

THE FLINT RIVER OBSERVER



Vol. 2, No. 3

FLINT RIVER ASTRONOMY CLUB

May, 1998

Officers: President, Larry Higgins (227-2233); 1st Vice President/newsletter editor, Bill Warren (1212 Everee Inn Rd., Griffin, GA 30224 / 229-6108 / e-mail: WE1212LW@aol.com; 2nd Vice President/Secretary-Treasurer, Ken Walburn (P. O. Box 1179, McDonough, GA 30253 / 954-9442); AlCor, Neal Wellons (946-5039); Librarian, Keith Cox (227-8171); Observing Chairman, Steven "Smitty" Smith (583-2200). Club mailing address: 2431 Old Atlanta Road, Griffin, GA 30223. All of these phone numbers have 770 area code prefixes.

Please notify **Bill Warren** and **Neal Wellons** promptly if you have a change of address.

* * *

Club Calendar. Mon., May 4: Lecture on Mars by Dr. Richard Schmude (7:30, Gordon College, 110 Russell Hall); **Thurs., May 14:** Club meeting (Beaverbrook media center, 7:30); **Fri., May 15:** Beaverbrook "First Light"/FRAC joint observing, Fair Oaks Farm at dark; **Fri., May 29:** deep-sky observing (Cox Field at dark).

* * *

President's Message. I want to thank **Neal Wellons** and **Keith Cox** for their work in overseeing arrangements for our Astronomy Day display at the Griffin

Mayfling celebration on May 2-3. Thanks, too, to my daughter **Randi**, and to **Smitty, Neal, Steven Byous, Mike Stuart, Tim Astin, Doyne Tallman, John Wallace, Ken Walburn** and **Bill Warren** for manning our booth on those days and getting out the word about Astronomy Day and FRAC.

Here's a bit of news you should be interested in: **Ted Upchurch** is donating an 8" German equatorial telescope to our club! Presently in need of repair, the 'scope nevertheless will be a valuable acquisition, available to all FRAC members if and when our proposed observing facility at Cox Field ever becomes a reality.

Beyond that, our predicament is like that of the deceased atheist: all dressed up and no place to go. We have a 3-meter radio dish and an 8" telescope, and no place to put them.

I need to have a long talk with **Keith Cox**.

- Larry Higgins

* * *

April Meetings/Activities. Fourteen members attended our April meeting, which fell on Easter weekend. If you weren't there, you missed one of the best programs we've ever had.

When **Larry H.** was unable to reach **Jeff Lichtman**, our featured speaker, he and **Smitty** decided to present their long-

awaited "Astronomy on a Shoestring" program, its theme being that you don't have to spend a fortune on fancy and costly equipment to maximize your stargazing fun.

Taking turns, Larry and Smitty showed inexpensive, home-made equipment such as: collimating devices made from film containers; telescopic and binocular dew shields made of flexible strips cut from notebooks and held on with Velcro fasteners; solar filters made from #14 welder's glass; shower caps serving as telescope caps; Smitty's Telrad dew shield made from two Little Debbie Star Crunch containers -- empty, of course -- and Larry's famous 3" telescope made from soup cans at a cost of \$1.49.

They also showed various materials that could be used to provide counterbalance weights for telescopes; headlight tape for turning flashlights, dome lights, etc., into LEDs; a \$15 Telrad-like Daisy bb gun scope for small telescopes that, with but one modification (a variable intensity beam), sells for \$40 in the catalogs; a home-made binocular mount; and several other cost-effective and innovative ideas, hints and techniques that even a dedicated non-Mr. Fixit type such as yr. 10-thumbed reporter could apply with a minimal loss of blood and self-esteem.

After the program, we held a belated birthday party commemorating our club's 1st anniversary. The cake was supplied by **Louise Warren**, who insists that the Kroger receipt in the Kroger box the cake was in didn't necessarily mean that she hadn't baked it herself. (Yeah, right, and the ingredients in baked Alaska are ice cream and an Eskimo.)

Finally, it was good to see **David Floyd** and **Doyne Tallman** at the meeting, Doyne sporting a new set of contact lenses that will enhance his observing if he ever gets

around to it. We hope to see new members **Charles, Katie and Kathy Osbolt, Thomas Faber**, and the **Cirincione** clan -- **Joanne, Mark, Kathy, Joey and Daniel** -- at future meetings and observings.

Our FRAC/First Light observing at Fair Oaks Farm was cancelled due to overcast skies.

