

# STAR GAZER NEWS

NEWSLETTER OF THE DELMARVA STARGAZERS

May 2005

WWW.DelmarvaStarGazers.Org

Volume 11 Number 11

## At the April Meeting .....

Jerry Truitt brought the meeting to order at 7:15 with 29 members and guests attending.

## Outreach Saturday April 16

### Port Deposit Library- by Jerry Truitt

Keith Lohmeyer and I had about 23 adults and 10 children show up at the library on Saturday night. We gave them a short talk and demonstration on distances to put things into perspective. I brought a soccer ball which represented the Sun. Pin heads represented Mercury, Mars and Pluto, pepper corns were Earth and Venus in our scale model. A small walnut and an acorn were Jupiter and Saturn, peanuts were Uranus and Neptune. We had them pace off Mercury in the library, which ran us out of room, and then explained the number of paces for the other planets. Obviously, this is better done outside but it still gave them a good idea of the scale of our universe. This is called the 1,000 yard universe or Earth as a pepper corn. I next talked about our universe as a quarter. I explained that if we were on one edge of the Milky Way the other edge would be the coast of California. The nearest star would be two soccer fields away.

Following answering some questions, mostly how far is this or that, which I'm learning because I brought my Norton Star Atlas and was able to look things up, we gave our Show on PlanetQuest and the Moon. As you all have reported, there are still lots of great things to view. I don't think conditions could have been any worse unless it rained, of course. The sky was about as unsteady as it could be; I'm not sure if this was because we were right on the river or it was just a bad night.

On top of that the library is right next to the local bar. I might have read more as a young man if I'd had that convenience. The bar patron's headlights, plus outside lighting made it a brutal place to try to view. All that being said what's out there now is bright and easy to find. We showed them the first quarter moon, Saturn, Jupiter and the Orion Nebula. They were all amazed and thrilled and every one of them took the time to thank us. We collected a sign-in sheet and many people expressed interest in attending more events.

Next outreach is Chesapeake City on April 30th at

## Monthly Meeting, Tuesday, May 3rd Nomination of Club Officers

2005-2006

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

7 PM. Keith drove 2 hours to come up and help me. It would be great if some people more in the area could help out with these events.

### Program Jerry Truitt

Michael Borgia was slated to speak on the Space Shuttle program for this April's Delmarva Stargazers meeting. Wow! Did he deliver? Mike's presentation included videos, animations and many technical aspects of the shuttle and the program I was not aware of before. Mike presents highly technical information in a manner everyone can grasp. He presented a history of each shuttle and the program in general. He also gave us the pros and cons, pluses and minuses. Everyone in attendance walked away with a better understanding of the shuttles and what was involved with the building and operating the ships and how decisions were made with the program. Well is the Space Shuttle program a success or not? That is up to each of us to determine, but those in attendance have a better basis on which to make that decision.. The bottom line for me is a lot of great space programs were launched on the back of the shuttles because nothing else in the world could throw them into space.

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Keith Lohmeyer gave us a presentation on places for Delmarva Stargazers to observe. He presented

us with light maps and ground maps of Tuckahoe and Black Bird and gave us a lot of information on what we have and how things may look in the near future. A great presentation that led to a lot of discussion.

DAS President Billy Westergard attended this month's meeting. Billy has been one of the parties working with Don on the Black Bird site and certainly had some information to add to Keith's presentation. Billy also wanted to invite all Delmarva Stargazers to the May DAS meeting at Lambert's Cucina Restaurant at 1300 Centerville Rd., Price's Corner. Why would you want to attend a DAS meeting? Besides this being an opportunity to eat great Italian food and enjoy the camaraderie of your fellow star gazers from the north, they have lined up John Wood from the Goddard Space Flight Center. John is an optical expert and worked on correcting the Hubble's vision.

