

THE FLINT RIVER OBSERVER

NEWSLETTER OF THE FLINT
RIVER ASTRONOMY CLUB

An Affiliate of the Astronomical League

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Officers: President/Newsletter Editor, **Bill Warren:** (770)229-6108, warren7804@bellsouth.net; Vice President, **Larry Higgins**; Secretary-Treasurer, **Steve Bentley**.

Board of Directors: **Dwight Harness; Tom Moore; Mike Stuart;** and **Jessie Dasher**.

Facebook/Scouting/Ga. Sky View Coordinator, **Steve Knight**; Alcor/Webmaster, **Tom Moore**; Observing Coordinator, **Dwight Harness**; NASA Contact, **Felix Luciano**.

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Please notify **Bill Warren** if you have a change of home address, telephone no. or e-mail address.

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Club Calendar. **Thurs., Oct. 27:** Fayetteville Public Library observing (7:30 p.m.); **Fri., Oct. 28:** Cox Field observing (at dark); **Sat., Oct. 29:** Kurtz Rock observing (come before dark); **Fri., Nov. 4:** UGa-Griffin lunar observing (7-10 p.m.); **Thurs., Nov. 10:** FRAC meeting (7:30 p.m., Rm. 305, Flint Bldg., UGa-Griffin campus); **Fri., Nov. 18:** Cox Field observing (at dark); **Sat., Nov. 19:** Kurtz Rock observing (come before dark).

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President's Message. We'll be trying out the Kurtz Rock observing site for the first and second times on **Sat., Oct. 29th** and **Sat., Nov. 19th**. It's important for you to understand in advance the problems we'll face at that site.

As I pointed out last month, Kurtz Rock is a primitive site, not just in the sense of not having water or electric hookups or restrooms, but also because it's a large granite rock whose contours, although basically level in most places, were shaped by nature, not by man. It's not the sort of place you'd want to drive around in the dark without assistance using just your parking lights.

That's one of the reasons why we recently purchased sixty 9-in. safety cones. We'll have them set out to show you where to drive, with other cones indicating areas you should avoid. If you're planning to attend either of the Kurtz Rock observings in Oct. or Nov., you need to arrive well before dark in order to familiarize yourself with the terrain on foot as well as in your car. Later on, when you understand the site more fully, you can arrive after dark if you need to. But for now, you need to arrive early.

When you're ready to leave, we'll give you all the assistance you need – and if it makes you more comfortable, don't hesitate to use your headlights.

(Note to astrophotographers: For these first visits, at least, you might want to avoid taking long-exposure images.)

It is not our intention to replace Cox Field as our primary observing site unless or until we have to. Kurtz Rock is simply an alternative to be explored, and that's what we'll be doing on those dates. Other problems such as the daytime heat that the granite stores and releases slowly during the warmer months probably will render Kurtz Rock unusable in the summertime. We'll continue to search for a suitable replacement for Cox Field – but for now Kurtz Rock seems to be the best available alternative.

Meanwhile, everyone in FRAC who visits the site needs to sign a waiver releasing **Bill Kurtz**, FRAC and its members from responsibility for damages or injuries incurred on the property. It's the same kind of waiver that GSV attendees sign, and we should have had you sign similar waivers for Cox Field before now. If you didn't sign a waiver at the Oct.

meeting, I'll have forms available for signing at Cox Field and Kurtz Rock on both nights.

-Bill Warren

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Last Month's Meeting/Activities. A large number of FRACsters and their families attended our Sept. 24th Rock Ranch observing and festivities. Those who participated in the observing phase included: **Larry Higgins; Smitty; Tom Moore; Tom Danei; Steve & Betty Bentley; Dwight, Betty & Laura Harness; Mike Stuart; Erik & Mason Erikson; Roger Brackett; Stephen Ramsden; and yr. editor.**

The following Saturday, Oct. 1st, our Rock Ranch observing crew included: **Dwight & Laura Harness; Steve & Betty Bentley; Smitty; Steve & Angela Knight; and yrs. truly.** Both evenings featured clear skies and large crowds of visitors, all of whom appeared to enjoy the experience of seeing the night sky up close and personal.

Five FRACsters – **Betty & Steve Bentley, Mike Stuart, Tom Moore** and **yr. editor** – conducted a lunar observing for 60 Pre-K students and their teachers and families at Orrs Elementary on Oct. 3rd. The kids were fascinated by the craters we showed them, referring to them as “holes in the Moon.”

