



# Roanoke Valley Astronomical Society



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

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February 2004

## Warm Gathering in a Cold Month

By Sir Patrick Moore,

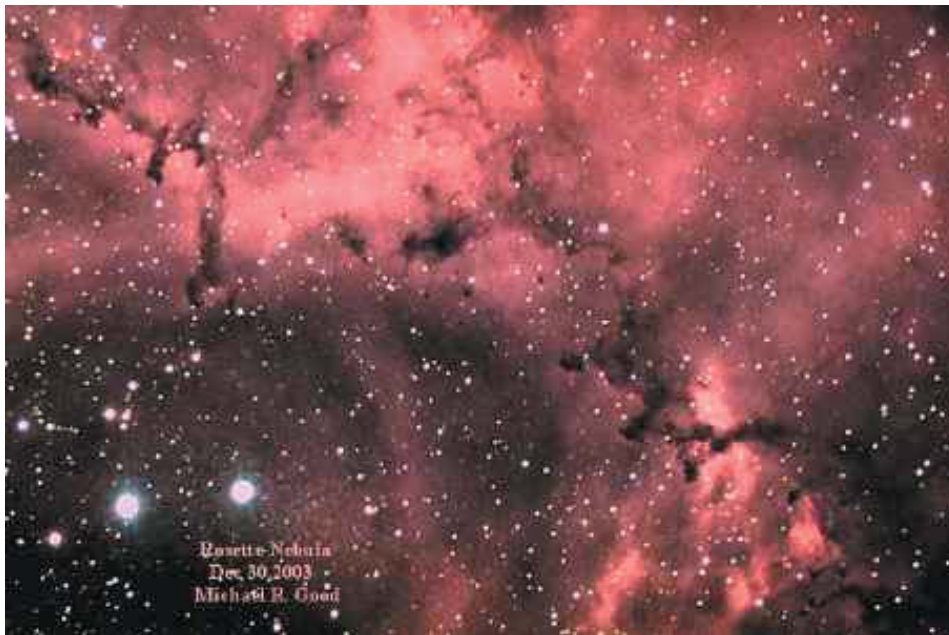
The brightest star in the night sky is easily visible on cold clear January and February nights. Sirius dominates the southeastern skies, and is not hard to find.

As Jack Horkheimer in this month's *Stargazer* segment showed, simply follow the direction of Orion's belt stars to the lower left and, bingo, you'll land smack dab on Sirius. On the next clear night brave the cold and enjoy the brilliant stars of the winter sky!

Wouldn't it be nice if there were a means for members to communicate with others in the club about things astronomical? Our webmaster, **Mahesh Tailor**, has been creating just such a forum. Find out how to participate by log-

**Paul Caffrey** presented the *Caldwell Club* certificate and pin to **John Goss** for observing at least 70 items on Patrick Moore's increasingly popular list. According to John, "These deep sky objects greatly range in viewability, from the Hyades, which is perhaps the easiest in the sky, to NGC 4236, a large very dim galaxy in Draco."

Earlier in the month the *Planetary Observing Club* award was earned by both **Genevieve and John Goss**.



Part of the Rosette Nebula, in Monoceros. Caldwell 49. Michael Good.

### Society Announcements

The RVAS has been selected to participate in a new educational outreach program sponsored by the Astronomical Society of the Pacific and NASA. Details of the *Night Sky Network* were discussed by Genevieve Goss.

ging on to <http://www.roavas.org/forum>.

Observing plays a large part in amateur astronomy. The Astronomical League, in an effort to draw members out under the stars, has devised a number of observing clubs. This month, RVAS President

Genevieve explained, "This list takes over a year to complete. Its 27 projects include observing all the major planets and some of their many moons, our moon, and the sun. You don't need a telescope for a couple of them."

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# Faith-Based Space Program

By Clark M. Thomas

When President Kennedy announced the extremely ambitious goal of putting a man on the moon before the end of the sixties our nation responded with

## Mystery Object

Can you identify the ORigen of this winter Herschel object? Send your best guess to Dave Thomas, our Mystery Object Columnist, at

thomasde-ka8inl@worldnet.att.net



electric excitement. We were going to beat those evil Soviets where it counts, and keep them from aiming bombs at us from the moon. Putting American boots first on lunar soil would also heal our wounded pride going back to Sputnik.

Shortly after Apollo 11, trips to the moon became "routine," except for Apollo 13. Fortunately, Apollo 13 ended well. It could have ended otherwise. Over the years, the Challenger and Columbia disasters, plus several other deaths in space and on the launch pad, have confirmed that human space flight is the world's riskiest endeavor.

