from the lecture hall. It houses a Meade 16" LX200 in a 6 meter dome which is open most Friday nights for public viewing as well as for school groups at other times. Unfortunately, scattered clouds and sporadic rain limited us to just an "inside tour".

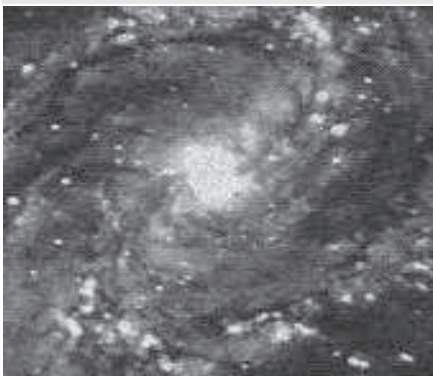
Many vendors had set up tables to promote their wares and they and others provided excellent door prizes. Most notable was that attendance at the fest was free of charge. Photos and other info can be found at www.greensboroastronomyclub.org.

LAST MONTH'S MYSTERY OBJECT

The Mystery Object for March was M83, located at RA 13h 37m, DEC -29 deg 52 m. At a distance of 15 million light years it glows at magnitude 7.6.

Called the "Southern Pinwheel", this spiral galaxy on the border of Hydra and Centaurus is one of the ten largest galaxies in the sky.

M83 has the distinction of being the galaxy with the largest number of observed supernovae with a total of 6 so far.



FOR SALE

6 " Meade Newtonian RFT about 25 years old. Equatorial drive w/ eyepieces, a Barlow, and 2 finder scopes. Drive motor and mount rings need work. Mirror is good. Best offer. Contact Roger Dalton, Roanoke, to arrange inspection.
444-4114(day)
774-3727(evening)

ETIQUETTE*Continued from Page 1*

4. On the other hand, if there are observers who don't want to be bothered, leave them be. They might be trying to find a difficult object all by themselves, or trying to photograph something. You can identify these people by the way they are set up far from everyone else and they ignore you, or only grunt when you say "hi."

5. Compliment others' equipment/skills/whatever and don't brag about your own. No need to be fake - there is always something nice to be said. If the person is having a difficult time with his telescope or map or (GASP) finding a dropped eyepiece, offer to help, but don't insist. Definitely do not offer to help if you don't know what you are doing, but offer to get help if you know someone present who could be of assistance.

6. Come prepared. Bring what you need. Look through your stuff and make sure everything's there before you leave the house. Got batteries?

Public Observings

Some of these rules are the same. Some are very different.

1. Get there early. Set up and be ready so you aren't doing that when the crowds start to show up. See # 6 above - be ready.

2. Find out ahead of time what is up in the sky and what the observing conditions are likely to be. If you are set up in the parking lot of a car dealership, you'd better be sure there are some planets and a moon up there, or you'll be looking for the Mill Mountain star

as a last resort. Know some facts about the objects that are in the sky that night. Don't make up stuff. If you don't know it, don't say it.

Bring a safe stepladder or stepstool if there is any chance at all that someone may not be tall enough to reach your eyepiece.

3. Do not expect the public to know anything about telescopes or astronomy whatsoever. If they were astronomers, they wouldn't be doing their stargazing in a parking lot. However, a few of them are astronomers or science teachers and are just passing through to check us out - you'll recognize them easily enough.

People will bring flashlights and little kids and sticky candy and there will be teenagers wearing belly shirts when it's 30 degrees, and all sorts of other stuff will happen that you would never see at Cahas. That's fine - that's what they are supposed to do. They don't know where the scopes are and they need the flashlights to see from one scope to the next - they don't have night vision like you do. They will be freezing cold and won't want to stay out long - that's okay, too. They're just stopping by; you are the one who has to stand out there until the event is over, so make sure you are as warm and happy as possible.

4. Always attend your scope or have someone attend it for you. Do not leave your scope unattended under any circumstances. The last time I did this, I found out that some kid was using it for a seesaw. At our observing sessions, we can wander at will. At a public session, it's a really bad idea.

5. If you have to leave the event early, turn on your headlights when you leave. Anyone at a public observing should come and go with headlights. There could be little kids or dogs in the parking lot that you won't see with only fog lights on.

