

STAR GAZER NEWS

NEWSLETTER OF THE DELMARVA STARGAZERS

September 2003

WWW.DelmarvaStarGazers.Org

Volume 11 Number 3

There was no August meeting nor was there any special club event held in August.

Outreach:

July 25 Trap Pond Observation for campers. Although it was cloudy, 25 people did attend.

August 25-26 Shehan Audubon Society ??

From the President's Desk....

August 13, 2003

Mars in a 2:00 AM suckerhole. By the time you read this our memories of an extended monsoon drought breaking nine months will hopefully be on the wane. But this morning I awoke at 2:00 AM – naturally – no alarm clocks – and as usual I looked out the window to see if stars were visible. As usual there were none visible in the west and I almost went back to bed, but something told me to check due south for Mars and the Moon. So I went outside and yes the moon was visible thru a heavy haze and just to the east and north of it was Mars! First time in a week I have sighted the Red Planet! So I prepared myself for some Mars viewing, ie,

Monthly Meeting, Tuesday, September 2nd

MARS

(Viewing, Missions, Info, Update)

7:00 p.m. First Presbyterian Church, Smyrna

acquired pants and shoes. The old ugly 10" was waiting on the front porch and the three new University Optics orthos were in the eyepiece case. A few minutes to setup and there is Mars in the eyepiece...the sky is calm and very thick. Now for some POWER! Drop in the 2X barlow and a 13mm TV plossel – the image is not moving so more POWER is needed. It's Ortho time...first the 6mm, then the 5 and the image holds together each time. What a view! Mars is the size of Jupiter – and it is gorgeous. The image is noticeably FLAT and sharp even with all the haze. Well, lets try the 4mm. For those not familiar with the University Optics orthos let me just say that you need a magnifying glass to SEE the eyelens – these are definitely not Naglers! So I put the 4mm in the focuser and have difficulty seeing anything. I also notice the almost full moon light has softened significantly and a quick naked eye check verifies that I have been suckered by the clouds. Mars is

very well hidden by some seriously thickening clouds – and then even the moon disappears. Well, that Mars viewing session lasted all of 10 minutes! So, a strategic retreat is made; equipment is returned to a wait for the next opportunity and I return to bed. But, that was some view of Mars. I can't wait for some clear sky! So what have you been doing this summer? Vacations, gardening, painting, mowing the grass, good food, family reunions...I hope you have had a great summer. And I hope you have built up a need for some serious stargazing under all the cloudy skies we have experienced.

We should see a moderation in weather as August winds down and September approaches. Personally, I want to see a blast of Alberta air come roaring down and blow out this hu-mi-di-di-ty. I call the Alberta Clippers "Mother Nature's Air Conditioner". Talk about a heat exchanger...She can power up a cooling tower to cool a continent. Our Power, Heat and Ventilation engineers should learn from her. My Daddy always talked about the "cool nights of August" that triggered a rapid maturing of the crops. For your reference, prior to those cool nights of August we had the hot, muggy, un-airconditioned bed-sheet sticking eastern North Carolina nights that rarely dipped below 80 F. This type of heat and humidity is necessary for growing hi-quality flue cured tobacco (lots of tars and nicotine to stimulate the real cravens for a Camel) and good long staple cotton. Daddy made sure we noted that corn begins to dry and turn brown, our tobacco ripened and needed to be

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harvested at an increased pace (gotta take care of the smokers), cotton would begin to rapidly set bolls (fruit to make fiber), the black gum tree leaves would begin to turn red and tupelo poplar tree leaves would yellow, and muscadine grapes would ripen. Those of you who have not experienced eating your fill of wild muscadine grapes straight off

the vine...well, that's just unfortunate. And if you have never tasted scuppernongs I really do have sympathy for your plight. Anyway, as the mornings begin to cool off, coffee tastes better, the cicadas sing incessantly, and crickets make a mad rush for your living quarters. And you can sleep a little longer because the sun doesn't rise so 7@^^*6 early.

August 20: A week has passed and we have had a taste of the Arctic. Our temps have lowered and so has the oppressive humidity. We even have a forecast of highs in the upper 70's for this weekend. I say bring on the last of August and the first of September.

You should know the Best of the Summer Milky Way is waiting for you after sunset. Be sure to schedule some observing time soon. You will not have better views of the Milky Way than late August thru September.

