

STAR GAZER NEWS

NEWSLETTER OF THE DELMARVA STARGAZERS

January 2005

WWW.DelmarvaStarGazers.Org

Volume 11 Number 7

At the December Meeting.....

Don Surlles brought the meeting to order at 7:15 with 25 members and guests attending.

New Member: Marc Henderson, Newark, DE

Monthly Meeting, Tuesday January 4

HOME OBSERVATORIES

Dave Wells

7:00 p.m First Presbyterian Church, Smyrna

Outreach Opportunities

Prime Hook Wildlife Refuge

Don Surlles gave a presentation to this group on December 9 at 7:00 p.m. with 12 people attending.

Montessori School

November 9 Keith Lohmeyer, Lynn King (DAS) and Jerry Truitt did a presentation for United Way at the Montessori School.

Astronomy at the Library

Jerry Truitt, along with Keith Lohmeyer, James Morgan, and Bill McKibben presented a program at the Elkton Central Library on November 19th. A letter from a student and a note from the teachers were received.

Willingboro Astronomical Society

by James Morgan

On Saturday November 6th, Jerry Truitt, Leonard White, Bill McKibben and several people from the Delaware Astronomical Society joined with the members of the Willingboro Astronomical Society to do some observing.

The location was Fort Mott in New Jersey, just across the Delaware Memorial Bridge.

This group is very much like our Delmarva Stargazers in both activities and temperament.

They are a fine group and it was a pleasure to meet and join them in observing.

This was the first time I ever was at an observing event where the group ordered pizza delivered right to the observing field. A great time was had by all.

James T. Morgan

NASA Update

Jerry Truitt gave a power point presentation updating some of the Nasa projects .

(1) The first image was taken with the Cassini Space Craft Wide Angle Camera on October 27, 2004 at a distance of 392000 miles from Saturn. This image shows the unlit side of the B rings.

(2) The 2nd image was taken with the Cassini Space Craft Narrow Angle Camera on October 29 at a distance from Saturn of 523000 miles. It shows Saturn's inner C ring in an area 46000 miles from Saturn. In the center of this area lies the dark Columbo Gap which houses the bright narrow Columbo Ringlet in resonance with the moon Titan.

(3) The 3rd image was taken on October 29 at a distance from Saturn of 509000 miles. Here the Cassini Narrow Angle Camera caught the sunlit side of the outer B ring. Other objects involved were the Huygens Gap, the Huygens Ringlet and the Moon Mimas.

(4) The 4th image is a view of the potato shaped moon Prometheus (63 miles across) interacting gravitationally with the multistranded F ring. The Cassini Huygens portion of the power point ended with the December 3th Flyby of Saturn's Moon Titan.

Also included in the NASA update were images taken on November 19th, when Rover Spirit's Microscopic Imager took numerous photomicrographs of 3 cm square samples of martian soil.

From the President's Desk....

So, did Santa unload his sleigh at your house? Did you get boxes and boxes of telescopes, eyepieces, computer-scope-camera connections and combinations...maybe even some dark sky for wrapping paper? Throw in a comet or two and we have the makings of a real Christmas for AA's. I hope you got a garage full of AA goodies because Santa and the postman have conspired and sent a sleigh full of bills to my mailbox. Just be ready to share your new toys when we are observing together and I will share some of the bills!!!

Speaking of Comets! There is a beauty in Orion's portion of the sky at this time. In the coming weeks Comet Macholtz will leave Orion, travel north across the top of our sky, and increase in brightness as it travels north. Log onto Sky & Tel to get the trajectory coordinates and plot them on your star charts. This comet bears watching because it could become a real beauty. Today it is a large, bright fuzz ball easily found in binoculars. By the new moon in January it should be much brighter. Put Comet Observing on your schedule.

Was it cold enuf this morning? My thermometer read 11 degrees F at 8:00 AM and I think the low was around 6 degrees F. BRRRRR! As the cold arctic wind roared around our house this morning and I pulled the covers a little closer, I thought, "This is a very **good morning** to be on vacation". Then the new baby cat pounced and pounced again so I had to get up. Such is life.

