

THE FLINT RIVER OBSERVER

NEWSLETTER OF THE FLINT
RIVER ASTRONOMY CLUB

An Affiliate of the
Astronomical League

Vol. 17, No. 2 **April, 2013**

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Club mailing address: 1212 Everee Inn
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www.flintriverastronomy.org.

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

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Club Calendar. Sat., March 30:

Bluebirds & Bluegrass Arts & Crafts
Festival (9 a.m.-4 p.m., Dauset Trails
Wildlife Center, Flovilla, Ga.); **Thurs.,
April 11:** FRAC meeting (Flynt Bldg. Rm.
219, UGa-Griffin campus); **Fri.-Sat., April
12-13:** Joe Kurz Wildlife Management Area
club observings (at dark); **Thurs., April 18:**
Gordon State College observing (9:15 p.m.,
Abbott's Farm near Barnesville, Ga.); **Fri.,
April 19:** UGa-Griffin lunar observing (7-
10 p.m.).

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President's Message. With hunting season
over at Joe Kurz until Aug. 15th, the gate
will be closed and locked. I talked with the
ranger, and he's put a combination lock on
the chain so we can continue to observe
whenever we want to between now and then.
He gave me the combination, so if you want
to observe at JKWMA on a weeknight or an
unscheduled weekend, call me at 770-227-
9321 and I'll give you the 4-number
combination.

There are two combination locks on the
chain, so if one doesn't work the other one
will. Close the gate behind you when you
enter, and *be sure to close and lock the gate
when you leave*. The surest way for us to
lose our observing privileges at Joe Kurz
would be for us to leave the gate open or
unlocked when we leave.

-Dwight Harness

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Last Month's Meeting/Activities. Twelve
members and guests – **Larry, Dylan, Ethan
& Easley Higgins; Andy Hasluem; Erik
Erikson; Joe Auriemma; Carlos Flores;
Dwight Harness; Phil Sacco** & his guest
Vicky Walters; and **yr. editor** – showed up
at Joe Kurz Wildlife Management Area

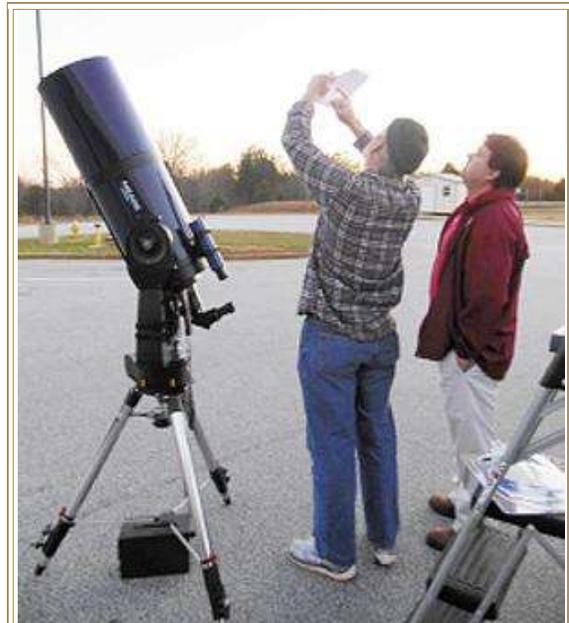
(JKWMA) for our March club observing. We were hoping to get a sneak peek at the bright **Comet C/2011/L4 (PanSTARRS)**, hovering near the western horizon at sunset. It was not to be, however: at sundown, there was just one small rectangle of clouds in the entire sky – and they were gathered exactly where the comet was located. But we got in a bunch of observing anyway, including **Kimble’s Cascade** and the lovely little open cluster **NGC 1502**, renamed “The Whiz” by Larry.

The following evening was cloudy, as indicated by Murphy’s Law. (That’s why, just before going out to observe, you should always announce loudly that **“I’m not going outside and observe tonight! I’ll just stay here and watch TV!”** Then rush outside and observe before Mr. Murphy realizes what you’re doing.)

A fine crowd of 16 astronuts – **yr. editor; Steven “Smitty” Smith; Charles “Prince of Darkness” Turner; Larry “The Whiz” Higgins; Betty & Steve Bentley; Andy Hasluem; Joseph Auriemma; Aaron Calhoun; Roger Brackett; Jessie Dasher; Felix Luciano; Tom Moore; Dwight Harness; and Erik Erikson** – attended our March meeting. Our speaker, **Dr. Richard Schmude**, described recent changes in **Jupiter’s Great Red Spot**. At the tail end of his talk, everyone rushed outside en masse to see **Comet PanSTARRS** before it set.