We have a lot coming up for our May meeting. Anyone out there up to reporting on the jargon of optical coatings? We also need someone to cover the Future of Amateur Astronomy. We'll also be planning the next 5 years for Delmarva Stargazers. This is also the time of year to be thinking about what you want to give back to the club, which is a tricky way of reminding you, nominations for next year's officers will be made at the May meeting. Clear Skies and hope to see you at Stargaze VI. -Jerry

### **From the President's Desk...**

April 18, 2005

Greetings! It is 1:30 AM, I am awake, it is clear outside but I am not out there on this clear night looking at the wonders of our universe. I hope to get my days and nights back in sync soon. The hours between 2AM and 5AM do not have the best TV programming so I have begun filling them with non-TV activities. Overall, my recuperation is on schedule without any major obstacles; I am currently walking half a mile 3 times a day.

Yesterday, I was reading an old (1987 or 89) Sky & Tel while sunning myself on the driveway (it didn't have the cool breeze we have been enjoying lately). There was an article on weather/atmospheric phenomena that I found very interesting. I will not bore you with the technical details...heck, I don't remember the details. But the gist of the story is that the changing weather patterns of Spring is a great time for observing rainbows, beautiful cloud/sun displays, sunrises

and sunsets. You may want to keep a camera with polarizer filter handy just in case you spot something you would like to share with us. Don't forget the possibilities of black & white photography when the clouds and sun are displaying their masterpieces in the sky...you may want to use an orange or yellow filter to enhance the clouds.

Can you believe the weather we have had so far in April? I cannot remember a longer period of clear skies both day and night. What would we do if we lived in a place where this type of weather is commonplace? We can only dream about such a place because Delmarva will haze up and the weather patterns will become more changeable. But that is what makes our Delmarva such a nice place to live. The green lawns, forests, farms with wonderful produce, and a usually comfortable climate require lots of rain and clouds. And Mother Nature is usually kind enough to sprinkle in a few clear nights for us to gaze her celestial wonders. Most of you know that I have experienced a heart attack and by-pass surgery. I stated in an email to [delmarvastargazers@yahoo.com](mailto:delmarvastargazers@yahoo.com) that I would not seek re-election for president of Delmarva Stargazers. Frankly, I dearly love DSG but it is not at the top of my list of priorities in the near future. I believe it is best for DSG and for me to declare my feelings now so that you have time to think about who you want to lead DSG next year. Nominations for officers will be taken at the May meeting and the election will be during the June meeting.

Immediately after I posted the message on yahoogroups there was a flurry of suggestions on how to "take up the slack". Most of the suggestions involved committees. I cannot argue that committees work in some cases – especially when the goal is clearly stated and success is defined as the completion of the goal. Historically we have not had many formal "committees" but there has always been more than enough resources to man/woman any event we have held. We may just be one large committee when it comes to execution of the plan.

Did you notice the words "goal" and "plan"? Over the years I have informally surveyed our members for ideas on what those goals and plans should be. You folks are a treasure of information about astronomy. We have not adopted every idea mined from you in this process but those that have been accepted have been executed very successfully. Basically, I have proposed your ideas to you and you have accepted the challenge

and responsibility to successfully execute them. My point is that every organization needs a goto person to make the proposals, to establish goals, and to ask for the assistance necessary to execute. For that reason DSG must have one single person to accept the responsibilities of president. It is a very rewarding position. I can truly say that I have enjoyed every day of being president for twelve years. You have made it rewarding for me and I thank you for your past support. I know each of you, and I, will support the new president. Look amongst yourselves and nominate the persons you believe are willing and able to be the "goto" person for DSG president.

Please note I have not mentioned our VP, Sec, Treasurer, Editor of the Star Gazer News, or Aide-de-camp. I will let them speak for themselves about their intentions. So, clean your Naglers, collimate your scope, and lets do some serious stargazing. Speaking of Star Gazing – how about the wonderfully clear skies the DSG XI were blessed with! Thanks to all who lent a hand to make DSG XI successful. You ladies and gents are just great See you at the Church May 3rd Don

### 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 1, March 1, 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 8-10 (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 [pir127@Yahoo.com](mailto:pir127@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 Fleetown Rd, Lincoln, DE 19960. Call club President Don Surles at 302-653-9445 for more information.

