

THE FLINT RIVER OBSERVER

Newsletter of the FLINT RIVER
ASTRONOMY CLUB
(an affiliate of the Astronomical League)

Vol. 11, No. 10 **December, 2007**

Officers: President/Alcor, **Curt Cole**; Vice President/Newsletter Editor: **Bill Warren**; Secretary-Treasurer: **Irene Cole**; Board of Directors: **Larry Higgins, Tom Danei** and **Felix Luciano**.

Webmasters, **David Ward** and **Tom Moore**; FRACgroups moderators: **Steve Knight** and **Tom Moore**; Ga. Sky View/Astronomy Day Coordinator, **Steve Knight**; Observing Chairman/Public Observing Coordinator, **Larry Higgins**; Program Co-Chairmen: **Larry Higgins** and **Bill Warren**; Publicity: **Curt Cole**; NASA contact: **Felix Luciano**; and Event Photographer, **Tom Danei**.

Club mailing address: 190 West James Circle, Hampton, GA 30228. Web page: www.flintriverastronomy.org; discussion group at FRAC@yahogroups.com.

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Club Calendar. **Sat., Dec. 1:** McDonough Christmas Parade (6:00 p.m.); **Fri.-Sat., Dec.**

7-8: Cox Field observings (at dark); **Tues., Dec. 11:** Beaverbrook Elementary School PTA observing (6-7:00 p.m.); **Fri., Dec. 14:** FRAC Christmas dinner meeting (Ryan's Buffet Restaurant (Griffin, 7:30-9:00 p.m.); **Sat., Dec. 15:** Cox Field observing (at dark); **Sun., Dec. 16:** Peachtree City Boy Scout observing (details TBA).

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President's Message. This newsletter finds us between a day of thanksgiving and a whole month of celebrations, all of which heavily involve friends and family. Depending on your religious beliefs, you may shortly celebrate Christmas, Hanukkah, Kwanzaa, Boxing Day (don't laugh, there is a former Canadian in our midst), or numerous other holidays, including New Year's Day, the most important holiday for Japanese.

I must admit I don't know much about Kwanzaa, so I did the same thing I do when I get to wondering about some mysterious celestial body or principle – I Googled it! I found that it's a holiday created in 1966 and celebrated by many African-Americans. There are seven days of Kwanzaa, with a principle for each day. The one that caught my eye is the principle for Kuumba (creativity): "to do as much as we can to leave our community more beautiful and beneficial than we inherited it." Sounds like a good principle to me, and one community that's dear to all our hearts is FRAC.

In this season of gift-giving, what can we do to benefit this community of ours? We could start by offering to help out the new members, in particular those new to the hobby. We were all in their place once, with

lots of questions. You can also help our little community by offering suggestions or opinions to the leadership. Let 'em know what course of action or direction we should take. Do that at each meeting and it benefits all of us. Each person has different life experiences that can be of benefit to the group. You can also offer to fill an elected or appointed position. When the same people are in that position year after year, they may get burnt out at best, or too big for their britches at worst.

A big draw at the meetings are the programs. Offer to present a program. Few of us are polished public speakers, but we all have knowledge that can be valuable and interesting to others. Overcome your fears and help the community. Public observings are fun for us and rewarding to the public, so participate and you'll receive a word of thanks not just from the public observing liaison, but from the public as well.

Our community is improving every month thanks to the great group of people we have. Let's keep it up in 2008. To paraphrase a famous American, "Ask not what your community can do for you, but ask what you can do for your community." Happy holidays and best wishes for 2008.

-Curt Cole

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Last Month's Meeting/Activities. We had a total of 25 at our Nov. Cox Field observings: **Larry Higgins** and **yr. editor** (all four nights); **Tom Danei**, **Doug Maxwell** and **Dwight Harness** (two nights); and **Curt Cole**, **Steve & Aimee Mann**, **Joel Simmons**, **Tom**

Moore, **Alan & Sally Bolton**, **Steve & Betty Bentley**, and visitors **Joe Auriemma** and **Charles Turner** (one night). We had a ball, observing **Comet Holmes** and guessing at the reasons for its changing appearance. The weather was chilly, but the skies were good, even on Fri., Nov. 9th when afternoon clouds kept everyone home except Larry and yrs. truly.