NASA can go deep into space with redundant safety features, sharply reducing the immediate risk to our human adventurers. However, risk can never be eliminated, only minimized. There is a huge price to pay for redundant improvements to safety after most risks are covered. What sort of cost-benefit analysis will be made when budgets and astronaut lives are compared? How will we also weigh the inescapable risks associated with deep space radiation?

Finally on this matter, if something like Apollo 13 were to get into trouble on or near Mars, what chance would it have? How

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## Astro-Quiz

If the waning disk of the Moon is near the vernal equinox, what season is it?

**Answer to Last Month's Astro-Quiz:** The Great Orion Nebula has a well-known feature called the "Fish's Mouth," a dark gulf of obscuring matter pointing toward the Nebula's famous Trapezium star group. The fact that the Fish's Mouth is dark reveals that it cannot be in the immediate vicinity of the Trapezium. Its stars are very young and hot, and would cause the dust of the Fish's Mouth to glow with emitted radiation if it were nearby. So, like the famous Horsehead Nebula, also in Orion, the Fish's Mouth is a nearer dark patch silhouetted against a brighter background.

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: Paul Caffrey, President (345-2847); Katherine Hix, Vice President (334-2443); Carol Mesimer, Secretary (334-1177); Lynn Slonaker, Treasurer (774-5695); Dennis Stevens, Executive Committee Member-At-Large (989-8801); Dave Godman, Immediate Past President (774-3337); John Goss, Past President (966-4606); Clark M. Thomas, Newsletter Editor (427-1873, [clarkt7@cox.net](mailto:clarkt7@cox.net)). Dave Thomas, Mystery Object Columnist ([thomasde-ka8inl@worldnet.att.net](mailto:thomasde-ka8inl@worldnet.att.net)).

# The Local Group...

By Genevieve Goss

Are you interested in sharing your interest in astronomy? Have you perfected your public speaking skills, but need ideas for space or astronomy topics? Do you remember the fun of constructing "inventions" with household items? Imagine the same concepts à la NASA!!

That's the idea for the public outreach kits offered by the **Night Sky Network**, a partnership of amateur astronomy clubs, NASA/JPL Planet Quest, Astronomical Society of the Pacific, and the Astronomical League.

## Last Month's Mystery Object

NGC 2068 (M78) a bright emission nebula in ORion, was the mystery object for January. The nebula lies about 1,600 LY distant and glows at a apparent magnitude of 8. M78 is located on the sky at RA 5h, 46.7 m and Dec. +00 deg, 03 m.



At a recent meeting of the Blue Ridge Astronomy Club, in Forest, John Goss and I viewed a collection of the Network's outreach toolkits. Each kit contains materials on themed topics, training in the use of the materials, and ideas for effective ways to communicate with varied audiences. The contents the kits include a DVD for presenter training, a Power Point presentation and "stuff" — inexpensive snake flashlights, marbles, grains of sand, birdseed, springs and strings, and lots of other fun items to help audiences envision how the universe works.

At the January RVAS meeting, I outlined the basic program and RVAS' participation in it. John and Genevieve Goss will be the club contacts. Participation is free, and the only requirement to remain in good standing is to conduct five outreach programs a year.

Outreach events can range from displays at a museum, star party or Astronomy Day to presentations for Scout groups, schools, clubs, or even family gatherings. RVAS webmaster, Mahesh Tailor, will receive a NSN logo and link for our club website.

If you would like to participate in outreach events with the RVAS Night Sky Network, please send me an e-mail or plan to sign up at the next RVAS meeting. 2004" (maybe that should be our new club motto?!).

# Why the Spirit Rover Went Crazy

Gusev Crater (MPI) - A spokeshing for Martian Air Force denounced as false rumors that an alien spacecraft crashed in the desert, outside of Ares Vallis on Saturday. Appearing at a press conference today, General Rgrmry The Lesser stated that "the object was, in fact, a harmless high-altitude weather balloon, not an alien spacecraft."

The story broke late Saturday night when a major stationed at nearby Ares Vallis Air Force Base contacted the *Gusev Crater Daily Record* with a story about a strange, balloon-shaped object which allegedly came down in the nearby desert, "bouncing" several times before coming to a stop, and "deflating in a sudden explosion of alien gases."

Minutes later, General Rgrmry The Lesser contacted the *Daily Record* telepathically to contradict the earlier report. General Rgrmry The Lesser stated that hysterical stories of a detachable vehicle roaming across the Martian desert were blatant fiction, provoked by incidences involving swamp gas. But the general public has been slow to accept the Air Force's explanation of recent events, preferring to speculate on the "other-worldly" nature of the crash debris.