Our January meeting promises to be a great one. Dave Wells will cover Home Observatories. Astronomical photography will be revealed by Norman Todd (CCD cameras), Steve Long (digital cameras), and Don Surlis (antique film cameras). Greg Lee will tell us about Johannes Kepler and his Rudolphine Tables. Jerry Truitt will update us on the influence of the Internet's WWW on amateur astronomy. And Keith Lohmeyer will tell us all about the January night sky. So, put the meeting on your calendar and join us for hot coffee and left over holiday cookies Tuesday night, January 4, 2005.

Yes, you have seen the following information before and it is still valid. Orion is the Jewel of the Winter Sky – don't postpone looking at it. From 2003: "this is the season for Orion watchers. The great constellation is "on the meridian" just after sunset during January and early February. A word of caution: Observe now and observe often – the brilliance of Orion's jewels will diminish as it heads westward during late winter and early spring. Aperture and power complement Orion's wonders; use your largest scope and increase the power to the max; you will not be disappointed with the Orion family. But again, please do not postpone your viewing – Orion's beauty diminishes rapidly after the next few weeks."

How about some New Year's Amateur Astronomy Resolutions? Is this the year you will make your

very own telescope? How about trying your hand at photography? Maybe grind and polish a mirror? Or connect a computer to your scope? Or add a day of observing to your very busy schedule? How about promoting amateur astronomy in your circle

**2005 Club Dues (\$15.00)
are payable in January**
Make Check payable to *Delmarva Stargazers*
and mail to Kathy Sheldon

of friends? This is the year you can make a difference. All you have to do is make an effort and I guarantee you will be surprised at the results.

Please take every opportunity to make the most of these long, cold, clear, and transparent winter nights. They can offer some of the best observing of the year. All you have to do is bundle up, protect your sensitive twinkie-toed feet, do something similar to protect your balding head, and of course you will need some hand protection; after all this, if you can still move, move toward the scope and do some serious viewing. We are all waiting for you to recap your experiences on our yahoogroups. Enuf for now; see you in January. Don...

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Solar System in January

As with December, most of the happening stuff will be in the morning hours. All of the major planets except Saturn will be morning stars in January and even then, Saturn will be visible into the wee hours. Mercury and Venus as morning stars on January 7th will both be low in the SSE and less than one degree apart. Mars will be nearby to the west and just above Antares in Scorpius as

January begins but will retrograde 16 degrees by month's end. Although Jupiter doesn't rise until midnight, the best viewing is at its highest point in the morning twilight.

Saturn is at opposition on Jan. 13th, which make Jan. a good month to view this planet.

The Messiers, M35, M36, M37, and M38 are all good objects to find this month. M36 and M38 are inside Auriga, with M35 and M37 between Auriga and Gemini. Skip Neptune and Uranus in the evening as well as Pluto in the morning this month, as they are too close to the sun.

January is also the month that the Cassini Huygens module will be inserted via parachute onto the moon Titan. While NASA currently seems almost secretive about the time line involved, my sources put the module insertion on **January 14 at 9:00U.T.**

C/2004 Q2 (Machholz) in January at magnitude 4 will pass from Orion to just west of the Pleiades where it may be visible to the naked eye or certainly to the Bushnell Voyager discussed on page 5 in this issue.

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 annual meeting dates for 2005 are: January 4, February 8, March 8, April 5, May 3, June 7, July 2 Picnic, August 2 No inside meeting; event to be scheduled, September 6, October 4, November 1 and December 6 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 observing days for 2005 are:

January 7-8, February 11-12, March 11-12 **April 9-12 (Stargaze XI)**, May 6-7, June 3-4, July 8-9 August 5-6, September 2-3, **September 28-October 2 (No Frills X)**, October 28-29, November 4-5 and December 2-3

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.

