

The Dec. Meeting at MCAO

Jerry Truitt

Thanks to everyone who attended the meeting last night at Mount Cuba. I know for some that was a pretty good trip, particularly for Tim and Terry who came from the other side of the Bay Bridge. As it ended up we spent so much time touring the observatory we didn't present any of our programs. I had noted at the start of the meeting that the programs wouldn't be a concern so we could take our time and enjoy the observatory.

Rob Lancaster ran a great demonstration of the planetarium's capabilities for us. This ended with us yelling out to him what to show next, like show us the LMC, now let's see the Vail or how about a black hole. We were still at it at 20 after eight so I had to break us away so we could see the rest of the observatory. Greg Lee and Bill Hannagan, both members of our club, but long time associates of the observatory with their membership of the Delaware Astronomical Society provided us with excellent tours of the facility. They also provided us with some history about the site and facilities.

One item that generated a lot of interest was the 24-inch scope, which had a regular old telrad hanging off it just like most of our scopes and a tiny finder scope. The finder was an 8-inch Meade, which was number 6, one of the first one made.

The University of Delaware and Mount Cuba participated in the whole Earth study of variable stars. This is a program that had observatories around the world track a variable star for weeks. The number of observatories allowed the star to be tracked constantly to get a real pulse of its variability. Mount Cuba exceeded all other observatories in data collection and is now the organizer of the next round of studies. We ended the night with a visit to the Swain Observatory which houses a 12-inch telescope used by members of the DAS.

Thanks to Greg for putting this together for us and to Bill and Rob for helping make sure the we got to see all of the facilities capabilities. Again a little different for us but I think we all had an enjoyable time. Let me know your thoughts on the meeting.



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) _____

Do you need the newsletter snail mailed to you (Y/N)? _____

Please attach a check for \$15 made payable to Delmarva Stargazers and mail to Kathy Sheldon, 20985 Fleetown Rd, Lincoln, DE 19960. Call club President Jerry Truitt at 410-885-3327 for more information.

The PST Problem

Michael Lecuyer

Coronado PST's (Personal Solar Telescope) are experiencing what's being called the 'PST Problem': the breakdown of a coating in the front objective. The accompanying photo of the front lens show what it looks like in my PST. It's the irregular 'rusty' ring you see around the objective. In fact the 'rust' color actually swirls across the entire lens but is much lighter. Bits of it may be seen in the dark reflection of the lens shade. I've noticed this for the past year and had no idea what it was. But lately it's gotten much worse. PST's with a blue (like mine) or gold coatings seem to be affected.

Apparently this has been noticed since the middle of 2005 and was discussed in the Coronado chat areas on the Coronado web site (you must be registered on the web site to read about it). Cloudy Nights (www.cloudynights.com) picked this up this problem with reports of 'sick PSTs' and how people phoning Coronado were having their objectives replaced. In the early days of this malady the objectives were replaced with equally faulty objectives. Coronado originally thought this was an unusual problem – but it's much more common than first believed. On Cloudy Nights people reported that the 'rust' could be seen on new PST's right out of the box. The current repairs seem to have the problem resolved and people have reported the PST performs better than it was new.

The discussion on Cloudy Nights sums up people's experience with the problem. Coronado (recently bought by Meade Instruments) says it does not affect safety but does affect the image. A spokesfolk for Coronado, Russ Tanton, stated, "The 'breakdown' or rust colored appearance that has been seen on front objectives of some PST's is a result of degradation of the ITF coating." The message goes on to say that the degradation is from outsourced application of the IFT (Induced Transmission Filter) which blocks infrared radiation. Apparently Coronado took this seriously enough that it's paying for shipping both ways with no questions asked. That policy is no longer in effect and you have to pay shipping now.

Coronado will repair all defective PST's but is not issuing a recall because this is a performance rather than a safety issue. Considering that the problem turns the telescope into a nearly useless piece of junk it should have merited more attention and publicity.

I couldn't find any pages covering the problem while visiting both Coronado's and Meade's web sites. While the problem been explained on Cloudy Nights there is no real information that the problem exists, how to get the problem fixed, and who to contact.

The best way to check for this problem in your PST is to examine the objective in sunlight. The clouding appears between the lenses and may not be apparent at all under typical indoor lighting.

