THE

FLINT RIVER

OBSERVER

NEWSLETTER OF THE FLINT RIVER ASTRONOMY CLUB

An Affiliate of the Astronomical League

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Club Mailing Address: 1212 Everee Inn Rd., Griffin, GA 30224. FRAC website: www.flintriverastronomy.org.

Please notify Bill Warren promptly if you have a change of home address, telephone no. or e-mail address, or if you fail to receive your monthly *Observer* or quarterly *Reflector*.

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Club Calendar. Fri.-Sat., Sept. 2-3: JKWMA observings (at dark); **Sat., Sept. 10:** Club meeting/pool party/potluck dinner at **Bill Warren's** house at 1212 Everee Inn Rd., Griffin, GA (swimming from 5-7 p.m., dinner at 7, brief meeting afterward); **Sun., Sept. 11:** solar observing at Arts In The Garden (1-4 p.m., setup starts at 11 a.m.).

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President's Message. As your president, my short term goal is to keep the club running smoothly from one month to the next. It's not always easy, but I'm blessed with officers who are willing to pitch in and help me solve problems as they arise. So thanks, **Bill, Carlos, Truman, Larry, Aaron, Jeremy** and other members like **Tom Moore**: without your help and support, I could never do what it takes to keep things running smoothly in FRAC.

I have another goal for FRAC, however, and this one is long-range: *We need a club observatory*. We need a permanent place where we can store – and *use* – the telescopes that have been donated to FRAC in recent years. I can't bring my scope and several others to JKWMA every month, so they presently are gathering dust at my house. And that's a shame, because they are excellent scopes. We need a place where they can be stored safely and used regularly. We need a place where we can hang our hats and conduct observings on our own terms.

We discussed the observatory issue at our Aug. meeting, and the response was positive. But the problem is large and complex for a small club like ours. There are many things to consider, many problems to solve and many decisions to be made. Our discussion was a good start, but we need a broader format to spread the word to everyone in the club. I don't want to devote an entire issue of the *Observer* to talking about an observatory and what it will take to get one, so Bill and I will prepare a Special Edition devoted entirely to that topic. It will pave the way for further discussions and decisions that hopefully will turn a dream into reality.

-Dwight Harness

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Last Month's Meeting/Activities. Our Aug. JKWMA weekend observings were clouded out.

We had 11 members – **Dwight Harness; Kenneth Olson; Vencislav Krumov; Jeremy, Sarah, Emily & Delilah Milligan; Felix Luciano; Dawn Chappell; Aaron Calhoun;** and **Scott Hollander** -- and two visitors (**Scott & Cindy Burton**)) at our Aug. meeting. After watching **Neil Armstrong** and **Buzz Aldrin** walking on the **Moon** on July 20, 1969, **Dwight** brought us gently back

down to Earth, leading a discussion of how his dream of a FRAC observatory might be realized. The best possibility presently appears to be a public observatory at The Garden.

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This 'n That. **Alan Pryor** wants to sell his 20-in. Obsession truss-tube scope. It's a wonderful scope, used but in pristine condition. If you're interested, contact Alan at 770-739-0709 or adpryor1953@comcast.net.

20" Telescope for Sale - $5,000

This 20" Dobsonian Classic F5 truss tube reflector was made by Obsession Telescopes in 2000. It is in "like new" condition. When not in use it has been stored inside my home in an air conditioned space. It is equipped with detachable wheelbarrow handles to make it easy to move the mirror box, and it has a light shroud and a cooling fan for the primary mirror.

Complete information on the 20" Classic F5 model can be found at:

http://www.obsessiontelescopes.com/telescopes/20/index.php#specifications

The scope has a 20" primary mirror with a focal length of 2540 mm. and a 2" Event Horizon focuser by JMI. I will include a Meade QX Wide Field 26 mm eyepiece.

This is a "push to" scope, equipped with a secondary mirror heater that runs off of a 9 volt battery. The standard 9 volt battery will keep the mirror free of dew all night long.

The scope is equipped with optical encoders for each axis and an Argo Navis digital setting circle system that provides the ability to accurately "push to" any object in the Argo Navis database. This handheld computer system has 29,000 objects in its database. The Argo Navis manual is included.

Also with the scope is an equatorial platform to allow tracking of objects. It is designed for a latitude of 33 degrees +/-5 degrees (Atlanta's latitude). It was custom built for this scope.