## Kent Blackwell on Easter Island

I'm at an Internet Cafe on beautiful Easter Island in the middle of the South Pacific. This place is awesome. Wow! The southern sky is incredible. I've been observing that sky on a moving ship's platform but have still seen many deep sky objects, including the LMC and Eta Carinae. Here's a short write up about my trip.

After a hearty breakfast on Friday morning April 8, 2005 Robert Hitt and I set up our telescopes and cameras on the deck of the m/v Discovery cruise ship located about 500 miles from the isolated landmass of Pitcairn Island in the middle of the South Pacific. The sky was mostly clear however some puffy white clouds and a few high cirrus clouds gave us a bit of a scare. It wouldn't take much for one of those clouds to completely obscure a total eclipse lasting only thirty-one seconds. As our ship steamed slowly forward we actually gained a full second of totality from our intended position. The reason Captain Erik Bjurstedt moved his vessel was that he feared clouds would be more prevalent in the original location. Our final position as totality neared was -22 37.879 south latitude and W129 39.27 longitude.

At 10:22 am we saw first contact, as suddenly a tiny bite was taken out of the sun's disk. I've anticipated this for a long time and it was hard to believe the time had finally come to witness this awesome event. As 2nd contact approached at 11:51 am everyone began getting more and more excited. Suddenly the moon slipped completely in front of the sun, revealing a spectacular diamond ring. This was my 10th total solar eclipse and in my experience I've learned not to waste valuable time photographing it. At totality, especially one of this short duration, it's far more important to look at it visually. Believe me, you will never witness anything in nature to match it.

I watched the eclipse through my Orion 4.5" f/4 StarBlast, and the view was nothing short of astounding. For those who have seen prominences through hydrogen alpha filters you may take my word for it that it can't even come close to the vibrancy and glory of those marvelous pink prominences visible during a solar eclipse. I can honestly say I have never witnessed a more beautiful corona or more spectacular prominences than this eclipse. Surely that's because the moon was so much smaller in angular size than it is at longer eclipses. The view was just breathtaking. As I viewed the sun in the StarBlast I was simultaneously photographing it with a 8 Megabyte Canon 20D digital SLR camera riding piggyback, fitted with a 80mm f/6 William Optics Megrez refractor telescope. My gracious thanks to friend Steve Hamilton for lending me this superb instrument. I never took my eye away from the 25x image in the StarBlast telescope, so could only hope the camera caught at least a fraction of what I saw visually.

Viewing and photographing this eclipse was one of them most challenging I have ever undertaken because the swells in the Pacific Ocean reached nearly 10-12', with very high wind gusts. Even at 25x the sun's image would, at times, drift completely out of the field of view, return to the center and then drift out the opposite side. You have to learn to snap a picture on one of these "returns" to be even moderately successful.

The trip has been wonderful so far, visiting such interesting ports as Papeete Tahiti and the lovely Moorea Tahiti. Our next port was Pitcairn's Island. Pitcairn is famous as the isolated island chosen by the mutineers from the ship HMS Bounty. Reaching Pitcairn remains to this day very difficult because of its inaccessibility and dangerously heavy swells. The 45 inhabitants of this island are surely some of the most isolated people on this planet, and only have electricity a few hours per day. Imagine how glorious the southern night sky is from Pitcairn Island with absolutely no lights, and hundreds and hundreds of miles from any land mass! I could find no flat surface on this mountainous island to set up my 25" telescope!

The next port will take me to Easter Island, truly the most remote place in the world. The nearest inhabited island is tiny Pitcairn over 1200 miles to the west. Easter Island is almost 2,300 miles from Santiago and, in the other direction nearly 2500 miles from Tahiti. To its inhabitants it has always been the center of the world, a fact reflected in its name, Te Pito o Te Henua, meaning "navel of the world", in the belief that they were the only inhabitants. Easter Island is most famous for it's Moai statues. The exact number of Moai is unknown because many lie buried in piles of rubble or beneath the soil at the stature quarry, the estimates vary from 800 to 1,000 and range in size from 12' to 30' tall.