Other Events for 2005

March 4-6 Mid-Atlantic Mirror Making #5

July 2 July 4 th picnic

December 10 Christmas Party

Delmarva Star Gazer Officers 2004-2005

President.....Don Surles 302 653 9445

Vice President.....Jerry Truitt 410 885-3327

Secretary.....Paul Riley 302 738-5366

Treasurer.....Kathy Sheldon 302 422 4695

Member Magazine Subscriptions

Just a reminder -- As an added bonus to your **PAID** membership in the Delmarva Stargazers, you can get the club discount on your favorite astronomy magazines, **Sky and Telescope** -or- **Astronomy**. You can save \$10 -or- more ! For more info on a subscription (or renewal) please contact PJ Riley at pjr127@Yahoo.com

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

NAME _____

ADDRESS _____

CITY, STATE & ZIP _____

E-MAIL ADDRESS (If any) _____

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

BUSHNELL'S VOYAGER 4.5 INCH FAMILY TELESCOPE Model 78-2010

Back in November, Jerry Truitt mentioned in the Yahoo pages, a special sale for the Bushnell VOYAGER 4.5 inch Family Telescope. Judging by the photo in the ad, it appeared to be a knock-off of the \$199.99 Edmunds Astroscan. Both scopes are 15 pound Newtonian reflectors with roughly 4.5 inch apertures at f4.5 .

With an original \$330.00 list price, Bushnell's special sale price was \$99!!

Now I need another telescope like Imelda Marcos needs another pair of shoes but this deal was too good to pass by, especially with no shipping charges.

When the scope arrived 5 days later, I was favorably impressed. The Mirror ball rotated as smooth as silk in the heavy aluminum cradle as I slewed the optical tube around at every conceivable angle. The secondary mirror is permanently mounted to the flat cover glass, eliminating the need for a spider or any other aperture obstruction. Even though the scope was factory collimated, it was reassuring to see 3 collimating screws on the secondary mirror mount (just in case). The flat glass cover is a mixed blessing, since it probably guarantees dewing problems.

In actual use, the Voyager must be placed on a stable horizontal vibration free surface

I started with some daytime terrestrial viewing . My scope came with two 1.25 inch Plossl eyepieces having focal lengths of 27mm and 5mm. Since the objective (mirror) has a focal length of 500mm, this gave me magnifications of 19 power and 100 power respectively. The 27mm eyepiece had wonderful eye relief and could be used with or without eyeglasses. The 5 mm eyepiece had a bb sized aperture and because of the low eye relief, could not be used (by me) wearing eyeglasses. The 5mm. eyepiece was reminiscent of eyepieces of the so-called department store scopes.

By using my own eyepieces however, I eventually wound up with a satisfactory range of useable magnifications from 20 to 200 power. The latter was attained with a single eyepiece, the 2.5mm Vixen (lanthanum). The scope came with no finder, nor do I think it needs one. A wide angle 35mm eyepiece can find anything, After finding

your target, center it and gently remove the eyepiece.... Then the rock solid vibration free Voyager permits you to drop in your viewing eyepiece without losing your target.

One of my first goals with this telescope will be to check it out on my favorite celestial objects to wit: the Moon, the Pleiades, the Lyra Ring Nebula, M13, the Great Orion Nebula, and the double star Alberio in Cygnus.



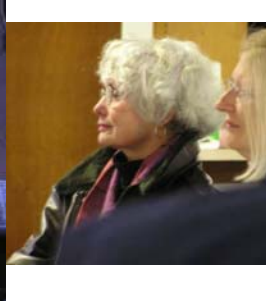
In conclusion, I feel this scope has a real niche for beginners (and everyone else for that matter).

For myself, I'm certain my viewing time will double in the coming year. With the lousy weather we've had going on for 3 years, I hardly ever dragged out my 2 big guns: a 12.5 inch Dob and a 6 inch refractor.