Included are two finding scopes: an Antares 7x50 Finderscope with cross hairs and a Telrad Finder Scope with red illuminated centering circles.

The photo shows the telescope with the wheelbarrow handles still attached. The truss tubes can be broken down into two pieces plus the trusses. The upper piece holds the secondary mirror and focuser. The mirror box holds the mirror, and it can be rolled around when the wheelbarrow handles are attached.

Alan's telescope

***ALCON 2016. Tom Moore** didn't win the Webmaster Award, and **Bill Warren** didn't win, place or show in the Mabel Stearns Newsletter Award competition. But Bill received a very nice plaque commemorating his earning Master Observer #4, and he got current A. L. president **John Jardine Goss** to sign the M. O. certificate he received in 2001. (It had been signed by **Mike Benson**, the M. O. coordinator at the time, but the space for the president's signature had been left blank.)

The opening speaker at the convention, which was held in Washington, D. C. from Aug. 10th-13th, was **David Devorkin**, the man in charge of the Smithsonian's National Air and Space Museum. He is also **Katie Moore Nagy's** boss, and the man who hired her to work there. (Katie is Tom's daughter, and until recently she operated the Smithsonian's

outdoor observatory. She is now in charge of public outreach for the Smithsonian's space sciences.)

After Dr. Devorkin's talk, Bill introduced himself and said, "I think I know someone you know: Katie Nagy." Dr. Devorkin's face lit up like he had just won the lottery. When Bill told him about Katie's introduction to astronomy in FRAC, he was so delighted that he showed Bill a slide picturing Katie in the observatory that, due to time restraints, he hadn't gotten to. Then he said, "Come with me, there's someone you need to meet!" He took Bill to the lobby, walked up to **Dr. Genevieve de Messieres** (the next speaker) and said, "This is the man who got Katie Nagy started in astronomy!" She grinned from ear to ear and said, "Katie hired me!" They talked until it was time for her to begin her talk; her admiration and respect for Katie was evident in everything she said.

Later, Bill and his wife **Louise** took the A. L.'s National Air and Space Museum tour. It began at the observatory. The young woman there showed her visitors the wooden home-made (of course) telescope that **John Dobson** built and donated to the Smithsonian, then she talked about their array of solar telescopes. When she was done, Bill asked her if she knew Katie. She grinned like a Cheshire cat and exclaimed, "Do I know her? She hired me!"

During a break in the tour, Katie walked up. It was like seeing a long-lost friend. They talked as old friends do, and when the tour continued she accompanied Bill and Louise to the exhibit where visitors can touch a **Moon** rock that the Apollo astronauts brought back.

Bill says, "I don't embarrass easily. As I've often said, *You can't embarrass me: I've been embarrassed by **experts***! But I was embarrassed when one of our A. L. tour members rubbed the rock and said, 'That's not a Moon rock! Moon rocks are coarse, not smooth. That's black electrical tape!' The next one in line rubbed it and said, 'I think it's plastic.' Maybe they were joking. I hope so, but they didn't act like it.

Katie took it in stride. She had heard such comments before, although probably not from people who profess to be astronomers. She smiled sweetly and said, 'No, it's a Moon rock – or at least a cross-section of one. Every year more than a million people rub that rock. That's why it's so smooth.'"

That's vintage Katie Moore: soft-spoken, unfailingly courteous, and a teacher to the core of her being.

Above: Bill & Katie at the Natl. Air & Space Museum

On the negative side, it was disappointing to learn at the convention that the A. L.'s membership has declined from about 22,000 members in 2001 to a present-day total of 15,000.

On the positive side, the A.L. is doing something really cool for next year's convention: **ALCON 2017** will be held in Casper, Wyoming in conjunction with the total eclipse. Casper is smack-dab in the center of the path of totality on Aug. 21, 2017, so anyone who attends the convention will be guaranteed a ringside seat for that epic event.

Above: Dr. Pittendreigh, Bill & their hats

Finally: Bill met **Maynard Pittendreigh**, the A. L.'s Outreach Program coordinator, and sat with him at the awards banquet on Saturday night.

Like Bill, Dr. Pittendreigh wears his A. L. pins on a cap, but his 41 pins take up considerably more space than Bill's 16. They were the only M.O.'s to display their pins at the convention, and several people asked them to pose together for photos.

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Upcoming Meetings/Activities. Our JKWMA observings will be on **Fri.-Sat., Sept. 2nd-3rd**. The **New Moon** will be on Sept. 1st, so the skies should be delightfully, deliciously dark. The gate will be unlocked all night, so leave it open when you arrive and when you leave.