6. If possible, get together ahead of time with folks who will be attending the observing with you to come up with a plan for that night's session. The attendees could have a short discussion before the crowds arrive. Appoint a coordinator (See #5 below.) Each astronomer should have his/her scope trained on an object that is well-seen in his instrument. Refractors - planets. Wide FOVs - open clusters. Good filters - nebulae. Etc. If possible, the objects should be different, so that people aren't looking at the same thing over and over.

If these objects will not remain visible throughout the session, make adjustments when necessary. If something sets or moves behind a cloud, find something else that no one else is looking at, if possible.

With an event such as a lunar eclipse, all scopes will be on one object. There may be some people whose scopes can aim at something else, for contrast. Still, follow the rules below for crowd movement.

7. It is helpful if there is one person attending without a scope who can act as a guide, or coordinator, for people who arrive. There should be a starting point and ending point, and there should be no places in between where there are long lines for one scope and no lines

Continued on Page 5...

ETIQUETTE

Continued from Page 4

for another. The coordinator can explain to people, as they arrive, where to start and where to finish.

Sometimes there are a lot of scopes, but not so many visiting members of the public. Other times, there are not enough scopes for a large crowd of people. Either way, it's important to keep the crowd moving along, and everyone who brings a scope should have some interaction with the public.

8. Bring RVAS cards with you. Put your name on the back before you leave home. The cards have the hotline number, but you can put your own phone number on them, if you like. If someone asks a question that you know will take a lot of time to answer, and there is a line for your scope, give that person a card and ask them to give you a call, or tell them to write their number down and give them a call later (and make sure you do it). Otherwise, you might ask them to visit you at your scope later when there isn't anyone else waiting.

This is necessary when there is a big crowd and someone wants you to compare the price/quality of your scope with everyone else's, or wants to ask you what's wrong with the scope he got for his birthday, etc. If there is no one waiting, you can indulge the person for awhile until another person comes along. Once a queue begins to form, you will have to excuse yourself, and that's when your card comes in handy, once again. The person who hasn't seen out of the eyepiece takes precedence over the person who has. Answer all of the person's questions on the phone later, or if you can't answer them, guide them to someone who can, if possible.

Where do you get RVAS cards?
John Goss.

9. Allowing a crowd to form at your scope and stay there will create confusion for people coming into, or departing from, the observing session, and this is confusing for even the smallest crowd. When you have a crowd at your scope, the longest anyone should be

at the eyepiece is a minute or two, and there should always be someone at the eyepiece. Make sure that people move along to the next scope when they are finished with yours.

Tell each person a little something about the object being observed (see #2, above). Once again, no more than a minute or so, depending upon the age of the person and their obvious interest level. "That's the Moon" is good for a toddler. You can point out Copernicus or Mare Tranquillitatis to an adult, why the image is upside down (if it is), etc. That's it - just a few things. If there's no one else behind them, you can talk a little longer. Otherwise, guide them to the next scope.

That's about it. Still hanging onto that olive pit? Well, don't spit it into a spoon and definitely don't swallow it. It goes back onto the plate the same way it went in, with your hand cupped in front of your mouth, ease the pit into your hand and put it on your plate, whence it came. If you didn't have a plate to start with, use a napkin.

ASTRO-QUIZ

Most stargazers know that Crux, the Southern Cross, is the smallest constellation. But which constellation is the largest and which the most average?

Answer to Last Month's Astro-Quiz: No, last month's quiz on when we see the fewest first magnitude stars wasn't a trick whose cheeky answer was "When it's cloudy"! The Observer's Handbook, of the Royal Astronomical Society of Canada, lists 22 first magnitude stars; that is, of magnitude 1.5 or brighter. Of these, six are below our horizon (though one, Canopus, just reaches it). In general, we see the fewest in the fall. But to be precise, any night at sidereal time 21h 30m, only five are visible. This is start time, when the 21h 30m hour circle of right ascension is on the meridian. This hour circle is roughly mid-way between Enif, the nose star of Pegasus, and the little constellation Equuleus. This area is due south around 10:30 p.m. in late September, 8:30 p.m. in late October and so on.