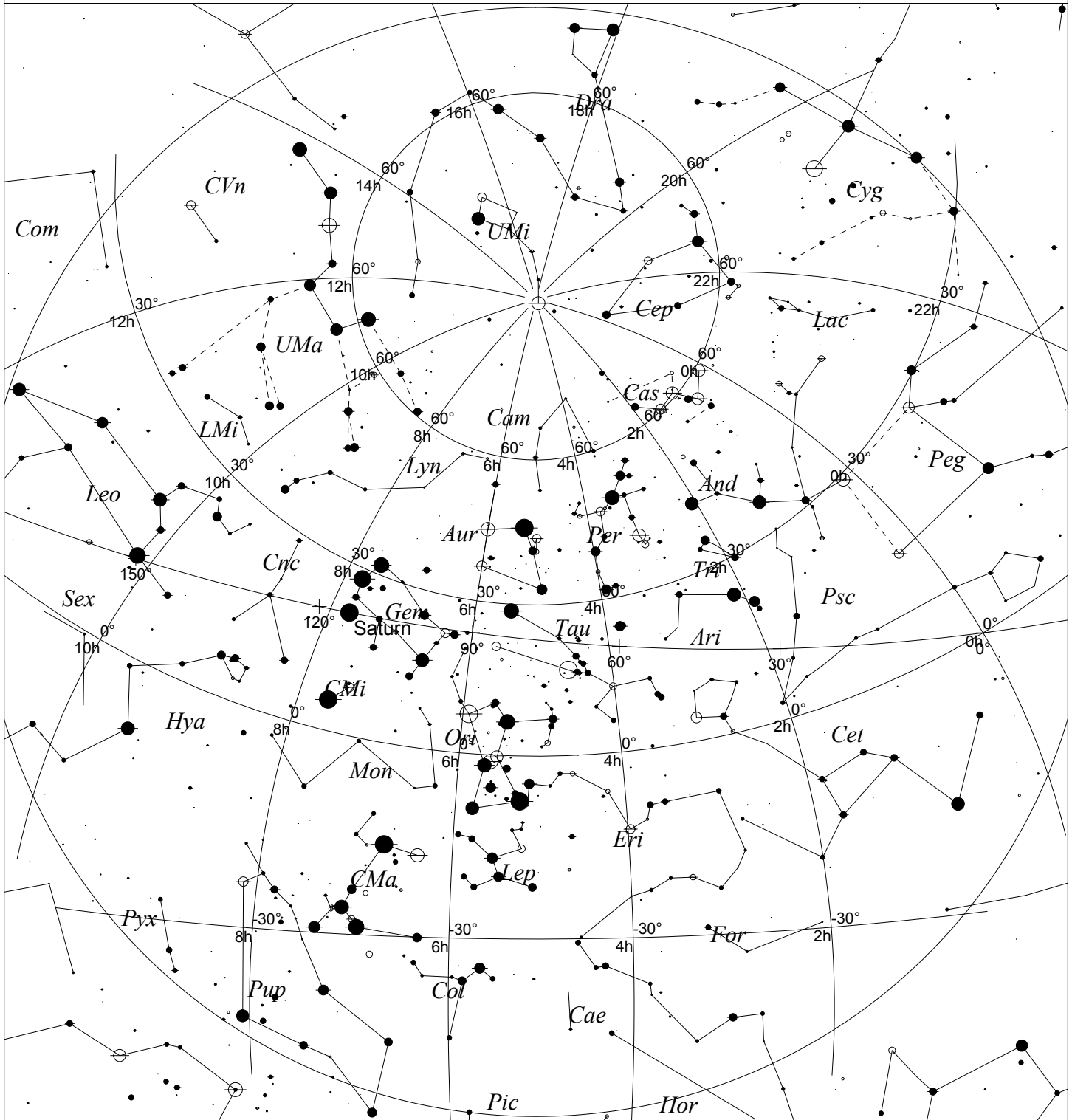
The 4.5 inch Voyager is easier to use for star hopping than my 20X80 binoculars! At 15 pounds with its own carrying strap, easy transport is guaranteed. Yeah, stargazing is going to be fun again.