Our Apr. 24th Cox Field observing featured a nice contingent of AAC/FRAC members and guests who were eager to test the dark skies of Williamson. They were impressed with our site, and we were impressed with the views of the night sky afforded by their array of *large* telescopes. Among the fourteen attendees were FRAC regulars **Tim and Celia Astin, Tom and Katie Moore**, and **Mike Stuart**, along with AAC/FRAC members **Rich Jakiel, Art Russell, Phil Sacco and Chrissy Mandell**.

* * *

Renewals... Club members whose renewal dates are 6/98 include: **Doyne and Jodie Tallman and Jack Warner...**

...And Apologies, to **Mike Stuart** and his family for misspelling their last name in the April "People You Should Know" section. Hey, Mike, have *you* ever tried to read **Larry's** handwriting? (And what's a president for, if not to blame for one's own shortcomings?)

* * *

Upcoming Meetings/Activities. At 7:30 p.m. on **Mon., May 4th**, Gordon College astronomy professor and FRAC member **Dr. Richard Schmude** will present a lecture on Mars at the school at 110 Russell Hall. If you missed his Mars talk at our May, '97 meeting -- or if you just want

to know more about the Red Planet than you do now -- call me and we'll make the trip to Barnesville, caravan-style. (Bring along your 3-D glasses from the March '98 issue of *Astronomy*: he'll be showing 3-dimensional color photos of Mars.)

On **Thurs., May 14th**, the aforementioned **Dr. Schmude** will be the featured speaker at our May FRAC meeting. He'll talk about his two-week trip to the barren back country of Nevada last December to explore a possible crater site. His goals were to determine (a) whether the site was in fact a crater, and (b) if so, whether its origin was meteoric or volcanic. The presentation will include photos and overhead transparencies relating to the site and his trip. He'll answer questions afterward. (**Ken Walburn** wants to know if he met Wayne Newton or Barbara Mandrell while he was out there..)

Our joint FRAC/First Light Beaverbrook observing will be held on **Fri., May 15th**, at Fair Oaks Farm on Birdie Road, and our deep-sky observing at Cox Field on **Fri., May 29th**.

In June, we'll try again to have **Tom Crawley** of the Atlanta Astronomy Club and SETI's amateur branch talk to us about radio astronomy.

* * *

The Sky in May. **Pluto** (mag. 13+) is the planetary headliner of the nighttime sky in May, which suggests that this month won't be a planetary observer's dream come true.

Venus can be seen in the daytime via the naked eye or binoculars in May, if you know where to look. (On **May 22nd** it will be about 5° away from the crescent Moon and toward the Sun. DON'T let the Sun stray into your binocular field of view unless you want to read future issues of the *Observer* in Braille.) *Astronomy Magazine*

suggests finding the Moon first and then shifting your gaze toward the tiny speck of white that is Venus. **Mitch Hammond** suggests finding the sky first, then the Moon and Venus. (That's why Mitch isn't writing for *Astronomy Magazine*.)

Uranus and **Neptune** arise in the SE around 3 a.m., **Jupiter** around 4 a.m., and **Venus** around 4:45 a.m. On **May 12th**, **Mercury** and **Saturn** will be a mere 0.8° apart 45 minutes before sunrise, but only 3° above the horizon. (A line between Jupiter and Venus extended to the E will point to Mercury and Saturn.) On **May 28**, Venus and Saturn will be about 0.6° of each other, with Saturn's moon **Titan** between them. And that will be a lovely sight...

On the evening of **May 2nd**, **Praesepe** (M44, the "Beehive Cluster") is about 5° W of the Moon. It -- and the asterism forming the constellation *Coma Berenices* ("Berenice's Hair") as well -- is always lovely in binoculars.

The **Eta Aquarids meteor shower**, dimmed somewhat by a first quarter Moon, will peak on the night of **May 4th/5th**, maxing out at a rate of maybe 10-15 meteors an hour in the early morning hours. The meteors are actually dust particles left over from previous visits of Halley's Comet.

Gamma Leonis -- sometimes referred to by its Arabic name, *Algeiba* (no, **Mitch H.**, it's not a subject you had in h.s.) -- is one of the finest double stars in the sky, and well worth observing before *Leo* leaves us for another year. Gamma Leonis is the brightest star in the curve of the sickle that forms Leo's mane, with even brighter **Regulus** (*Alpha Leonis*, mag. 1.36) below and to the right of Gamma Leonis at the bottom of the sickle.

With the primary star of Gamma Leonis shining at mag. 2.4 and its companion at mag. 3.4, you'd think it would be easy to

split this pair's 4.5" separation -- and it *is*, if you use 150X or higher.

Having split them, your next task is to describe their colors. The primary is gold -- or at least a golden yellow -- but what about the other one? Burnham says it's yellow like the primary, but other observers disagree. It looks yellow to me, but can you really trust the judgment of a guy who sometimes mistakes Venus for the Pleiades?

