

THE FLINT RIVER OBSERVER

NEWSLETTER OF THE FLINT RIVER ASTRONOMY CLUB

An Affiliate of the
Astronomical League

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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. Tues., May 29: FRAC interview (9-10:15 a.m., Griffin radio station WKEU); **Tues., June 5:** Venus transit public solar observing (5-9:00 p.m., The Garden in Griffin); **Tues., June 12:** combination presentation/solar observing for UGa-Griffin's "Kids University" summer program (2 p.m., Stuckey Auditorium); **Thurs., June 14:** FRAC meeting (7:30

p.m., Rm. 315 of the Flynt Bldg. on the UGa-Griffin campus); **Fri., June 15:** Kids Univ. presentation and observing (time TBA); **Thurs., June 21:** Gordon College observing (9:30 p.m., Abbott's Farm near Barnesville); **Fri.-Sat., June 22-23:** Cox Field observings (at dark); **Fri., June 29:** UGa-Griffin lunar observing (7-10 p.m., on the lawn in front of the Flynt Bldg.).

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President's Message. Changes.

To quote **Prof. Stargazer**, "Change is inevitable – but you need to count it before you leave the drive-thru window at your local Burgers 'n Burps Restaurant."

For once, at least, the professor is right: change *is* inevitable. The important thing is how you deal with it.

At our Board of Directors meeting in May, I announced that I will not be seeking re-election as FRAC's president in 2013.

I've been your president since 2008, and I also spent 7 yrs. as vice president since co-founding FRAC with **Larry Higgins** and **Ken Walburn** in 1997. But I'm 70 yrs. old, and my get-up-and-go has largely got-up-and-went. FRAC needs younger leadership. I told the Board that I'd be willing to stay on as v.p. and newsletter editor next year, depending on who the presidential candidate might be.

Also at that board meeting, the members present – one was absent, and another had stepped down from the board and will be replaced at the June meeting – voted unanimously that FRAC not host Ga. Sky View in 2013. (I didn't vote, since under the Bylaws the president votes only to break ties – but I support their decision.)

Although GSV '12 netted a small profit of somewhere between \$120-\$200, the board feared that, with Pres. Obama's national health care program set to go into effect in 2013, we haven't yet begun to feel

its disastrous impact on our national economy and job situation.

For the past two years or more, the financially beleaguered Ga. Dept. of Natural Resources has considered closing Indian Spring State Park to save money. That they did not do so last year probably was due to the terrible string of tornadoes that raged through north and central Georgia last April. One of them severely damaged a state park near Columbus and its group campers were diverted to Camp McIntosh and ISSP, which somehow managed to escape damage. The rental fee for Camp McIntosh rose last year from \$500 to \$555 a night, and the cost of food and supplies for GSV '12 was 30% higher than it was two years earlier.

Elsewhere: Within each of us lurks at least one get-rich-quick scheme. For some people, such as **Bill Gates**, their stars miraculously align and their vision becomes a greater reality than they could ever have imagined in their wildest pipe-dreams. For most people, though, those schemes wind up falling flatter than one of **Mrs. Stargazer's** ice cream cakes.

My get-rich-quick scheme for FRAC and me probably falls into the latter category.

A few years ago, I started collecting all of the humorous articles I'd written for the *Observer* into book format, with the intention of selling it to a publisher. I never completed the project, and it lay dormant for several years in my files under the tentative title, *The Wacky FRACs*.

Recently, though, I dragged out the ms. and decided to update it and complete the project. I added other, later humorous articles and items; changed the names of the characters (whose personalities, actions and statements were never meant to accurately portray actual members anyway, as you well know); I changed the title to *Light Years From Reality: The Universe According to Prof. Stargazer and FRAC*; and I'm presently editing the entire ms.

My inspiration for renewing the project was an ad in *Sky & Tel*: "Is your passion astronomy and would you like to see your work published by Willmann-Bell? If so, let's explore the possibilities."

They probably won't want it; after all, it's *humor*, and many professional astronomers – and some amateurs as well -- take themselves and their work so seriously that their faces would bleed if they broke into a smile.

Most amateur astronomers don't take it that seriously. We tend to favor having fun, socializing and pursuing modest observing or learning goals to things like studying galactic magnetism, measuring accretion disks and testing models of the evolution of supernova remnants. So who knows?: Willmann-Bell – or some other publisher -- may want our book, or at least be willing to look at it. We'll never know unless we try.