Clear Skies *Frank Sheldon*

Christmas Party Images



SKYMAP FOR JANUARY 2005



STARS

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

- Multiple star
- Variable star
- ☄ Comet
- Galaxy
- Bright nebula

SYMBOLS

- Dark nebula
- ⊕ Globular cluster
- ⊕ Open cluster
- ⊕ Planetary nebula
- ⊕ Quasar
- △ Radio source
- × X-ray source
- Other object

TUCKAHOE STATE PARK, MD
 JANUARY 7, 2005
 2200 HOURS EST

Local Time: 22:00:00 7-Jan-2005
 Location: 38° 58' 0" N 76° 56' 0" W

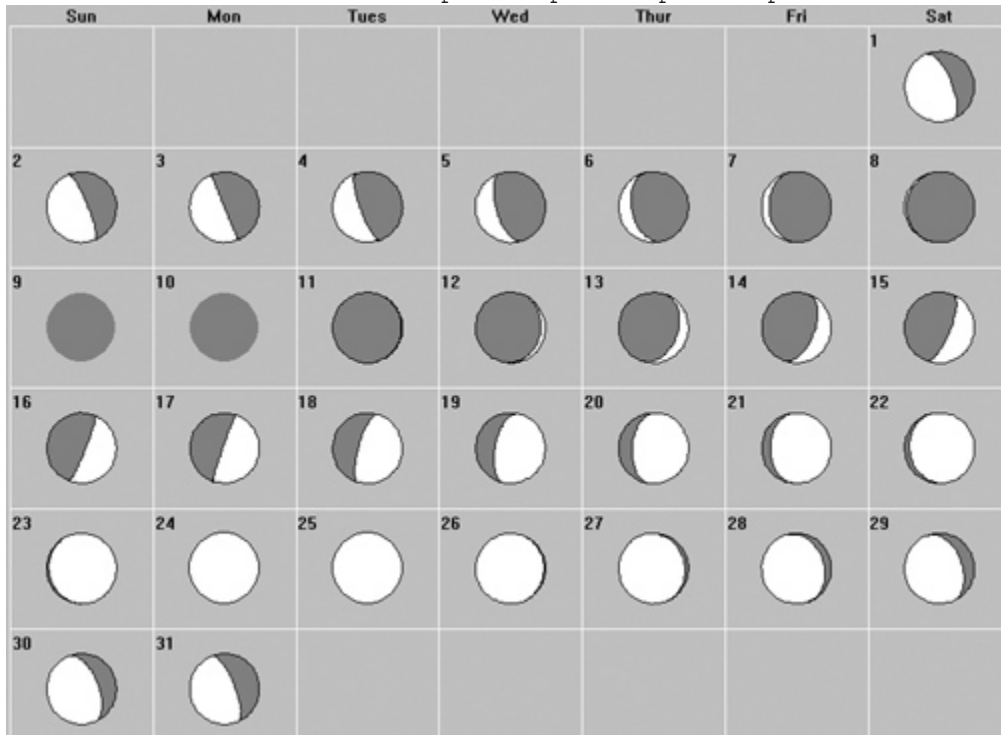
UTC: 03:00:00 8-Jan-2005
 RA: 5h03m20s Dec: +38° 57' Field: 182.0°