UPCOMING EVENTS

HANDS ON SWAP MEET - APRIL 2, 2005

We invite you to join us in the Mid Atlantic largest Telescope Swap Meet. Bring anything telescope related and other cool stuff to sell or trade. We invite all to attend. H-Alpha observing will be available. Please feel free to bring your solar scope for observing. We have tent tents and tables, but feel free to bring your own. We are limited to about 30 tables so it is firstcomefirst serve. We will provide pricing labels, pens, etc, soft drinks and advice. We will have our usual 500+ used odds and ends for sale also. Rain Date April 3. For more information please call us toll free at 1-866-726-7371 or email us at astroguy@handsonoptics.com. For directions, go to <http://www.handsonoptics.com/contact.html>

ALMOST HEAVEN STAR PARTY - SPRUCE KNOB, WV - JUNE 2-5, 2005

NOVAC is pleased to announce that we will be holding our firstregionalStarPartyatSpruceKnob,West Virginia on June 2-5, 2005. The event will be held at The Mountain Institute in one of the darkest areas on the east coast at an elevation of about 4200 feet. Please check the web site for more information. We will be adding details over the next few weeks. <http://www.novac.com/AHSP/index.php>

Registration is now open and it can be done completely on-line. If you have questions, send an email to AHSP@NOVAC.COM.

Mid-East Region of the Astronomical League (MERAL) is also planning to hold their annual meeting at the event, so please try to send a representative from your club if possible. All proceeds will go to the Virginia Outdoor Lighting Taskforce - VOLT.ORG to supportefforts to fightlightpollution.

GREEN BANK STAR QUEST II - GREEN BANK, WV - JULY 6-10, 2005

Combining Optical and Radio Astronomy at One Event!

Come join us July 6th-10th, 2005 under the very dark skies of West Virginia for the 2nd annual Green Bank Star Quest at the National Radio Astronomy Observatory in Green Bank, WV . By day checkout all the NRAO has to offer, like the new multi-million dollar Visitor's Center, and free tours of the facilities: including the 100 meter GBT – which is the world's largest fully steer able radio telescope. Star Quest will have 4 days of lectures, imaging classes, vendors, raffles,kidsactivitiesandnighttimeopticalobservingonoversixacresof camp sites at the low price of \$ 75.00 for a party of two or \$ 100.00 for a family. For more information contact Joe Gonzalez at (304) 626-5012 or visit our web site at www.greenbankstarquest.org

Register before 3/15/05 to receive a 10% discount off your total registration fees, just write Early Registration Deal on the registration form and submit it before 3/15/05!!

******* DUES AND SUBSCRIPTION NOTICE *******

It's renewal time for RVAS memberships, most of which expire on June 30, 2005. If your membership expires at another time, you'll receive a special notice. If you want to know now when your membership expires, **call Frank Baratta at 774-5651**. Membership categories are:

INDIVIDUAL (\$20.00 per year) - RVAS and Astronomical League membership for you.

FAMILY (\$25.00 per year) - RVAS and Astronomical League membership for you and your family.

STUDENT (\$10.00 per year) -RVAS and Astronomical League membership for a full-time student.

Make checks payable to "RVAS," and forward to: **Lynn Slonaker, RVAS Treasurer, 3548 Kenwick Trail, Roanoke, VA 24018.**

MAGAZINES: Members may subscribe to *Astronomy* (\$29.00) and/or *Sky & Telescope* (\$32.95) at the indicated substantial club discount rates. Subscriptions are sent to the publishers each April 15th, August 15th and December 15th. Renewal payments should be submitted by whichever of these dates is at least 4 months prior to the expiration of your magazine(s). Orders may be added to dues payments, or submitted separately

STAR TRAIL PHOTOGRAPHY

By Gary Hatfield

Hello everyone! This month I'm going to talk about "Star Trail Photography". Star trail photography is the easiest form of astrophotography you can do. All you need is a 35mm camera with a "B" (bulb) setting, a shutter lock cable, and a tripod. Unfortunately, you probably won't be able to use your digital camera, unless you have one of the digital SLR cameras. Just dust off that old 35mm film camera and let's have some fun the old way!

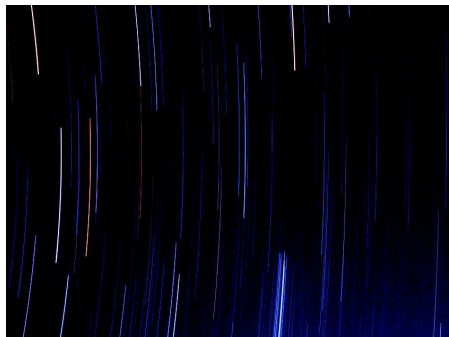
Let's start with film. While using a high speed film will take in more photons in a shorter time, you should try to avoid anything over 400 ISO. The beauty of star trails is that the longer you leave the shutter open, the more movement you will see in your photo. If you are using 400 or faster film, stop the aperture down to f/4 or f/5.6. This will keep the film from getting overexposed and reduce vignetting. Vignetting is the darkening around the edges of a photo due to the optical qualities of a lens. It is especially obvious on long exposure photos, as can be seen on my Polaris shots. What we're after is movement from a long exposure. 100 or 200 ISO is very good. If symmetry is your thing, then a shot