Attendance at our club meetings just keeps on growing. Despite being temporarily relocated to another building on the UGa-Griffin campus this month, we nevertheless had **20** members and guests at our Nov. meeting: **Dwight Harness** and his daughter **Laura**; **Charles**, **Erica & Jeffrey Anstey**; **Joel Simmons**; **Doug Maxwell**; **Betty & Steve Bentley**; **Sally & Alan Bolton**; **Aimee & Steve Mann**; **Dan Pillatzki**; **Larry Higgins**; **yr. editor**; visitors **Joe Auriemma**, **Charles Turner** and **Jessie Dasher**; and speaker **Steve Knight**, whose very interesting talk on "Using Heat Rope As a Dew Zapper" generated a great deal of discussion during the Q&A portion of his presentation.

Larry H., **Joe Auriemma** and **yr. editor** joined **Doug Maxwell** to conduct an observing for Christian school students in Doug's front yard on Nov. 10th, after which the four of them went out to Cox Field.

On Thurs., Nov. 15th, the evening of our cancelled UGa-Griffin class, six club members – **Tom Moore**, **Larry Higgins**, **Steve & Betty Bentley**, **Doug Maxwell** and **yr. editor** – participated in absolutely the most incredible public observing that any of us has ever been associated with.

The scene was Jackson Road Elementary School in Griffin, our audience (by Larry's estimate) between 80-100 2nd Graders, their

parents and teachers. The children were remarkably well behaved, the event highly organized by the J. R. teachers, and the sky cooperated nicely although the weather was cooler than some of the parents had expected.

At evening's end, the event coordinator, **Joyce Christy** (see p. 4), said that the teachers had collected some money among themselves to give us for coming out to show everyone the sky, and that they were also going to give our club the proceeds of that evening's sales of hot chocolate for the parents and children. She handed us an envelope containing **\$80.00!**

And when's the last time you can recall anyone, anywhere, doing anything like that!

One other point should be made regarding that incredible evening.

Yr. editor has often loudly declared in these pages his belief that, although FRAC is a small club, *No astronomy club anywhere has more downright **good people** than FRAC!*

Case in point: **Doug Maxwell.**

Doug had been sick all day Thursday. He had tried several times, unsuccessfully, to call and say that he was too sick to attend the observing. But because he couldn't reach us, he came anyway, feeling like Death warmed over but doing his part. For the kids. But that's Doug: a man of his word, and always a class act.

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This 'n That. For those of you who have been in FRAC for less than 3 years, we're expanding the newsletter in a rather unique way. Starting this month, we'll be adding to the website – but to not the *Observer* – reprints of important articles that have

appeared in previous newsletters, so you'll have access to them in the future even if you don't save your newsletters. These articles will be stored under the heading "Observer Articles."

This month's initial website offering is a timely one indeed, now that the weather is cooling and winter is closing in. Written by **Smitty**, "Of Mukluks and Messiers: Dressing for Cold Weather Observing" will tell you all you need to know about how to stay warm when the temperature drops. As we wrote when this article first appeared in the Jan. '99 *Observer*, "Take time to read it carefully because, regardless of your observing skills, you won't accomplish much or enjoy being outdoors if your teeth are chattering like a set of wind-up false teeth."

A companion piece, "Attack of the Martian Mosquitos," also written by Smitty, will be added to the website next spring. The two articles appeared in combined form in a 2005 issue of *Amateur Astronomy Magazine*. Both are excellent guides to seasonal observing. Best advice here is, go back and re-read them every year, so you won't be caught off-guard when the temperature changes.

(One bit of advice that Smitty advocates applies to *all* nighttime observing but appears only in the "Martian Mosquitos" article: *Always dress for weather that is at least 15 degrees cooler than it is when you leave the house, even during the summer months.* As Smitty has pointed out many times, "You can always take off an outer layer of clothing if you get too warm, but you can't add a layer of clothing if you don't have it and the weather is cooler than you expected it to be."

*If you want or need an updated list of our members' e-mail addresses, let **yr. editor** know and he'll send one along. (By e-mail, of course.)

* From **Joyce Christy**, Interrelated Resources Teacher at Jackson Road Elementary School and coordinator of our recent observing with them: "I appreciate the fine job your club did with the presentation, explanation and viewing of the night sky. You are all very knowledgeable and captured everyone's full attention.