If I can sell the book, I'll split the royalties 50-50 with FRAC.

-Bill Warren

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Last Month's Meeting/Activities.

Fourteen members attended our May FRAC meeting: **Betty & Steve Bentley; Joseph Auriemma; McKenzie & Steven "Smitty" Smith; Tom Moore; Larry Higgins; Aaron Calhoun; Cynthia Armstrong; Charles Turner; Jessie Dasher; Laura & Dwight Harness; and yr. editor.** Our Quizbowl contest was won by one team or the other, but Laura forgot to record the final score. (Just kidding, but it didn't matter: the game wasn't about winning or losing, it was about having fun, popping balloons and cracking jokes.)

Moderator: Here's your next Tossup question: *What was the name of Charles Messier's assistant?*

(Pop!)

Dwight: Pepe Le Pew?

Aaron Calhoun and **yrs. truly** enjoyed two splendid observings at Cox on May 18th-19th. We were joined on the 19th by **Larry Higgins, Charles Turner, Erik Erikson, Betty & Steve Bentley** and three Turner Rd. residents who found out we were astronomers and came by to take a look through our telescopes.

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This ‘n That. After several years of dedicated service as a member of FRAC’s Board of Directors, **Tom Moore** has stepped down from the post. He will remain as our webmaster. We will hold a replacement election at our June meeting.

Thanks, Tom, for a job exceedingly well done. We love ya, man!

***In Memoriam: Turning Left At Orion.** Although small in stature, **Art Zorka** stood very tall in the hearts of everyone who knew him. He was a warm, kind and gentle man with a zest for life that was mirrored in his ready wit, ever-present sense of humor and passion for astronomy outreach, education and observing.

Yr. editor once wrote that “No matter how long you live, it’s too soon for dying.” Never have those words been truer than when applied to Art Zorka. Art was the sort of man you assumed – or at least *hoped* – would live forever. He made the world a better place for those around him. His unexpected passing due to cardiac arrest on May 16th saddens us all, and FRAC’s deepest condolences are extended to his wife **Maria**. In lieu of flowers, FRAC has sent \$75 to Maria and individual members have sent donations to help defray the cost of the EMS vehicle and other expenses she is facing.)

For those members who didn’t know him, Art Zorka was an honorary FRAC member and vice president for observing in the Atlanta Astronomy Club. He was

A. L. Master Observer #119, having attained that status last year. He spoke at a FRAC meeting last year, and at two GSVs as well. Like **Phil Sacco** and **Larry Higgins**, Art was a Renaissance man – a man for all seasons whose skills and knowledge extended to every aspect of astronomy.

Comments from FRAC members re Art’s demise: “Oh man, I hate to hear that Art has passed away. He was a good person.” (**Steve Bentley**) “I am very sorry to hear this.” (**Dr. Richard Schmude**) “Very sad news. A great fellow, always a big smile. He will be missed.” (**Felix Luciano**) “Very sad news indeed.” (**Carlos Flores**) “Art... was the speaker at one of the meetings I attended, and he was delightful. I’ve used his adding machine tape method for representing solar system distances on several occasions and thought of him every time I did it. I will miss him even though he didn’t know who I was. He’s turning left at Orion now...” (**Frank Hiller**)

*For the rest of 2012, our UGa-Griffin lunar observings will be moved one day forward from Thursdays to Fridays.

*With summertime heat rapidly approaching (although it doesn’t feel like it as we write this on May 13th), Kurtz Rock will be uncomfortably hot and stored heat from the granite will cause telescopic images to shimmer for hours after sunset. Therefore, we will use Cox Field for all club observings until the weather cools in the fall.

*Do you subscribe to *Sky & Telescope*? If so, did you try to solve the clever “Transit of Venus” crossword puzzle on p. 82 of the June ’12 issue? And if you did, how did you do? **Yr. editor** solved it with just one mistake. He says, “Let me know if you were able to solve the whole puzzle correctly. If you did better than I did, I’ll be happy to collimate your telescope with a crowbar.”)

On a more serious note, there's a *great* fold-out **Moon** map at the center of that same issue of *S&T*.

*While the rest of FRAC is watching the **Venus** transit from The Garden or somewhere else in the Flint River area, **Stephen & Natalie Ramsden** will be observing it from a slightly more exotic locale, i.e., Hawaii. The bad news for them: it could rain. The good news: it's *Hawaii*, rain or shine.