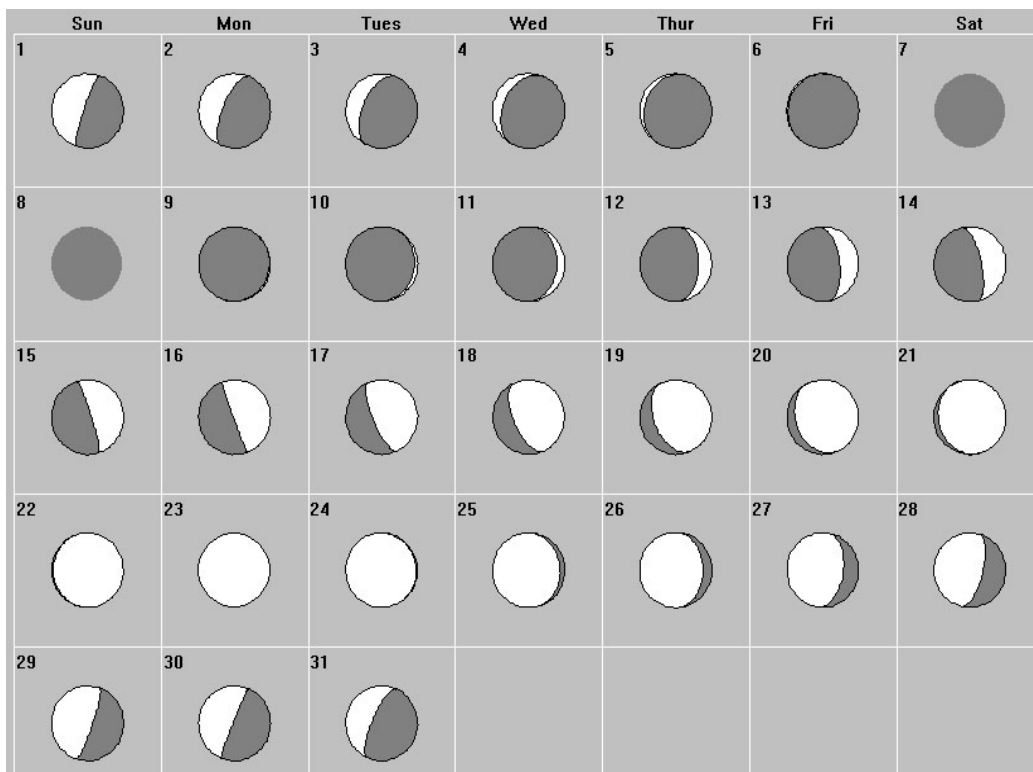
Next year's total solar eclipse will occur through Libya and the Mediterranean Sea. I highly recommend you try see it. Totality at that eclipse will last nearly 4 minutes. I'm already planning my 2006 vacation.

Kent Blackwell [kent@exis.net](mailto:kent@exis.net)

