

THE FLINT RIVER OBSERVER

NEWSLETTER OF THE FLINT
RIVER ASTRONOMY CLUB

An Affiliate of the
Astronomical League

Vol. 17, No. 5 **July, 2013**

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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. Fri.-Sat., July 5-6:
JKWMA deep-sky observings (at dark);

Thurs., July 11th: FRAC meeting (7:30
p.m., Flynt Bldg. Rm. 305, UGa-Griffin
campus); **Fri., July 19:** UGa-Griffin lunar
observing (7-10 p.m.); **Wed.-Sat., July 24-
27:** ALCON (in Atlanta).

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President's Message. Over the years,
members have often asked why we don't
sell FRAC tee shirts, hats, coffee mugs, etc.
At our June meeting, Smitty mentioned a
way we might be able to do it without
bankrupting our treasury.

Café Press has a deal in which, if we
were to send them a FRAC logo, it could be
placed on items purchased from them. That
way, the club wouldn't have to buy, say, 25
tee shirts and sell them ourselves, and we
would receive a percentage of the profits
from every item purchased by our members.

There are a number of questions yet to be
answered (e.g., Is there a registration fee for
the logo [and if so, how much]? What items
will they sell with the FRAC logo affixed?
And how would we be paid?).

At any rate, it sounds like a very good
idea, and we're looking into it. Stay tuned.

-Dwight Harness

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Last Month's Meeting/Activities.

Seventeen members attended our June
meeting: **Dwight Harness**; **Alan Pryor**;
Carlos Flores; **Steven "Smitty" Smith**;
Aaron Calhoun; **Cynthia Armstrong**;
Steve & Betty Bentley and **Erin &
Brianna Mills**; **Larry Higgins**; **Andy
Hasluem**; **Roger Brackett**; **Felix
Luciano**; **Joseph Auriemma**; **Tom
Moore**; and **yr. editor**. Aaron and Joe
received their Basic Outreach pins, and
Larry and Steve their Master Outreach pins.
(**Charles Turner** got his Stellar Outreach
certificate at our May UGa-Griffin
observing.)

To date, 23 FRAC members have earned Basic Outreach pins, six have earned Stellar Outreach certificates, and three have been awarded Master Outreach pins. (**Betty Bentley** has qualified for a Master Outreach pin, but it hasn't arrived yet.)

We had three FRACsters at our June UGa-Griffin observing, and one of them – **Cynthia Armstrong** – qualified for a Basic Outreach pin. **Dwight Harness** and **Aaron Calhoun** found planets while it was still daylight.

Our June club observings were clouded out. (*See below.* –Ed.)

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This 'n That. An Open Letter to FRAC from **Alan Pryor**: “I want to apologize to everyone for messing up last weekend’s JKWMA dark sky observings. The cloudiness was my fault. It happens every time I buy new astronomy stuff. This time it was an 11-in. Celestron EdgeHD telescope. Maybe my purchase won’t ruin the weather for the rest of the summer.

“Clear skies...I hope.”

*An Open Letter to **Vickie Pryor** from FRAC: “Please take away Alan’s Visa card.”



Lower Left Corner: **Alan Pryor’s** new telescope. The chair is empty because he’s gone inside to order more accessories. Thanks, Alan, from all your friends in FRAC.

From Our “Changes in Latitude” Dept.: **Charles Turner** has moved to New Mexico. His new address and contact info are: Charles Turner, 16140 Mangus Rd., Deming, NM 88030; 575-694-5577, turnerc@stellanova.com .

FRAC treasurer **Roger Brackett’s** home address is 680 Bartley Rd., LaGrange, GA 30241.

*The Belmont Stakes is the third and final leg of horseracing’s Triple Crown, the others being the Kentucky Derby and the Preakness. At a mile and a half, the Belmont is the longest of the three races.

So what does this have to do with FRAC? Well, in this year’s 145th running of the Belmont, one of the fourteen entries was a thoroughbred named **FRAC Daddy**.

And where, you’re probably wondering, did FRAC Daddy finish? Did he win?

Well...not quite. He finished dead last, 63-1/2 lengths behind the winner, **Palace Malice**.

