



# *First Light*

The Newsletter of the Cape Cod Astronomical Society



July, 2008

Vol.19 No. 6

## Members!

Have you seen this green box and smiley before?

An evening of public "stargazing" at the Schmidt Observatory every Wednesday at dusk, beginning June 11th, members of the Cape Cod Astronomical Society will be gathering to share and view the night sky and all are welcome. The evening is always guaranteed to be fun. Several satellites overhead may also be viewed. This Starparty repeats itself every Wednesday throughout the summer, weather permitting. Come one, come all, and let us show you what's up there. It's Free and Fun!



Please check back here at this website to find out if conditions are clear and we are on. (No starparty July 9th and August 6th as the regular CCAS meeting is the following night at 7:30PM)

If yes, study it again and consider yourselves and your friends and neighbors invited to one of our Wednesday Star Parties. Every Wednesday during the Summer except July 9<sup>th</sup> and August 6<sup>th</sup>!

If no, you never saw it before, also consider yourselves and your friends and neighbors invited to one of our Wednesday Star Parties. Every Wednesday during the Summer except July 9<sup>th</sup> and August 6<sup>th</sup>! And check out our website: [www.ccas.ws](http://www.ccas.ws) Lots of good stuff... produced and managed by Tom Leach.

We are a society of sky observers. Come observe the sky! If you haven't done that for a while, try it. You will find it well worth the trip!

[The box turns red no later than 6pm on any Wednesday night that we must cancel the Star

## **Bright New Stars**

Welcome to new member David Goehringer. David is a “beginner” astronomer, lives with his wife in Sandwich, and looks forward to joining us both at meetings and Star Parties in the near future to learn more about observing the night sky and more about the tools we use to do so.

We wish to invite recently joined members not yet introduced in “Bright New Stars” to send an email to the [info@ccas.ws](mailto:info@ccas.ws) email address letting us know something about themselves: background, astro equipment owned if any, and interests.

## **Thoughts on First Light**

This month we have an instructive and (as always) entertaining contribution from Jon Greenberg... some observations on the travails of new enthusiasts who start their stargazing career, usually very short, with a “toy” telescope.

Thank you, Jon. And also thanks to Tom Leach who created the “green box” on Summer Star Parties imaged on Page 1. That announcement is always visible on our main web page. Once again, the box “knows how” to “turn red” anytime we need to cancel a Star Party because of uncooperative weather.

All members, please keep the trend of many people making contributions to FL going and make that trend grow:

“First Light wants YOU!”

Suggested areas: Member Profiles, “Light Side” articles about members, astronomy resources, favorite observing targets or techniques, astrophotography and photos, special observing experiences you have had.

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## **Of Special Interest to Members:**

**Subscriptions to S&T:** Kel Parkinson, our Treasurer, asked First Light to remind all CCAS members that *Sky and Telescope* magazine has the list of current active CCAS members. The benefit of this to us is that when you renew your S&T subscription, you should automatically be entitled to and get the reduced rate for Society Members: \$32.95 per year, \$5 off the regular subscription price. If the system works as it should, the reduced rate should show up in mailings you receive from S&T. In case there is any doubt about the operative rate, a phone call to S&T should yield favorable resolution. There is no need for our Treasurer to

submit your renewal to accomplish the reduced rate as was true in the past. You should be able to do it yourself.

## **CCAS Events**

**[VOTE FOR CHANGE IN BYLAWS AND OFFICERS TO TAKE PLACE AT CCAS MEETING ON JULY 10](#)**

**[YES, OUR NEXT MEETING IS JULY 10<sup>TH</sup>. JULY 3<sup>RD</sup> IS THE EVE OF THE NATIONAL HOLIDAY.](#)**

## **BYLAW CHANGE VOTE:**

The present Bylaws stipulate that Officers of the Society serve for two year terms. Two candidates who have agreed to run for office at our upcoming election agreed to be nominated if only for a one year term.