Our first meeting since June will be September 2, at 7:00 PM in the First Presbyterian Church, Smyrna, DE. Mars will be the main topic; planning for the No-Frills Fall Star Party will also be covered. I do hope each of you has had a wonderful and memorable summer. See you at the Church or Tuckahoe.

Don...

Observing Notes from the Tuckahoe Irregulars August 4, Mike Stephano

Set up my 8" SCT last night for a break in the clouds. Turned out to hold for most of the evening. It has been more than 3 weeks since I set up last. What a difference that time makes. Nothing is where I left it. LOL... M8 and 20 very distinct. Even though there was some Moon Glow left I was able to see quite a bit of detail and resolve some of the components of these objects. M13,5,12 also able to see much detail. I picked up a 16mm Nagler a while ago. I really like it. I spent an hour trying to draw detail to paper of M13. I am a terrible artist but was surprised with the result when I later compared the drawing to photos. I was going to set up the camera (a converted webcam) but I did not want to take a chance of clouding up while I was fooling around. I was also able to resolve Epsilon Lyre 1 and 2 with a 6mm plossl I am sorry I did not try to photograph Mars last night. It is perhaps the best and sharpest view I have had to date. I could, with averted vision make out the South Polar Cap, Mare Cimmerium, Electris. I used the lens from my Barlow and screwed that to the front of the diagonal. Then I used my 16mm Nagler with a couple of different filters. I am not sure how I feel

about the colored filters that I have. Blue seemed to bring out some of the detail that I observed last night. I also used a moon filter which gave me really good results.

Mike N-5/ST-80 N-8i

N 37.42**W 075.48/Onancock, Va.

Tuckahoe Saturday July 19, 2003... Doug Norton

Mars was awesome. I finally left Tuckahoe around 3:15am when the air got too turbulent to give anymore decent views. We fought dew all night long. It might as well have rained. Bring a flak jacket for the mosquitoes and some triple-A to keep them off of you. Two passes of the ISS and two extremely bright Iridium Flares added to the evening's show. We had a nice group of campers come by for some viewing and I think we wowed them. They timed it perfectly because they had about an hour to view deep sky beauties as well as Mars and the moon when they rose. It sounded like they were from Massachusettes judging by their accents and I'm sure they will have some stories to tell when they get back. Some of the objects I showed them included the Ring Nebula, Andromeda Galaxy and its satellite M32, NGC457 the Owl Cluster, M11 the Wild Duck Cluster, M13, Mars and the moon. It was a great night despite the constant battle with mosquitoes and dew. I was really complaining about the evening until the group of campers showed up and heard the gasps and wows coming from them. I think I take some of the aspects of this hobby for granted sometimes. It's good to be reminded of how special the objects I am looking at really are.

Douglas A. Norton

Tuckahoe Saturday July 19, 2003... Steven Long

Viewing last night varied between average and very good as long as your subject was higher than about 35 degrees above the horizon. The upper atmosphere was extremely stable, making for good views of double stars and of Mars once it was high enough. But low-level moisture (i.e., fog) was thick enough to overcome all but the most vigorous of dew-controlling devices. My three heating strips kept all of my optics dry except for my eyepieces; after midnight, any of my Pentaxes that I left in the telescope for more than about ten minutes became opaque.

The sky was a bit milky from humidity, and I used my Orion Skyglow filter to advantage when looking at the gassy nebulae in Saggitarius. Very faint objects like some of the NGC globulars in Ophiuchus were indiscernable unless you had eyes like an eagle's -- or like Doug's! :-)

We were graced with two passes of the International Space Station (magnitude 0 to -1) and two Iridium flares (-4 and -6, I think) during the evening.

And the mosquitoes were thick enough to seemingly affect limiting visual magnitude. Yes, bring your bug shirt -- your Kevlar one -- if you are going to Tuckahoe tonight! :-) Steve

**Mars and Moon in the morning, July 17, 2003..
Don Surles**

I got up this morning to check out some new filters on our neighbor Mars and was shocked to see a bright moon where Mars should have been. I knew Mars and Luna would be close --but not this close. This is an image taken with a handheld Sony Mavica and my homemade 10" f-7.7 dob with the ugly mirror. Oh, the ugly mirror likes Mars...but I couldn't check out the filters.