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Upcoming Meetings/Activities. On **June 5th**, FRAC will conduct a special **Venus** transit public solar observing at The Garden in Griffin. The transit will begin at 6:05 p.m., and sunset is at 8:46 p.m., so our observing will run from 5-9:00 p.m. We'll be showing the **Sun** and Venus in a variety of ways including welder's glass, white light filters and H-alpha filters. We'll also give away solar sunglasses, thanks to **Stephen Ramsden's** thoughtful gift to FRAC of 400 pairs at the April meeting.

To get to The Garden from, say, Jonesboro, come S on U. S. Hwy. 19/41 and stay on the 4-lane past Hardee's & McDonald's in Griffin, past the stoplight at Ga. Hwy. 92 to Fayetteville, and past the next stoplight as well. After crossing over the RR overpass, take the Griffin exit on the right. Turn right at the stoplight at West Ellis Rd., and after crossing over the 4-lane look for the stone or brick entrance to the UGa facility on the right. Turn right, drive past the garden area on the right, and you'll find us set up on the grassy area beyond. Unpack your gear, and then park in the spaces provided on the paved road. (They don't want us to park on the grass.)

A week earlier, at 9 a.m. on **Tues., May 29th**, FRAC has been invited to appear on Griffin radio station WKEU to discuss the Venus transit, FRAC and astronomy. **Yr.**

editor will participate, and I'm hoping that at least one other member will join me. I've heard myself on radio before, and trust me, with a voice that sounds like a cross between Mickey Mouse and Donald Duck, mine is NOT the only voice that you want listeners to associate with FRAC! I'll have a prepared set of questions for the interviewers, and a prepared set of answers for us. Let me know if you can be there and I'll send you directions to WKEU.

On **Tues., June 12th** and again on **Fri., June 15th**, we'll conduct indoor/outdoor presentations/observings for groups of 8-12 yr. olds in UGa-Griffin's "Kids University" summer program. At writing, the times are tentative for the two events, but as it stands now the Tues. one will be at 2 p.m. and the Fri. one sometime that morning. We'll do an indoor powerpoint presentation, and then take the kids outdoors to show them the Sun and talk about telescopes. (They too will receive free solar sunglasses.) The presentations will be held in the auditorium of the Stuckey Bldg. where we used to meet before we moved to the Flynt Bldg.

Between those two dates, on **Thurs., June 14th**, we'll have our club meeting. The program will consist of another segment of **Carl Sagan's** *Cosmos* series, and we'll meet in Rm. 315 in the Flynt Bldg.

At 9:30 p.m. on **Thurs., June 21st**, we'll hold a Gordon College observing for **Dr. Schmude's** students at Abbott's Farm, a short distance south of Barnesville. To get there from, say, Hampton, come south on 4-lane U. S. Hwy. 19/41 like you're going to Cox Field, but stay on the 4-lane past the Williamson/Ga. Hwy. 362 exit. Go 19.1 mi. beyond Williamson Rd. on U. S. Hwy. 41 South – it eventually becomes Hwy. 341 – and turn left at paved Brent Rd. Turn left into the driveway of the first house on the left.

Our club observings on **Fri.-Sat., June 22nd-23rd** will both be held at Cox Field.

Finally, our UGa-Griffin lunar public observing will be from 7-10 p.m. on **Fri., June 29th**, on the lawn in front of the Flynt Bldg.

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The Sky in June. **Venus** may be the star of the night sky show in June, but it has a fine supporting cast of characters.

Mercury (mag. 0.0) will be up from mid-June on, setting about 90 min. after sundown. **Mars** (mag. 0.6) and **Saturn** (mag. 0.6 or thereabouts) will be easy targets in the WSW sky, the Red Planet lying in *Leo* and Saturn about 5° – that's 3 finger-widths held at arm's length against the sky -- from the bright star **Spica** in *Virgo*.

June also offers an excellent opportunity for you to observe **Omega Centauri (NGC 5139)**, the finest globular cluster in the sky, above the S treeline at Cox Field.

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What You Need to Know About the Upcoming Venus Transit

by Bill Warren

Ques.: *What is the Venus transit, and why is it such a big deal?*

Ans.: At 6:05 p.m. on Tues., June 5, 2012, the planet **Venus** will move between Earth and the **Sun**, and for several hours thereafter it will appear as a small black dot crossing the Sun's face. Such occurrences rank among the rarest of all predictable astronomical occurrences.