Zippping away from the **Sun** at 126,000 mph, the comet didn’t stay long before disappearing behind a building on campus, but it was lovely to behold in binoculars.

Then we went back inside for the Q&A portion of Richard’s talk, during which we availed ourselves of Betty’s tasty treats: sausage balls, pound cake and strawberry shortcake, all of which disappeared faster than the comet.



Science has its night at T.G. Scott

Above: Steve Bentley showing a visitor at the T. G. Scott Elem. School observing on Feb. 19th how to use a star chart printout to find the constellations.

Steve & Betty Bentley conducted an observing at K. B. Sutton Elem. School in Forsyth on Mar. 22nd. Says Steve, “We had about 125 kids and parents attend the event, which ran from 6-8:30 p.m. We showed them the Moon, and later on Jupiter when it became visible in the twilight. We had a great time, and the kids were great.

“When it was over, the lady came out and told us that we were the hit of the event. She said she’d like for us to come back on May 2nd for “Movie Night.”

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This ‘n That. At writing, 17 members haven’t yet paid their 2013 dues. If you plan to re-up with the club – and we hope you will, of course – send your \$15 check, payable to FRAC, to either **Dwight Harness** or **Roger Brackett**; their addresses are

listed on the left side of p. 1 of this newsletter.

We won't bother you with further announcements in this regard, so thanks for sending in your checks promptly – and thanks, too, to those who have already paid. Your support and ongoing membership mean a great deal to us.

*As we've mentioned in previous newsletters, the Astronomical League's annual convention – **AlCon 2013** – will be held in Atlanta this summer from July 24th through July 27th. Barring the unlikelihood of AlCon ever coming to Griffin, this will be your best chance ever to attend this important event. It's usually held someplace at least a thousand miles from here.

Smitty pointed out recently that, while the March '13 issue of the A. L.'s quarterly newsletter, the *Reflector*, contains a registration form for AlCon '13, the A. L. website does not presently offer a registration form. As the Dec. issue notes, "More specifics will be posted on the League Website soon" – possibly by the time you read this.

Meanwhile, if you want to register early you can use the *Reflector* form, or call 1-800-933-6679 or contact the A. L. at [www.emoryconferencecenter-px.trvlclick.com](http://www.emoryconferencecenter.px.trvlclick.com).

*On Oct. 19, 2014, newly discovered **Comet 2013 A1 (Siding Spring)** will have a close encounter with **Mars**. Preliminary estimates – which are notoriously wide of the mark regarding comets, since their behavior is unpredictable until they draw close enough to the **Sun** to permit accurate prediction of their orbital paths – suggest that Siding Spring will come somewhere between 73,000 mi. and direct impact with the Red Planet. That's like saying that the UGa-Griffin campus lies somewhere between Atlanta and Macon.

The comet – named Siding Spring because it was discovered at that Australian observatory – is presently thought to be somewhere between 5-30 mi. in diameter. (The meteorite that killed off the dinosaurs and created the 150-mi.-wide Chicxulub crater off the coast of Mexico 65 million years ago was 6 mi. wide. But Mars is about half as large as the Earth, so the damage there would be significantly greater.)

A direct impact with Mars is unlikely but possible at this point: presently, the odds against collision are about 8,000 to 1. But if it were to occur, the collision would destroy the comet and create a Martian crater up to 1-1/2 mi. deep and at least ten times the diameter of the comet's nucleus. The blast would generate a force equivalent to 200 billion tons of TNT, and send massive amounts of debris hurtling into space. How much of it would reach the Earth would depend on how far apart the two planets are on Oct. 19th.

*On the other hand, astronomers have determined that the asteroid **99942 Apophis** definitely will *not* hit Earth in either 2029 or 2036.

Discovered in 2004, Apophis initially was given a slight – 3% -- chance of impacting Earth in 2029. When further orbital calculations ruled out that possibility – the 1,000-ft. rock will miss us by 20,000 mi. – an extremely slight possibility remained that it might impact Earth in its approach in 2036.

Nope. During its latest pass on Jan. 9th, Apophis missed us by 9 million mi., and further revised orbital computation revealed that it will miss us by anywhere from 14-35 million mi. in 2036.

***Four Trivia Questions.** 1. *How many NASA planetary probes have reached their targets?* 2. *Why was Halley's Comet brighter in 1910 than it was on its next visit*

in 1986? 3. Why do meteor showers usually peak after midnight or during the pre-dawn hours? 4. How large, and how far from Mars, are its two moons *Deimos* and *Phobos*? (Answers on p. 4.)