So at our meeting on July 10th, the membership will vote on a proposal to change the Bylaws to stipulate that Officers of the Society serve one year rather than two year terms.

We also will vote for new Officers on July 10.

## **“Making a Movie of the Universe”**

We are very pleased to announce that Dr. Larry Marschall, professor of physics and astronomy at Gettysburg College has graciously agreed again to give a presentation at a CCAS monthly meeting. Dr. Marschall’s talks are always highlight events for us. He will join us at the DY Library on July 10th presenting a program “Making a Movie of the Universe.” The program will review plans for one of the most remarkable instruments of the next generation of telescopes---now under construction: The Large Synoptic Survey Telescope---which will keep a continuous record of the entire visible sky down to the faintest objects now known. It involves remarkable technical challenges, including the construction of the most curved astronomical mirrors ever created, and a way of handling the enormous flood of data that the telescope will produce. Dr. Marschall will discuss how those challenges are being met, and describe some of the discoveries we expect the new telescope to make.

This topic is of very special interest in the light of the surprising “accidental” viewing of a new supernova as it occurred on January 9<sup>th</sup> as described in detail in the May 22, 2008 issue of *Nature*.<sup>1</sup> The advent of new space monitoring technology like the Large Synoptic Survey Scope will help make sure we don’t miss many such “startling events” in the future as we certainly have in the past.

Special thanks to Mike Marks for his wonderful demonstrations using **Digital Skylab** presented at our meeting at the Cape Cod Museum of Natural History last

month. Special thanks also to Bob Dwyer, Director of CCMNH for hosting the event.

**Reminder:** CCAS has both 8" and 14" Dobsonian telescopes for loan to members.

### Executive Corner

...when we have input from the Executive Committee...

### From the Dome

Star Parties continue every Wednesday during the summer at 8:30PM except July 9<sup>th</sup> and August 6<sup>th</sup>, the two Wednesdays preceding Society meeting nights.

Gary Derman and friends visited the Observatory the evening of Sunday, June 22. Although overcast prevented any star gazing, Gary and Mike Hunter provided the visitors an introduction to the Society and the Observatory. Mike reports that a good interchange was had between "presenters" and visitors illustrating the point that learning and enjoyment in Amateur Astronomy is not always dependent on clear skies!

Mike has successfully started up and lined out our StellaCam II at the Observatory. This camera is basically a camcorder that fits at the eyepiece of one of our telescopes and provides live video of whatever is in the eyepiece to a computer or TV monitor screen or room projector. Mike plans to have StellaCam provide continuous "TV" views of appropriate targets like Saturn or the Moon during upcoming Star Parties.

Six members and five guests enjoyed our first Star Party on June 11. Nine members and one visitor had great observing on July 18<sup>th</sup>.

**Y'all come !**

Group or individual observing sessions at the Werner Schmidt Observatory may be scheduled by contacting observatory Director Mike Hunter at [mamhunter@yahoo.com](mailto:mamhunter@yahoo.com).

### Foundation News...

...when we have input from Foundation Officers...

## Mooncusser's Almanac and Monthly Alert<sup>2</sup> By Peter Kurtz JULY 2008

Object	July 01 (DST)	July 15 (DST)	July 31 (DST)
<b>Sun</b>	R: 05:10 S: 20:19	05:20 20:13	05:34 19:59
<b>Moon</b>	R: 03:22 S: 19:09	18:27 02:53	04:40 19:34
<b>Mercury (daylight)</b>	R: 03:53 S: 18:30	04:08 19:13	05:41 20:13
<b>Venus (evening)</b>	R: 05:37 S: 20:46	06:08 20:51	06:47 20:45
<b>Mars (evening)</b>	R: 09:21 S: 22:59	09:09 22:23	08:57 21:42
<b>Jupiter (evening)</b>	R: 20:41 S: 05:58	19:40 04:54	18:29 03:42
<b>Saturn (evening)</b>	R: 09:43 S: 23:13	08:55 22:21	08:01 21:22
<b>Uranus (late nite)</b>	R: 23:44 S: 11:25	22:48 10:29	21:44 09:24
<b>Neptune (late nite)</b>	R: 22:32 S: 08:58	21:36 08:02	20:32 06:57

