

## President's Report

by Jon Stewart-Taylor

The Cape Fear Astro Observatory is now a real thing, and we're ready to start qualifying people for 24/7 access to the observing field. Hank and the Observatory Committee have some Big Plans to make it better for us to use, including increasing permanent telescope installations, in increasingly more evolved observatory buildings. The long-term goal is to enable club members to arrive at the observatory, and be observing within 10 minutes. The planned installations include a variety of scopes, from small classical dobbs to large, driven scopes.

Through March and into April we have improving weather and opportunities for observing and outreach. Our first public session is March 12th, the second is April 9th, both at Carolina Beach State Park. We are currently enlisted to help with two State-Wide Star Party events (April 8th and 22nd). I will personally be helping Girl Scout Troop 4301 with their Astronomy badges for the next few months. I know from the attendance at Outreach SIGs that not everybody in the club enjoys outreach, but it is a way to help our club grow.

Club observing sessions are the last quarter and new moon weekends at the observatory. With the warming weather and the opening of the observatory, I encourage everyone to try to make at least one observing session in the next 30 days, if weather permits. I'm looking forward to a chance to meet you under the starry skies.

★ ★



Check it out!  
I'm talking about the ladder behind it.

# Calendar

The February Meeting will be via ZOOM.  
 Observing events, being outside, shall continue at this time.  
 Please watch your email for the most up to date information.

## March 2022

### Date – Event – Time

- 01 Moon-Mercury-Saturn w/in 4 degree circle; morning
- 02 Mercury and Saturn < 1 degree apart
- 02 New Moon
- 04 Club Observing @ the Club Observatory; Shiloh Road Ivanhoe NC; 6:00 PM**
- 05 Club Observing @ the Club Observatory; Shiloh Road Ivanhoe NC; 6:00 PM**
- 10 First Quarter Moon
- 12 Public Observing, 6:15 PM, starts at sunset; Carolina Beach State Park**
- 13 Spring forward - Daylight savings time begins
- 13 ★ Cape Fear Astro Monthly Meeting ★**  
**CFAS Monthly Meeting - 7:00pm – 9:30pm**  
**Will be via Via Zoom and, possibly, in person .**
- WATCH YOUR EMAIL.**
- 18 Full Moon
- 20 Venus at westernmost elongation; 47 degrees from Sun; morning skies
- 20 March Equinox (Northern Spring)
- 25 Last Quarter Moon
- 25 Club Observing @ the Club Observatory; Shiloh Road Ivanhoe NC; 7:00 PM**
- 26 Club Observing @ the Club Observatory; Shiloh Road Ivanhoe NC; 7:00 PM**
- 28 Staunton River Star Party; "Staunton River State Park"

**Astro phenomena from:**  
<https://www.universalworkshop.com/astronomical-calendar-any-year/>

### 2022 Public Events

Date	Time	Event	Where
Mar 12	30 min before Sunset	Public Observing	CBSP
Apr 8	TBA	State Wide Star Party	BES
Apr 9	30 min before Sunset	Public Observing	CBSP
Apr 22	7-10 pm	State Wide Star Party	CBSP
May 7	30 min before Sunset	Public Observing	CBSP
Jun 4	30 min before Sunset	Public Observing	CBSP
Jul 2	30 min before Sunset	Public Observing	CBSP
Aug 6	30 min before Sunset	Public Observing	CBSP
Sep 3	30 min before Sunset	Public Observing	CBSP
Oct 1	30 min before Sunset	Public Observing	CBSP
Oct 1	TBA	International Observe the Moon Night	CFM
Oct 29	30 min before Sunset	Public Observing	CBSP

Where (Locations):

- ★ CBSP: Carolina Beach State Park
- ★ CFM: Cape Fear Museum
- ★ BES: Beulaville Elementary School

### Special Interest Groups (SIGs)

*Usual meeting dates – watch emails for exceptions*

- Phenomena: First Wednesday
- Both Eyes: Second Tuesday
- Astrophotography: Third Monday
- Telescope Usage: Third Tuesday
- New Astronomer: Third Wednesday
- Outreach: Fourth Tuesday

## Upcoming: Late on Sunday, May 15



### Wilmington, North Carolina,

Total lunar eclipse visible

Magnitude: 1.4137

Duration:	5 hours, 18 minutes, 44 seconds
Duration of totality:	1 hour, 24 minutes, 52 seconds
Penumbral begins:	May 15 at 9:32:05 pm
Partial begins:	May 15 at 10:27:52 pm
Full begins:	May 15 at 11:29:03 pm
Maximum:	May 16 at 12:11:28 am
Full ends:	May 16 at 12:53:55 am
Partial ends:	May 16 at 1:55:07 am
Penumbral ends:	May 16 at 2:50:49 am

