

THE FLINT RIVER OBSERVER

NEWSLETTER OF THE FLINT
RIVER ASTRONOMY CLUB

An Affiliate of the Astronomical League

Vol. 30, No. 10 **October 2026**

Officers: President, Larry Dove.

Vice President, Sean Neckel.

Secretary / ALCOR Terri Sutton.

Treasurer, Mark Sutton.

**Board of Directors: Aaron Calhoun, Bill Evans,
and George Ruff; Program/Observing**

**Coordinator and Social Media Coordinator:
Tom Partin.**

Webmaster: Sean Neckel.

Newsletter Editor: Dawn Chappell.

* * *

Club Calendar:

FRAC Meeting:

We will have our club meeting on Thursday, October 8, 2026, 7:30pm at the UGA Gardens in Griffin and on Zoom. Carlos Flores will give a presentation on supernovae, and Mark Sutton will take us on an observing tour of Capricorn.

Public Observing Events:

In October we have two public events scheduled.

We will be at Indian Springs on Friday, October 2, and in case of clouds we will have a weather make-up date for Saturday, October 3. The event starts at 7:45pm.

On October 16th we will be at Sprewell Bluff Park in Thomaston, GA. There is a weather make-up date for the next day, October 17th. This event also starts at 7:45pm.

FRAC Observing Events:

Our club observing weekend at Joe Kurz will be on October 9th and 10th from sunset until whenever.

The gate is now closed, so please be sure to leave the gate as you find it when the last person leaves for the night.

The lock code is 9321.

Please keep checking your email for updates regarding club events.

President's Message:

Look around and all you see is stardust. So said Carl Sagan. If you are of a certain era, you may remember Sagan's 1980 series on PBS "Cosmos". Sagan took us through a fantastic journey of the universe for an hour each Sunday night for thirteen weeks. He made the universe understandable.

Carbon, hydrogen, oxygen and nitrogen make up the most common elements of life as we know it. The original hydrogen, the simplest element, came out of the big bang. Hydrogen coalesces into stars which ignite into fusion reactors. The hydrogen fuses under tremendous heat and pressure to become helium. Energy is released to make heat and starlight. Our sun will eventually run out of hydrogen and start fusing helium to produce carbon, oxygen, and nitrogen. And then our star will die a quiet death.

Massive stars, orders of magnitude greater than our sun, do not go quietly into the night. Those stars die in a supernova explosion with enough energy to fuse elements into heavy metals such as iron. Our rocky planet is made of the iron from such a supernova explosion. In July, if you would have looked at the spiral galaxy NGC 3310, you would have seen a bright spot on one of the spiral arms, a supernova SN2026sqf. And if you look at the Crab Nebula, you are seeing the remnants of a supernova explosion.

So, look around and enjoy this wonderful amalgamation of stardust.

Clear skies,
Larry

* * *

Alan's Astrophotography Series - Part 2: Scope Designs

The discussion is limited to refractors and SCTs since they are the ones typically used for amateur astrophotography. Refractors can produce very nice photos, but they are expensive for their objective size. Most people will go for units at 5 inches or less in diameter. For astrophotography the refractor needs to bring all wavelengths to focus at the same point, namely an apochromatic scope. Reflecting telescopes do not have this as an issue. Also, refractors hold their collimation very well.

SCT scopes are popular for astrophotography. Concerning the objective size and resolution, the same statements about refractors apply to SCTs. The central obstruction does impact the image contrast a bit. However, a 6-inch or 8-inch should get one to the limit of the atmosphere.

SCTs are inexpensive for the objective size. The focal length is long, and the focal ratio is high, usually around 10. You collect significantly more light with the larger objective sizes. With the longer focal length, you will probably match it up with a camera with larger pixels or you will use binning. Binning increases the number of photons per pixel. It will also allow you to optimize the arcseconds per pixel.

One thing to consider is the use of a focal reducer. A 0.7 reducer will double the amount of light per pixel and increase the field of view.

SCTs hold their collimation quite well.

A dew shield with a dew heater is needed to keep the corrector plate free of dew if you are doing long sessions. The dew shield section is needed because a dew heater alone is not adequate for the larger corrector plates which will sometimes fog in the center. Having a little battery powered hair dryer may be helpful. There are 300-watt units available that run off a car battery.

An SCT usually produces a spherical focal plane, so a field flattener may be needed. It is worth noting that Celestron makes the EdgeHD models that have a flattener built in. That model also has mirror locks.

An SCT usually suffers from mirror flop, especially as the scope crosses the meridian. Mirror flop can ruin images, so you usually want a scope that has mirror locks. Mirror flopping can also impact the focus.

Mirror locks solve the flopping problem, but they complicate focusing. The focuser moves the mirror, so the mirror locks must be disengaged when focusing. Once you achieve focus you need to lock the mirror. When you do that the mirror moves slightly. The focus is changed, and the field of view moves a little too. One can install an external focuser. Put the external focuser at its midpoint. Then use the telescope's focuser to bring the object to a reasonable focus and lock the mirror. Then use the external focuser to bring the image into sharp focus.

