

THE FLINT RIVER OBSERVER

Newsletter of the Flint River Astronomy
Club

Vol. 11, No. 3

May, 2007

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

Please notify **Bill Warren** or **Curt Cole** if you have a change of home address, telephone no. or e-mail address.

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Club Calendar. Thurs., May 10: FRAC meeting (7:30, Stuckey Hall, UGA Griffin campus); **Fri.-Sat., May 11-12:** Cox Field observings (at dark); **Fri.-Sat., May 18-19:** Cox Field observings (at dark); **Fri., May 18:** "Relay For Life" public observing (6:30 till dawn, Spalding [Griffin] H. S.; **Sat., May 26:** VA Hospital/Nursing Home observing (7:00, Atlanta).

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President's Message. I want to thank everyone involved for helping to make FRAC's 4th annual **Georgia Sky View** star party a great success. We especially owe a debt of gratitude to those who arrived early and stayed late to help set up and break down, clean up, etc., before, during and after the party. Thanks also to those who couldn't get there early but took care of the many necessary tasks while there, day and night. Thanks to all the program presenters who took time out of their lives to prepare and present the interesting programs Friday and Saturday afternoon and the mythology talks each night – **Bill Warren, Larry Higgins, Felix Luciano, Rich Jakiel, Dr. Richard Schmude** and **Phil Sacco**. Thanks to **Dan Newcombe** for emceeing the various daytime events. Thanks also to **David Ward** and his clan for the Midnight Munchies, and **David** as well for the tee shirt design.

Thanks to the incomparable **John Serrie** for his eerily beautiful “space music”; it set the tone for everything else that followed at GSV.

Thanks very much to all the door prize donors. (*More about them later, on pp.4-5. –Ed.*) They could have withheld their wares or donated them to other clubs, but they chose our event and we deeply appreciate it. Many thanks to **Tim Nix** of Camera Bug for bringing his store items down to sell. His prices and services are very competitive, so please give him a call next time you’re ready to buy new astronomy toys. (Remember, he does mail order, too.) If you won a door prize, please take a few minutes to contact the individual or firm who supplied it and thank them for their support.

Our thanks to Jimmy’s Steak & Seafood in Jackson for the \$5 gift cards. And thanks to the Indian Springs State Park staff for their cooperation.

A very special thanks goes to the hardest-working FRAC member of all, **Steve Knight**, for all the behind-the-scenes planning, worrying, errand running and sweat equity that he put into making this year’s event a success. Steve never stops trying to improve GSV. I believe he talked to everyone there, learning what, if anything, we could do to make next year’s event even better. GSV is such a well thought-out and well-run star party that there were very few suggestions anyone could come up with to improve it. But Steve is open to ideas at any time throughout the year.

Most of all, I want to thank everyone who attended our star party this year. The state park people were very happy that the field and buildings were left so clean. Without all of

you fine folks, all the best intentions and planning would have gone for naught. I hope to see all of you back next year.

Finally, I want to offer a hearty FRAC welcome to our newest member **Mike Polk** of Williamson, Ga., who joined at Mayfling. Mike has an ETX90 EC and, living closer to Cox Field than most of us, I hope he’ll be able to join us at our club observings.

-**Curt Cole**, President

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Last Month’s Meeting/Activities. We had 12 in attendance at our April FRAC meeting: **Irene & Curt Cole, Betty & Steve Bentley, Steve Knight, Tom Danei, Charles Anstey, Jim Chiu, Joel Simmons, Dan Newcombe, Larry Higgins** and yr. editor.

Charles again showed himself to be extremely knowledgeable re Curt’s constellation quizzes, his proficiency almost sufficient to offset the abysmal ignorance of the “Mouth of the South,” i.e., yr. editor, who mis-identified **M67** in *Cancer* not once, but **four** times.

Felix Luciano was unanimously elected to FRAC’s Board of Directors.

Our speaker was **Steve Knight**, who discussed last-minute plans for the (then) upcoming GSV star party.

Speaking of which...

We had a splendid turnout of FRAC members at **Georgia Sky View 2007: Steve Bentley, Matt McEwen, Dan Newcombe, Larry Higgins, Joel Simmons, Curt & Irene Cole, Steve Knight, Smitty, Tom Danei, Charles, Lisa, Erica & Jeffrey Anstey, Felix**

Luciano, Doug Maxwell, David & Roxanne Ward, Richard Schmude and yr. editor.