On **Sat., Sept. 10th**, we'll have our annual pool party and potluck dinner meeting at **Bill Warren's** house at 1212 Everee Inn Rd. in Griffin. **(Please Note: This event will take the place of our regularly scheduled club meeting. We will NOT meet at The Garden in September.)**

We'll eat at 7 p.m., but the pool activities will begin at 5 p.m. Bring the entire family: we have pool toys for the kids, so bring swimsuits for all. We don't have water wings, so bring them along for small children who may need them, and plan to take a dip in the pool yourself. Or you can just lie around in a floating pool chair. You can change clothes in the bathroom or laundry room.

After the meal, we'll have a very brief meeting – no more than 10 min., tops. Stay as long as you like after that, whether swimming or just sitting around talking.

As for what food to bring – Dwight will bring KFC chicken and liquid refreshments (non-alcoholic, of course). FRAC will supply cups, plates, eating utensils, napkins, ice, etc., so just bring one item of the sort that you'd bring to a church picnic: another meat item or more chicken; potato salad, beans, chips, congealed salad, dessert, or any specialty item that you like to prepare for such an event.

So holy guacamole!, by all means plan to come. Swim, eat like there's a famine coming and let your family spend some quality time with us. It's a rain-or-shine affair: if it rains, we'll eat and hold our meeting on Bill's large carport and screen porch.

To get to Bill's house from, say, Hampton on U.S. 19/41, continue south on the 4-lane past the stoplight at Ga. 92 (to Fayetteville), get in the left-hand (U.S. 19) lane and stay in it past the Griffin exit, the Ga. 16 (Griffin-Newnan) exit and the Ga. 362 (Williamson Rd.) exit. Turn left at the stoplight at Airport Rd., and then turn right at the 4-way stop at Everee Inn Rd. Go one block, and turn left at Roberts St. Bill's 3-car driveway is the first one on the left. Either park there or drive past, turn around and park beside his backyard fence.

Bill's GPS coordinates are: 33° 13' 15.37" N, -84° 16' 54.77" W. Or, 33.220933, -84.281907.

FRAC will conduct a solar observing at UGa-Griffin's annual "Art in The Garden" activity on **Sunday, Sept. 11th**. The event, which is always well attended, will run from 1-4 p.m., but we can set up any time after 11 a.m. Regardless of whether you have a solar telescope or not, come anyway: we'll have a table of handouts under Bill's canopy, and we'll also show passersby the **Sun** with solar sunglasses and Bill's panes of #14 welder's glass.

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Back to the Future

opinion by Bill Warren

I've noticed a very encouraging sign in our club lately.

In the last two months, four members have told me that they are working on one or more A. L. pin programs or are planning to do so in the near future. Such a move would be enormous, both for FRAC and the individuals involved. It would literally take us back to the future.

Over the years, new members have often told us that what makes our club so special, and so different from other astronomy clubs, is our friendliness and our desire to make them comfortable with us. We want our members to regard FRAC as their extended family, and friendships develop quickly at our club meetings.

Still…Those meetings are held just once a month, so our time together is limited to a couple of hours. That's why attending our observings is so important: interacting with friends to find and observe things in the sky cements those bonds of friendship in ways that meetings cannot duplicate. For example, consider **Dwight Harness, Jeremy Milligan** and **Venci Krumov**. I guarantee you that, after spending quality time together at JKWMA tracking down (and finding) **Pluto** in July, their mutual respect for each other has grown

considerably, and *respect* is the foundation for all lasting friendships. Those three gentlemen will fondly remember that night and each other for a long, long time.

In our age of entitlement, earning a Messier or Lunar pin, etc., is something to be proud of. The A. L. doesn't give out observing pins like food stamps. Earning a pin requires setting a goal and working to achieve it. You'll have help available if you need it, but the achievement is yours alone. The Messier pin is just a little lapel pin -- but it's much more than that to anyone who has ever earned one. It's a visible sign of your growth as an astronomer.

Most of the A. L. programs are designed to take about a year to complete. This isn't an accident. The A. L.'s goal is to encourage you to get out and observe regularly, so most of their pin programs contain objects in each of the four seasons. (Notable exceptions: the Outreach, Globular Cluster, Lunar and Sunspotters programs)

Why should it matter to the A. L. whether FRAC has good turnouts at our monthly observings? Because clubs with a large base of regular observers are more likely to remain in the A. L. than clubs that *don't* have high turnout rates. (That's probably why the A. L.'s membership has declined by 7,000 over the past decade and a half: fewer people are regular observers.)