This affects my PST by reducing the contrast of the solar surface reducing detail and the crispness of prominences. This is just like looking through a really dusty telescope. When the telescope was new the background around the solar disk was ever so slightly tainted with orange light but was not objectionable. Now the entire background is awash with orange light.

Here's how to return your PST for repair: Call the Meade Instruments Corporation at 1-800-626-3233 and choose technical support from the telephone menu. A Meade representative will require the serial number of you PST and will give you a Returned Goods Authorization (RGA) number. Then ship your ailing PST to Meade.



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The December Holiday Party



**Food,
Fun,
And
Games**



Rocket Launch at Wallop's Island

Pj Riley

At 7AM on December 16th, a 69 ft Minotaur I Rocket with two satellites onboard was launched from Wallop's Island VA. This was a major event for the site in that it may hopefully lead to more commercial use of the facilities. The launch was easily seen in the mid-Atlantic area. Doreen and I saw the rocket and saw the first stage separate on our way to breakfast, ~120 miles from the launch site. Bob Bunge took a photo from his place in Bowie MD, ~100 miles from the launch site. Doug Miller also snapped some photos from his casa in Sussex County DE, ~60 miles from the launch site. Apparently, the launch caused a panic in South Jersey, with the 911 centers swamped with calls about a 'missile' launch.



Above: Bob Bunge's pics from Bowie MD. Right and below: The rocket launch as seen from Doug Miller's place in Sussex County DE. (notice the position of Luna in the pics above and right)



The Delmarva Stargazers Announces a Writing Contest.

The DMSG will raffle away astronomy gifts to members who submit articles to the Star Gazer News.

How to enter:

- 1 Open to DMSG members.
- 2 Members may submit original articles at least 500 words (1/2 page) for publication in the Star Gazer News.
- 3 Articles **must** be authored by the member.
- 4 Pictures can be included, but they do not count towards word count (1 picture¹ 1000 words).
- 5 Must be astronomy related. Each article = one chance in the raffle. The drawing will be made at the star parties based on the previous 6 issues – need not attend to win (but it would be nice to see you there). *The editor of the Star Gazer News qualifies articles submitted.*

Magazine Subscriptions

As a paid member of DMSG, you can sign up -or- renew your S&T or Astronomy magazines through the club for a discount over private rate. S&T, reg. \$42.95, is \$32.95 thru DMSG, Astronomy, reg. \$44, is \$34 thru DMSG. See Tony Codella for details.

Cassiopeia

Jerry Truitt

Looking for objects to check out this month? Just point your 'scope in the area of Cassiopeia. There's plenty to see in this area.

Particulars:

Irregularly variable stars *alpha Cas*, *gamma Cas*
Double star *eta Cas*
Triple star *iota Cas*
Variable star *rho Cas*
Diffuse Nebulae *I 1805*, *I 1848*, *I 59*, *NGC 281*
Planetary Nebula *NGC 7635*
Open star clusters: *M52*, *M103*, *NGC 663*, *NGC 129*, *NGC 133*, *NGC 146*, *NGC 457*, *NGC 559*, *NGC 654*, *NGC 663*

Cassiopeia Stars

[SHEDIR](#) (Alpha Cas) (arabic for the breast), is an irregular variable star (K0IIIa), Sedir forms a optical double with a 9th mag blue neighbour.

[Caph](#) (Beta Cas) sometimes called *Tsi* (Chinese for the whip), unstable blue subgiant (spectraltype B0IVe) which varies between 2nd and 3rd magnitude as it throws off shells of gas at unpredictable intervals.

[Ruchbah](#) (Delta Cas)

[Segin](#) (Epsilon Cas)

[Achird](#) (Eta Cas) a double which consists of a 3.44 mag yellow (G0V) and a 8th mag red (M0). This pair are a really beautiful small telescope object.

