

THE FLINT RIVER OBSERVER

Newsletter of the Flint River Astronomy Club
Vol. 7, No. 1 March, 2003

Officers: President/Treasurer, **Steve Knight**, sdknight@bellsouth.net; Vice President, **Larry Fallin**: lbfj@mindspring.com; Secretary, **Dawn Knight** (see above); Board of Directors: **David Ward**: dward@flintriverastronomy.org; **Steven (Smitty) Smith**; **Doug Maxwell**: dougmax1@bellsouth.net; and **Felix Luciano**: Montbo2@yahoo.com. Newsletter editor/ observing chairman, **Bill Warren**: warren1212@mindspring.com; Webmaster, **David Ward** (see above); Alcor/Librarian, **Tom Moore**: tmoore@dfiequipment.com; Event Photographer, **Doug Maxwell** (see above). Public Observing Liaison, **Felix Luciano** (see above). Club mailing address: 1212 Everee Inn Road, Griffin, GA 30224. Web page: www.flintriverastronomy.org, discussion group at FRAC@yahoogroups.com. Please notify **Bill Warren** if you have a change of address, telephone no. or e-mail provider.

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Club Calendar. Fri.-Sat., Feb. 28-Mar. 1: Cox Field observings, at dark; **Fri.-Sat., Mar. 7-8:** Cox Field observings, at dark; **Thurs., Mar. 13:** FRAC meeting (Beaverbrook, 7:30); **Fri., Mar. 14:** Beaverbrook observing (at dark); **Fri.-Sat., Mar. 28-29:** Cox Field observings, at dark.

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President's Message. "A new era has begun," **Bill Warren** said recently. As a result of last month's club elections, we now have a new vice president, **Larry Fallin**, and a brand-new board of directors consisting of **Doug Maxwell**, **Felix Luciano**, **David Ward** and **Smitty**. They have already begun

contributing ideas that will help us grow and strengthen us.

Moving on, it's nearly time for – guess what? – **Chiefland!!!!** Their Spring Picnic weekend, that is. April 4th-5th, and no registration fees! Just come down, camp out, put a little thank-you money in the donation box, and have a good time. Several of you have indicated that you're going, and I want more. I'm arranging a meeting place so we can all caravan together.

The trip is 300 miles, or about six hours' traveling time. You really owe it to yourself to see this place. The people are second to none. Then there's the fact that it'll be **Messier Marathon** weekend: there's probably not a better place to run a Marathon on the east coast, period. Last year in early April, **Lar109** – that's our vice president, in case you wondered -- and I bagged all but one of the Messiers, including **NGC 5866**, the **M102** alternate in *Draco*. **M30**, you're *mine* this year!

About 150 people are expected at this year's Picnic, and there'll be room for plenty more, including **you**. The grills will be fired up on Sat. afternoon, and everyone is invited. For more info, go to www.c-av.com and check it out.

I said it at the Feb. meeting, and I'll repeat it here: *If you want to build a dew zapper system, I'll be glad to help you as a club project.* I have some heat rope, and in this month's and next month's *Observer* I'll tell you how to do the rest of the system. (*See pp. 4-5 of this issue. –Ed.*) At the FRAC birthday party in March, I'll have schematics for the control box for those who want to give it a whirl.

Before signing off for this month, let me welcome our newest members – **Mike, Karen & Devan Steen, Tracy & Haley Chambers** and **Avery Smith**. We're happy to have you aboard, folks; we intend to try very hard to make you glad that you decided to join us.

-Steve Knight

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Last Month's Meeting/Activities. Despite the best efforts of dedicated observers **Dawn & Steve Knight, Smitty, Felix Luciano, Doug Maxwell** and **yr.**

editor, the sky refused to cooperate for our scheduled Cox Field observing on Fri., Jan. 31st.

Conditions were better the following evening, and a fine crowd of 14 showed up on Sat., Feb. 1st, including then-guests (and now 3 of our newest members) **Mike, Karen & Devan Steen**. Others present included: **Larry Fallin, Robin & Jerry Carlson, Dawn & Steve, Doug, Smitty, John Wallace, David Ward, Felix** and **yr. editor**. It was cold and the mood somewhat somber initially in light of the day's tragic space shuttle explosion (see **Smitty's** "*Columbia: A Perspective*", pp. 3-4), but the skies were clear and observing conditions good.

