

The Flint River Observer

Newsletter of the Flint River Astronomy Club

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Please notify **Steve Knight** if you have a change of address, telephone number and or new e-mail address.

President's Message: Oct. 2006 Newsletter Vice-President's Message

I must apologize for the cancellation of our Sept. meeting. With our President on vacation, holding the meeting was in my hands. My wife Deborah was having chest pains and had to be in the hospital where the doctor did a some exploring of her heart with a little TV camera. Pretty amazing I would say. It was good news to hear that he did not find anything unusual but, the chest pains are still a mystery. Anyway, that was the reason I cancelled the meeting.

A comment I heard on the observing field this month was "I sure miss Astronomy Day!" I concur. Astronomy Day has been a real invigorating event for all of us, not to mention how excited the public gets too. I know the next one is quite a bit in the future but it won't take long to sneak up on us. If you think you know of a good location for next year's event please let us know. We need to get some solid permission from the owners and have whatever legal documents taken care of well in advance.

Last but not least, member Tom Danei has been working on scripting the FRAC promotion video we had talked about making at our meeting a few months back. What he has done is looking real good. Thanks Tom! Stay tuned folks; Tom is going to need help with this project.

Steven "Saratoga Smitty" Smith
Vice-President, FRAC

Club Calendar: October 12, 7:30 PM, Club Meeting at UGA campus, Griffin

Cox Field Club Observings: Friday & Saturday, October 20, 21 Dusk

September Meeting Minutes: The September meeting was cancelled.

October Meeting: Reschedule from the September program. Felix is doing a presentation on his personal style of eyepiece maintenance, cleaning.

Public Observings: We continue to receive requests for public observings. We have another request for a school group in the Fairburn area (October, November). The coordinator is asking for us to meet them at their location. The kids don't have the means to come over to Cox Field. More to follow as details are made available.

Did you Know: Asterism vs. Constellation – The Summer Triangle is what's called an asterism, a distinctive pattern of stars that isn't a whole constellation. Another famous asterism is the Big Dipper, which is part of the constellation Ursa Major. Technically, a constellation defines a specific section of the sky rather than a collection of specific stars. *nightsky magazine*, July/August 2006, pg 50

Pluto the ninth Planet, no longer:

<http://nssdc.gsfc.nasa.gov/planetary/planets/plutopage.html>

The International Astronomical Union has voted on a new scientific definition of a "planet" which does not include Pluto. Pluto has been classified as a "dwarf planet."

IAU RESOLUTION: DEFINITION OF A PLANET IN THE SOLAR SYSTEM

Contemporary observations are changing our understanding of planetary systems, and it is important that our nomenclature for objects reflect our current understanding. This applies, in particular, to the designation 'planets'. The word 'planet' originally described 'wanderers' that were known only as moving lights in the sky. Recent discoveries lead us to create a new definition, which we can make using currently available scientific information.

RESOLUTION 5A The IAU therefore resolves that "planets" and other bodies in our Solar System be defined into three distinct categories in the following way:

(1) A "planet"¹ is a celestial body that (a) is in orbit around the Sun, (b) has sufficient mass for its self-gravity to overcome rigid body forces so that it assumes a hydrostatic equilibrium (nearly round) shape, and (c) has cleared the neighborhood around its orbit.

(2) A "dwarf planet" is a celestial body that (a) is in orbit around the Sun, (b) has sufficient mass for its self-gravity to overcome rigid body forces so that it assumes a hydrostatic equilibrium (nearly round) shape², (c) has not cleared the neighborhood around its orbit, and (d) is not a satellite.

(3) All other objects³ except satellites orbiting the Sun shall be referred to collectively as "Small Solar-System Bodies".

1 The eight planets are: Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, and Neptune.

2 An IAU process will be established to assign borderline objects into either dwarf planet and other categories.

3 These currently include most of the Solar System asteroids, most Trans-Neptunian Objects (TNOs), comets, and other small bodies.

Astronomy News:



Staggering Distance

By Dr. Tony Phillips

Tonight, when the sun sets and the twilight fades to black, go outside and look southwest. There's mighty Jupiter, gleaming brightly. It looks so nearby, yet Jupiter is 830 million km away. Light from the sun takes 43 minutes to reach the giant planet, and for Earth's fastest spaceship, New Horizons, it's a trip of 13 months.

That's nothing.

Not far to the left of Jupiter is Pluto. Oh, you won't be able to see it. Tiny Pluto is almost 5 billion km away. Sunlight takes more than 4 hours to get there, and New Horizons 9 years. From Pluto, the sun is merely the brightest star in a cold, jet-black sky.

That's nothing.

A smidgen to the right of Pluto, among the stars of the constellation Ophiuchus, is Voyager 1. Launched from Florida 29 years ago, the spacecraft is a staggering 15

billion km away. It has traveled beyond all the known planets, beyond the warmth of the sun, almost beyond the edge of the solar system itself.

Now that's something.

"On August 15, 2006, Voyager 1 reached the 100 AU mark—in other words, it is 100 times farther from the Sun than Earth," says Ed Stone, Voyager project scientist and the former director of NASA's Jet Propulsion Laboratory. "This is an important milestone in our exploration of the Solar System. No other spacecraft has gone so far."