Like every worthwhile activity in life, observing regularly requires commitment. Most amateur astronomers – not just in FRAC, but everywhere – take out their binoculars or telescopes at least occasionally to enjoy time spent under the stars. And that's a *good* thing, too, because the desire to see for oneself what's up there in the sky is what draws many people into astronomy. Observing occasionally is better than not observing at all.

On the other hand, observing is a learned skill: the more often you do it, the more you'll learn about the night sky, your telescope and yourself. The more you learn, the more you'll want to observe regularly. And the more often you observe, the more things you'll see that you haven't seen before – beautiful and fascinating galaxies, star clusters and nebulae that you can show your observing friends. It doesn't matter if we've seen them a thousand times before, we'll want to see them again.

Trust me: *We'll want to see them again*. It's like the beach: if you see a shapely, bikini-clad young woman (or well-chiseled hunk in a Speedo, ladies) who is worth observing once, s/he is also worth a second (or third, etc.) look. Whether we're talking about the beach or the night sky, the appreciation of beauty does not diminish with repetition. When's the last time you heard someone say that **Orion Nebula** is boring?

Train up a child in the way he should grow,
And when he is old he will not depart from it.
-Proverbs 22:6

In terms of observing, everyone starts out as a child, taking baby steps before running full speed.

When FRAC began in 1997, only **Larry Higgins** and **Steven "Smitty" Smith** knew much about astronomy or observing. They taught the rest of us what we needed to know. As a result of their teaching and motivation, FRAC's inaugural class of 1997 eventually earned a total of *41* observing pins. But the process began with one simple decision: to spend more time with our clubmates by attending our observings. The pins came when we realized that, as the late Roy Orbison sang, *You're not alone any more*. We were observing with friends who helped us, applauded our successes and reminded us that our failures were only temporary.

And now, it seems, we've come full circle – back to the future, so to speak, with a new generation of dedicated observers. I hope so, because our club will be better for it.

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<u>Observing Report: Alan Pryor</u>

Last night *(June 26th. -Ed.)* I decided to take my 11" Celestron out to do some planetary photography. I had collimated the scope indoors yesterday with my new HoTech Advanced Collimator. I did it with the scope pointed up about 20^{o} from horizontal. As usual, I approached focus by having the focuser push the mirror up. Then I

locked the mirror in place and used the Crayford focuser mounted on the back of the scope.

The hardest part was lining up the scope and the collimator. I found it much easier to do if I tilted the HoTech to match the polar axis of my mount. That way, I could work on one axis at a time.

I did that, then moved the mirror up and down, slewed the scope around and checked the collimation again. It was pretty close, so I used a magnifying glass to confirm the positions of the laser crosshairs for the alignment of the collimator to the scope. This was the most sensitive part. It worked well. I double-checked it again, and nothing changed after moving the scope around. I was ready for a wonderful night out.

At 7 p.m. the forecast was for mostly clear skies until 10 p.m., and then clear for the rest of the night.

I took the telescope to a section of my pasture where I have a good view of the southern skies. I set up the mount with my trusty compass, accounting for the difference between magnetic north and true north, then leveled the mount and waited for stars to appear.

Jupiter came out first. The sky conditions limited me to about 210x, but the belts were clearly defined and one of the Galilean moons – **Callisto** – was almost on the edge of the planet.

Then **Mars** came out. It was exceptionally crisp: I could see patches of dark green surface features and a polar ice cap.

Next to appear was the **North Star**. I used it to check my polar alignment. My earlier alignment using a compass and level was within $1/4^{o}$ of accurate, and I fine-tuned it with my alignment scope.

I wanted to photograph **Saturn**, but it was behind a tree. I decided that it would be better to wait for Saturn to come out from behind the tree than to cut the tree down, so I decided to photograph Mars. I set up the camera, imaging train and computer. I wanted to try it at a focal length of 5600mm, but I could not get my exposure right. I looked up and saw that a large cloud had drifted across the planet. Clouds were moving in, and they covered the sky completely in 15 minutes.

I checked the weather forecast again. Radar showed clouds coming in and some rain about 30 miles west of me, so I started taking everything down. By 1:30 a.m. I had the equipment back in my house, at which point the sky started clearing up. I think it was tempting me to start all over again, but I didn't.