**A Thrilling Night Viewing Mars, July 18, 2003
Kent Blackwell**



I awakened Thursday morning, July 18, 2003 at 2:30 am EDT to sneak a view of Mars. After rolling the 25" scope out of the trailer in the driveway I +pointed it towards the Red Planet. Seeing was absolutely awesome, the best I have seen it thus far. The air was thick with haze, calming any atmospheric turbulence to a nearly nil amount, and Martian features stood out as I have never seen before.

The SPC was most prominent, as was Mare Erythraeum. Niliacus Lacus was at the northwestern limb. The seeing was so good filters seemed to be of less benefit than usual. Images were simply sharper without the filters. I have always found Vernonscope filters to surpass every other color filter for sharpness.

It was, indeed, quite an exciting early morning for viewing Mars, the Bringer of War.
Kent Blackwell Virginia Beach, VA

Club Activities...

Club Meetings- We meet in the First Presbyterian Church in Smyrna, DE (653-8000) on the first Tuesday of each month from 7-9 PM. From US 13, turn west at Wendy's and go one stoplight on Commerce Street; the church is on the right directly across from the Fire Hall.

Future Meetings...The remaining meeting dates for 2003 will be: September 02, October 07, November 04 and December 02 The regular meeting format includes discussion of club activities, observing highlights and an advertised presentation. We solicit suggestions for topics and presenters.

Club Observing... Observing is (usually) scheduled for the Friday nearest the New Moon to maximize the hours of *deepnight* without the moon in the sky. Unless otherwise stated, the monthly observing site will be at the baseball field in the camping area at Tuckahoe State Park. The remaining observing days for the year 2003 will be: August 29, September 24 - 28 (No-Frills VII) October 24, November 21, and December 19. The cloud or rain date for the monthly Friday observing will be the following Saturday, but don't trust the weather man! Go outside and look for yourself or check the CNN weather link on our web page. If you still can't decide, Call Don Surles (302) 653-9445 or Lyle Jones (302) 736-9842.

Delmarva Star Gazer Officers 2003-2004

- President.....Don Surles 302 653 9445**
- Vice President.....Lyle Jones 302 736 9842**
- Secretary.....Keith Lohmeyer 410 482 6077**
- Treasurer.....Kathy Sheldon 302 422 4695**

How to Join the Delmarva Star Gazers: Anyone with an interest in any aspect of astronomy is welcome to Join.

NAME _____

ADDRESS _____

CITY, STATE & ZIP _____

E-MAIL ADDRESS (If any) _____

SPECIAL INTERESTS OR TALENTS _____

Please attach a check for \$15 made payable to Delmarva Stargazers and mail to Kathy Sheldon, 20985 Fleadown Rd, Lincoln, DE 19960. Call club President Don Surles at 302-653-9445 for more info.

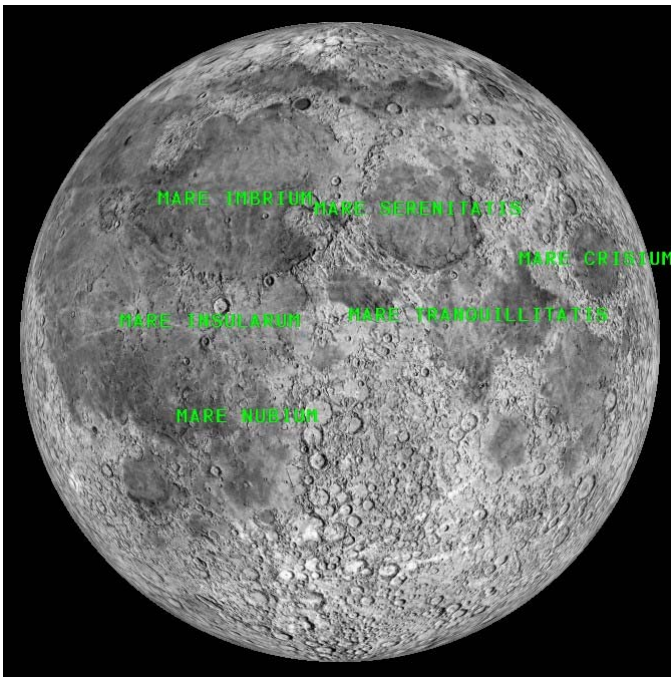
Software Review

Virtual Moon Atlas Ver. 1.6 by Frank Sheldon

Until I came across this program, I had no intention of ever getting a moon atlas, even if it was free.