On Feb. 5th, **yr. editor** braved the Jaguar-infested wilds of Peachtree City to attempt a solo observing for a small (four 12-year olds, their parents and a troop leader) group of girl scouts. The sky was completely clouded over, so we went inside St. Paul's Lutheran Church to talk about astronomy, telescopes, the night sky and observing. How did it go? Let me answer a question with a question: Didja see the **Shelley Long** movie "Troop Beverly Hills"? "*I got perm-ed!*"

We had 12 members and three guests who joined FRAC that evening (**Avery, Cheryl & Sharon Smith** of Riverdale) at our Feb. meeting. Others present included: **Steve & Dawn Knight, Larry Fallin, Greg Potter, Smitty, David Ward, Bill Snyder, Curt Cole, Tom Moore, Felix Luciano, Doug Maxwell** and **yr. editor**. We watched the rest of the "Great Telescopes" videotape – thanks again, **Felix** – and elected officers for the upcoming year. They are: President/Treasurer, **Steve Knight**; Vice President, **Larry Fallin**; Secretary, **Dawn Knight**; and Board of Directors **David Ward, Smitty, Doug Maxwell** and **Felix Luciano**.

Greg Potter won the \$100 Sky Map Pro 8 software package door prize – but because Greg has neither a telescope nor an overwhelming desire to buy one, he generously sold it back to the club for only \$75. (No, actually he donated it for re-drawing, and **Larry Fallin** won it the second time around.)

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Membership Renewals Due in March: Tim & Celia Astin; Larry & Veronica Fallin; Ken & Doris

Walburn; John Wallace; David Ward; and Jerry Williams. Please send your check for \$12 payable to either Steve Knight or FRAC c/o Steve's address listed in the upper left hand portion of p. 1.

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Upcoming Meetings/Activities. On **Fri.-Sat., Feb. 28th-Mar. 1st**, and again on **Fri.-Sat., Mar. 7th-8th**, we'll conduct the first two of *three* Cox Field observing weekends in March.

Our **Thurs., Mar. 13th** club meeting at Beaverbrook will begin at 7:30, and will consist of a birthday honoring FRAC's six years of existence.

On **Fri., Mar. 14th**, we'll stage an observing for Beaverbrook children and parents; this time, we can show them **Saturn and Jupiter**.

We'll close out the month with a third Cox Field observing weekend on **Fri.-Sat., Mar. 28th-29th**. (The new moon will fall on Mar. 3rd and April 1st.)

Tom Moore will be the speaker at our April meeting, his topic "Alcon 2000 and Alcon 2003", the latter in reference to the A. L.'s national convention that this year will be held in Nashville at the magnificent Opryland Hotel & Convention Center.

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This 'n That. **John Fincher**, a visitor at one of our Cox Field observings about a year ago, has a 4-1/2" Tasco reflector on an equatorial mount. He's interested in finding out if any of our members has a finderscope, Barlow, or 1.25" eyepieces (esp. 25mm) that he might buy at a reasonable price. You can reach him at (770)471-5810.

*An article by **Steve Knight**, "Keeping Heat In Its Place," has been accepted for publication by **Tom Clark**, and will appear in the May or August issue of *Amateur Astronomy Magazine*.

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The Sky In March. The two big gas bags – and we're talking **Jupiter** and **Saturn** here, not **Steve K.** and **yr. editor** – dominate the night sky in March. Saturn (mag. 0) will lie between *Taurus's* horns, and Jupiter (mag. -2.4) high in the SE sky near **M44**

(Praesepe, the Beehive) in *Cancer*. The March issue of *Astronomy* (p. 67) lists and describes four occasions – on **Feb. 28th**, **Mar. 2nd-3rd**, **Mar. 8th** and **Mar. 24th** – when one or another of Jupiter’s moons will eclipse and/or occult another Jovian moon.

Mars (mag. 0.8) will rise after 3 a.m. in March. Prior to dawn on **Mar. 5th – 6th**, Mars will pass between **M8 (Lagoon Nebula)** and **M20 (Trifid Nebula)** in *Sagittarius*.

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People You Should Know: Larry Fallin. FRAC’s new vice president is a man of many talents and interests. For starters, he is a Ga. Tech graduate with a major in architecture. Larry has designed houses; he’s been a technical designer in the avionics dept. of an aircraft maintenance firm; and presently he is local area network administrator of Southern States Police Benevolent Assn. He lives in McDonough with his wife **Veronica**.