Also present were Matt's and the Wards' daughters.

On April 24th, **Curt, Steve & Betty Bentley** and yr. editor conducted a 90-min. class and solar observing for a dozen kids and adults at UGa's Griffin campus.

Larry Higgins and **Betty & Steve Bentley** worked both days at the Great Griffin Mayfling arts & crafts festival, **Curt Cole** and **Joel Simmons** worked Saturday and yr. editor worked Sunday. Crowds were brisk – the event has grown and improved since the last time FRAC set up an exhibit there – and the weather cooperated nicely throughout.

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The stars are God's dreams, thoughts remembered in the silence of night.

-Henry David Thoreau, 1842

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People You Should Know: Larry Higgins.

Larry is the guy who, in 1997, decided that an astronomy club was needed to serve the area between Atlanta and Macon. Larry even gave the new club its name, suggesting that "Flint River" more accurately described our service area than "Griffin Astronomy Club."

In addition to being a co-founder of FRAC (with **Ken Walburn** and yr. editor), Larry was also the club's first president and now, ten years later, is a board member, observing chairman and program co-chairman.

An eloquent spokesman for FRAC and astronomy, Larry is also well-versed in all areas of astronomy – a true Renaissance Man

if ever there was one! He has built his own equipment, ranging from solar filters to telescopes, mounts of all kinds, and even eyepieces. His "Astronomy On a Shoestring" talk, co-delivered with **Smitty**, ranks among the finest program presentations in FRAC's first decade of existence.

Larry has two grown children, **Randi** and **Dylan**, and two grandchildren. He lives in Griffin with his wife **Linda**.

He also likes burritos, which give him gas (as do most other foods), but let's not get into that.

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Behold how the evening now steals over the fields, the shadows of the trees creeping farther and farther into the meadow, and ere long the stars will come to bathe in these retired waters.

-Henry David Thoreau, 1849

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Upcoming Meetings/Activities. Our club meeting will be held at **7:30** on **Thurs., May 10th** in Stuckey Hall of UGa's Griffin campus. The program will be a quiz bowl contest emceed by yr. editor.

If you've never participated in one of these events -- and most people haven't – you should know that (a) you don't have to participate unless you want to (although we hope you will); and (b) you don't have to be an expert in astronomy, since many of the questions are easy and the person to answer them will be the one who buzzes in first.

We'll hold Cox Field observings on **Fri.-Sat., May 11th-12th**, and again on the following weekend, **Fri.-Sat., May 18th-19th**.

As will be seen below, the May 18th observing date conflicts with a popular FRAC public observing event, but you're welcome to observe at Cox Field on the 18th if you prefer not to participate in the public observing.

On the evening of **Fri., May 18th**, FRAC will again participate in the American Cancer Society's annual "**Relay For Life**" walkathon to be held on the track at Spalding High School in Griffin. We'll set up our 'scopes – probably beyond the far end of the running track (i.e., the end away from the school) – around 6:30 p.m., and you're welcome to stay as long as you like at the all-night event. The ACS representative said that participants in the walkathon always appreciate and enjoy our coming out to show them the sky.

Here's how to get to the school:

If you're coming S on U. S. Hwy. 19/41 from, say, Jonesboro, stay on the 4-lane to the Ga. Hwy. 16 (Griffin/Newnan) exit. Exit there, turn left onto Hwy. 16, and stay on that road all the way through Griffin. (Street signs refer to it as Taylor St.)

After maybe 3 mi. you'll pass the Griffin-Spalding Co. Regional Library on the right, then go through a stoplight intersection and past Dairy Queen on the right. Stay on Hwy. 16 past a side road that veers off to the right, and ½ mi. from the Dairy Queen you'll cross a RR track; 3/10 of a mi. farther on you'll come to a green sign and arrow indicating the direction of Spalding H. S. (i.e., to the right) at the next corner.

Turn right at that street – Wilson Rd. – continue past the stop sign at American Excelsior Co., and the school will appear almost immediately on the left beyond a small rise. Drive past the football field, turn left at the 1st intersection – Futral Rd. – and turn left

again at the 1st road leading into the school property.