Sidereal Time: 05:03:19
 Julian Day: 2453378.6250

Sun and Moon Data for January 2005, Tuckahoe MD

38.98°N 75.93°W 5hrW Standard Time Astronomical Twilight

Date	Sun				Moon				% Illumination
	Twil.	Rise	Transit	Set	Twil.	Rise	Transit	Set	
1/1/2005	5:47a	7:23a	12:07p	4:52p	6:28p	10:40p	4:26a	11:03a	70
1/2/2005	5:47a	7:23a	12:08p	4:53p	6:29p	11:42p	5:08a	11:25a	60
1/3/2005	5:47a	7:23a	12:08p	4:54p	6:30p	*****	5:50a	11:47a	50
1/4/2005	5:47a	7:23a	12:09p	4:55p	6:30p	12:47a	6:33a	12:11p	40
1/5/2005	5:48a	7:23a	12:09p	4:56p	6:31p	1:54a	7:21a	12:38p	30
1/6/2005	5:48a	7:23a	12:10p	4:57p	6:32p	3:06a	8:12a	1:11p	20
1/7/2005	5:48a	7:23a	12:10p	4:58p	6:33p	4:23a	9:10a	1:52p	11
1/8/2005	5:48a	7:23a	12:11p	4:59p	6:34p	5:39a	10:14a	2:45p	5
1/9/2005	5:48a	7:23a	12:11p	5:00p	6:35p	6:52a	11:21a	3:52p	1
1/10/2005	5:48a	7:22a	12:11p	5:01p	6:35p	7:54a	12:29p	5:08p	0
1/11/2005	5:48a	7:22a	12:12p	5:02p	6:36p	8:44a	1:33p	6:29p	2
1/12/2005	5:47a	7:22a	12:12p	5:03p	6:37p	9:23a	2:31p	7:49p	7
1/13/2005	5:47a	7:22a	12:13p	5:04p	6:38p	9:55a	3:24p	9:04p	15
1/14/2005	5:47a	7:21a	12:13p	5:05p	6:39p	10:22a	4:13p	10:15p	24
1/15/2005	5:47a	7:21a	12:13p	5:06p	6:40p	10:46a	4:59p	11:22p	34
1/16/2005	5:47a	7:21a	12:14p	5:07p	6:41p	11:10a	5:43p	*****	44
1/17/2005	5:46a	7:20a	12:14p	5:08p	6:42p	11:34a	6:27p	12:28a	54
1/18/2005	5:46a	7:20a	12:14p	5:09p	6:43p	12:00p	7:13p	1:32a	64
1/19/2005	5:46a	7:19a	12:15p	5:10p	6:44p	12:30p	8:00p	2:36a	73
1/20/2005	5:45a	7:19a	12:15p	5:11p	6:45p	1:04p	8:49p	3:39a	81
1/21/2005	5:45a	7:18a	12:15p	5:13p	6:46p	1:45p	9:40p	4:40a	88
1/22/2005	5:45a	7:18a	12:15p	5:14p	6:47p	2:33p	10:31p	5:37a	93
1/23/2005	5:44a	7:17a	12:16p	5:15p	6:48p	3:28p	11:22p	6:27a	97
1/24/2005	5:44a	7:16a	12:16p	5:16p	6:49p	4:27p	*****	7:10a	99
1/25/2005	5:43a	7:16a	12:16p	5:17p	6:50p	5:28p	12:11a	7:47a	100
1/26/2005	5:43a	7:15a	12:16p	5:18p	6:51p	6:31p	12:58a	8:18a	98
1/27/2005	5:42a	7:14a	12:17p	5:19p	6:52p	7:32p	1:43a	8:44a	95
1/28/2005	5:41a	7:13a	12:17p	5:21p	6:53p	8:34p	2:25a	9:08a	90
1/29/2005	5:41a	7:13a	12:17p	5:22p	6:54p	9:35p	3:07a	9:29a	84
1/30/2005	5:40a	7:12a	12:17p	5:23p	6:55p	10:38p	3:48a	9:51a	76
1/31/2005	5:39a	7:11a	12:17p	5:24p	6:56p	11:42p	4:30a	10:13a	67



Moondark for January: Deep Night Weekends for 2005

For the darkest skies, unspoiled by moonlight, observers plan around the new moon. Deep night refers to that time between astronomical twilights without the Moon in the sky. Especially favored are the deep nights of Fridays and Saturdays listed in the table below. Most of these are regular monthly observing nights for the [Delmarva Star Gazers](#), and these circumstances are calculated for [Tuckahoe State Park](#), MD, 38° 59' N and 75° 56' W.