So I got a pretty good view of Jupiter and a real good look at Mars, but I never got to see Saturn.

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Observing at JKWMA
article by Bill Warren

One of the million-and-one things that **Larry Higgins** and **Smitty** taught the rest of during FRAC's early years was how to evaluate observing sites.

If you're observing at home, you do the best you can with whatever horizons and light pollution problems you have. But for club observings, you need minimal sky glow and as much open horizons as you can find. So let's take a look at FRAC's observing site, Joe Kurz Wildlife Management Area (JKWMA).

JKWMA is located about 18 mi. west of Griffin as the crow flies, 25 mi. south of Peachtree City and 30-35 mi. SE of Newnan. Those distances go a long way toward minimizing the light pollution we face. Nowhere in the eastern half of the U. S. is entirely free of light pollution, but JKWMA comes as close as we're gonna find.

JKWMA sits on 3,700+ acres of land, but much of it is forest and most of the rest is too far from the dirt roads that wind through the property to be useful for observing with telescopes.

When Larry, **Dwight Harness** and I visited JKWMA for the first time together to find an observing site, we briefly considered using the open area at the ranger station. It was convenient, grassy, accessible to vehicles, and it even had electric outlets. But the eastern and southern views were restricted by treelines – and worse, there were two bright security lights that could not be turned off or avoided.

Site #3. On an earlier trip to JKWMA, Dwight found an excellent observing site on a hilltop open field. It was a mile from the gate, and it had great horizons in all directions except to the north. But as

Larry pointed out, the sky glow of metropolitan Atlanta cannot be avoided wherever you go in our neck of the woods, so a northern view is unimportant. To observe objects in the northern sky, he said, just wait until they drift to the northwest, out of Atlanta's dome of light.

The hilltop site at JKWMA – we eventually referred to it as Site #3 because it is farther from the gate than the other observing sites – is in fact better than Cox Field, our previous observing site near Williamson. (JKWMA is father from Griffin than Cox Field, so Griffin's sky glow is less intrusive.) Site #3 has excellent horizons in almost all directions, and trees behind us as we faced south blocked most of Atlanta's sky glow. It was, Larry said, the best observing site he'd ever seen, including the legendary dark skies at Chiefland, FL. (The change from present to past tense here isn't accidental.)

We used that site until one evening when I arrived early for a club observing only to find that the ranger had planted crops on our observing field.

Site #2. Desperate to find somewhere to observe that evening before the members arrived, I back-tracked until I found a place to observe on the side of the driving path. It was, in a word, *awful* (as **Truman Boyle** will tell you: it was the first FRAC observing he ever attended). The ground wasn't level, and there wasn't much room to set up our scopes on the side of the road. But we used it that night out of necessity, and later we searched for a better site. We settled on another roadside site about half a mile from the gate, and we call it Site #2. It has terrific western horizons, although trees block our view of the other half of the sky. It isn't ideal: as before, we have to park on one side of the road and set up on the other side because there is no field to set up in. But there's an even better site on the other side of the trees.

Site #1. We knew about a field (the hunters' parking lot) located 0.3 mi. from the gate. It was knee high in weeds at the time, but it has excellent views of the eastern half of the sky. Larry had taught us that, since the setting sun delays the onset of darkness in the western sky, the best horizons are those to the east, southeast and south. Site #1 has excellent horizons in those directions, so Dwight volunteered to mow the field before our next observing. (It doesn't need mowing during hunting season because the ranger mows the parking area in the fall and the grass doesn't grow after that until next spring.)

If we had our druthers, we'd druther observe at Site #3. But the ranger doesn't want us to use it anymore, so we've agreed not to.

Of the other two sites, we have more room to set up our scopes and move around at Site #1 than at Site #2. And except for the western view that is blocked by trees, we can see everything from Site #1 that needs to be seen when objects rise above the sky glow of Griffin.

Put it this way: I have 16 observing pins – 12 earned at Cox Field, one at JKWMA (Globular Cluster), and three under light-polluted skies elsewhere (Basic Outreach, Master Outreach and Urban). But if I'd been observing at Site #1 throughout my pin quest, I'd still have 16 pins.

Site #1 isn't perfect – nothing in astronomy is perfect except **Prof. Stargazer** (to hear him tell it) -- but it's good enough for you to accomplish whatever observing goals you might have, however modest or lofty. The sky's the limit.

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Above: Mars. Photo by **Alan Pryor**.

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