With SCTs you should be careful about the temperature where they are stored. If they are stored in a shed where it can get really hot, then the grease that lubricates the mirror focus mechanism can drip across the mirror or partially vaporize. It can re-condense on the mirrors and the inside of the corrector plate which lowers image quality. It is very difficult to clean the mirrors or the inside of the corrector plate. Also, the grease could eventually dry out enough to interfere with the focusing mechanism.

There are other models out there. Seestar offers a scope and camera system that is optimized for astrophotography. There are scope designs like the Corrected Dall-Kirkham that do not suffer the issues of the SCT. They are very expensive; they have few disadvantages, and they produce great results.

There are other designs such as Newtonians and Dobsonians. Dobsonians are large Newtonians on a low-profile Alt-Az mount. They are great for visual work, but the mount is not steady enough for photography. Newtonians are good for visual, and sometimes they are optimized for astrophotography. For astrophotography, the Newtonian needs to be on a suitable mount, and its design must provide adequate back focus. Both of these telescope designs require collimation before a session.

Next Month's Article: Guiding

* * *

FRAC T-Shirts

FRAC T-shirts are still available! They are \$20 at all FRAC gatherings.

* * *

FRAC meeting:

FRAC meeting September 10, 2026, at 7:30pm at the UGA Gardens in Griffin and on Zoom.

Just 6 members joined us at the meeting at the Garden building: Sean Neckel, Ann Angelheart, George Ruff, Stacy Spear, Ben Barker, and John Cruickshank.

10 club members joined us on Zoom: Dave and Rosanne Stone, Larry Dove, Clayton Wilson, King Davis, Eugene Rush, Wade Simmons, Chelsea Neckel, Tom Partin, and Brent Summers.

Topics Discussed:

- George Ruff gave a presentation on dwarf planets in our solar system.
- Ann Angelheart will find a suitable gift and an astronomy picture as a thank you to Mason Starr, our presenter from back in July.

FRAC Observings:

The club held its monthly observing event at Joe Kurz WMA on Friday, September 11th and Saturday, September 12th.

Public Observing Events:

In September we were scheduled to have a public observing at Indian Springs State Park on September 4th or 5th. Both dates were cancelled due to weather.

* * *

Solar System Observing October 2026

Mercury is behind the sun and not observable.

Venus is setting right about the same time as the sun.

Earth is not too small, and not too big. It's just right.

Mars is visible starting around 2am until dawn.

Jupiter is visible starting around 4am.

Saturn is visible, starting around 10:30pm until dawn.

Uranus is visible through a telescope starting around midnight until dawn.

Neptune is also visible through a telescope, starting around 9pm until dawn.

Moon: LQ 10/3 New: 10/10 FQ: 10/18 Full 10/26

<https://in-the-sky.org/>

In the sky, October 2026

Saturn is back in the evening sky! The rings are nearly vertical but still distinctive.

The Pleiades, M45, is generally a very recognizable star cluster for visual observers. Train your smart telescope on this target to capture the faint blue reflection nebula.

The Triangulum galaxy, M33, is a face-on spiral galaxy with loosely bound spiral arms. Look for M33 in the Triangulum constellation. This galaxy is a companion galaxy to the Andromeda galaxy and is in our local group of galaxies.

A harder target to find is the Bubble nebula, NGC 7635. This nebula is only about 7000 light years away in the constellation Cassiopeia. The Bubble nebula is created by the stellar winds from a young massive star. The glowing gases of this nebula result from the high energy output of that young star.

Supernova SN2026sqf burst into view on July 8th, 2026. Look slightly below the cup of the Big Dipper to find this target. <http://www.skylive.com> will have specific details on this supernova.

Lastly, two faint comets make for a good challenge. The first is a predawn target, Comet 169P Neat. The second, Comet 161P Hartley, shows itself in the evenings. <http://www.skylive.com> has updated ephemeris on these and other comets.

Classifieds:

If you have something you would like to buy, sell, or trade, email the specifics, including your contact information to stneckel@gmail.com

* * *



Fireworks Galaxy NGC 6946 Courtesy of Alan Pryor

Photographed 9/13/26

NGC 6946 is also called the Fireworks Galaxy because it produces a lot more supernovae than the galaxies in our local group. It also produces new stars at a high rate. Consequently, it is classified as a starburst galaxy. The galaxy is a beautiful face-on spiral galaxy. It also has a lot of HII regions. Its core is small. NGC 6946 is about 25 million light-years away, and its diameter is 87,000 light-years. The galaxy also has a lot of dust clouds in it.