What drew me to VMA, was the co-author Patrick Chevally, who is also the author of Cartes du Ciel (Sky Charts), one of my favorite star chart programs. Like Cartes du Ciel, VMA is also free and can be downloaded from www.astrosurf.com/UK_index.html. After 10 minutes with it, I couldn't leave it alone and was even considering some serious moon observations.

When you enter the VMA program, you are confronted with a 10 inch X 10 inch image of a full moon with the 5 or 6 largest mares (seas) labeled in green. (below)



Actually what VMA is, is a seamless continuous photographic image of the entire near side of the moon. You can navigate this moon with a mouse, by dragging the moon's surface itself, in any direction you wish. When you encounter an object of interest, you can zoom in or out to get different views of its surface features. By right clicking the object, say a crater, you can see its name (in yellow), which in turn opens an information window giving you the following data: The object's name, type of object, geological period, physical dimensions, a detailed description of object, when to observe it, minimal aperture to use, Position- (Lunar Longitude and Latitude), Atlases in which the object appears including the Lunar Orbiter catalog, and finally, origin of the object's name.

Lunar geological periods are very different from earth

geology. If earth geology is measured in millions of years, lunar geology is measured in billions of years.

The moon's youngest period (Copernican) is 3.2 billion years to the present and the oldest (Pre-Nectarion) goes to -455 billion years. This compares with earth's Cenozoic era -6.5 million years to present and the pre-Cambrian period to circa -1 billion. For some reason, the Geology feature seems to be limited to the Mares. Once you enter your observing site's latitude, longitude and local time, the moon image becomes *real time*. Thus in day light or foul weather you can open the Ephemeris menu to view the Moon's phase, coordinates (RA & Dec), rise, set & transit times, latitude and longitude libration, Rise & Set azimuths and illumination (%). You can also click on a tab called Terminator and view a list of all the objects on the terminator (for viewing maximal texture and contrast). You can also change real time to any time of your choosing for future observations.

The Configuration Menu is equivalent to Setup and is the place where all of your raw data is entered as well as default operations such as geological map which shows the moon in 3D color. Under the display tab you determine all of your label options. Green labels are for general labeling only. The yellow label is only for ID when you right click a single object. Red is for marking or tagging objects. A final feature under tools, I call the tape measure. When you click *measure distance*, the cursor turns to a tiny point. Going from any point on the map to any other point on the map, gives you distance in kilometers between the points.

The *Images* tab of the configuration menu has empty folders to use for down loaded NASA images from Lunar Orbiter (LOPAM), Clementine, Apollo, and Lunar Probes. Finally there's a folder for Images of your own. The LOPAM images may be downloaded directly from within the VMA program (labeled & unlabeled) when they appear on the information menu. I have not yet learned how to retrieve the LOPAM images from their folder.

Finally, one of my favorite features of VMA is *image capture* which the scanty VMA documentation doesn't even mention. With this feature whatever you see in the large display window at any given time can instantly be saved in either the BMP or JPG format by clicking SAVE. The labeled moon image above was produced in this manner and a giant image of the Mare Imbrium area, now graces my computer desktop.

This killer application is a *must have* for everyone who has read the text this far.

Mars Images by Eric Todd from Salem, NJ



I have been involved with Astronomy for a number of years. My first telescope was a Coulter Odyssey Compact 10.1" Dobsonian. I used this scope for several years and then sold it. I was basically inactive for ten years until this past spring, when I purchased a Meade ETX-90RA. It sat for a while and then I found some Internet information on webcams, so I decided to try imaging. My early shots of the sun weren't very good, but I learned from the experience. Once I had successfully imaged Jupiter, I figured it was time for a larger scope, so I bought a used C-8 on GC-5 mount. I use the C-8 setup currently.

Related interests include almost too many things to list- physics, certain sports, and rock collecting to name a few. I used to be involved with Ham radio also.