**Sun and Moon Data for May 2005 Tuckahoe MD**

38.98°N 75.93°W 5hrWDaylight Time Astronomical Twilight

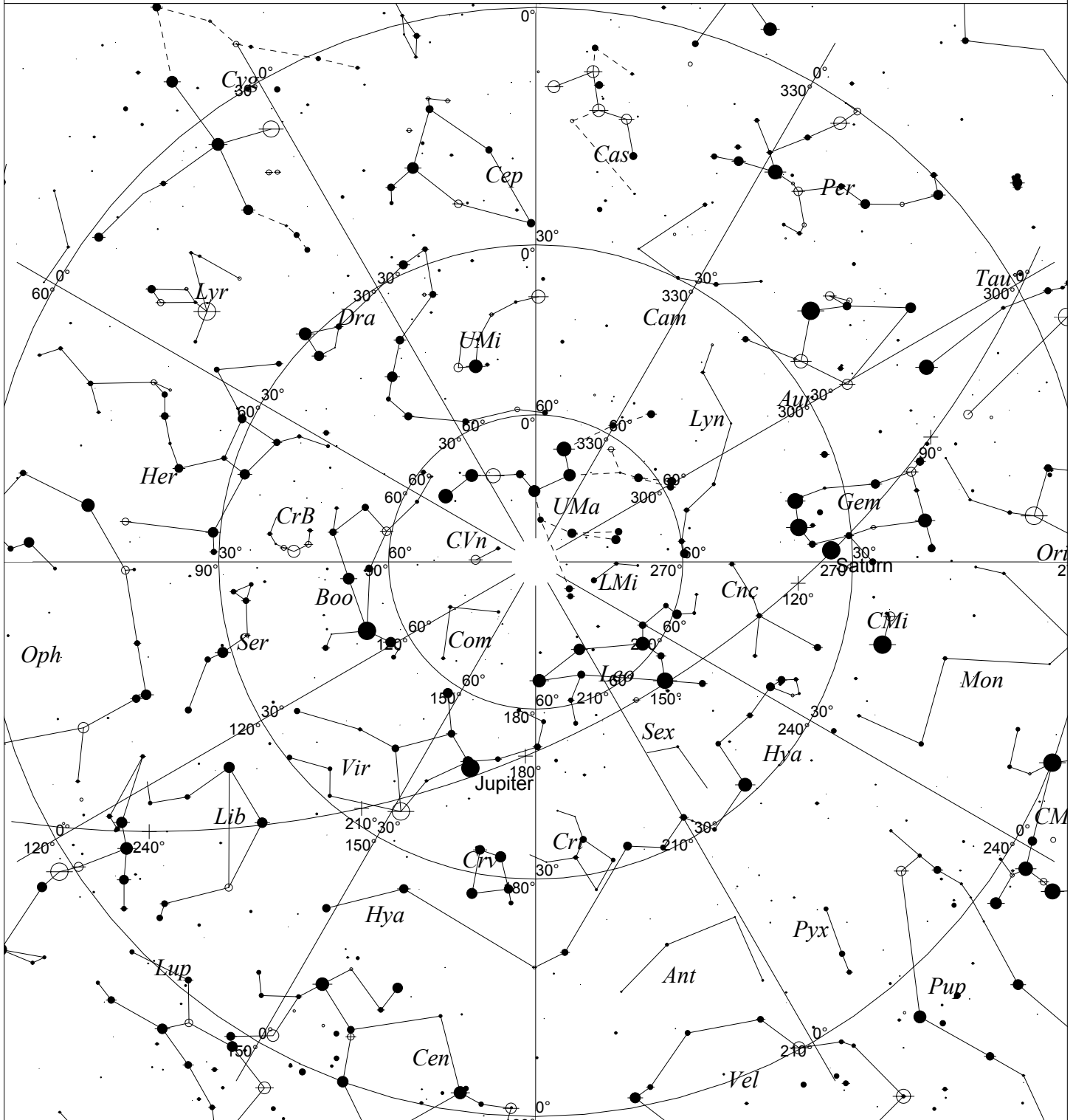
Date	Sun				Moon				% Sun
	Twil.	Rise	Transit	Set	Twil.	Rise	Transit	Set	
5/1/2005	4:24a	6:06a	1:01p	7:57p	9:38p	2:45a	7:38a	12:38p	45
5/2/2005	4:23a	6:04a	1:01p	7:58p	9:40p	3:19a	8:31a	1:53p	34
5/3/2005	4:21a	6:03a	1:01p	7:59p	9:41p	3:48a	9:21a	3:04p	24
5/4/2005	4:19a	6:02a	1:00p	8:00p	9:43p	4:13a	10:08a	4:14p	15
5/5/2005	4:18a	6:01a	1:00p	8:00p	9:44p	4:36a	10:53a	5:22p	8
5/6/2005	4:16a	6:00a	1:00p	8:01p	9:45p	5:00a	11:39a	6:30p	3
5/7/2005	4:15a	5:59a	1:00p	8:02p	9:47p	5:26a	12:26p	7:38p	1
5/8/2005	4:13a	5:58a	1:00p	8:03p	9:48p	5:54a	1:14p	8:46p	0
5/9/2005	4:12a	5:57a	1:00p	8:04p	9:50p	6:27a	2:05p	9:52p	2
5/10/2005	4:10a	5:56a	1:00p	8:05p	9:51p	7:06a	2:58p	10:55p	6
5/11/2005	4:09a	5:55a	1:00p	8:06p	9:52p	7:52a	3:51p	11:50p	11
5/12/2005	4:07a	5:54a	1:00p	8:07p	9:54p	8:44a	4:43p	*****	18
5/13/2005	4:06a	5:53a	1:00p	8:08p	9:55p	9:42a	5:34p	12:38a	25
5/14/2005	4:04a	5:52a	1:00p	8:09p	9:57p	10:43a	6:22p	1:18a	34