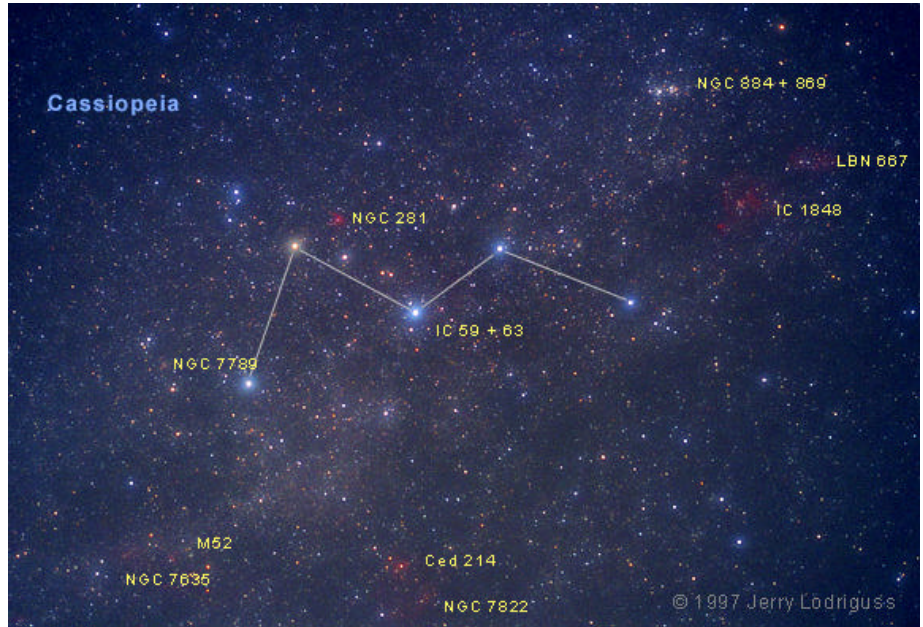
[Marfak](#) (Theta Cas)

iota Cas A small telescopes will reveal 4.5 mag white star accompanied by a 8th mag companion. A larger telescope of at least 4 inches at high power will show the white star also has a near 7th mag companion.

[Marfak](#) (Mu Cas)

rho Cas is a yellow naked eye variable star with an unknown period.

phi Cas (spectraltype F0Ia) is a yellow supergiant that shines at 5th mag.



Mythological Background:

Cassiopeia was the wife of Cepheus and mother of [Andromeda](#). Because Cassiopeia fancied herself more beautiful than sea god Nereus's daughters. This vainness angered the god Poseidon. The story goes that Poseidon had Andromeda chained to a rock off the coast as a sacrifice for the monster Medusa. Perseus intervened however and saved Andromeda from death when he slew the Medusa.

Cassiopeia was banished to the sky, destined to hang her head in shame half the time to teach her humility.

Highlights:

In this region of gamma Cas, one can find lots of nebulae and open clusters:

Right next to gamma Cas is a diffuse nebula *I 59*, consisting of two fans pointing northwest.

NGC 281 is a diffused nebula only one degree west of *alpha Cas*.

NGC 7635 is a planetary nebula that reads high total brightness, however because it is spread out it appears faint. Still a very nice object for small telescopes.