"Last night was truly amazing, not only the beautiful night sky and the physical features of the Moon, but you opened the eyes and minds of our students and their parents to the wonders of our universe. It was by far the best field trip ever, and it was right in our backyard! I truly believe the children will look at the night sky with a new perspective and a new appreciation.

"It was a pleasure seeing you again, as well as meeting **Larry Higgins** and the others. I am so looking forward to our next viewing!!!"

*You probably won't believe this (not if you have a grain of intelligence, anyway) but we recently received a phone call from the Pike Co. Sheriff's Dept. requesting FRAC's assistance in tracking down a series of "questionable" – they wouldn't go so far as to call them obscene -- telephone calls.

According to the deputy sheriff who called us, the victims – all women – said the male, who identified himself as a "Mr. Meade Mysky," invited the women to join him at a mysterious dark site he called "Cox Field" where he promised them that "After a few minutes with me, you'll be seeing stars!"

"All we know for sure," the deputy concluded, "is that the caller is a man."

Yes, he is, we thought. You just spelled his name wrong.

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Upcoming Events. On **Sat., Dec. 1st**, you are cordially invited to participate in FRAC's entry in the McDonough Christmas Parade. Says **Curt**, who organized the event at FRAC's end:

"I welcome all who want to participate, but only about 4 people and two scopes can fit on my trailer, plus one person in the passenger seat of the van. A couple more could sit in the cargo area with the side doors open if desired. I have a neighbor with a much larger trailer I could probably borrow, but I won't impose on him unless I have definite commitments from numerous FRAC members that they will participate. People are also allowed to walk behind a float. I think we could also have another vehicle, such as a pickup, if we needed more capacity. Each vehicle has to have two signs to indicate what organization the vehicle represents.

"We meet at the Henry County High School parking lot (in front of the Performing Arts Center), 37 Lemon St., McDonough, at 4:00 pm, Saturday, December 1. Only participating vehicles are allowed in the lot, so participants will have to park somewhere else. The parade begins at 6:00 PM.

"From the intersection of Ga Hwy 42 & 81 in downtown McDonough (At the courthouse square) head east on Ga 81 about .75 mile to Lemon Street. Turn left onto Lemon. The school/Performing Arts Center will be on the right a short distance up that street. Drop off

any participants and park anywhere you can find a place.

“I’ll have my 10” Dob. If anybody wants to bring a tripod-mounted scope, we can put it on too.

“Any unanswered questions can be directed to Janice Price, Chairperson of the Parade Committee, at 770.957.3915.”

Our main Cox Field observings will be on **Fri.-Sat., Dec. 7th-8th**.

On **Tues., Dec. 11th**, we’ll conduct an observing at Beaverbrook Elem. School, N of Griffin, from 6-7:00 p.m. prior to their monthly PTA meeting.

To get to Beaverbrook (where we used to hold our club meetings) from, say, Hampton, come S on U. S. Hwy. 19/41. A few miles S of Hampton, you’ll round a curve and come to the stoplight at Birdie Road. Turn right at the light, and the school will be on the right about ½ mi. ahead, at the bottom of the long hill. Turn right onto the school property, drive to the right-hand corner of the school and look for us. We’ll set up our ‘scopes behind the school.

To get to BB from, say, Barnesville or Newnan, come N on U. S. Hwy. 19/41 Bypass, past Ga. Hwy. 16, and continue N past McIntosh Rd. (Ga. Hwy. 92), past the next stoplight about a mile ahead at Vintage Rd., and get in the left-hand turning lane at the *next* stoplight, Birdie Rd. Follow the previous directions from there.

Important Note: We will NOT have our regular 2nd-Thursday-of-the-Month meeting at the UGa-Griffin campus in December!

Instead, our annual Christmas party and meeting will be held from **7:30-9:00 p.m.** on **Fri., Dec. 14th** at **Ryan’s Buffet Restaurant** in Griffin. An “All-You-Can-Eat” buffet dinner costs about \$10 with tax. They’re reserving a private room for us, so bring along your whole family and a healthy appetite, and enjoy a fun get-together with your friends in FRAC.

To get to Ryan’s from, say, Jonesboro, come S on U. S. Hwy. 19/41 like you’re going to Cox Field. Go past the stoplight at McIntosh Rd. (Ga. Hwy. 92 to Fayetteville), and after .3 mi. – just past the Panda Bear Restaurant sign -- turn right at the Griffin Crossroads-WalMart-Griffin sign and park in the big Ryan’s parking lot. The restaurant’s big red neon sign is behind the WalMart sign, and easily seen from Hwy. 19/41.