### Moon Phases, July 2008

**New Moon** Wednesday, July 2 at 10:19pm DST  
**First QTR** Thursday, July 10 at 12:35am DST  
**Full Moon** Friday, July 18 at 4:59am DST  
**Last QTR** Friday, July 25 at 2:42pm DST

For night owls or early risers, the waning crescent moon will locate itself only 1.1° from **M45, the Pleiades**, on the early morning hours of Sunday, July 27<sup>th</sup>.

### More on July Observing:

**Mercury** is nicely positioned for viewing on July 1 being at greatest western elongation, separated from the sun by 22°... but it sets before sunset most of the month. It makes sense to think about looking for **Mercury** starting in mid-August; then it will join **Venus** and **Saturn** in a spectacular triple near-conjunction show for folks with a low western horizon after sunset.

This month, you can try to start looking for **Venus** in the evening as it begins to set later and later after the sun.

Both **Mars** and **Saturn** are setting earlier and earlier as we move into mid-summer. By July 31, **Saturn** sets only 83 minutes after the sun for Cape Codders and faint **Mars** sets 103 minutes after the sun. **Mars** will hang around beyond August but by the end of that month, **Saturn** will be gradually losing itself behind the sun. Also look forward to close groupings of **Mars**, **Venus**, and **Mercury** toward the end of August and into September.

But there is good news for July. **Jupiter**, at opposition on the 9th, rises earlier and earlier being higher and higher in the sky after sunset as the season moves along. A problem during this viewing season which will last several months, is that **Jupiter** will never get high enough in the sky for really good detail/moons study because of how low the ecliptic is at night in this season.

One specific near-conjunction note for July: On July 1, **Mars** is only 42' north of Regulus; on July 11, only 42' south of **Saturn**; both are pairings that should be pretty in a good telescope or binoculars.

<sup>2,3</sup>

**Minima of Algol visible after dark at Cape Cod:**

JULY	
1:16 (am)	Wednesday, July 23
10:05 (pm)	Saturday, July 26

**Libration and Declination Tables for the Moon**<sup>2</sup>

JULY	
Max Longitudinal	Min Longitudinal
7/7 (7°)	7/22 (-6°)
Max Latitudinal	Min Latitudinal
7/12 (7°)	7/26 (-7°)
Max Declination	Min Declination
7/1 (28°)	7/15 (-28°)

Information on how Libration and Declination Maxima and Minima can make visible parts of the moon normally hidden was reviewed in the December-January First Light. Quick recap: Max Long brings to view extra right side; Min Long, extra left side; Max Lat, extra north side; Min Lat, extra south side. Max Dec puts it high in our sky during its transit; Min Dec puts it low.

**Lander Watch:**

A busy schedule forbids time to do justice to what Phoenix has accomplished on Mars since landing on May 26<sup>th</sup>. For those who can't wait, Google "Phoenix Mars" and you can find leads to amazing pictures and stories about scraping away dirt and watching the ice sublime. We will give a good look at Phoenix next issue and also see what the boring old Opportunity Rover has been up to in Victoria crater.

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A PORTION OF THIS PAGE IS INTENTIONALLY LEFT BLANK TO REMIND ALL MEMBERS THAT THERE IS ALWAYS PLENTY OF ROOM IN FIRST LIGHT FOR YOUR CONTRIBUTIONS.

THIS MONTH WE HAD INPUT FROM MANY CLUB MEMBERS! NEXT MONTH, HELP US MAKE IT EVEN MORE!