Larry’s hobbies and interests include (and you ain’t gonna believe all this): playing classical guitar – and very well, we might add, having heard him practicing at Chiefland last Nov.; sport shooting; fishing; flying model airplanes; watching movies – “even bad ones... lately I’ve taken an interest in foreign and independent films”; and travel. He’s been to Hawaii, Paris, Rome, Berlin (east and west, before the wall came down), Greece, the Bahamas and Mexico. His favorite vacation spot is the San Francisco/Sonoma area of California, and he and Veronica have already decided that their next big trip will be to Belize.

And then, of course, there’s astronomy. “My primary interest is deep-sky objects,” Larry says. “I find it amazing that the images I see have traveled thousands – and in some cases millions – of light years to reach my eyes.” He presently uses a 10” Discovery Dob, and his “ultimate dream scope” would be a 15” truss tube Dob with a built-in drive system. Larry’s favorite deep-sky object is the lovely spiral galaxy **NGC 253** in *Sculptor* – “but it’s subject to change,” he says, “upon discovery of yet an even cooler object.”

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Columbia: A Perspective

By Steven (Saratoga Smitty) Smith

Feb. 2, 2003

To the Editor,
Sky & Telescope Magazine
49 Bay State Rd.
Cambridge, MA 02138-1200

Sirs:

I sit here writing this on the day after the *Columbia* space shuttle disaster, still feeling shock and disbelief at the tragic events of only 24 hours ago.

Last night was our club’s regularly scheduled observing. I arrived after dark, finding about ten members already there and a few more trailing in after me, including some guests. We talked about the space shuttle and the sorrow each of us felt. Gradually, though, the discussions turned away from the tragedy and toward our normal conversations topics – telescopes, equipment, and the objects in our eyepieces.

At some time during the late evening hours, I considered suggesting that we should gather round for a moment of silence, or to say a prayer for *Columbia*’s crew. As I stepped back from my ‘scope and surveyed the shadowy figures around me, young and old, all were busily taking in the wonders of the cosmos. *No*, I thought, *there will be plenty of prayers said later, and plenty of memorials, remembrances and tributes. The best way we can pay our respects to our astronauts is to keep exploring space by doing what we do and being awed by God’s creation – the immense Universe.*

I am reminded of **John Glenn**’s historic orbital flight on Feb. 20, 1962. I can remember how, as a young boy, I was concerned about John’s safety when they announced that his capsule’s ablative heat shield might be loose. Even then, I understood the consequences of his spacecraft’s losing its heat shield during re-entry. I’m also reminded of the many times since then that I’ve been placed in harm’s way, depending on my own and other people’s actions to ensure our mutual safety.

Anyone can make a mistake, anything mechanical eventually wears out, and anything electrical eventually fails. There are no guarantees for all that we do in life. We do not live in a perfect world. We should remember that, although space flight is a risky undertaking, it's also something that we must continue to do for all the sciences or else our civilization will become stagnant. NASA needs to fix any problems it finds and resume exploration and experimentation beyond the relative safety of our planet.

Steven "Saratoga Smitty" Smith
Flint River Astronomy Club

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Moon rocks are OK when everyone is eating.
-Goodman Ace

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(Space travel) is an extravagant feat of technological exhibitionism.
-Lewis Mumford

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Goodman Ace and Lewis Mumford are idiots. When they wake up every morning, they probably wonder why there's sawdust on the pillows.
-Bill Warren

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What if Columbus had been told, "Chris, baby, don't go now. Wait until we've solved our No. 1 priorities – war and famine; poverty and crime; pollution and disease; illiteracy and racial hatred."
-W. I. E. Gates

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I would be very ashamed of my civilization if we did not try to find out if there is life in outer space.
-Carl Sagan

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Putting Heat Back In Its Place: Part I

a tech article by Steve Knight

If the title to this article sounds familiar, it should: it's taken from my earlier article, "Putting Heat In Its Place" (*The Observer*, Feb.-Apr., 2002), that discussed getting rid of heat in the primary mirror.

Hey, I never said that heat is *bad*. When properly applied, heat can defeat one of our worst enemies, **dew**. We already use heat for that purpose in the form of hair dryers -- drying off finders, eyepieces, secondary mirrors, corrector plates and anything else that suffers from the effects of dew. Dew shields help, too, but dew forms as much as it falls, and it will form on anything that has a cooler temperature than the air around it. Dew can dramatically shorten an observing session, especially when the temperature drops below freezing. At the November Cox Field observing, even the *inside* of my tube had a layer of ice on it.