So what do you think? (About the colors of Gamma Leonis, that is, not Venus.) Is it topaz and gold? (A popular choice.) Green and yellow? (Another frequent description.) One thing you'll have no trouble agreeing with is that Gamma Leonis is a beautiful double star, and one well worth observing.

* * *

People You Should Know: Tom and Katie Moore. Tom and Katie have been regular attendees and participants since joining FRAC last December, seldom missing a meeting or observing since then.

Using a laptop computer and a Star Traveler II program in conjunction with their 2-1/2" reflector, they make a fine team with Tom doing most of the computer work and Katie doing most of the searching. We stayed up till about 5 a.m. at the Peach State Star Gaze last month, enjoying the many wonders of the late winter/early spring sky and looking for Messiers and finding about 30 in all.

Tom enjoys our meetings and the laid-back, relaxed atmosphere at our observings. Katie, although relatively new to astronomy, is a quick learner who possesses the boundless energy, patience and persistence to stay at the telescope for long periods until she finds what she's looking for. Her ultimate goal is to become

an astronomer, or at least to work in an astronomy-related profession.

Tom works at Fashion Industries in Griffin; Katie, a freshman in the gifted program at GHS, will be 15 on May 6th. Her broad hints to Dad must have paid off, 'cause she's getting a 10" Dob for her birthday. If her observational skills keep improving, she'll be the first -- and *only* -- teenager in Griffin/Spalding County ever to earn a Messier pin. (Sorry, Tom, but AL doesn't give pins jointly; you've gotta find 'em yourself!)

* * *

How Good Is Your Atlas?

by Philip Sacco

(Editor's Note #1: Phil is the Observing Vice President of AAC, an enormously talented and immensely likeable man whose astronomical interests span the universe. This is the first in a series of articles he is contributing to the Observer.)

Well, it's finally here, the ultimate in star atlases, the final word drawn in Hipparcos data: the *Millennium Star Atlas*. Let me tell you, don't look at one unless you have \$250. You'll want one *badly*.

So how good is your atlas? I'm asking because I have a constellation for you to look up. Granted, we don't stand much chance of seeing it since it lies deep in the southern sky between *Crux* (the Cross) and the prow of *Argos* (the Ship). [*Editor's Note #2: Argo Navis, or Argos* (the Ship) has been subdivided in modern times into four constellations: *Puppis* (the Stern); *Carina* (the Keel); *Vela* (the Sail); and *Pyxis* (the Compass).] Still, to many generations of astronomers before us Argos held a notable place in history if not in the

sky.

Get out your atlas and look under the tail of *Centaurus* (the Centaur), just W of his hindmost hoof and to the E of Argos... Got it? Let me guess what you see...

Nothing, right?

What you're looking for in vain is the now-defunct constellation **Robur Carolinum**, identified by Edmond Halley in 1678. Robur Carolinum is close in age to three other constellations -- *Columba* (the Dove), *Fornax* (the Furnace) and *Sculptor* -- that are still in use today. So what happened to Robur Carolinum?

The original constellation represented an oak tree and contained approximately 6 stars -- 2 more than *Crux*, twice as many as *Aries* (the Ram), and three times as many as *Canes Venatici* (the Hunting Dogs). The name "Robur Carolinum" was Halley's way of commemorating the occasion of King Charles II's hiding in an oak tree to avoid capture during England's Civil War. Although the king successfully eluded his pursuers, it is unlikely that he appreciated being commemorated for hiding in a tree.

Earlier, Halley re-named the star Alpha Canes Venaticorum **Cor Caroli** ("Heart of Charles") after Charles II assumed the English throne in 1660. Halley probably should have left well enough alone the first time, but since the constellation *Rorum Carolinum* no longer exists no lasting damage was done.

Then there is this: *Can you tell me the name of the North Star?* (This is not a trick question.) And NO, I'm *not* referring to Alpha Canis Minoris or Polaris.

Got ya, don't I?

I'll make it even easier for you: just come up with one of the two other names it's known by (one is Roman, the other Babylonian like so many other star names).

Let me know if you come up with it, and the first one to give me a call correctly identifying it gets a prize.

So... Just how good *is* your atlas? Got ya wondering, huh?

##

(Editor's Note #3: Phil's phone no. is (404) 296-6332, his e-mail address ppsacco@mindspring.com. Just don't let him get you into a debate on cosmology.)

Beginners' Star-Hop: April, 1998
"Lasciate Ogni Speranza Voi Ch'entrate!" Part II
By Art Russell

Last time, oh stalwart adventurers, you'll remember we were galaxy hoping in the constellations Virgo. This month's Beginners' Star-hop continues our odyssey into the heart of the realm of galaxies as we chase down five of seven remaining Virgo galaxies which I haven't covered in the last two and a half years of "Beginners' Star-Hops."