There’s good news here, though: although FRAC Daddy didn’t run in the Preakness, his 14th place finish in the Belmont was an improvement over his 16th place finish in the Kentucky Derby.

We asked FRAC’s daddy/founder, **Larry Higgins**, how FRAC Daddy might improve his performances.

“Feed him a laxative before his races,” Larry said. “He might not win, but he’ll make it unpleasant for every horse behind him.”

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Upcoming Meetings/Activities. As you know, a lunar month has four phases: New

Moon, First Quarter Moon, Full Moon and Last Quarter Moon. In scheduling our club and lunar observings, however, we divide the lunar month into two phases: New/Last Quarter for our club observings (because we want as little moonlight as possible in order to observe or photograph deep-sky objects); and First Quarter/Full when we want to show visitors the **Moon** at our UGa-Griffin observings.

As you also know, lunar months do not coincide with calendar months except occasionally and briefly. (If they did, we could hold our observings on the same date every month.) So we have to decide which weekend offers the least lunar interference for our JKWMA observings, and which Friday offers the best view of the Moon for UGa. (In the latter case, it's usually the Friday nearest to First Quarter, because (a) the Full Moon is as flat as a pizza, with no shadows to highlight craters and mountain ranges, and (b) the Last Quarter Moon rises too late for visitors to see it.)

Other scheduling problems involve holidays -- do you really see yourself going out observing on, say, Thanksgiving, Christmas, Valentine's Day or July 4th? -- and months when our JKWMA or UGa-Griffin observing is on the day after our club meeting. (Spouses tend to object less to FRAC activities held on different weeks.) We schedule around those dates whenever possible, and hope for the best.

With few exceptions, we schedule our club meetings for the 2nd Thursday of every month. "Second Thursday" is easy to remember.

At any event, our July JKWMA deep-sky observings are scheduled for **Fri.-Sat., July 5th-6th**. (The New Moon will be on the 8th.)

Our club meeting will be at 7:30 p.m. on **Thurs., July 11th**, in Room 305 of the Flynt Bldg. Our program will be a continuation of the *Man on the Moon* dvd, this episode culminating with the unprecedented

worldwide live telecast of the Apollo 11 moon landing on July 20th, 1969. A billion viewers -- one of every three humans on the planet -- were in front of TV sets watching first **Neil Armstrong** and then **Buzz Aldrin** step down cautiously onto the **Moon's** surface and take their first tentative steps on the soft, granular lunar soil.

The astronauts quickly discovered that conventional Earth-walking wouldn't work due to the Moon's weaker gravity, so they adopted modified galloping or hopping gaits to maintain their balance while exploring the area around Tranquility Base. During two moonwalks totaling 2-1/2 hours, they performed a variety of tasks and then returned to the *Eagle* (the lunar excursion module) to rejoin command module pilot **Michael Collins** in orbit around the Moon and begin their return trip home. Three days later, they splashed down safely in the Pacific Ocean.

Even now, 44 years later, watching the event is a deeply moving experience.

Dwight Harness smiled when **yr. editor** told him, "There might not be a dry eye in the room when we watch it."

"Oh, there *won't* be," Dwight said. "I'm bringing **Laura's** Super Soaker!"

(By the way, there's an excerpt from Aldrin's latest book, *Mission to Mars: My Vision for Space Exploration*, in the June '13 issue of *Astronomy* (pp. 25-29). Portions of the excerpt involve Aldrin reflecting on his time spent on the lunar surface with Armstrong. For example: "If Neil started to do the wrong thing, I wouldn't have known, because I wasn't following a particular order of what we were doing. In some ways, we were thrown out onto the surface and expected to perform a checklist by memory. Set up the flag. Open rock boxes. Put an experiment in place. It was very extemporaneous." [p. 26].)

Our UGa-Griffin lunar observing will be from 7-10 p.m. on **Fri., July 19th** on the

lawn in front of the Flynt Bldg. On that date in 1969, the Apollo 11 crew were on their way to the Moon.

ALCON (the A.L.'s national convention) will be held in Atlanta from **Wed.-Sat., July 24-27.**

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Novels That Make an Impact, Part 2

Book Review #2: *Lucifer's Hammer*, by Larry Niven and Jerry Pournelle
(Playboy Press, 1977, 494 pp., \$2.40 + \$3.99 s&h in used paperback from amazon.com).