We had 11 members – **Betty & Steve Bentley, Bagitta & Chris Smallwood, Laura & Dwight Harness, Tom Moore, Roger Brackett, Larry Higgins, Charles Turner** and **yr. editor** – at our UGa-Griffin observing on Oct. 7th. Our visitors included: **Debra Smith** of Jackson, Ga., back for a return visit after a trip to Cox Field last month; **Lawrence Oluta** of Duluth, Ga., and 7-8 friends; and a few other local passersby. The sky cooperated nicely.

No such luck was to be had the next night. On Oct. 8th, overcast skies at the Rock Ranch prevented us from showing more than occasional glimpses of the **Moon**. Attendees included: **Tom Moore; Roger Brackett; Betty & Steve Bentley; Dwight Harness; Smitty; Bill Kurtz & his daughter Laura Kurtz Phillips** and grandson **Scout Phillips; and yr. editor.**

A fine crowd of 17 members and a very special guest attended our Oct. meeting. Members included **Carlos Flores; Angela & Steve Knight; Charles (“Prince of Darkness”) Turner; Tom Moore; Steven “Smitty” Smith; Erik Erikson; Larry Higgins; Bagitta & Chris Smallwood; Mike Stuart; Doug Maxwell; Dwight Harness; Betty & Steve Bentley; yr. editor;** and speaker **Jessie Dasher**, who used a FRAC resource kit to demonstrate how lenses work. Our surprise guest was an ex-member of long standing, **Joe Auriemma**. It was great seeing Joe again after far too long an absence.

Also at the meeting, Doug said that he had recently conducted a solo observing for a group of scouts. After the observing, a parent, **Brent Scarbrough** of Brooks, Ga., asked Doug if he could pay him for hosting the observing. Doug replied, of course, that we don't charge for our observings, but do it simply for the love of the night sky. Mr. Scarbrough then asked if FRAC accepted contributions, and Doug said he thought that, Yes, we do. So Mr Scarbrough handed Doug \$200. “That's for your club,” he said.

The Rock Ranch had its largest crowd yet on Oct. 15th. FRACsters present included **Betty & Steve Bentley, Brianna & Erin; Betty & Laura & Dwight Harness; Smitty; Roger Brackett;** and **yr. editor.** The sky was incredibly clear, the light pollution understandable but annoying.

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This 'n That. As announced at the Oct. meeting, **Tom Danei's** wife **Brit** recently suffered a stroke. She has since called to say that she appreciates your thoughts and prayers, and she is now resting comfortably at home.

Brit and Tom, we love you and will continue to remember you in our prayers throughout Brit's convalescence and beyond.

(Incidentally, due to Brit's misfortune Tom has understandably and regretfully relinquished his post as FRAC's event photographer. (And thanks, Tom, for a job well done.) Anyone interested in filling Tom's position should contact **Bill Warren** at 770-229-6108 or at warren7804@bellsouth.net.)

*From **Alan & Vicky Pryor** comes this exciting news: “Our first grandchild arrived on Wed., Sept. 21st. **Natalie** was 9 lbs., 10 oz. Mother and daughter are doing fine.”

So what’s it going to be, Vicky & Alan? Grandmother and Grandfather? Grandma and Grandpa? Granny and Gramps? Nana and PaPaw? (In reality, it’ll be whatever Natalie decides to call you when she’s old enough to associate you with names. And whatever it is, you’ll love it!)

*Here’s an interesting trivia question: Prior to the invention of the telescope, the only way that comets were discovered was via naked-eye observation. So *when was the last time a comet was discovered without external assistance such as a telescope or binoculars?*

Ans.: On Sunday morning, July 23, 1961, PanAm pilot **Stewart Wilson** was flying from Honolulu to Portland at 29,000 ft. when he co-discovered **Comet Wilson-Hubbard (C/1961 01)**. Wilson reported in the Sept. ’61 issue of *Sky & Telescope* that “Only a trace of zodiacal light was visible in the east, and dead ahead the star **Theta Aurigae** had just come over the horizon... Following that was a faint wisp of light as from a distant searchlight. My associates in the airplane... unfortunately did not appreciate the significance of what we had just observed that morning.” (Quoted in *Sky & Telescope*, Sept. 2011, p. 10.) Wilson reported his discovery to the Central Bureau of astronomical Telescopes (CBAT) of the International Astronomical Union (IAU) on the same day as co-discoverer **William B. Hubbard** (who used a telescope) – and the rest, as they say, is history.