*From **Prof. Stargazer**: “Your interview last month with **Wanda the Tap Dancing Pig** was pure hogwash! I was never engaged to her cousin **Petunia**, I just dated her a couple of times. I took Petunia to my high school graduation breakfast because I thought she’d go well with scrambled eggs, hash browns and toast. As for Wanda’s being a ‘professional astronomer’? In a pig’s eye! She’s full of baloney!”

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Upcoming Meetings/Activities. On **Sat., March 30th**, FRAC will man a booth at the Bluebirds & Bluegrass Festival at Dauset Trails near Flovilla, Ga. From 9 a.m. until 4:00 p.m., we’ll show folks the **Sun** and talk with them about astronomy and FRAC.

To get to Dauset Trails from, say, Hampton, come south on I-75 to Exit 205 (Ga. Hwy. 16). Turn left (east) toward Jackson on Hwy. 16, and after 3.9 mi. turn right on High Falls Road. Go 5.9 mi. on High Falls Rd., and turn left at Mt. Vernon Church Road. Dauset Trails will be 3.1 mi. ahead on the left. Admissions workers will tell you where we’re set up.

Our FRAC meeting will be held in Room 219 of the Flynt Bldg. on the UGa-Griffin campus at 7:30 p.m. on **Thurs., April 11th**. Our program will feature a segment from **Carl Sagan’s** *Cosmos* series.

Our Joe Kurz club observings will be on **Fri.-Sat., April 12th-13th**. **Comet PanSTARRS** will still be near the western horizon but rising, and we’ll have ample time to study it telescopically after sunset.

If we appear to be harping on Comet PanSTARRS, it’s because bright comets are relatively rare. For every **Comet Hale-Bopp** or **Hyakutake**, there are hundreds of fainter ones. There are usually 8-10 comets up at any given time, but most of them are exceedingly faint even in telescopes. PanSTARRS is an exception to the rule. Although fading from its earlier maximum brightness, it should be about mag. 5 on April 19th, which makes it an excellent telescopic target.

On **Thurs., April 18th**, we’ll conduct an observing for **Dr. Schmude’s** Gordon State College students at 9:15 p.m. at Abbott’s Farm near Barnesville. To get there from Griffin, go south on the 4-lane U. S. Hwy. 19/41 Bypass. It’s 19.1 mi. on the 4-lane from Williamson Rd. (Ga. Hwy. 362) to Brent Rd. on the left. Turn there, and turn left again into the unpaved driveway of the first house on the left.

On **Fri., April 19th**, we’ll hold our monthly UGa-Griffin lunar observing from 7-10 p.m. on the lawn in front of the Flynt Bldg. parking lot.

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The Sky In April. **Jupiter** (mag. -2.0) will lie NE of the **Hyades** (the V-shaped face of *Taurus, the Bull*) in the western sky in April.

At 10:40 p.m. on **Apr. 2nd**, Jupiter will occult (pass behind) its moon **Io**; 24 min. later, at 11:04 p.m., another Jovian moon, **Europa**, will transit (pass in front of) Jupiter; and 58 min. after that, at 12:02, Jupiter will transit a third moon, **Ganymede**, leaving **Callisto** the only visible Galilean moon. That doesn’t happen very often.

Saturn (mag. 0.2) will be up all night in April. **Mercury, Uranus & Neptune** will be iffy morning targets, hovering near the horizons, and **Venus & Mars** will be too close to the Sun to be seen.

Comet C2011 L4 (PanSTARRS) will still be near the Sun, but nevertheless impressive in binocs if you wait until after sunset to look for it. During the first week of April, PanSTARRS will lie a mere 2° W of another impressive object, **Andromeda Galaxy (M31)**.

Markarian's Chain is a group of at least 13 galaxies arcing gracefully from SE-NW through 2° or more in *Virgo*. It's named for the Armenian **B. E. Markarian**, who discovered in the early 1960s that at least seven of the galaxies in the chain share a common motion through space. (The other members of the chain just happen to be there.) They lie close enough together that, in following the chain from start to finish at low power telescopically, you'll have at least one of them in view at all times.

Start at **M84 & M86**, a bright galaxy pair located exactly halfway between **Denebola (Beta Leo)** and **Vindemiatrix (Epsilon Vir)**. Move them to the W side of your field of view and you'll see another bright, closer pair: **NGCs 4435 & 4438 (The Eyes)**". Move NE to another galaxy pair, **NGCs 4458 & 4461**. Continue NE to, first, **NGC 4473**, and then to another pair, **NGCs 4477 & 4499**. Move twice as far to the N to **NGCs 4459, 4468 & 4474**. From there, move NE about 1/2 ° to the end of the chain at **M88**.