Evening of	Sunset	Twilight Ends	Twilight Begins	Sunrise	Night	Deep Night	Moon %	Observing Window	Remarks
F 7 Jan Sa 8 Jan	16:58	18:33	05:47	07:22	11.2 h	11.1 h 11.2	8 3	18:33 - 05:39 18:33 - 05:47	NM on 10th
F 4 Feb Sa 5 Feb	17:29	18:59	05:35	07:06	10.6	9.5 10.6	20 11	18:59 - 04:29 19:00 - 05:34	NM on 10th
F 11 Mar Sa 12 Mar	18:07	19:35	04:51	06:19	9.3	9.0 7.9	4 10	19:48 - 04:51 20:58 - 04:49	
F 8 Apr Sa 9 Apr	19:34	21:07	05:02	06:36	7.9	7.9 7.9	0 2	21:07 - 05:02 21:09 - 05:01	Star Gaze XI : 6-10 April; NM on 8th
F 6 May Sa 7 May	20:01	21:45	04:15	05:58	6.5	6.5 6.4	2 0	21:45 - 04:15 21:46 - 04:13	NM on 8th
F 3 Jun Sa 4 Jun	20:25	22:21	03:42	05:38	5.4	5.4 5.3	8 3	22:21 - 03:42 22:22 - 03:41	
F 8 Jul Sa 9 Jul	20:31	22:27	03:50	05:46	5.4	5.4 5.0	6 12	22:27 - 03:50 22:48 - 03:51	
F 5 Aug Sa 6 Aug	20:10	21:54	04:25	06:08	6.5	6.5 6.6	1 4	21:54 - 04:25 21:52 - 04:26	NM on 5th
F 2 Sep Sa 3 Sep	19:32	21:05	05:01	06:34	7.9	7.9 8.0	0 0	21:05 - 05:01 21:03 - 05:02	NM on 3rd
F 30 Sep Sa 1 Oct	18:47	20:16	05:30	06:59	9.2	8.8 9.3	5 2	20:16 - 05:05 20:14 - 05:31	No Frills X : 28 Sep-2 Oct; NM on 3rd
F 28 Oct Sa 29 Oct	18:07	19:37	05:57*	07:27*	10.3	8.3 9.3	15 9	19:37 - 03:54 19:36 - 04:55*	DST ends, *subtract 1 h for Su morning times
F 4 Nov Sa 5 Nov	16:59	18:30	05:04	06:35	10.6	10.5 9.5	12 20	18:36 - 05:04 19:33 - 05:05	
F 2 Dec Sa 3 Dec	16:41	18:16	05:30	07:05	11.2	11.2 11.0	3 9	18:16 - 05:30 18:28 - 05:31	NM on 1st
F 30 Dec Sa 31 Dec	16:50	18:26	05:46	07:22	11.3	11.3 11.3	0 2	18:26 - 05:46 18:27 - 05:46	NM on 31st

All times are local: [Eastern Standard Time](#) is 5 hours behind Universal Time; [Daylight Saving Time](#), between 3 April and 30 October 2005, is 4 hours behind. New moons start the year on 10 Jan and gradually advance to the beginning of the months by year's end. In fact, December has two new moons: on the 1st and then on New Year's Eve. Observing windows match twilight times because (fortunately!) New Moons tend to fall on weekends this year (N.B. moon phases are UT). This table is also available in text format for [every day of 2005](#).

2005 looks promising. As the year opens, we have bright Comet Machholz in the northern sky, and the Huygens probe reaches Saturn's moon Titan. Throughout the year, there are lunar occultations of Jupiter, Antares and Spica. Mars returns and dominates the sky through year's end. But why not use these deep nights to re-discover the constellations or complete your Messier list? For a greater challenge try the Caldwell, Herschel, NGC lists, or even the catalogs of hordes of dim, hard to find planetaries and galaxies out there. [Our club](#) has experts in all these, and our members will be only too glad to provide encouragement. Participate in the online discussion at the club's [Yahoo! site](#) or join us at a monthly meeting, held on the first Tuesday of the month in Smyrna.

For the latest info, be sure to check times and dates in the monthly newsletter, the [Star Gazer News](#). Moondark is written by [Doug Miller](#), published at the [Moondark web site](#), and printed in the [Delmarva Star Gazers' Star Gazer News](#). This document was last revised on 26 December 2004. Text and images copyright © 2004 by Douglas C. Miller, All Rights Reserved. This material may not be reproduced in any form without prior permission.