5/15/2005	4:03a	5:51a	1:00p	8:10p	9:58p	11:45a	7:07p	1:51a	43
5/16/2005	4:02a	5:50a	1:00p	8:11p	9:59p	12:47p	7:50p	2:19a	53
5/17/2005	4:00a	5:49a	1:00p	8:12p	10:01p	1:48p	8:32p	2:43a	62
5/18/2005	3:59a	5:48a	1:00p	8:12p	10:02p	2:50p	9:14p	3:06a	72
5/19/2005	3:58a	5:48a	1:00p	8:13p	10:03p	3:53p	9:56p	3:27a	80
5/20/2005	3:57a	5:47a	1:00p	8:14p	10:05p	4:58p	10:40p	3:49a	88
5/21/2005	3:55a	5:46a	1:00p	8:15p	10:06p	6:07p	11:28p	4:13a	94
5/22/2005	3:54a	5:45a	1:00p	8:16p	10:07p	7:20p	*****	4:41a	98
5/23/2005	3:53a	5:45a	1:00p	8:17p	10:09p	8:36p	12:21a	5:14a	100
5/24/2005	3:52a	5:44a	1:01p	8:18p	10:10p	9:51p	1:19a	5:57a	99
5/25/2005	3:51a	5:43a	1:01p	8:18p	10:11p	11:00p	2:22a	6:51a	95
5/26/2005	3:50a	5:43a	1:01p	8:19p	10:12p	11:58p	3:27a	7:56a	89
5/27/2005	3:49a	5:42a	1:01p	8:20p	10:14p	*****	4:32a	9:10a	81
5/28/2005	3:48a	5:42a	1:01p	8:21p	10:15p	12:44a	5:32a	10:27a	70
5/29/2005	3:47a	5:41a	1:01p	8:21p	10:16p	1:21a	6:28a	11:43a	59
5/30/2005	3:46a	5:41a	1:01p	8:22p	10:17p	1:51a	7:19a	12:56p	48
5/31/2005	3:45a	5:40a	1:01p	8:23p	10:18p	2:17a	8:06a	2:06p	37