Background. While **Harold McAlister's *Sunward Passage*** (reviewed in last month's *Observer*) deals primarily with events leading up to a potential cometary impact, Niven & Pournelle's darkly compelling *Lucifer's Hammer* is broader in scope, and therefore more than twice as long. And whereas *Sunward* takes place over a two-week period, *Hammer* encompasses a comet's discovery, its devastating collision with Earth, and subsequent efforts of isolated groups of survivors to reestablish civilization and order in a chaotic world.

Reviews. *Library Journal* reviewer **Judith Yamamoto** wrote that *Lucifer's Hammer* contains "good, solid science, a gigantic but well developed and coordinated cast of characters, and about a megaton of suspenseful excitement."

Bill Warren: "*Lucifer's Hammer* was excellent. I enjoyed it from start to finish. (Apparently a lot of people agreed with me: it sold over a million copies, and was a *N.Y. Times* No. 1 bestseller.)

"As an astronomer, I found the first part of *Hammer* especially intriguing because I've always been interested in impact scenarios. (I've read **John Baxter & Thomas Atkins's *The Fire Came By***, a

nonfiction account of the 1908 Tunguska explosion, four times.)

"The rest of the book, involving mankind's efforts to survive a global catastrophe that has decimated Earth's human population, is somewhat similar to **Stephen King's *The Stand***. It's engrossing reading that deftly straddles the line between hope and despair."

Plot. (Only the first part of the book will be discussed, since the rest is, like *The Stand*, rather complicated with a huge cast of characters and numerous sub-plots.)

Tim Hamner, the book's main character, is a wealthy young heir to a soap company. He is also an accomplished amateur astronomer who, during an observing run, co-discovers a new comet, dubbed Hamner-Brown. (Shades of **Comet Hale-Bopp**: *Lucifer's Hammer* was published in 1977, *eighteen years* before Hale-Bopp was discovered, and not only are the discoverers' initials the same, but **Thomas Bopp** is an amateur astronomer!)

The comet's orbital path is tracked, and although it is expected to pass close to the Earth, astronomers consider an impact to be very unlikely. But they've been unable to track Hamner-Brown's trajectory accurately due to the comet's constant outgassing. "The Hammer" (as media refer to the comet) *does* fall, breaking up into smaller fragments that impact around the world with devastating results, striking parts of Europe, Africa, the Gulf of Mexico, and both the Atlantic and Pacific Oceans. The strikes trigger worldwide volcanic activity and earthquakes, including the San Andreas Fault, heavily damaging the Southern California region and the rest of California, with millions of casualties. The oceanic impacts trigger half-mile-high tsunamis that destroy major coastal cities around the globe.

Within hours of the comet strike, hundreds of millions of people are dead and

much of the world is in ruins. As the survivors contend with weeks of nonstop rain due to the massive quantities of vaporized seawater in the atmosphere, flooding is rampant, leaving the search for food and shelter a top priority. Civilization crumbles as people use the remaining weapons to protect themselves from each other.

Such books are known as “post-apocalyptic” novels, and you either like them or you don’t. They tend to be long, because there are no quick-and-easy solutions to global catastrophes that turn civilization upside-down. They also tend to be somewhat depressing or frightening, because you can’t help but imagine what *you’d* do if such an unthinkable disaster were to occur. But they also offer hope because, like a forest that is destroyed by fire but eventually grows back, the actions and attitudes of the survivors remind us that mankind is resilient and resourceful in the face of adversity.

Book Review #3: *The Hammer of God*, by Arthur C. Clarke (Bantam Spectra, 1993, 226 pp., \$0.01 + \$3.99 s&h in used paperback from amazon.com).

Background. If you read Arthur C. Clarke’s *The Hammer of God*, you may notice certain similarities to a movie that you may remember: *Deep Impact*, a 1998 sci-fi thriller about efforts to render harmless an asteroid that is on a collision course with Earth. The movie, produced by **Stephen Spielberg**, is based on Clarke’s 1993 novel *The Hammer of God*, but so many changes were made in the movie version that Clarke received no screen credit. That’s unfortunate, too, because having Arthur C. Clarke’s name associated with the movie would have deflected much of the criticism of the methods employed in attempting to divert the asteroid from Earth’s path.