As for computers, I was never really interested them until I experienced the Windows 95 operating system on an old 486. For me, Windows made computers a lot friendlier and easier to work with despite its limitations. I then started with a Pentium using Windows and worked up from there.

As for the software and skills involved in making these composites, a lot of trial and error has been involved. I use several different programs including Iris, Registax, Paint Shop Pro, the demo version of Photoshop, and the Neat Image restricted version. K3CCD Tools, also freeware, is used for capturing the avi's. Of all these, I find Iris freeware the most useful for processing planets. It uses the DOS command format, but once you've become used to it, it can't be beat. A new version of Registax freeware is about to be released that will probably come close to the performance of Iris, and will also be much more user friendly. Cartes du Ciel is also an excellent freeware star chart program.

So, the next step, aside from the pursuit of my teaching career, is to either modify a webcam for long exposures or just break down and buy one of the Starlight Express CCD cameras. DSO imaging will be the next interest once Mars is out of the picture.

My thanks to Frank Sheldon for publishing the Mars picture and allowing me to express a few words.

Best,
Eric Todd

Moondark for September: Showtime!

Stop reading this. Put down the newsletter and go outside. If you do this on a clear night, you will see [Mars at its closest and brightest](#) in [thousands of years](#). Next, drag your telescope outside. Enjoy and savor this spectacle. amateurs About the time you receive this [newsletter](#), Mars will be at opposition, up all-night and unmistakably orange and bright, blazing in the southern sky. While have long anticipated this summer's close approach, the popular media--in what is normally a slow news month--has just now caught on. Weekly magazines, cable news channels and even local television stations all feature this record breaking event. Each day for the next few weeks, stories will run in newspapers around the world: try this [google.com news search](#). For positive events in the sky, this is about as big as it ever gets.

Not surprisingly, the web has an overwhelming number of Mars pages. A recent online search for "[Mars at closest approach](#)" returned over 34,000 hits! Just in case it's cloudy (the only acceptable excuse for not following the instructions above), here are some of my favorites.

[Skyandtelescope.com](#) has a comprehensive observing guide and a [Mars Profiler applet](#) to display which side of the is planet visible for your date and time, matching your view whether normal, inverted or mirror-reversed. A stand-alone program [Mars Previewer II](#) is also available; this program renders Mars's globe in size and phase for direct comparison with sketches or images. Speaking of which, amateur astroimagers are again outdoing themselves with detailed, colorful images. You need not look far for some great examples: I've especially enjoyed those posted to our [own club's web page](#) and [yahoo group](#).