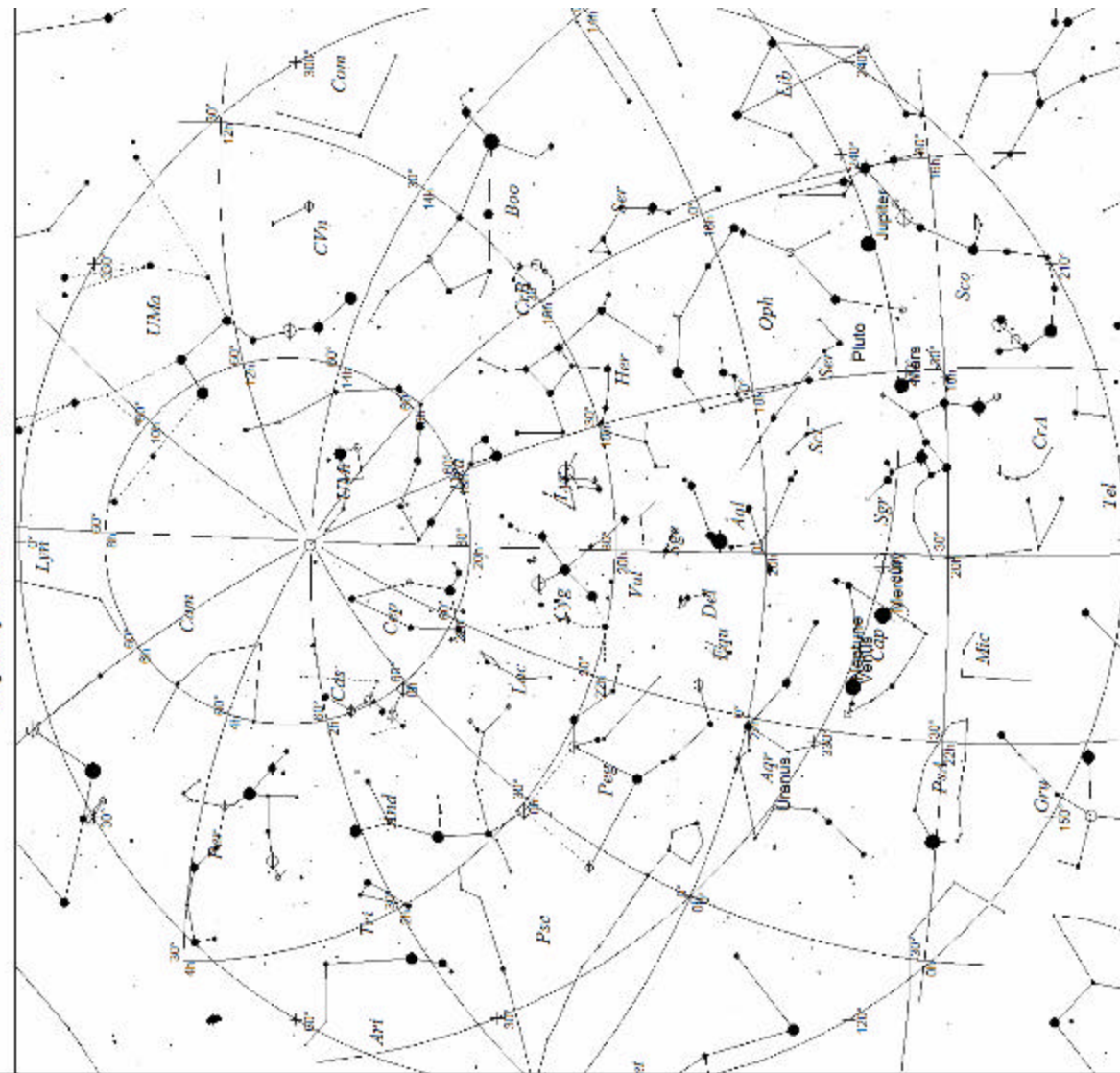
Two of Mr. Messier's best known open clusters reside in Cassiopeia, [M52](#) and [M103](#).

M52 will appear like the shape of a kidney and contains over 100 stars. A great binocular or small telescope object with a prominent 8th mag star at one edge.

M103 has 40 or so members which have a fan shape.

NGC 457 is one of the brightest open clusters in the sky. The stars seem to form a chain of diamonds when viewed with a small telescope.

Skymap 19 Jan 2007 10PM



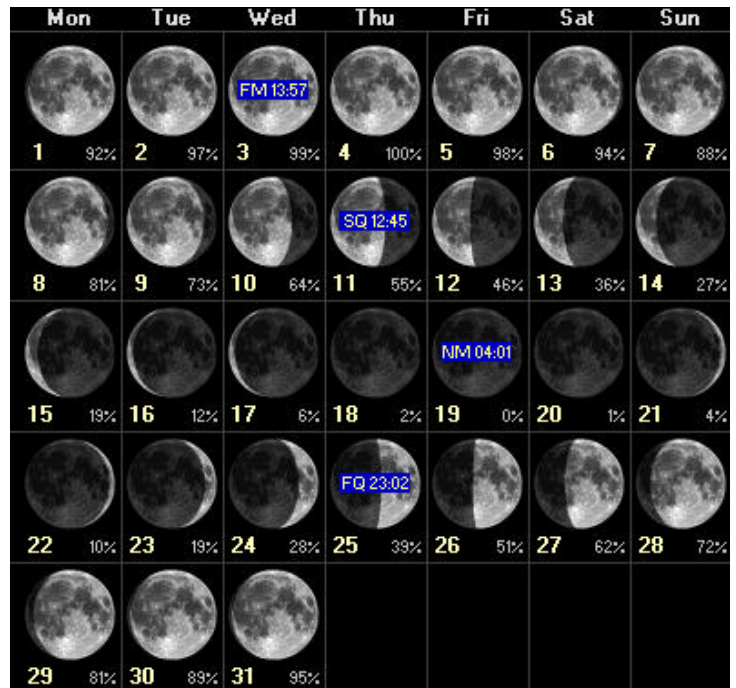
Tuckahoe State Park, MD

- STARS**
- <1
 - 1.5
 - 2
 - 2.5
 - >5
- SYMBOLS**
- Multiple star
 - Variable star
 - ☄ Comet
 - ☄ Galaxy
 - ☄ Bright nebula
 - ☄ Quasar
 - ☄ Dark nebula
 - ☄ Globular cluster
 - ☄ Open cluster
 - ☄ Planetary nebula
 - ☄ Radio source
 - ☄ X-ray source
 - ☄ Other object