Coming from I-75 is easier to explain: heading W from the Interstate on Hwy. 16, look for a bumpy RR crossing just past a stoplight; Wilson Rd. is the next intersection. Turn left at Wilson Rd., and follow the rest of the directions in the previous paragraph.

Curt's Veterans Administration Hospital/Nursing Home observing will begin at 7 p.m. on **Sat., May 26th**. Says Curt, "I plan to begin showing the **Moon** and **Venus** as soon as I set up, and **Saturn** as soon as it's visible. Some of the patients are ambulatory and some confined to wheelchairs, so smaller (lower) 'scopes are preferred."

To get to the VA facility, says Curt, "Take I-285 around the E side of Atlanta. Exit at Church St. (Exit 40). Turn left and go about 1 mi. to North Decatur Road. Turn right. Go west about 1.5 mi. to the VA facility on the left. Turn into the nursing home entrance. (The nursing home is attached to the S wing of the hospital.) Unload your equipment at the entrance, then park wherever you can. I'm told that there should be plenty of parking spaces on the weekends."

* * *

This 'n That. Old as he is, **yr. editor** wasn't around for the Great Stock Market Crash of 1929. He *was* around, unfortunately, for the Great Computer Crash of April 30, 2007, when he lost *everything* in his computer's hard drive, including the template for *The Observer*:

Can you say "Bummer!"?

That unhappy occasion has made preparing this issue of the newsletter about 50 times

more difficult and time-consuming than it otherwise would have been. (The good news: it serves as a wonderful excuse for whatever shortcomings this issue may contain.)

***Steve Bentley** has lead counterweights available – free, of course – for anyone who needs them. You can ask him about it at a club meeting, or contact him through [fracgroups](mailto:wd4ity@bellsouth.net) or at wd4ity@bellsouth.net.

*On p. 80 of the May, 2007 issue of *Sky & Tel*, there's a photo of a "New Product," a line of "fast, affordable Rickey-Chretien telescopes" from RC Optical Systems. The mirror for the pictured 10RCA 9-3/4" f/7 OTA model was ground by none other than **Larry Higgins**, back when he was working for Star Instruments in Newnan.

*Our list of door prizes for this year's GSV was truly impressive: a Trifid guiding camera valued at \$500 from **Yankee Robotics**; a 114 GT GOTO 'scope from **Celestron**; deep-sky planner software from **Knightware**; vibration pads and an eyepiece case from **Orion Telescopes**; astroposters from **Milky Way Images**; a small cover from **Scope Armor**; flocking paper from **Protostar**; a year's membership and tee shirt from **IDA**; two \$25 gift certificates from **Lumicon**; two 12x60 binocs and a diagonal from **Camera Bug** in Atlanta; a Meade 8.8mm Ultrawide eyepiece and an enhanced diagonal, both from **Williams Optics** and brought to GSV by Camera Bug's **Tim Nix**; a laser pointer donated by **Tom Danei**; and 11 little space bear figurines donated by **Smitty**.

With this year's reduced attendance, the odds of your winning a door prize probably

were the best ever at any star party anywhere. Hope you were among the many lucky winners who walked away happy!

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The Sky in May. **Venus** (mag. -4.0) will be visible in May for 90 min. after sunset. Although a full disk to the naked eye, the planet will be roughly half-full through binocs or a telescope. (A naked-eye optical illusion: Venus is so small and bright that our eyes – or, more properly, our brains – fill in the rest of the disk.)

Saturn (mag. 0.5), gradually leaving the evening stage, will still lie high in the SW sky in May. **Jupiter** (mag. -2.5) will be up all month in the S sky near the red giant **Antares** in *Scorpius*.

Mars will be a mag. 1 red star low in the ESE sky.

At mag. 5.4, the bright asteroid **4 Vesta** will be naked-eye from a dark site around the end of May and on into June. A finder chart appears on p. 51 of the May issue of *Astronomy*.

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Images of GSV 2007

Dougmax circling Camp McIntosh and the observing field and taking photos from his plane. **Joel Simmons** and **Felix Luciano** snapping photos of everything and everyone that Doug might have missed in his aerial photos. **Dan Newcombe's** snoring registering 7.6 on the Richter Scale and rattling pots and pans in the dining hall. **Richard Schmude** solar baking potatoes by the dining hall and

discussing, of all things, caving in Alabama with **Irene Cole**.