Just like last month, we'll begin in the constellation Leo and use the galaxies M87, M84 and M86 as our guide. We'll then jump off to the galaxies M58, M59, M60, M89, and M90.

Reiterating last month's Beginners' Star-Hops, the secret to star-hopping in the realm of galaxies is that you don't star-hop with stars! You star-hop with galaxies! Once again, depending on the size of your scope, you'll often find more galaxies in your field of view than you find stars. Of course this also means you need to have GOOD STAR CHARTS!! As a minimum, consider using a copy of Sky Atlas 2000. However, you'll be much better off using Uranometria or a set of custom printed finder charts generated by one of the many excellent personal computer based astronomy programs now available.

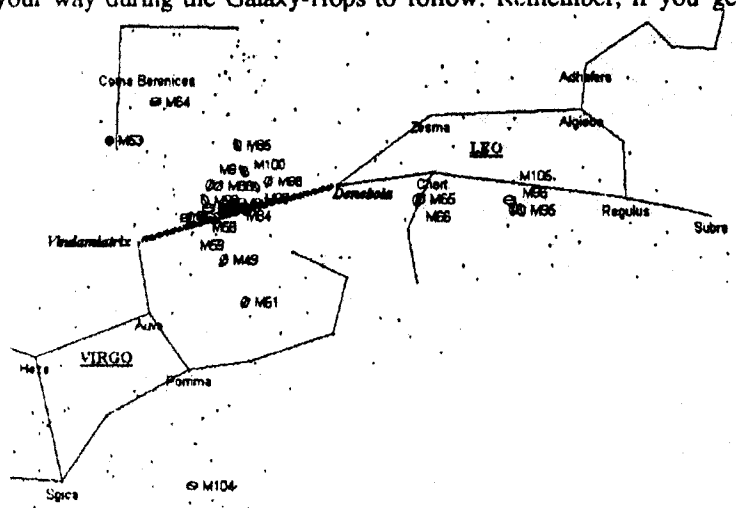
So how to get started? Where to begin? Once again, find the constellation Leo which this month, culminates (crosses the zenith or gets as high as it ever does) on the 15th at about 10PM. From the star Denebola, Beta (β) Leonis, extend a line east-southeast to the star Vindamiatrix, Epsilon (ϵ) Virginis, in the constellation Virgo. You'll find the M84 and its close companion, M86, at the midpoint between these two stars. As a side trip, note the giant elliptical galaxy, M87, is only a little more than 1 degree east-southeast of M84 because we'll use it to get started with our galaxy-hopping.

Like before, this is where the fun really starts. As with last month, we'll be using M86 as our starting point for our journey to this month's galaxies. Take time getting comfortable finding M86 as it is very easy to get lost galaxy-hopping in the fields of myriad galaxies in Virgo and Coma Berenices. At this point, be sure you know how large the field of view in your telescope's eyepiece is. For comparison purposes, the distance between M84 and M86 is about 17 arcminutes. The distance from M86 to M87 is about 1.3 degrees, or a little more than 3 times the distance between M84 and M86. Take time to determine the size of your field of view in order that you know how far you are moving when you transverse star and galaxy fields when observing through your eyepiece. This is probably the easiest way to work your way through the galaxy fields of Virgo and Coma, so familiarize yourself with the technique. Do you know the field of view of your favorite eyepiece? If not, take time to find out before tackling these galaxy-hops.

If not obvious already, there are many galaxies in this area. In the figure below, for simplicity, I've excluded all galaxies dimmer than 11th. As a general rule, the Messier galaxies are brighter than the surrounding galaxies, so you shouldn't have too much trouble finding your way during the Galaxy-Hops to follow. Remember, if you get lost, you can always start over at M86.

Galaxy-Hop #1. M86 to M89 (NGC

4552). Starting at M86, our first hop enroute to M89 is the giant elliptical galaxy, M87. As stated earlier, M87 is about 1.3 degrees southeast of M86. Assuming a 1 degree field of view in my favorite eyepiece, I'd only have to move about 2 fields of view southeast of M86 to arrive at M87. From M87, M89 is about the same distance away to the east-northeast, once again, about 2 fields of view away. Even in large telescopes at medium magnifications, this galaxy appears small, but diffuse, so pay attention when you are in the proper field of view. Its halo is relatively uniform in brightness except for the edges which fade rapidly. At high magnification, the nucleus is much more pronounced with bottling around its edges.



Its halo is relatively uniform in brightness except for the edges which fade rapidly. At high magnification, the nucleus is much more pronounced with bottling around its edges.