Local Time: 22:00:00 19-Jan-2007
 Sideral Time: 19:51:06
 Location: 38° 58' 0" N 75° 58' 0" W
 RA: 18h51m06s Dec: +38° 57' Field: 182.0°
 UTC: 17:00:00 19-Jan-2007
 Julian Day: 2454120.2083

Sun and Moon Data for January 2007 Tuckahoe MD 38.97°N 75.93°W ShrW Standard Time Civil Twilight

Date	Sun				Moon				%
	Twilight	Rise	Transit	Set	Twilight	Rise	Transit	Set	
1/1/2007	6:53a	7:23a	12:07p	4:52p	5:22p	2:48p	10:49p	5:45a	98
1/2/2007	6:53a	7:23a	12:08p	4:53p	5:23p	3:47p	11:48p	6:51a	99
1/3/2007	6:53a	7:23a	12:08p	4:54p	5:24p	4:53p	****	7:46a	100
1/4/2007	6:53a	7:23a	12:09p	4:55p	5:24p	6:01p	12:46a	8:31a	98
1/5/2007	6:53a	7:23a	12:09p	4:55p	5:25p	7:09p	1:39a	9:06a	95
1/6/2007	6:53a	7:23a	12:10p	4:56p	5:26p	8:14p	2:28a	9:35a	90
1/7/2007	6:53a	7:23a	12:10p	4:57p	5:27p	9:15p	3:12a	9:59a	83
1/8/2007	6:53a	7:23a	12:10p	4:58p	5:28p	10:15p	3:53a	10:21a	75
1/9/2007	6:53a	7:23a	12:11p	4:59p	5:29p	11:13p	4:33a	10:41a	67
1/10/2007	6:53a	7:22a	12:11p	5:00p	5:30p	****	5:12a	11:01a	58
1/11/2007	6:53a	7:22a	12:12p	5:01p	5:31p	12:12a	5:51a	11:22a	48
1/12/2007	6:53a	7:22a	12:12p	5:02p	5:32p	1:12a	6:32a	11:45a	39
1/13/2007	6:52a	7:22a	12:12p	5:03p	5:33p	2:14a	7:17a	12:12p	30
1/14/2007	6:52a	7:21a	12:13p	5:04p	5:34p	3:18a	8:05a	12:46p	21
1/15/2007	6:52a	7:21a	12:13p	5:05p	5:35p	4:24a	8:57a	1:27p	14
1/16/2007	6:52a	7:21a	12:13p	5:06p	5:36p	5:27a	9:54a	2:19p	7
1/17/2007	6:51a	7:20a	12:14p	5:08p	5:37p	6:25a	10:52a	3:22p	3
1/18/2007	6:51a	7:20a	12:14p	5:09p	5:38p	7:16a	11:52a	4:33p	0
1/19/2007	6:50a	7:19a	12:14p	5:10p	5:39p	7:58a	12:49p	5:48p	0
1/20/2007	6:50a	7:19a	12:15p	5:11p	5:40p	8:33a	1:43p	7:03p	3
1/21/2007	6:50a	7:18a	12:15p	5:12p	5:41p	9:02a	2:35p	8:18p	8
1/22/2007	6:49a	7:18a	12:15p	5:13p	5:42p	9:29a	3:24p	9:31p	16
1/23/2007	6:48a	7:17a	12:16p	5:14p	5:43p	9:54a	4:12p	10:43p	25
1/24/2007	6:48a	7:17a	12:16p	5:15p	5:44p	10:19a	5:01p	11:56p	36
1/25/2007	6:47a	7:16a	12:16p	5:17p	5:45p	10:47a	5:52p	****	47
1/26/2007	6:47a	7:15a	12:16p	5:18p	5:46p	11:16a	6:45p	1:10a	58
1/27/2007	6:46a	7:14a	12:16p	5:19p	5:47p	11:56a	7:41p	2:23a	69
1/28/2007	6:45a	7:14a	12:17p	5:20p	5:48p	12:42p	8:40p	3:35a	79
1/29/2007	6:45a	7:13a	12:17p	5:21p	5:50p	1:37p	9:39p	4:42a	87
1/30/2007	6:44a	7:12a	12:17p	5:22p	5:51p	2:39p	10:36p	5:39a	93
1/31/2007	6:43a	7:11a	12:17p	5:23p	5:52p	3:46p	11:30p	6:26a	97



Moondark for January: What's Up in 2007?