*And here’s another trivia question that, like the previous one, undoubtedly has kept you awake at night, tossing and turning restlessly as you search the memory banks of your mind for the answer:

What is the minimum number of hours of participation in public observings required to earn a Master Outreach pin?

And the answer is... a drumroll, please... **160 hours**. (That’s five 2-hr. events for an Outreach pin,

an additional 50 hrs. for a Stellar Outreach certificate, and 100 hrs. beyond all that for the Master Outreach certificate and pin.)

That figure – 160 hrs. – may not presently mean much to most of you – but it assuredly means a great deal to **yr. editor**, who in October qualified to become only the second person in FRAC to earn that pin. (**Stephen Ramsden**, solar astronomy’s perpetual motion machine, was the first.) It will be yr. editor’s 16th observing pin.

Five other FRACsters have completed the Stellar Outreach program and are working toward Master Outreach: **Larry Higgins**, 76.5 hrs.; **Steve Bentley**, 67 hrs.; **Betty Bentley**, 52 hrs.; **Tom Moore**, 32 hrs.; and **Dwight Harness**, 23.5 hrs. (Those hours are current through observings as of Oct. 15th, 2011.)

***Speaking of Tom Moore**: Leave it to Tom to come up with the perfect term to describe those of us who attend FRAC’s UGa-Griffin lunar observings: *lunies*. It’s an apt description of the zany cast of characters who gather every month on the lawn in front of the Flint Bldg. to have fun, howl at the **Moon**, and take visitors on an Earth-bound trip through space and time to ol’ Luna.

So that’s what we’ll be from now on: *loonies*. (Excuse us, *lunies*.) As someone – we’d like to blame **Larry Higgins**, but it probably was **yr. editor** – once observed, “You don’t have to be loony to be in FRAC – but it helps.”

*In case you weren’t aware of it, **Dr. Richard Schmude** is presently serving as secretary of the Southeastern Region of the Astronomical League. He is also working on another book for Pearson Publishing, this one about earth-orbiting satellites. (As if that weren’t enough to occupy Richard’s time, he has also logged more than 70,000 variable star observations.)

***Steve Knight** offers the following candidate for “all-time funniest astronomy joke”:

Why does a Moon rock taste better than an Earth rock?

A Moon rock is meatier.

(At this point, one envisions **Ken Walburn** thinking, *I don't get it. There ain't no meat on the Moon. And there ain't no rocks anywhere that taste good except rock candy, and last time I ate rock candy it took three trips to the dentist to fix the damage.*)

*While we're at it, here's some homespun astronomy humor from **yrs. truly**:

*How are Prof. Stargazer's teeth like the stars?
They come out at night.*

(Prof. Stargazer replies: Very funny, Bill. I laughed so hard that tears ran down my leg. No wonder nobody likes you.)

***Yr. intrepid reporter** recently asked **Prof. Stargazer**, "What's the dumbest question you've ever been asked?" His answer: "Someone once asked me, 'Light travels at a rate of 5.8 trillion miles a year; how far does it travel in a leap year?'"

(If you need an answer to that question, you need to attend our meetings more often.)

*As you know, **Louise Warren, yr. editor's** spouse for the past 40 years – and in all honesty, it doesn't seem like a day over 39-3/4 years – seldom attends FRAC events. Weezie does, however, watch TV, and she suggested recently that the A. L. should add an observing club and pin for watching "Dancing With the Stars." When we pointed out that that's not exactly the kind of stars that the A. L. has in mind for us to observe, she replied, "Okay, then they can make it an outreach club. The network is reaching out to viewers."

"Yes, but that's the TV network reaching out, not you—" we began weakly, but she didn't agree. She was already arranging yr. editor's pillows on the sofa for another sleepless night in paradise.

***The Return of Cosmos.** Back in 1980, Cornell astronomer **Carl Sagan**, his wife **Ann Druyan** and others produced the most popular astronomy video of all time: *Cosmos: A Personal Journey*. Roughly 700 million people have watched it.