Times shown in local time (EDT)

This day was cloudy 56% of the time (since 2000)

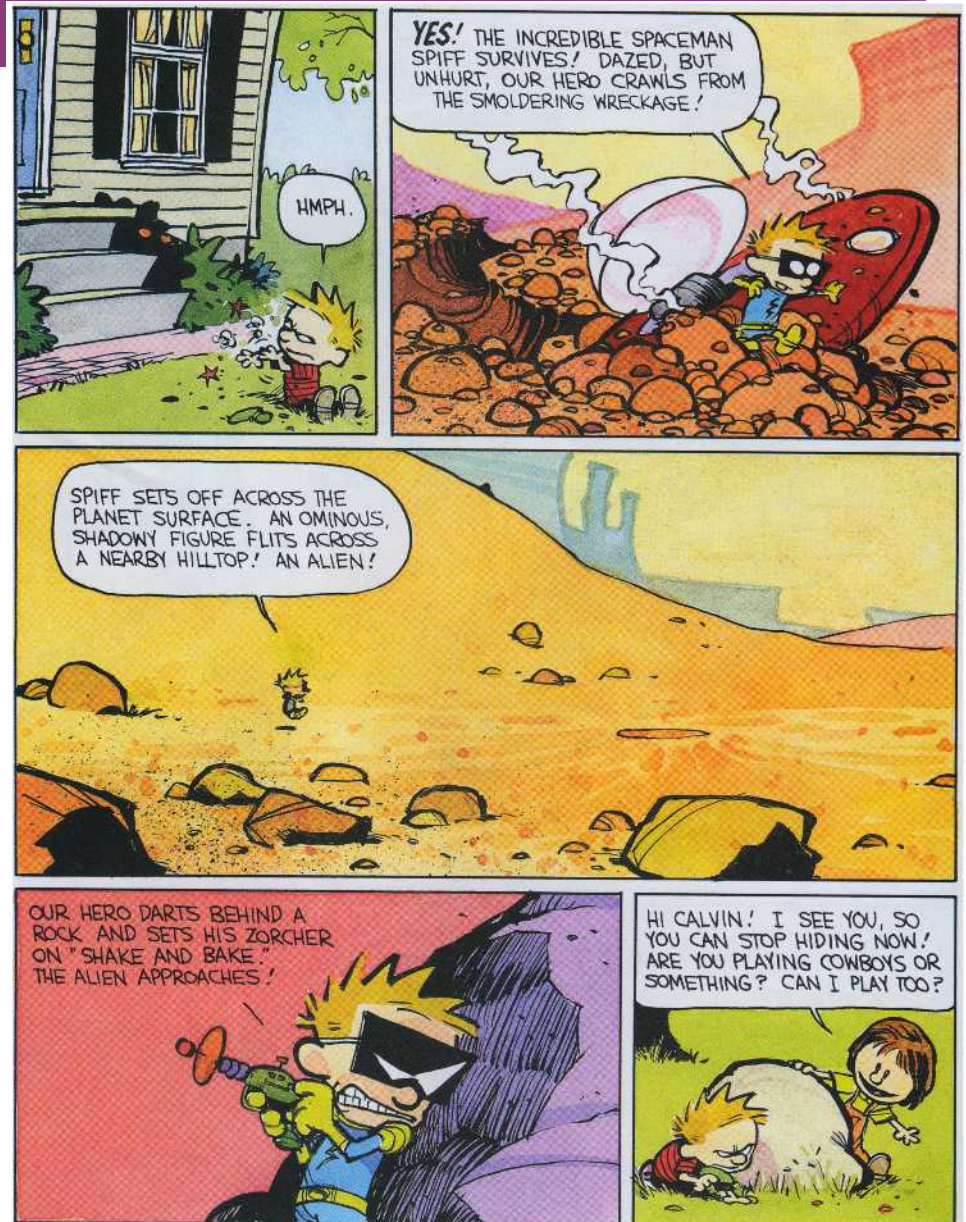


Pin

[See animation of how it w](#)



I like them both, but Calvin & Hobbes a little more.



## What's Wrong with this Picture?

(This is an unprocessed image.)



What's Wrong with this Picture? is a question that I like to ask in the Astrophotography Special Interest Group (AP-SIG) meetings. It is also the question I ask myself both during the imaging session at the telescope and at the computer. The answers are easiest with the large image on the computer than the small screen on the camera. And the answers are how we all learn to take better astrphotos, so here's some answers that should help or at least be informative.