Ques.: *Why are they so rare?*

Ans.: There are several reasons, but perhaps the easiest way to begin is to consider their size from our vantage point in space. Compared to the immense size of the entire sky, Venus is about the size of a pencil point seen from arm's length away, and the Sun slightly smaller than a pencil

eraser at that same distance. Both of them are easy to see due to their brightness, but they are tiny compared to the sky around them. The Earth, Venus and the Sun must be precisely aligned in a straight line for the transit to occur.

Ques.: *How do transits occur?*

Ans.: The Sun moves across the sky along an imaginary line called the *ecliptic* (so named because solar and lunar eclipses occur only when the **Moon** is near that line). All of the planets (including Earth) orbit the Sun within a few degrees above or below that line. Transits occur when planets move between the Earth and Sun. And since only **Mercury** and Venus are closer to the Sun than Earth's 93 million miles, they are the only ones that appear to transit the Sun's face.

Ques.: *How often do such transits occur?*

Ans.: Mercury transits are much more frequent than Venus transits, primarily because Mercury is closer to the Sun and orbits it more rapidly. Mercury transits occur about 13-14 times a century. The last one occurred on Nov. 8, 2006 and the next one will be on May 9, 2016.

Venus transits, on the other hand, occur in a repeating cycle every 243 years, with pairs of transits spaced eight years apart at intervals of 121.5 and 105.5 years. The last Venus transit occurred on June 8, 2004, and before that the last ones were in Dec. 1874 and Dec. 1882.

Beyond the possibility of their being rained or clouded out, there is one other problem involved with transits:

Venus transits always occur within a day or two of June 7th or Dec. 8th, when the planet is closest to the Sun from our viewpoint. It reaches that point twice a year, but most of the time it passes slightly above or below the Sun. Even when a transit occurs, however, your location determines how much of it you'll see before the sun

sets. This transit will last about 6-1/2 hours, but we'll see only the first part of it, from when the transit begins at 6:05 until 8:46 p.m. when sundown occurs.

Ques.: *If I miss this one, how long will it be before another Venus transit occurs?*

Ans.: You have the opportunity on June 5th to witness the second of a twice-in-a-lifetime astronomical phenomenon. After the June transit, the next pair of Venus transits will be in Dec., 2117 and Dec., 2125, i.e., 105 and 113 years from now. Add 105 to your present age and you'll know how old you'll be the next time it occurs.

Ques.: *How should I observe the event?*

Ans.: If you use a telescope, use a solar filter that fits onto the front of your 'scope, not one that screws onto your eyepiece. (Screw-in eyepiece filters have been known to crack when exposed to the Sun's heat magnified by the telescope's mirror or lens and your eyepiece. And if that happens, you won't have to worry about viewing future transits or anything else.)

If you don't have a solar filter, you can use *solar projection* with your telescope. Find the Sun, not by using your finderscope or Tel-Rad, but by studying the shadow cast on the ground behind your telescope and making the shadow as small as possible. Then hold a sheet of cardboard a foot or two from the eyepiece and the Sun's (and Venus's) image will be cast onto the cardboard. Do *not*, however, look into the unfiltered finderscope in searching for the Sun.

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Above right: M65 and M66 are the N and NW components of the "Leo Trio," a threesome of beautiful galaxies that also includes the edge-on spiral galaxy **NGC 3628**. The trio is easy to find, located halfway between **Theta** and **Iota Leonis**.

Separated by just 1/3°, M65 and M66 fit easily inside a low-power eyepiece field of view, with 3628 nearly twice as far away to the SE. **Pierre Mechain** (i.e., **Charles**



Messier's assistant and the answer to the trivia question on p. 3) discovered M65 and M66 in 1780, but missed the fainter NGC 3628.

M66, at mag. 8.9 the brightest component of the Trio, is a stunningly photogenic barred spiral galaxy with a large, bright core and mottled halo. (It's the galaxy to the upper left of center in **Alan Pryor's** photo.) M65 (mag. 9.3 and to the lower right of center) is also a barred spiral but less inclined toward face-on than its companion.

Alan imaged the pair at home on Apr. 28th. His 4.3 hours of exposures that evening consisted of 22 luminescent frames at 5 min. each and 10 sets of 5-min. exposures each of red, green and blue. We're sure you'll agree that the result was worth the time and effort.

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