Conspiracy theorists have condemned Rgrmry's statements as evidence of "an obvious government cover-up," pointing out that Mars has no swamps. They point to the release of secret government memos detailing attempts to discredit reports of the landings by alien spacecraft. The memos discuss strategies to avoid troubles similar to those caused by the War of the Worlds

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## Spaced Program...

will people on this planet react to watching the slow and terrifying death of a brave crew in space far beyond the embrace of Earth?

In the meanwhile, we are tasting the early fruits of robotic and remote controlled science from the safety of our planet. The Hubble Space Telescope and its companions work perfectly well in the vacuum of space. The Spirit rover cruised away from its landing pad impervious to an environment that would kill all humans not heavily encased in survival suits. There are more robotic missions planned and dreamed of that will extend our knowledge of the solar system and deep space, and none of them will endanger human life. All of them will be relatively cost-efficient, but not politically sexy.

When President G. W. Bush proposed in an election year going to back into space, it was hard to separate posturing from science. I suspect that his America-only vision was cynically designed to gather more votes than science. Shuffling around NASA's modest budget, while hardly increasing its total budget, won't get the job done. The financial heavy lifting would come long after Bush the junior is back in Crawford. Understandably, American taxpayers are skeptical.

Just two days after President Bush announced his "faith-based space program" (faith, because

there is very little new money in the budget, just faith that it will be found in the future), NASA played the ever dutiful dog, and quickly canceled the last Hubble repair and upgrade mission! This galactic blunder was due entirely to the squeeze on NASA's budget from Bush's impossible mandate to create something big from virtually nothing. NASA has in one absurdly myopic act alienated millions of its natural allies.

It has been claimed that a moon base could pay for itself. Maybe, but how cost-effectively? One money-making idea is solar cells on the moon energizing a microwave beam directed back to Earth. That's fine if you are nowhere near the beam, including birds and other wildlife.

A vastly more cost-effective alternative is boosting funding for solar-cell farms in the desert Southwest.

Add your voice to the many who are asking that the Hubble not be prematurely terminated. Go to this Save-the-Hubble site, and add your name to the petition which will be presented to Congress: <http://www.savethe-hubble.org/petition.jsp>

I believe the best way to rationally and affordably return to space beyond Earth is to more efficiently build on the precedent of the International Space Station. The Europeans, the Russians, the Japanese, the Chinese, even the Indians are all eager to be seen as modern, space-conquering civilizations.

Why not put together a grand coalition of the willing under our leadership for peaceful and joint exploration of Mars? We could bring in Arab oil money, American and Russian expertise, Chinese and Japanese efficiency, etc. No national economy would be taxed seriously, and all the people on this planet would share in this great and peaceful adventure.

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## Spirited Away?...

radio program of years ago. The program, which featured a sensational story of gigantic, oxygen breathing, two-eyed invaders from Earth, sparked planet-wide panic.

Local residents like Driv Rhodo, who lives in the area of the alleged landings, are even more skeptical. "I seen it with my own 3 eyes," claimed Rhodo last week. "I've lived here over 300 years, most of my adult lifeform. Them things used to be few and far between, but lately they come in every few years or so. The government wants to bury the truth, but I can tell you what's real. The Earthlings are going to invade, and the government is spending our hard earned tax dollars on press releases and denials, instead of preparing for the battle to come."

A spokething denied any government involvement in the disappearance of Rhodo, who has not been seen since shortly after the interview, claiming: "Any sentient being knows that a planet with the concentrations of water and oxygen found on Earth is a deadly and inhospitable environment for the formation of life, much less intelligent life. The fear and consternation caused by the unfounded and wild speculations of citizens like Rhodo are a traitorous disservice to the citizens of Mars."

## Views and News

RVAS members, if you prefer articles from Roanoke over articles from Mars, step up and contribute!!!

Member **Gary Hatfield** has joined the ranks of members with excellent astronomy web pages. See his at [www.starrystateobservatory.com](http://www.starrystateobservatory.com)

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## **RVAS Monogrammed Clothing**

A number of people answered the call for clothing they wanted to be embroidered with the RVAS logo. Since there were only nine items collected, members will have another opportunity next month. In the past, clothing articles included shirts, sweatshirts, carry bags, and ball caps. Along with the items, please specify where the logo should be placed (not over a pocket) and what color stitching you desire. The price depends on the total number of items: 6-11 is \$6.50/item; 12-23 is \$5.75/item; and more than 24 is \$3.25/item. Let's try for 24!