To get to Ryan’s from, say, Barnesville, go N on U. S. Hwy. 19/41 Bypass like you normally go to our meetings. Continue past the U. S. Hwy. 16 (Griffin-Newnan) exit and, after you cross the RR overpass, get into the left-hand turning lane. Turn left there and take another left into the Ryan’s parking lot. (You’ll see the red neon Ryan’s sign on the left as soon as you crest the RR overpass hill.)

Our other Cox Field observing will be on **Sat., Dec. 15th**.

On the following evening, **Sun., Dec. 16th**, we’ll conduct an observing for Peachtree City Boy Scouts. The location is yet to be determined, but directions will be given via FRACgroups when the event is finalized.

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A Binocular Observing

by Alan Bolton

Although my wife **Sally** and I stayed out at Cox Field for just a short time on Sat., Nov. 10th, we were both glad we went. That afternoon, we hadn't been sure whether to go or not, because lot of high clouds and haze were threatening seeing conditions. We finally decided to go, gambling on the cooling evening air to clear the skies a bit. Even if the seeing was poor, it would give us a chance to locate Cox Field and get the lay of the land. So we packed our 'scope, binoculars and a picnic supper and headed out. We were the first to arrive, just before sunset.

It's always a challenge to be the first to arrive at a new observing site when you don't know the protocols (e.g., where to park and set up). We took out our folding chairs and ate our supper while watching a spectacular sunset. (Clouds and haze *do* have a few positive benefits.)

Although the sky was growing clearer, we decided not to pull out the 'scope. Instead, we mounted our Celestron Ultima 9x63 binocs on a tripod and observed exclusively with them. **Comet Holmes** was still putting on a good show, a pretty fuzzball in binoculars.

About that time, **Tom Moore** arrived and set up his ETX. Sally and I continued our tour of the sky, focusing mostly on old and easy favorites that would present themselves well in binoculars. We moved from Comet Holmes to the **Double Cluster** in *Perseus*, and on up to **Andromeda Galaxy (M31)**.

By that time, the **Pleiades** were high enough above the horizon for us to scan over to them. From there, we headed up near the

zenith to the **Ring Nebula (M57)** and the **Dumbbell (M27)**. Then, just to see if we could find it given the seeing conditions, we tried for **M33 (the Pinwheel Galaxy)**...and bingo!, there it was, faint but unmistakable, a testament to how much the seeing had improved.

Next, Sally took over the controls and did a wonderful job of finding the objects previously noted, including M33. We closed out our evening's observing by returning for some final views of the comet. Although we wore multiple layers of clothing, the damp, cool air was taking its toll and dew was becoming a problem with the binocs. We decided to call it an early evening.

As we were packing up, **Dwight Harness** arrived. We wished Dwight and Tom a good evening's observing, and headed home.

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Going My Way?

Not many endeavors require that you plan the mode of transportation before you even know what it is you are transporting. But weighing the physics and economics of getting any sort of cargo to space is a major part of designing a space mission.

It's one of the first issues that NASA's New Millennium Program (NMP) considers when planning a new mission. NMP has the forward-looking job to identify promising new technologies for space exploration. It then helps to mature the technology so it will be available to space missions of the future. If the technology cannot be tested adequately on

Earth, the last part of this process is to actually send the technology into space. With carefully documented test results, future mission planners can confidently incorporate the new technology into their designs.

But where to begin? On call from the start, Linda Herrell is the New Millennium Program Architect. Given a list of proposed technologies, she has the job of figuring out the feasibility of wrapping a mission around them.

“We might be considering six or more technologies, anything from solar panels to imagers to masts for solar sails to more intelligent software. Of those, we may choose four. My job is to answer the question—can the selected technology be transported to and operated in space within the constraints of a low-cost technology validation project?”

Along with the list of possible mission payloads (the technologies), Linda also has a list of spacecraft to put them on, as well as a list of launch vehicle parameters. All she has to do is try them out in every possible combination (of which there are thousands) and see what might work.

“Fortunately, we have a software tool to help with this analysis,” says Linda. When it

comes down to it, her job is primarily to figure out how to get the technologies into space.