Phil Sacco enthralling audiences young and old with his outdoor talks on mythology and the night sky. **Felix** trying to convince **Rich Jakiel** that he, Felix, actually uses his little Televue refractor atop a mount that would support the Hale telescope on Mt. Palomar. **Tom Danei** struggling with a series of problems with his computer drive. And **Tom** worrying himself sick about some missing equipment – we forget precisely what it was – and then finding it sitting out in the open on a table where he could not possibly have left it.

Larry Higgins being – well, Larry Higgins. **Doug** cracking himself up telling the joke about the Alabama girl who needed money for a prom dress.

Yr. editor, **Larry** and **Felix** giving talks on Friday. **Rich** signing copies of his new book, *Galaxies: How to Observe Them*. **Dr. Schmude** talking about **Jupiter**. *Num-num-num-num-num*. **Curt & Irene Cole** winning, first, a pair of 12x60 binoculars and later, a very expensive camera – and then trying to convince everyone that the drawings weren't rigged.

Joel drooling over the GOTO 'scope door prize. **Steve B.** arriving on his Harley so he'd have an excuse for not bringing his 18-in. Obsession Dob. **Charles Anstey** standing around at night with his arms folded while his 'scope and camera did all the work.

Yr. editor's choice of the funniest comment in a four-day weekend of humorous remarks occurred when **Larry Higgins** won the first door prize of his life, a little bear figurine holding up a sign reading "Earth is full. Go home." As Larry was walking up to receive

his prize, **Dan**, the emcee, said, "Like it says, Larry: Go home!"

Runnerup honors go to whomever replied to **Dan's** disgruntled comment, "This coffee tastes like mud!"

The reply: "Well, it was ground yesterday."

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Katie Asks for Help

*(Editor's Note: The following letter should prove interesting for **Katie Moore's** many friends and admirers in FRAC. She checks in with us from time to time – not nearly as often as we'd like, but as often as she can fit us into her busy schedule. This time, she's asking some of us for help. Are you reading this, ladies of FRAC?)*

"Hi. Bill.

"How are you doing? I'm finishing up the semester here in Washington, which included an internship with the Association of Science-Technology Centers and an exhibit design class where we got to do a redesign of an Apollo exhibit. It's even supposed to be installed, later this year. Also, back in February, the International Dark Sky Assn. had a conference here in D.C. that I was able to go to, and I ran into **Bob Gent** (past president of the A. L. and the man who presented my Horkheimer Award to me) and got to reconnect with him.

"I'm looking forward to two more classes in the summer and (especially) being through with grad school after that! Living in Washington, D. C. is fun, but I sure do miss observing! What's the latest with FRAC?"

“I also wanted to pass this along to you – and to ask you to get FRAC’s women members involved in it. One of my teachers for an upcoming course is doing a research project on women in amateur astronomy clubs. There is a quick survey for us girls to fill out online about our involvement in clubs, and **Judy (Koke)**, one of the researchers, asked me to invite the women amateur astronomers I know to participate. I think it would be great to get FRAC represented in this. Below is the note from the researchers containing the details that I would ask you to share with FRAC’s women. Thanks so much!

“Can’t wait to hear from you about FRAC’s latest adventures... ☺
Katie”

“**Dear Amateur Astronomer:** We are actively seeking your input! As part of a research project in public astronomy education, two of your colleagues would like to gather data on the interests, attitudes, and experiences of female amateur astronomers. **Judy Koke** and **Dr. Laura Danly** have devised an on-line survey and invite women amateur astronomers to participate. The survey takes no longer than 10 min. to complete. The survey can be found at: <http://websurveyor.net/wsb.dll/29886/waa.htm>.

“We expect to finish collecting data by the middle of May. We would be most appreciative if you can visit our survey web site before that time. The more responses we gather, the better we can understand the landscape for women in amateur astronomy clubs. We hope our results might help illuminate how AA clubs can better recruit and

serve women generally, and thus grow club memberships.

“If you have any questions or concerns about this survey, please feel free to contact either of the researchers.