Sagan died in 1996. Druyan, who also co-authored the highly success *Cosmos* book, is presently at work on a video sequel, *Cosmos: A Space-Time Odyssey*. The multi-part series, which will debut sometime in 2013, will be hosted by Hayden Planetarium director and astrophysicist **Neil DeGrasse Tyson**.

*From "The Cosmic Grid" by **Bill Andrews** (*Astronomy*, Nov. 2011), p. 80: "In research destined to be a favorite with adolescent boys, a member of the study to launch a probe to **Barnard's Star** (Project Icarus) suggests exploiting "the 'gas mines' of Uranus." (If you don't understand that or recognize it as humor, **Larry Higgins** will be happy to explain it to you.)

*Are you looking for a Christmas stocking-stuffer for little Johnny or Susie? Look no more: the catalog firm of Hammacher Schlemmer ("Offering the Best, the Only and the Unexpected for 163 years") suggests the "Observatory Class Telescope," a 20-in. Richey-Chretien design telescope (manufacturer unstated) with computerized GPS tracking, cooling fan, dew heater and all the other bells and whistles you'd expect from a telescope carrying a \$35,000.00 price tag. (You might want to consider enlarging and reinforcing the stocking before hanging it from the chimney with care, however: the package measures 8'8" H x 6'4" W x 3'6" L and weighs 640 lbs.)

Order by Dec. 1st for Christmas delivery.

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Upcoming Meetings/Activities. As you've doubtless noticed, our public observings pace has picked up since the weather turned cooler and darkness is coming earlier. It happens every year: there's something about starting observings at 10:30 p.m. in 93° heat when mosquitos rule the night that turns people off regarding observings during the warmer months.

On **Thurs., Oct. 27th**, we'll conduct a public observing at 7:30 p.m. at the Fayetteville Public Library. Here's how to get there from, say, Griffin:

Starting at the intersection of U. S. Hwy. 19/41 and Ga. Hwy. 92N, go 16.2 mi. on Hwy. 92 and turn left

at the stoplight where Hwy. 92 turns that way. Go 0.6 mi. and turn right at the stoplight where Ga. Hwy. 85N joins 92. Go 1.2 mi. on Hwy. 85/92 to the City Café & Bakery on the left, and turn left immediately past the Café. The library will be the red brick building one block ahead on your left. We'll set up in the library parking lot.

On the following evening, **Fri., Oct. 28th**, we'll have a club observing at Cox Field.

On **Sat., Oct. 29th**, we'll visit the Kurtz Rock observing site for the first time.

To get to Kurtz Rock from, say, Griffin, set your odometer at 0.0 at the U. S. Hwy. 19/41 Bypass 4-lane at Williamson Road/Ga. Hwy. 362. Go west on 362 for exactly 16 mi. to the paved intersection at Mt. Carmel Road. Turn right onto Mt. Carmel Rd., go 0.5 mi. and then turn right onto Sullivan Mill Road.

Go 2.8 mi. on Sullivan Mill Rd., and you'll come to a white house and mailbox on the left. About 30 yds. past the driveway to that house you'll come to a 2nd mailbox, this one gray with teal blue trim and yellow tape attached to it. Just before you reach that 2nd mailbox, turn left onto an unpaved path. (If you go to paved Dolly Harris Road on the right, you've gone too far.)

Once you turn off Sullivan Mill Rd. onto the path, safety cones will guide you to Kurtz Rock. Stay to the right of the cones, and drive slowly. The observing site is about 50 yds. from Sullivan Mill Rd.

On **Fri., Nov. 4th**, we'll conduct our monthly public lunar observing at UGa-Griffin from 7-10 p.m. This will be our last UGa-Griffin observing until March or April, since the public doesn't come out for cold weather observings.

Also, we will NOT conduct any Rock Ranch observings in November.

At 7:30 p.m. on **Thurs., Nov. 10th**, **Dr. Richard Schmude** will be the featured speaker at our club meeting, which will be held in Room 305 of the Flint Bldg. on the UGa-Griffin campus. Dr. Schmude will describe the data he's been collecting on geostationary satellites. (We'll also give you a sneak preview of the door prizes to be given out at our Christmas party meeting, which will be held at Ryan's Buffet Restaurant in Griffin at 6:30 p.m. on Sat., Dec. 10th.)

On **Fri., Nov. 18th**, we'll have a club observing session at Cox Field.