PLEASE SEND NOTES ON THINGS THAT INTEREST YOU OR SPECIAL EXPERIENCES YOU HAVE HAD BY EMAIL ([info@ccas.ws](mailto:info@ccas.ws)) OR SNAIL MAIL. IF THE LATTER, WE CAN SCAN IMAGES YOU MIGHT INCLUDE.

*Thanks to Jon Greenberg for creating and submitting the following vignette:*

# “ADVENTURES IN TOYLAND”

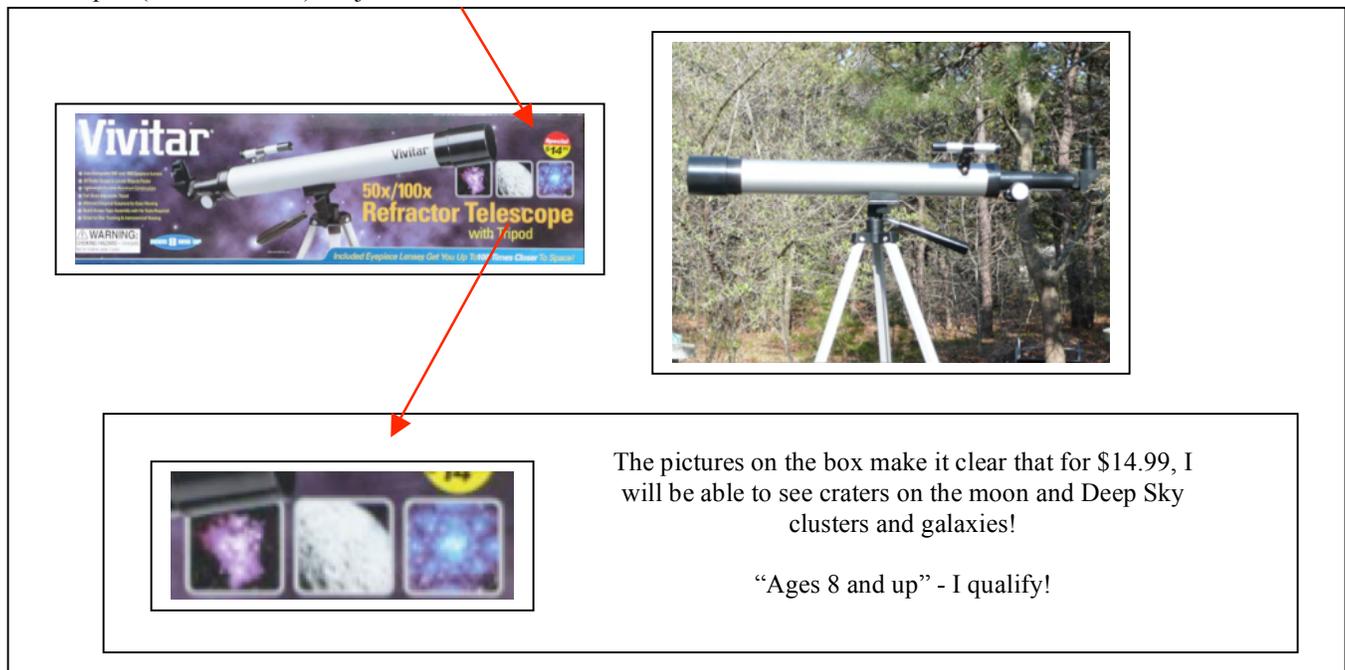
by Jon Greenberg

“Jeopardy” answer: *A drugstore telescope!*

“Jeopardy” question: *What’s worse than a department store telescope?*

When I give my courses in observational astronomy, I devote the second session to a discussion and demonstration of binoculars and telescopes. I always warn my students not to buy or gift a department store telescope (refractor) and emphasize that the tragedy in so doing is not the money wasted but the fact that the owner will be turned off from an exciting new hobby because of the frustration encountered in trying to use one of these flimsy pieces of junk. However, I never had an actual specimen to show my class.