“Thanks so much for your time and your thoughts,

***Judy Koke**, Senior Research Associate
Institute for Learning Innovation
166 West Street
Annapolis, MD 21401
<koke@ilinet.org>

***Dr. Laura Danly**, Curator
Griffith Observatory
2800 E. Observatory Drive
Los Angeles, CA 90027
laura.danly@lacity.org”

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Clouds from Top to Bottom

By Patrick L. Barry

During the summer and fall of 2006, U.S. Coast Guard planes flew over the North Pacific in search of illegal, unlicensed, and unregulated fishing boats. It was a tricky operation—in part because low clouds often block the pilots' view of anything floating on the ocean surface below.

To assist in these efforts, they got a little help from the stars.

Actually, it was a satellite—CloudSat, an experimental NASA mission to study Earth’s clouds in an entirely new way. While ordinary weather satellites see only the tops of clouds, CloudSat’s radar penetrates clouds from top to bottom, measuring their vertical structure and extent. By tapping into CloudSat data processed at the Naval Research Laboratory (NRL) in Monterey, CA, Coast Guard pilots were better able to contend with low-lying clouds that might have otherwise hindered their search for illegal fishing activity.

In the past, Coast Guard pilots would fly out over the ocean not knowing what visibility to expect. Now they can find out quickly. Data from research satellites usually takes days to weeks to process into a usable form, but NASA makes CloudSat's data publicly available on its QuickLook website and to users such as NRL in only a matter of hours—making the data useful for practical applications.

"Before CloudSat, there was no way to measure cloud base from space worldwide," says Deborah Vane, project manager for CloudSat at NASA's Jet Propulsion Laboratory.

CloudSat’s primary purpose is to better understand the critical role that clouds play in Earth's climate. But knowledge about the structure of clouds is useful not only for scientific research, but also to operational users such as Coast Guard patrol aircraft and Navy and commercial ships at sea.