POLARIS by Gary Hatfield

centered on Polaris is your ticket. Set up your camera so that Polaris is centered in your viewfinder. Make sure your shutter setting is on "B" and that your lens aperture is on f/4 or f/5.6. Now, using your shutter lock cable, lock the shutter open. The length of the exposure is up to you. Go eat dinner, watch TV, check your e-mail or whatever then come back and gently unlock the shutter lock and "Voila", you have a star trail. This picture is a 35 minute exposure with a 55mm lens @ f/4 on 200 ISO film. Unfortunately a plane came through 3 of the 5 pictures I took for this article so, unless you sit there during the exposure and watch for aircraft with a dark cloth ready to cover the lens while the plane goes by, you are at the mercy of flight control.

This picture is taken with the same



PLEIADES - M45 by Gary Hatfield

set-up, but instead of centering on Polaris, I set the camera pointing just above M45, The Pleiades, so that M45 would rise into the picture. To the left of M45 you can see Perseus rising also. This is a 45 minute exposure at f/5.6. Putting objects or landscape in the foreground can really add to your star trail photo, whether it be it trees, a familiar landmark, or in the case of this last photo,



CASSIOPIEA by Gary Hatfield

me and my scope. Since I was setting up for some piggyback and prime focus astrophotos, I decided to take this shot. The ghostly pointed object is me wearing a hooded jacket. I kept going back to the scope checking my drift alignment but didn't sit there through the whole exposure. Again, same set-up, but this time I lowered the tripod as low as it would go and put it behind me so it would get the scope in the foreground and Cassiopeia in the background. Straight above the scope is Cassiopeia and just on the outskirts of the ghostly image of me, is the Double Cluster in Perseus. This is a 15 minute exposure at f/4.

As you see, star trails can be as beautiful and diverse as your imagination allows. Get out there and give it a try. Go for a one or two hour exposure and you might just have a beautiful photo for the wall. That's it for this month. Don't forget about the Lunar Eclipse on the 27th, it's another chance for some photos. You can view these photos on my website at www.starrystateobservatory.com. Next article, we graduate to short and long exposure piggyback astrophotography.

Society Events and Activities for April

APRIL MEETING: Monday, April 18th, 7:30 p.m., Fifth Floor Meeting Room, Center In The Square, Roanoke: Mark Hodges will demonstrate his homemade "Barn Door" mount; The "Astrophotography Competition" will take place (photos must have been taken since May 2004), as well as the Spring Social (Everyone please bring a snack or dessert). This is always a fun meeting! Try to attend.

"MEMBERS ONLY" WEEKEND OBSERVING SESSIONS: Unless otherwise noted, observing sessions are held at Cahas Mountain Overlook, milepost 139 on the Blue Ridge Parkway.

* **Friday and Saturday, April 1st and 2nd.** Sunset is at 6:44 p.m. Astronomical twilight ends at 8:13 p.m. The Moon rises at 1:26 a.m. and 3:25 a.m., respectively.

* **Friday and Saturday, April 8th and 9th.** Sunset is at 7:50 p.m. Astronomical twilight ends at 9:21 p.m. The Moon sets at 7:52 and 9:00 p.m., respectively.

* **Friday and Saturday, April 29th and 30th.** Sunset is at 8:08 p.m. Astronomical twilight ends at 9:45 p.m. The Moon rises at 1:21 and 2:14 a.m., respectively.

* **May Sessions.** 6th and 7th, 27th and 28th

FRANKLIN CO. PARKS DEPT./RVAS PUBLIC STARGAZE: Next session: May 28th, 9:15 p.m..)

ROANOKE CITY PARKS DEPT./RVAS PUBLIC STARGAZE: Saturday, April 2nd, 7:30 p.m., Cahas Overlook, milepost 139, Blue Ridge Parkway. For City, County and other area residents; RVAS members welcome to participate. Call the **RVAS Message Line, 540-774-5651**, for information. (Next Session - May 7th, 9:00 PM, Cahas Mountain Overlook)

Roanoke Valley Astronomical Society
3578 Berry Hill Drive
Roanoke, VA 24018