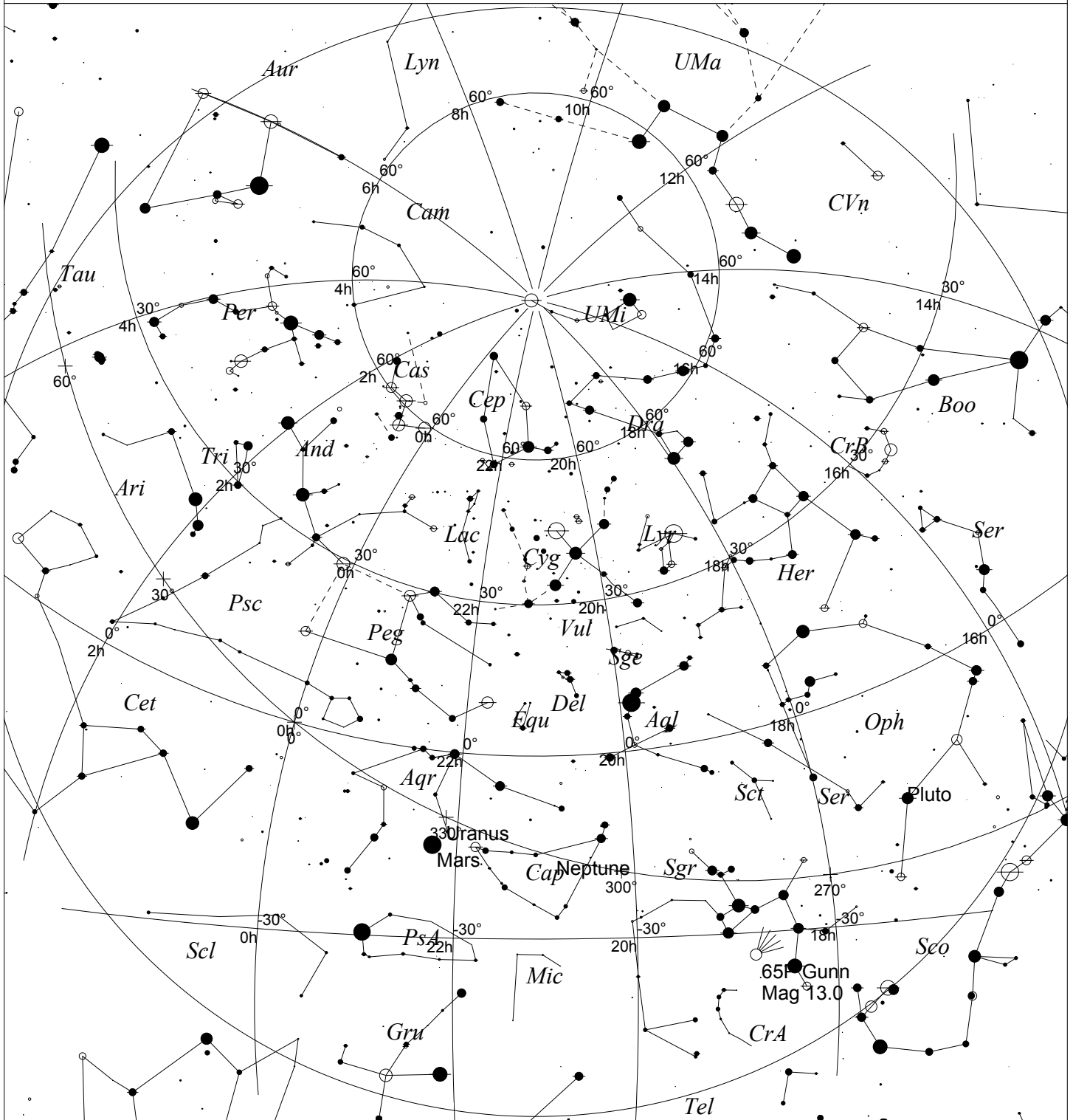
For really close views of Mars, there are none better than those from [NASA and JPL](#). A good starting point is the [Mars Exploration Program](#) home page. For images from all planetary missions, go directly to at JPL's [Planetary Image Atlas](#). A nice selection is also available at [Welcome to the Planets](#): follow the links here from thumbnail highlights to short non-technical figure captions, and then to the original-release and technical details and even links to download the full-sized images from the [Planetary Photojournal](#). Many of the Mars images from JPL were taken with the Mars Global Surveyor Orbiter and are available from JPL and [Malin Space Science Systems](#).

Lastly, here's a gem that not on the web, but a book to peruse offline, day or night: William K. Hartmann's [A Traveler's Guide to Mars: The Mysterious Landscapes of the Red Planet](#). This book has everything you would want to know to plan your own visit. And this author knows his terrain: he participated in missions from Mariner to [Mars Global Surveyor](#) and sprinkles personal anecdotes throughout. He begins with a brief history of exploration and overviews possible [future sample return missions](#). Hartmann explains the latest scientific theories and controversies with clear analogies and remarkable insight. For example the immense canyon of [Valles Marineris](#) is much less like the Grand Canyon than the rifting zones of the Gulf of California or the Red Sea. Hartmann makes the red planet become real: depicting martian features using terrestrial landscapes, for example, gullies in Iceland or deserts near Tucson. In this way, Hartmann shows us what we would see if we were really standing on Mars. But did you know that there is no single vantage point on its surface from which to view the whole, immense shape of Olympus Mons, the largest volcano in the solar system? And, while waiting for clouds to clear, hours can be spent using the image numbers in the book to locate the [actual images](#) form the [online databases](#). Now that's [as close to actually exploring Mars](#) as anyone will get in the foreseeable future.

While you're out surfing the web for Mars, check out the new [Moondark web site](#). Yes: broadband internet has finally come to my neighborhood, and as you can tell, I've used it to make a big dent in all those Mars-links on the web. Along with a new internet service provider, come new email and home page addresses for this column: <http://home.comcast.net/~dmiller5879/moondark/>. In fact, I'm planning a thorough web site overhaul just as soon as I finish setting up a new router and wireless laptop card. But at the end of the day, installation woes, IRQ conflicts and the "blue screen of death" are plenty of motivation to step outside, feel the cool dampness, listen to the chorus of crickets, and enjoy this unique Martian encounter. Hmmm...I wonder if I can use WiFi to do some remote observing from inside my house? Then I could surf and observe Mars at the same time...