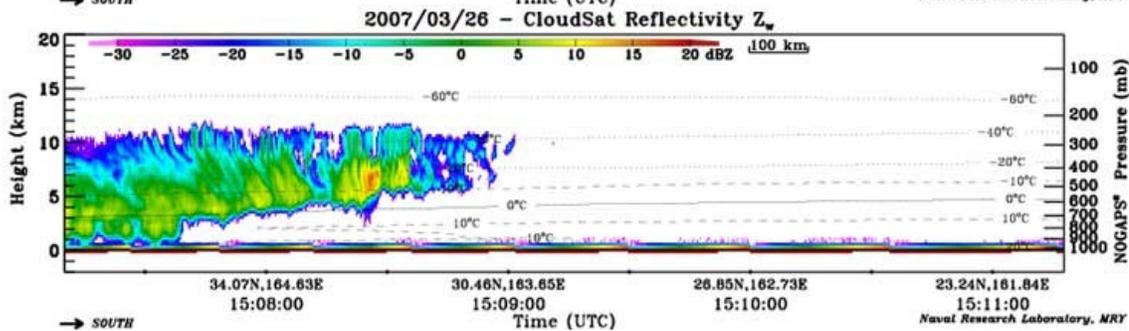
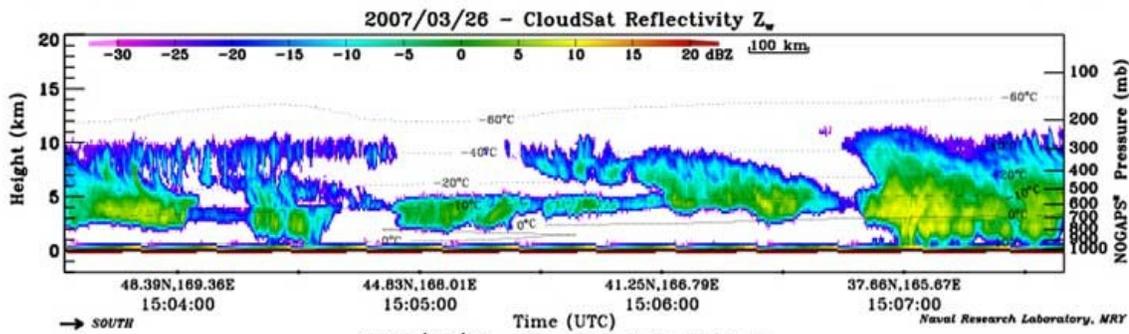
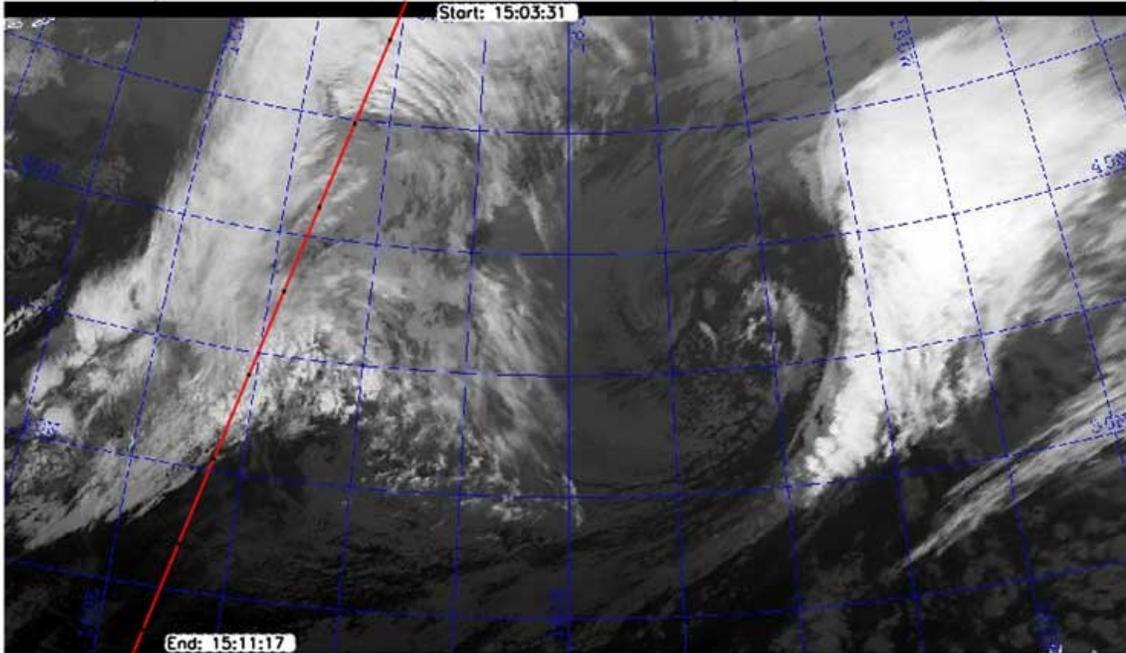
“Especially when it's dark, there’s limited information about storms at sea,” says Vane.

“With CloudSat, we can sort out towering thunderclouds from blankets of calmer clouds. And we have the ability to distinguish between light rain and rain that is falling from severe storms.” CloudSat’s radar is much more sensitive to cloud structure than are radar systems operating at airports, and from its vantage point in space, Cloudsat builds up a view of almost the entire planet, not just one local area. “That gives you weather information that you don't have in any other way.”

There is an archive of all data collected since the start of the mission in May 2006 on the CloudSat QuickLook website at cloudsat.atmos.colostate.edu. And to introduce kids to the fun of observing the clouds, go to spaceplace.nasa.gov/en/kids/cloudsat_puz.shtml.

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

2007/03/26 CloudSat track - GMS-6 VIS/IR (Day/Night) 2007/03/26 14:56Z



Caption:

A CloudSat ground track appears as a red line overlaid upon a GMS-6 (a Japanese weather satellite) infrared image. CloudSat is crossing the north-central Pacific Ocean on a descending orbit (from upper-right to lower-left) near a storm front. The radar data corresponding to this ground track (beginning in the center panel and continuing into the lower panel) shows a vertical cloud profile far more complex than the two-dimensional

GMS-6 imagery would suggest. Thicker clouds and larger droplets are shown in yellow/red tones, while thinner clouds are shown in blue.

A CloudSat ground track appears as a diagonal line overlaid upon a GMS-6 (a Japanese weather satellite) infrared image. CloudSat is crossing the north-central Pacific Ocean on a descending orbit (from upper-right to lower-left) near a storm front. The radar data corresponding to this ground track (beginning in the center panel and continuing into the lower panel) is output in color and shows a vertical cloud profile far more complex than the two-dimensional GMS-6 imagery would suggest.