So you can imagine my excitement when I found an ad in a CVS circular for a Vivitar 50x/100x Refractor Telescope with Tripod (a \$79.99 value) for just \$14.99!



The pictures on the box make it clear that for \$14.99, I will be able to see craters on the moon and Deep Sky clusters and galaxies!

“Ages 8 and up” - I qualify!

The box and contents weighed 2 ½ lbs. and the box measured just 28 and 5/8” long. Talk about portability!

About two months after purchase, I finally got up enough courage to open the box. I was not disappointed! The telescope was just as crappy as I expected it would be. Not a *gram* of glass in all the lenses. The objective lens was about 50mm diameter with a focal length of 600 mm and the two .965” eyepieces: 12mm and 6mm. There was a plastic 90 degree diagonal. The 3x finder scope gave a correct image but could not be aligned with the OTA and was too close to the main tube for easy viewing. The aluminum tripod had a maximum height of 45” and the angle and bearing adjustment lever could not be tightened enough.

Now for the actual test with a waxing gibbous moon! I could not use the finder scope but found the moon by sighting along the tube. I kept the moon in view by hand adjustments as the altazimuth bearing was not rigid enough to hold it. In fairness, the view of the moon through the center part of the two eyepieces was not bad. But I could not hold any star in place long enough to really view it. Saturn was covered by clouds.

Overall impression:

This is a telescope that would turn any aspiring amateur astronomer into a late night TV watcher.

Epilogue:

I had to cancel my spring astronomy class because of insufficient enrollment. Could an experience somewhat like this be a contributing factor?

Anyone want to buy a great refractor (\$79.99 value) real cheap? Make an offer!

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**Cape Cod Astronomical Society**

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Vice President	Tom Leach	508-237-9291
Secretary	Betsy Young	508-255-8448
Treasurer	Kelvin Parkinson	508-385-5982
Observatory Director	Michael Hunter	508-385-9846
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**Cape Cod Astronomical Foundation**

Chairman	Werner Schmidt	508-362-9301
Vice Chairman	Michael Hunter	508-385-9846
Director R&D	Bill McDonough	508-771-0471
Secretary	Ed Swiniarski	508-895-5973
Treasurer	Pio Petrocchi	508-362-1213
Observatory Director	Michael Hunter	508-385-9846
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The **Cape Cod Astronomical Society** meets at 7:30 pm on the first Thursday of every month in the library of the Dennis-Yarmouth Regional High School in Yarmouth, Massachusetts. Meetings are open to the public. Membership dues are \$30 for adults, \$15 for students in two year colleges, no charge for students in K-12 schools.



Reference Information:

1) May 22, 2008 issue of *Nature*, 453, #7194, page 462. An Associated Press review from this article appeared in the Cape Cod Times, May 22, page C8: "Experts witness explosion of star". Check out the article. Your friends and neighbors may ask you about it.

2) Information for The Mooncussers Almanac and Monthly Observing Alerts was extracted from Sky Events, Astronomy Magazine Online (Astronomy.com), Stargazing.net's Planet Rise/Transit/Set calculator (<http://www.stargazing.net/mas/planet2.htm>), *Astronomy Magazine*, *Sky & Telescope Magazine*, *Sky and Telescope Skywatch 2007*, and other sources. The *Observer's Handbook, 2007 and 2008*, published by The Royal Astronomical Society of Canada is also an important reference, particularly for information on lunar libration and declination and the minima of Algol.

3) Algol is an eclipsing variable star in Perseus which has its brighter component eclipsed or covered by its companion once every 2.87 earth days. When the dimmer component is not eclipsing the brighter, Algol appears typically about magnitude 2.1; when eclipsed, magnitude 3.3 The minima usually lasts about two hours with two hours on either side to bring it back to mag 2.1. Good comparison stars are  $\gamma$ -Andromedae to Algol's west, mag 2.1, and  $\epsilon$ -Persei to its east, mag 2.9.