You'll see other galaxies along the way – this is, after all, the "Realm of the Galaxies" – but the 13 mentioned above will be the brightest.

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Answer to Four Trivia Questions on pp. 3-4: 1. Thirty-nine NASA planetary probes have reached their targets: fourteen to **Mars**, nine to **Venus**, eight to **Jupiter**, four to **Saturn**, two to **Mercury** and one each to **Uranus** and **Neptune**.) Two other probes are on their way to Jupiter and Pluto,

and will reach their destination within 3-1/2 years.

Five probes have visited asteroids, and five others have visited comets. (Source: *Astronomy* [April 2013], p. 20.)

2. In 1910, the Earth passed through the tail of **Halley's Comet**; in 1986, the Earth was on the far side of its orbit from the comet when Halley reached perihelion (the point on its path closest to the **Sun**).

3. After midnight we're on the "front side" of the Earth (i.e., the side facing the direction Earth is rotating) when we pass through the moving stream of cometary debris. If that's unclear, think of how a moving car's front windshield receives more rain than the rear window. After midnight, we're the "front window."

4. At 13.8 mi. in dia., **Phobos** is the larger of **Mars's** two moons; its orbit is just 3,700 mi. from the planet. Timy **Deimos**, a mere 9.9 mi. in dia., is farther out at 14,570 mi. from Mars.

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Dwight's Inaugural Speech

humor by Bill Warren

*After a brief but intense flurry of vote-buying at our Feb. meeting, **Dwight Harness** became FRAC's eighth president in the club's 16-year existence. He asked me to write an inaugural address for him to deliver at our March meeting. I was happy to oblige him because, in addition to our close friendship and my deep respect for him, I needed the money.*

*The stirring acceptance speech I prepared for Dwight was, I thought, a masterpiece of understated elegance. It evoked memories of **JFK's** unforgettable "New Frontiers" inaugural address in 1960. But Dwight decided not to use it – as I recall, his exact words were, "I'd rather*

walk naked in the Rose Bowl parade than deliver that speech! It was so bad that, when I tossed it in the garbage can, it tossed it back out.”

Then the (expletive deleted) refused to pay me for it, so I'm putting it in this month's Observer. That'll show the (four expletives deleted) who he's messing with! That beady-eyed weasel will never know what hit him. I never liked him anyway.
-Bill

“Friends, Romans, countrymen, relatives, neighbors and fellow club members – and you *are* my friends, etc. (until the checks bounce that I bought your votes with, that is):

“Unaccustomed as I am to public speaking, it behooves me on this grand and glorious occasion to reiterate the principles that our Founding Fathers **Larry, Curly & Moe** – excuse me, of course I meant **Larry, Bill and Ken**...

“Where was I?

“Oh yes: It behooves me to reiterate the principles that FRAC's founders held dear, namely, *Buy Low and Sell High. Don't Give a Sucker an Even Break. And When Answering Nature's Call at Our Club Observings, Be Sure That Your Red-Beam Lanyard Flashlight Is Off.*

“Like **Moses**, I never wanted to lead because, as my wife and longtime dancing partner **Betty's** sore toes will attest, I'm not very good at leading. But really...After watching Bill Warren lead the club for five years, how bad could I be? I mean, the guy couldn't lead water downhill!

“Anyway, I'm proud to be FRAC's eighth president and will strive to lead you well. My first order of business will be to try to convince **President Obama** and Congress that we need for NASA to send another man to the **Moon** as soon as possible.

“Preferably Bill.

“One-way.”

Below: NGC 4449 is an irregular barred spiral galaxy in *Canes Venatici*. **Alan Pryor's** astrophoto shows considerably more detail than a visual observer will see, of course: in his Herschel 400 notes, **yr. editor** saw 4449 as being “bright, slightly oval NE-SW and measuring roughly 3' x 2' with a thick center. Interior brightness constant, fading rapidly at the outer edges. Lovely at 75x, only so-so at 228x. Located



3° NW of **Beta CVn.**” NGC 4449 has been described by some visual observers as being rectangular.

(And how cold has it been this winter? On March 9th when Alan imaged 4449, it was so cold that his camera froze to the ‘scope at 2 a.m. “I applied heat via hand warmers and got it to come off at 2:30 a.m.” he said.)

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