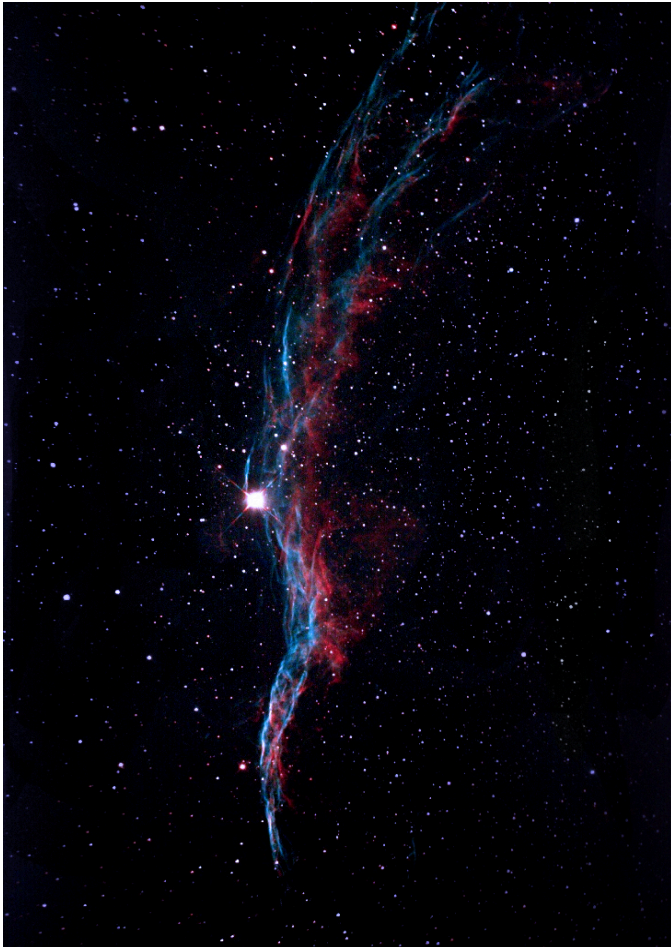
NGC 6946 lies on the border of Cygnus and Cepheus. It is best seen in the Fall. It lies almost 6 degrees SW of the star Alderamin. One will need an 8-inch or larger scope to observe this galaxy.

The photo was taken with a 14" Planewave telescope and a QHY600PH monochrome camera. The total exposure was 3 hours and 12 minutes (13 sets of 3-minute R, G and B frames plus 25 3-minute luminance frames). A full-size photo can be seen at [NGC 6946](#).

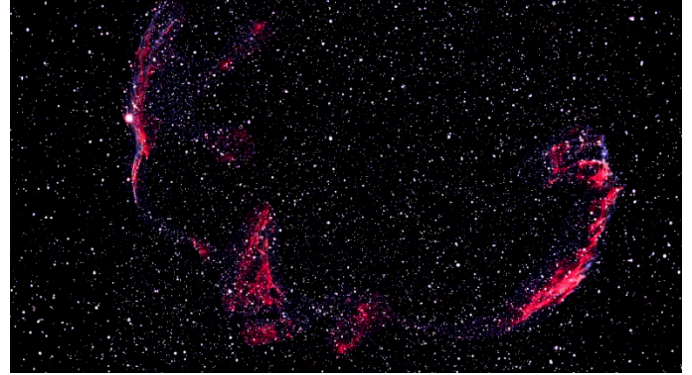


The Swan Nebula, Messier 17 Courtesy of Sean Neckel

This photo of the Swan Nebula was taken from my campsite near Paradox, CO with my SeeStar 50 on August 19, 2026. The nebula is about 5500 light years from Earth, located in the constellation Sagittarius.



The Western Veil Nebula (top) and Eastern Veil Nebula (bottom), courtesy of Eugene Rush



The Cygnus Loop, courtesy of Eugene Rush. The Western Veil (left); Fleming's Triangle (below left) and The Eastern Veil (right).

The Western Veil Nebula (NGC 6960) and The Eastern Veil Nebula (NGC 6995) were taken at Sharpsburg, GA on October 11 and 16, 2025 using a TPO 8-inch Ritchey Chretien telescope with a .67 reducer, ZWO ASI 071 MC Pro camera and Svbony SV-220 dual-band filter. The Western Veil image consists of 10, 180 second subs and The Eastern Veil image consists of 15, 180 second subs.

The Veil Nebula is a cloud of heated and ionized gas in the Constellation Cygnus. It constitutes the brightest parts of the visible portion of the Cygnus Loop, a supernova remnant from a star 20 times more massive than the Sun which exploded between 10,000 and 20,000 years ago. The Cygnus Loop consists of three parts; The Eastern Veil, The Western Veil and Fleming's Triangle. The wispy, intertwined structure of the nebula is a result of vast amounts of energy released as the debris from the supernova moves at high speed through the area creating shock fronts. The Veil is expanding at a velocity of about 1.5 million kilometers per hour and heats the surrounding gas to millions of degrees. As the material cools, it creates the colored glows.

##