Doug Miller

As [2007](#) begins, Venus lies low in the chilly, evening twilight. Despite being [closest to Earth on the 3rd](#) of **January**, the Sun's southerly declination and low path across the sky provide little warmth. The [Full Moon](#), known as the "Old Moon," is on the 3rd, and [New Moon](#) is on the 19th. Saturn rises early in the evening, while Jupiter dominates the morning sky by month's end. **February's** [Full Moon](#) occurs on the 2nd, but the bright constellations of winter will really shine by the [New Moon](#) on the 17th. March's moons are [eclipsed](#): the [Full Moon on the 3rd, rises in near full eclipse](#), providing great opportunities for astrophotographers. Unfortunately, [the partial solar eclipse on the 19th](#) is best seen from Asia. This is, however, a good year for [Messier Marathon](#) with over 9 hours of deep night around the middle of the month. With [the equinox on 21st](#), warmer but shorter nights are surely ahead.

Get you taxes done early this year, so you don't miss [Star Gaze XIII star party](#): this **April** event concludes with [New Moon](#) is on the 17th. Venus, Saturn and Jupiter will form a planetary parade for telescopes at the star party. **May's** [Full Moon](#) is on the 2nd, and [New Moon](#) on the 16th. In **June**, we experience the [briefest deep nights](#) of the year, [just over 5 hours long](#), and summer begins with [the solstice on the 21st](#). Venus dominates the evening sky, setting over three hours after sunset, and it is joined by the crescent Moon on the 18th.

[Humidity](#) and [bugs](#) are part of the observing "experience" in **July**, but those who do persevere and stay awake will enjoy some awesome views of the [Summer Milky Way](#) spanning clear across the sky. Venus all but disappears into the evening twilight, but not before a close conjunction with Saturn on the 1st. [Earth is farthest from the Sun on the 7th](#), and the [New Moon](#) is on the 14th. In **August**, a [New Moon](#) on the 12th means moon-free viewing for the [Perseid meteor shower](#). The [Full Moon](#) falls [on the 28th](#), and in contrast to the eclipse just months earlier, [this Moon will set as the eclipse deepens](#). With the [New Moon \(and a partial eclipse\)](#) on **September** 11th, hopefully much more comfortable and dark observing conditions return. [The equinox arrives on the 23rd](#), and the [Harvest Moon](#) rises on the 26th.

The date for fall's [No Frills Star Party](#) is not set yet, but in any case, reserve the weekend of **October** 13th-14th for some great dark-sky observing in crisp, clear air. Jupiter is low, but Mars is brightening and drawing much closer. The [Hunter's Full Moon](#) occurs on the 26th. In **November**, [New Moon](#) falls on the 9th, and [Full Moon](#) on the 24th. Unfortunately, a late setting [First Quarter Moon](#) may interfere with the [Leonid meteor shower](#), sandwiched in-between. In contrast, **December's** [Geminid meteors](#) are unhampered by moonlight. The [longest deep nights of the year, over 11 hours, run from the 6th to the 11th](#). Winter begins with [the solstice on the 22nd](#). Mars comes to a well-placed, high northern [opposition on Christmas Eve](#).

It's hard to believe that [the year 2007](#) has passed so quickly. Don't let it go by without exploring a new region of the sky, adding to your life list of celestial phenomena, challenging yourself with a [Messier Marathon](#) or glimpsing a rarely viewed, distant galaxy. *Clear skies for 2007!*

Dates for local circumstances are [Universal Times \(UT\)](#) for Tuckahoe State Park, the [Delmarva Star Gazers dark sky site](#). Visit the links embedded above for [more celestial events for the year](#), including a [moon phase calendar](#) and [deep night table](#) usable through 2008. Additional information can be found in [Guy Ottewell's Astro-nomical Calendar 2007](#).

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