This was taken with a late 1990's Meade 8" F6.3 (not F10) Schmidt-Cassegrain telescope, so one could say shooting at that f-ratio rather than a faster ratio is a "wrong". However, I wanted to see what I could do with this scope so this is not a "wrong". And if it's you only scope, no "wrong" there.

Focus: I aimed the scope at Sirius and used, for the first time, a Bahtinov mask to focus. That was good! And easy! The scope tube is aluminum, which has a high coefficient of thermal expansion, so maybe the focus shifted during the imaging run. But the temperature was fairly steady, so maybe it didn't. I should have checked at some point so I would know.

ISO: Wanting to stick with 30 sec exposures so I could use a 2 sec delay and trigger the camera with my finger, I maxed the ISO at 12,800. This is far beyond the 1600 or 3200 used by most astrophotographers. This probably would have led to much worse noise on a warm night.

Oops!: Everybody knows that once you have adjusted the mechanicals of the mount to achieve polar alignment, you one-by-one snug and then tighten the knobs and bolts to lock it in. I was thinking: take a test shot, then tighten. I forgot the second part of that. So somewhere during the evening I bumped the mount and got degraded tracking. Then I pointed the scope at the Pleiades and really messed up the polar alignment and, with the wind, which had been a slight breeze, becoming a pretty strong breeze, the astronomy ended for the night.

The streak just below center is probably SGDC-1, a Brazilian geostationary communication satellite for both civilian and military use.

## And Here's What Postprocessing Can Do!



The typical camera has a sensor that has a wider range than the human eye's perception. In order to produce a picture that is "realistic" to us, a filter is placed before the camera sensor. This filter blocks about 2/3 of the red. In a "modified" camera, this filter is removed.

My Canon T3i is not modified and the previous picture was straight out of the camera.

The above picture is that picture processed in Photoshop Elements. I used the "black eyedropper", applied to the top, left corner, to change the background to black. Then I use Levels, Red Channel to increase the strength of the red colors.

Well, I guess this is where I should have some kind of conclusion. I guess that is:

- ★ If you have a camera, see if it's possible to take longish exposures with it.
- ★ Then take some pictures!
- ★ Try processing the results. There is some freeware out there if you just want to try it.
- ★ I hope I'm not stepping in it when I say, if you have a picture and you'd like me to have a go at processing it, let me know!

★ ★

### **Next Meeting Program**

"Thermodynamics Versus DEW"

Being an astronomer, you must know that dew is often a problem for us. This program will present the cause for dew formation (it's more than just the humidity) and some actions that are available to combat it; from delaying its formation to preventing it to removing it.

I *dew* hope you'll find it informative.



## Get to Know YOUR Astronomical League

[www.astroleague.org](http://www.astroleague.org)



The Astronomical League (Astroleague or AL) is one of the largest amateur astronomical organizations in the world. The organization serves to encourage an interest in astronomy (especially amateur astronomy) and promote the science of astronomy by:

- ✓ fostering astronomical education;
- ✓ providing incentives for astronomical observation and research;
- ✓ assisting communication among amateur astronomical societies.

CFAS is one of over 300 member societies affiliated with the Astroleague. Your membership in CFAS allows you take full advantage of this relationship so periodically review the information below to see how the Astroleague can support your astronomical interests and endeavors.

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CFAS ALCor	Hank Lyon, <a href="mailto:hlyon8448@gmail.com">hlyon8448@gmail.com</a>
<b>Reminders!</b>	The CFAS Roster has been updated with the AL for first quarter 2022, our next update is April. Be sure to let your ALCor know of any mailing address changes or preferences for your <i>Reflector</i> delivery (mail or digital).

The Astroleague Correspondent (or ALCor) is your link between CFAS and the Astroleague. Don't hesitate to contact your ALCor if you need assistance with anything Astroleague related whether it's general information or detailed coordination of observing program completions for certification. Check back here each month to see any new postings or reminders.

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### CFAS Correspondence:

Please contact the society at: CFAS, P.O. Box 7685, Wilmington, NC 28406

Members are welcome and encouraged to submit articles or other input for "CAPE FEAR SKIES". Submit any and all interesting items for publication to Karl Adlon, Editor (email [kmja79@yahoo.com](mailto:kmja79@yahoo.com)).

***Cape Fear Astronomical Society is a tax-exempt organization under Section 501(c)(3) of the Internal Revenue Code.***

### CFAS Officers:

President: Jon Stewart-Taylor  
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**Dues:** Dues for 2022 are \$25 for Individual and \$32 for Family Membership. Students dues are \$5 per year.

Mail to :CFAS, P.O. Box 7685, Wilmington, NC 28406

### Contact Us:

You can contact CFAS at [info@capefearastro.org](mailto:info@capefearastro.org)

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