# STARGAZE XI



# SKYMAP FOR MAY 2005



STARS		SYMBOLS		
● <1	● 3.5	● Multiple star	◻ Dark nebula	△ Radio source
● 1.5	● 4	○ Variable star	⊕ Globular cluster	× X-ray source
● 2	● 4.5	☄ Comet	⊙ Open cluster	○ Other object
● 2.5	● >5	☉ Galaxy	⊕ Planetary nebula	
● 3		◻ Bright nebula	⊕ Quasar	

TUCKAHOE STATE PARK, MD  
MAY 6, 2005

Local Time: 22:00:00 6-May-2005

UTC: 02:00:00 7-May-2005

Sidereal Time: 11:52:20

Location: 38° 58' 0" N 76° 56' 0" W RA: 11h52m20s Dec: +38° 57' Field: 182.0°

Julian Day: 2453497.5833

## Moondark for May: Hipparchus of the Greek Islands

Methodology first formalized over twenty centuries ago by the ancient Greek philosophers. There's a [little Greek](#) in all star gazers, perhaps even more than just a little. The fantasies and legends of [Greek mythology](#) are depicted in many [present-day constellations](#). We use [Greek letters](#) to denote the [brightest of their stars](#). Professional astronomers employ the mathematics and analytical m

[Hipparchus](#), born circa 190 B.C. in Nicea in Turkey, is foremost amongst [Greek astronomers](#). He lived on the [Dodecanese island of Rhodes](#) and there became the greatest observer of antiquity. He correctly estimated the [distance from the Earth to the Moon](#) by parallax. By the same reasoning, he concluded that the sun and stars were immeasurably farther away. He understood the geometry of lunar eclipses and predicted them accurately. Hipparchus noted that the seasons were not equal in length, and he offset the Earth from the center of the solar system to better account for the observation. He ranked stars by their brightness, initiating the [system of magnitudes](#) still used today.

Although largely lost to history, Hipparchus created a revolutionary [star catalog employing equatorial celestial coordinates](#). His observations were accurate enough that he discovered the [precession of equinoxes](#), the slow westward shift of stars along the ecliptic. Although he could not know that this effect was due to the 27,000-year wobble of the Earth's axis, Hipparchus realized that any catalog would become outdated with time, and estimated the rate of precession at about 1° per century.

No celestial charts survive from the classical Greek era. But [Hipparchus' catalog may have been rediscovered recently](#) in Naples, Italy on the [Farnese Atlas](#), a Roman copy of a Greek statue with an accurately carved celestial globe. Noted astro-historian [Bradley Schaefer](#) has just [published his analysis](#) of the engraved coordinates of constellations and figures. Accounting for precession, he has determined that the source of the atlas [dates from Hipparchus' time and the latitude of Rhodes](#) and excluded all other possibilities. This remarkable discovery will no doubt shed light on long-standing questions surround this pioneering astronomer and his work.

Unfortunately, aside from this recent detective work and a single, surviving commentary on an astronomical poem, none of Hipparchus' work has survived. What we do know of him is recounted in the [Syntaxis](#) or as it is more commonly known in Arabic, the [Almagest](#). This text, possibly the [most important in all of astronomy](#), was written some three centuries later by [Claudius Ptolemy](#) (ca. 85 to ca. 165 A.D.), a descendent of a Greek family, living in Alexandria, Egypt and a Roman citizen. Although there continues rancorous debate (see *Sky & Telescope*, May 1984, p. 421 and February 2002, p. 39) about the degree to which Ptolemy appropriated Hipparchus's work as his own, it is [Ptolemy's catalog](#), organized by the 48 "ancient" constellations [that has come down to us](#). Of the treatise's 15 books, the last five focus on the geocentric theory of the solar system most closely associated with the author. Ptolemy also published on celestial cartography, sundials, optics and geography.

These two [Ancient Greek](#) astronomers, [Hipparchus](#) and [Ptolemy](#) dominated astronomy for the nearly *fifteen* centuries and were not surpassed until [Copernicus](#) moved the Sun to the center of the solar system. While our understanding of the scale and physics of the universe has grown unimaginably since these times, perhaps the best of the Greek Astronomer's legacy, [ancient constellations](#), still pass above us essentially unchanged, on each clear night.

[Moondark](#) is written by [Doug Miller](#), published [online](#), and printed in the [Delmarva Star Gazers' Star Gazer News](#). Last revised on 24 April 2005. Text and images are copyright © 2005 by Douglas C. Miller, All Rights Reserved. This material may not be reproduced in any form without prior permission.



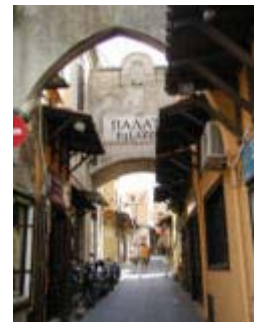
Today Rhodes is a popular destination for cruise ships.



Rhodes, was home to [Helios, Greek god of the Sun](#).



Hipparchus may have observed from the harbour where the [Colossus of Rhodes](#) once stood.



The [Crusaders](#) transformed Rhodes Town into a walled medieval city.