Bookmark those links: Mars-mania will continue at least through [early 2004 with the arrival of three spacecraft](#) (including [two US rovers](#) and [ESA's Beagle 2](#)) currently on their way to the Red Planet. The background image was downloaded from the [NASA PDS Map-A-Planet web site](#) for Mars' Valles Marineris near 8° S and 74° W. Moondark is written by [Doug Miller](#), published on the web, and printed in the [Delmarva Star Gazers' Star Gazer News](#). This document was last revised on 24 August 2003. Text and images copyright © 2003 by Douglas C. Miller, All Rights Reserved. This material may not be reproduced in any form without prior permission.

TUCKAHOE STATE PARK SEPTEMBER 2003



STARS

- <1 ● 3.5
- 1.5 ● 4
- 2 ● 4.5
- 2.5 ● >5
- 3

SYMBOLS

- Multiple star
- Variable star
- ☄ Comet
- Galaxy
- Bright nebula
- ◻ Dark nebula
- ⊕ Globular cluster
- ⊙ Open cluster
- Planetary nebula
- ⊗ Quasar
- △ Radio source
- × X-ray source
- Other object

TUCKAHOE STATE PARK
SEPTEMBER 24, 2200 HOURS EDT

Local Time: 22:00:00 24-Sep-2003

UTC: 02:00:00 25-Sep-2003

Sidereal Time: 21:06:12

Location: 38° 58' 0" N 76° 56' 0" W RA: 21h06m12s Dec: +38° 57' Field: 182.0°

Julian Day: 2452907.5833



are pleased to announce their eighth annual No-Frills Star Party
 from September 24 through September 28, 2003
 at Tuckahoe State Park near Queen Anne, MD.

The registration fee includes camping fee for the observing area. ALL NIGHT STARGAZER COFFEE, as always, will be free and usually corn-on-the-cob and watermelon as well. Sodas and hot dogs will be available at minimal cost. Campers will be permitted to park and set up by their scopes, but there are no hookups or electricity in the observation area. **All attendees are encouraged to register in advance for this event due to limited space and growing popularity of the No-Frills Star Party. Your entrance-parking permit will be sent to you on receipt of payment. You will receive your badges on-site.**

REGISTRATION for No-Frills VIII

	2-3 Days		4 Days		5 Days	
	Pre-Registration	After Sept. 15	Pre – Registration	After Sept. 15	Pre – Registration	After Sept. 15
1 Person	\$30	\$45	\$35	\$50	\$40	\$55
2 Persons	\$45	\$60	\$55	\$70	\$60	\$75
Family (3 or more)	\$60	\$75	\$65	\$80	\$70	\$85

For more information, visit our web site at: www.delmarvastargazers.org , call or e-mail:

Don Surles, President (302) 653-9445 E-mail: don.r.surles@usa.dupont.com

Lyle Jones, Vice-President (302) 736-9842 E-mail: worm1647@comcast.com

Keith Lohmeyer, Secretary (410) 482-6744 E-mail: kcl@dmv.com

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REGISTRATION FORM

Make check payable to *Delmarva Stargazers*

Mail to Lyle Jones 230 N. Bradford St., Dover DE 19904 (302) 736- 9842

Name _____ What Day Will You Arrive? _____

Evening / Weekend Phone _____

Address _____ City _____

State _____ Zip Code _____

Tuckahoe Park management wants no one in the Youth Camping Area on Tuesday before the Star Party (day or night) in order to allow the Park staff to prepare the area and for security.

Year & Make of Automobile _____

Number in your party _____

Attendee #2 _____ Attendee #3 _____

Attendee #4 _____ Attendee#5 _____

Attendee #6 _____ Attendee#7 _____

Use TABLE above to calculate Registration Fee(s). TOTAL ENCLOSED _____

YOUR BADGES AND ENTRANCE PARKING PERMIT IS YOUR RECEIPT. Sorry no refunds.