When used properly, heat keeps the moisture away. You need only a few degrees of heat to keep things high and dry. There are several commercially available systems that will do the trick, but they're pricey and you can't turn individual heaters on and off for the finderscope, secondary mirror and focuser at will. Rather, you have to unplug them at the controller to turn them off to save power, or else you're unnecessarily heating things that don't need it. (If only the finder is affected, why heat the secondary or focuser?) Even though they draw minimal current, your batteries will last longer by using individual controls, and you won't have heat on the optics until necessary. After seeing a Kendrick system in action, I decided I had to have one, but the \$200 price tag was 'way too high for me. You can, for a fraction of that figure, build a system that will permit you to observe until you're ready to leave, not when the dew chases you away.

I did a lot of walking and looking around at the Chiefland Star Party last November, and I eventually found just what I was looking for: a little thing called **Heat Rope**. Heat rope is used in commercial products that heat water, such as coffee makers. When used with 110V, you can boil water in seconds, but with 12V it produces just enough gentle heat to keep dew away, drawing very little current in the process.

If you can do any basic wiring at all, I can lead you through the process and show you how to use heat rope to make your own dew-zapping system for less than a third of what a commercial system costs – and you can customize your system to fit your needs, too. I installed individual switches to turn each heater on and off independently from the others – but if you don't want to do that you can save even more money. I'll give you the mathematical formulas to get amps of draw and wattages from the length of heat rope you're using. The switch box uses simple DC wiring, and the heaters themselves are easy to install.

The Parts. The basic rundown of parts for the control box includes: 1 medium project enclosure; 4 small 12V, 3-amp. on/off switches; 1 roll of 18-gauge solid core wire; four 12V red LEDs; one 10K-ohm volume control with knob; 1 tube of fine silver solder; and 5 female RCA jacks. All of the parts are available from Radio Shack and cost under \$50 altogether.

The Jacks and Switches. I used the jacks to supply power to the box, the Telrad, the secondary mirror/focuser, the fan heater and the fan power. I used the switches to: turn on the box with one switch; power the Telrad heater; power the secondary/focuser from the volume control; turn on the fan heater; and turn on the fans. I have fan speed and fan heater control, but if you don't have fans they aren't necessary.

Directions. Install the switches in the box, spacing them evenly apart, and install the RCA jacks directly opposite the switches. Use a common bar across the grounds of the jacks with the solid wire stripped of its insulation. Run power to the master switch, and from there run it directly to the telrad heater, the fan heater, the fans, and to the positive post on the volume control. The center post of the volume control goes to the secondary/focuser, and the last post of the volume control gets a ground wire. Run the wire from the center post to the focuser/secondary switch, and from the output of the switch run a wire to the center of the appropriate RCA jack.

Run wires from the other switches to the proper jacks, and don't forget to attach the power and

grounds to your LEDs. They will indicate when each heater is turned on, and they also dim with the heat control indicating how much power is on.

And that's all there is to it. It's really easier than it sounds, just take your time and it will all fall into place.

Next month's installment will cover figuring out how much heat rope you need, and how to install it.

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Smitty's Snippets

When he (Don Parker) settled down in south Florida...he reclaimed his old telescope, trained it on Mars, and was astonished by what he saw. "I couldn't believe it," he told me. "Beautiful, steady images! I had assumed, because everyone told me so, that the skies here were terrible, that the atmosphere was too damp. But we get world-class seeing here. People used to say, 'Oh, it gets cloudy,' but they didn't realize how clear it is *between* the clouds. We get good laminar flow here, nice smooth air, and that's the most important thing – good laminar flow, and good optics."

-Timothy Ferris, *Seeing In the Dark*
N. Y. (Simon & Schuster, 2002), p. 6

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Don (Parker) moved the telescope to Jupiter (Florida), and the view through the eyepiece was so clear that I nearly fell off the stepladder. "Let's try a higher power – it doesn't cost any more," he said. "I've had this 'scope up to 1600 power. People say, 'You can't do that.' Well, OK, so call the police." I wasn't keeping track of the magnifications at the time, but eventually I ran out of eyepieces.

-Timothy Ferris, *Seeing In the Dark* (p. 7)

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