The following evening, we'll return to Kurtz Rock for a second club observing at that site. (And before you ask, **Dan Pillatzki**, *Yes*, the directions to Kurtz Rock are the same as they were on Oct. 29th.)

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*A question for **Prof. Stargazer** from **Mike Stuart**: *What's the difference between a nova and a supernova?*

Prof. Stargazer: Supernovas get larger dressing rooms.

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The Sky in November. "They're baaaaaack!" -- in the night sky. (The planets, that is.) **Jupiter** (mag. -2.8) will be up all night in November, which means that it will be ideally placed for viewing during the prime observing hours before midnight. **Venus** (mag. -3.8) will be visible in the SW sky from 30 min. to nearly 2 hrs. after sunset.

Mercury (mag. -0.3) will be there, too, about 2 pinky-widths below Venus during the first half of the month. Like Jupiter and Venus, Mercury will be a naked-eye target for everyone whose name is not **Steve Bentley**.

Uranus (mag. 5.8) and **Neptune** (mag. 7.9) complete the night sky planetary lineup, although neither of them is visible except in binocs or 'scopes. And unless you have GoTo capability, you'll need a finder chart to locate them. (There's one on p. 53 in the Sept. issue of *Sky & Tel*, or you can go to www.skyandtelescope.com/uranusneptune to find them.)

Saturn (mag. 0.8) will be visible during the pre-dawn hrs. in November.

Elsewhere, the **Leonids** meteor shower is expected to be weak this year, due to the radiant's proximity to a bright **3rd-Qtr. Moon**. (Solution: don't look toward the Moon.) The shower will peak during the pre-dawn hrs. of Fri., Nov. 18th.

At mag. 6 or 7, **Comet Garradd (C/2009 p1)** will remain a bright target. The Nov. issue of *Sky & Tel* has an excellent finder chart on p. 52, where a photo

shows what we saw at Cox Field last month when Garradd passed by the globular cluster **M71** in *Sagitta*.

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Above: Although a faint, elusive visual target, **Cave Nebula** (a.k.a. **Sharpless 2-155** and **Caldwell 9**) is both lovely and photogenic in **Alan Pryor's** image.

Located in the constellation *Cepheus*, Cave Nebula is part of a larger region of H-alpha emission and reflection nebulosity and dust. Its nickname derives from a dark region on the east side that measures $50' \times 10'$ and visually resembles a deep cave.

In 1955, the renowned British amateur astronomer **Sir Patrick Caldwell-Moore** created a list of 109 objects that **Charles Messier** overlooked in preparing his famous list of cometary look-alikes. Sir Patrick called his list the "Caldwell Club," since to call it the "Moore Club" would have conflicted with Messier's "M-numbers" and suggested that **Tom Moore** might have created that list.

In devising his list, Sir Patrick stipulated that all of the objects should be "of equal or greater interest" than the Messier objects, and that they should be observable in a 4-in. telescope from a dark site.

Yeah, right. While many of the Caldwell Club objects (e.g., the **Blinking Planetary**, **Eskimo Nebula**, the **Hyades**, **Saturn Nebula**, **Helix Nebula** and the **Tau Canis Major** cluster) are both bright and well-known to visual observers, others such as Cave Nebula are less well known and difficult to observe under any conditions.

Alan P. writes: "This one was tough! It was shot at 1000mm f.l. I did 6 Ha's @20 min. each, 6 Luminescents @10 min. each, and 4 sets of RGBs (reds, greens, blues) @ 10 min. each. That's 300 min. total, and all of it was shot from my pasture, which is 17 mi. from downtown Atlanta."

(Hey, Alan, now we know what you'll do when you finally get put out to pasture! -Ed.)



Above: **Skull Nebula** (image by **Alan Pryor**). The small (3' dia.) planetary nebula **NGC 246** in *Cetus* is, like Sh 2-155, a Caldwell Club object (#56). The nebula contains three mag. 12 stars and two mag. 13 stars. NGC 246 is also sometimes referred to as "Skull Nebula" due to the uneven interplay of light and dark features within the nebula. (Frankly, we think it more closely resembles a puppy's face looking at us through a tube. Do you see the puppy?)

Alan Pryor's b&w image of Skull Nebula was taken as 15 frames of Hydrogen alpha at 20 minutes per frame, for a total of 5 hrs. with his Takahashi 130 at 1000mm focal length. Next month he hopes to get color data and turn the image into a color image.

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