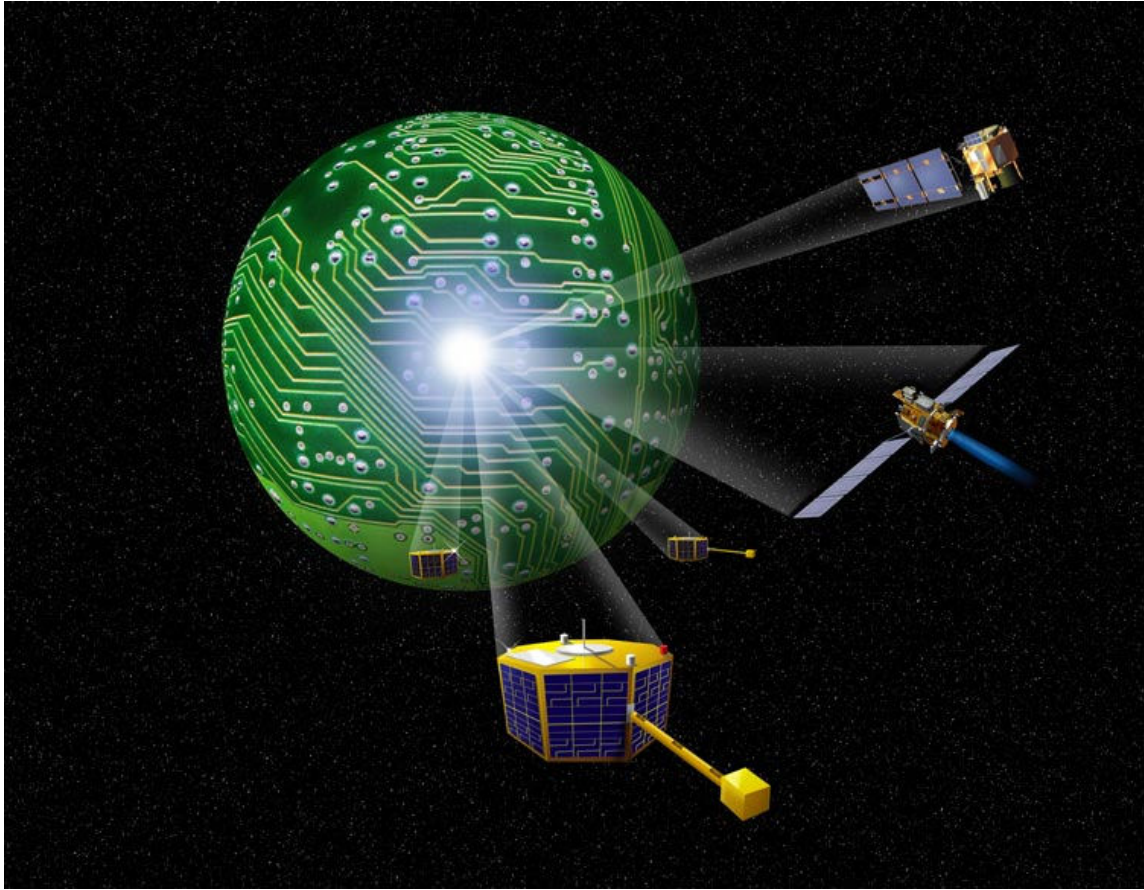
“Sometimes, it’s like figuring out how to get across town when you don’t have your own car. You have to get creative.”

She keeps a database of all possible options, including riding piggyback on another spacecraft, hitching a ride on a launch vehicle as a secondary payload, or sharing a launch vehicle with other NASA, Department of Defense, or even commercial payloads.

Her assessment is but one of a gazillion factors to be considered in planning a mission, but it is indeed one of the very first “details” that forms the foundation for the rest of the mission.

Find out some of the technologies that NMP has already validated or is considering at nmp.nasa.gov/TECHNOLOGY/innovative-tech.html. Kids will enjoy watching Linda’s cartoon alter-ego talk about her job at spaceplace.nasa.gov/en/kids/live.

This article was written by Diane K. Fisher and provided by the Jet Propulsion Laboratory, California Institute of Technology, under a contract with the National Aeronautics and Space Administration.



Caption:

NASA's New Millennium Program selects breakthrough technologies that will be of the greatest use to future space and Earth science missions and that are perceived to be risky to the first user.

This image may be downloaded from http://spaceplace.nasa.gov/news_images/circuitsphere.jpg