## **Constellation of the Month**

Milky Way bound Perseus was January's *Constellation of the Month*. **Katherine Hix** discussed a few of its numerous deep sky objects. Telescope users can search for the Double Cluster, always a crowd pleaser; and M76, Messier's dimmest object. Should you desire an imaging challenge, try the Perseus A galaxy cluster, dominated by the feeble 12th magnitude glow of NGC 1275. There are more than 60 extremely faint smudges in a couple of degrees of sky. Imagine that!

Perseus offers something for the unaided eye as well: Algol, the demon star. Katherine explained that Algol is an eclipsing binary type variable star. The stars in this system don't actually vary in brightness. Instead, as its two stars

of unequal brightness circle each other, the darker periodically passes in front of the brighter and on the opposite side of their mutual orbits, the brighter passes in front of the darker. As a result, Algol's brightness oscillates between magnitudes 2.1 and 3.4 over a period of 69 hours. Compare its brightness with nearby zeta Persei (2.8) and kappa Persei (3.8). After a few nights, you'll notice something "odd" going on with this star!

## **Messier Was Here**

In the April 2003 RVAS newsletter, a short article appeared that outlined a method for finding the dim Messier galaxies in the Virgo-Coma Berenices region of the sky. This was expanded upon by John Goss in his January presentation, *Mastering the Messiers: The Realm of the Galaxies*.

One theme for this talk was "No GoTo." How do you locate these deep sky objects? Try the old fashioned way of learning the constellations, of knowing your scope, and by hopping from object to object.

There certainly are many galaxies crammed in this 18° wide region between Vindemiatrix and Denebola--nearly 65 which are brighter than 13th magnitude. It can seem daunting. It sure did to Messier with his six-inch Gregorian reflector, and he did have his problems. John cited Messier's big mistake — his incorrect plotting of M91. With all these distant smudges, he confusingly misplaced M91 by triangulating on his map from M58 instead of the correct M89. So,

it's quite understandable about observer's trepidation when galaxy hunting in this area! But don't let that stop your adventure. You have better maps and better scopes, and you know it can be done.

*Surface brightness* plays a large role in galaxy observing. John touched on the subject by demonstrating how a typical galaxy smudge appears through 6, 10 and 17.5 inch scopes. Published magnitude values are a valuable tool used to give an idea of how an object will look. However, when it is finally located, the object's brightness may appear much differently than expected. The reason is that magnitude values indicate the brightness of the extended object as if it were concentrated to a point source. A bright large object can be very difficult to see (e.g. M33 and M101). A more suitable parameter is the surface brightness, because it factors in size of the object along with its brightness.

Look at last April's article on pages 4 and 5, and go through its seven points on finding and identifying Messier's numerous nebulae. Why not develop your skills at galaxy hunting in the Spring sky? Messier was the first, you can be next!

One of your membership benefits is a discount on subscribing to *Sky & Telescope* and *Astronomy*. *Astronomy* is \$29.00, and *S&T* \$32.95. Our treasurer submits club orders in January, April, July, and October after the meetings. The deadline is the meeting date for each of those months.

# *Society Calendar of Events and Activities for February 2004*

**FEBRUARY MEETING:** Monday, February 16th, 7:30 p.m., fifth floor meeting room, Center in the Square, Roanoke. Mark Klosinski will talk about the nature of asteroids, their discovery, and their place in our Solar System. He will show images of the NEAR Mission to the asteroid Eros. Mark will also show the particular asteroids that will be available for observing this year.

**“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, 13th and 14th. Sunset is at 5:57 p.m. Astronomical twilight ends at 7:26 p.m. The Moon rises at 2:09 and 3:21 a.m., respectively.

— Friday and Saturday, 20th and 23rd. Sunset is at 6:05 p.m. Astronomical twilight ends at 7:32 p.m. The Moon sets at 6:30 and 7:37 p.m., respectively.

— March Sessions: 12th and 13th; 19th and 20th.

**FRANKLIN CO. PARKS DEPT./RVAS PUBLIC STARGAZE:** March 13th, 7:15 p.m., Franklin Co. Rec. Pk.

**ROANOKE CITY PARKS DEPT./RVAS PUBLIC STARGAZE:** Saturday, February 21st, 6:30 p.m., Cahas Overlook, milepost 139, Blue Ridge Parkway. Free. Call 540-853-2236 to register. (Next month: March 20th, 7:00 p.m., Fallon Park.)

**RVAS EXECUTIVE COMMITTEE MEETING:** Meetings are now held the first Tuesday of each month; contact one of the officers regarding specific location and time information.

Roanoke Valley Astronomical Society  
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