Clarke, author of the sci-fi classic *2001: A Space Odyssey*, is highly regarded in the scientific community as well as being a leading sci-fi writer. His ideas for early detection of Near Earth Objects (NEOs) led to the development of LINEAR and other early-detection agencies and efforts.

Echoing that respect for Clarke, *Library Journal* reviewer **Jackie Cassadi** wrote, “In the capable hands of science fiction veteran Arthur C. Clarke, a standard cosmic disaster plot becomes a lucid commentary on humanity’s place in the cosmos.”

Plot. *The Hammer of God* takes place less than a hundred years in the future, in the year 2110 a.d. By then, humans have established permanent colonies on **Mars** and the **Moon**.

When a new asteroid named Kali (after the Hindu goddess of death and destruction) is found to be on a lethal trajectory with Earth, spaceship captain Robert Singh and his crew are dispatched to land on the asteroid. Their task is to set up a load of powerful thruster rockets that hopefully will nudge the asteroid out of Earth’s path. And in case that effort fails, the world government on Earth is rushing frantically to resurrect their long-decommissioned nuclear weapons for service in order to blast the peanut-shaped asteroid into two or more smaller pieces – hopefully at a distance that will disperse the pieces away from the point where planet and asteroid would otherwise intersect.

If the proposed solutions seem either far-fetched or simplistic to you – well, the U.S. government and NASA are open to suggestions on how to handle rogue NEOs. When the book was written two decades ago, there were no systematic searches being conducted to identify NEOs. Clarke was among the first to consider ways to identify and deal with potential planet killers. Even today, there is still no definitive, workable plan in place for dealing with such an

unthinkable scenario. But more than anyone or anything else, it was Arthur C. Clarke, *The Hammer of God* and an earlier book of his, *Rendezvous With Rama* (1973) that started us thinking about it.

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Interview Interruptions With Prof. Stargazer

(Editor's Note: When we learned that Prof. Stargazer recently published a book, The Care and Feeding of Telescopes (Bottom Feeders Press, 2013), a group of FRAC members visited the professor to ask him a few questions about telescopes. His answers, as usual, were not what we were expecting.)

Aaron Calhoun: How do you clean your mirrors, lenses and eyepieces?

Prof. Stargazer: Well, I start with a red solo cup of 151 proof Wild Turkey, and –

Stephen Ramsden: WHAT??!! You clean your optics with *whiskey*? What kind of blithering fool are you?

Prof. Stargazer: What's wrong with that? Hey, it works for me, so it should work for my telescope too!

Anyway, I don't use the whole cup on my optics. I drink most of it, then use the rest on my telescope and eyepieces.

Felix Luciano: Does it work?

Prof. Stargazer: I don't know. I usually nod off before I reach the bottom of the cup.

With my telescope, "151x" doesn't refer to the eyepiece magnification.

Larry Higgins: What kind of telescope do you have?

Prof. Stargazer: It's a 12-inch Richey-Chretien Schmidt-Cassegrain refractor with a German equatorial Dobsonian fork mount, and –

Charles Turner: That's a rather bizarre combination, Sir. Where did you get it?

Prof. Stargazer: I can't recall. I bought it online one evening while cleaning my eyepieces.

It may have been built by a kid: It had peanut butter and jelly smears all over it, and the yellow base has a Lego logo.

Woody Jones: Tell us about your observing techniques, Professor.

Prof. Stargazer: Well, I start with a red solo cup of Wild Turkey, and --

Tom Moore: Okay, enough about that. We were happy you could join us at a recent FRAC meeting, Professor. Did you have a good time?

Prof. Stargazer: I'll say! **Betty Bentley** made butterscotch pudding, and I happened to have some Wild Turkey with me, so I –

Betty Bentley: Wait a minute, you overstuffed turkey! *Did you spike my refreshments??!!*

Prof. Stargazer: I cannot tell a lie, Madam: the 151 proof was in the pudding.

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