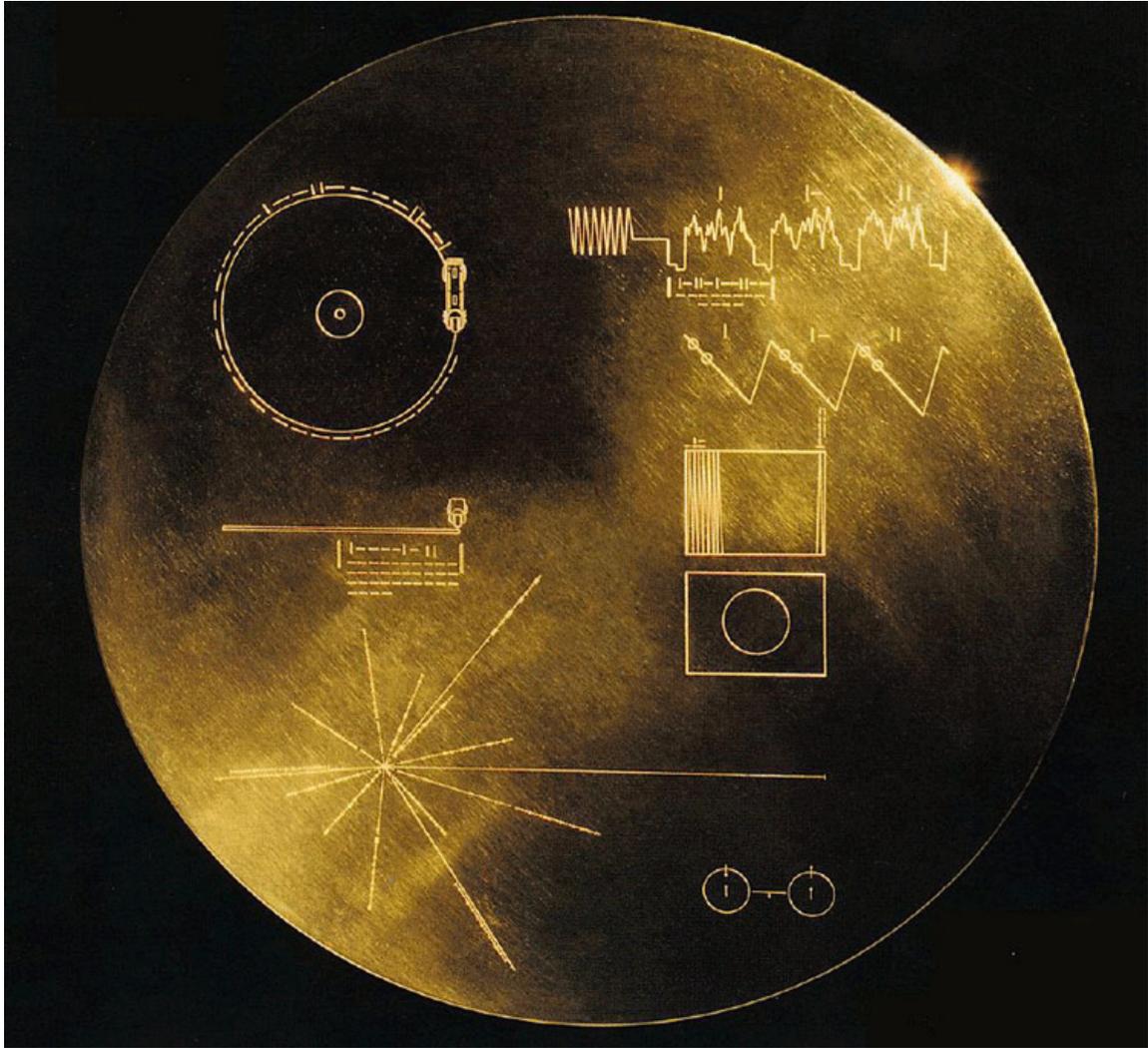
At 100 AU (astronomical units), Voyager 1 is in a strange realm called "the heliosheath."

As Stone explains, our entire solar system—planets and all—sits inside a giant bubble of gas called the heliosphere. The sun is responsible; it blows the bubble by means of the solar wind. Voyager 1 has traveled all the way from the bubble's heart to its outer edge, a gassy membrane dividing the solar system from interstellar space. This "membrane" is the heliosheath.

Before Voyager 1 reached its present location, researchers had calculated what the heliosheath might be like. "Many of our predictions were wrong," says Stone. In situ, Voyager 1 has encountered unexpected magnetic anomalies and a surprising increase in low-energy cosmic rays, among other things. It's all very strange—"and we're not even out of the Solar System yet."

To report new developments, Voyager radios Earth almost every day. At the speed of light, the messages take 14 hours to arrive. Says Stone, "it's worth the wait."

Keep up with the Voyager mission at voyager.jpl.nasa.gov. To learn the language of Voyager's messages, kids (of all ages) can check out spaceplace.nasa.gov/en/kids/vgr_fact1.shtml.



Caption:

In case it is ever found by intelligent beings elsewhere in the galaxy, Voyager carries a recording of images and sounds of Earth and its inhabitants. The diagrams on the cover of the recording symbolize Earth's location in the galaxy and how to play the record.

October

<i>Sun</i>	<i>Mon</i>	<i>Tue</i>	<i>Wed</i>	<i>Thu</i>	<i>Fri</i>	<i>Sat</i>
1	2	3	4	5	6 Full Moon	7
8 Draconid meteor shower	9	10	11	12 Club Meeting	13 Last Qtr Moon	14
15	16	17	18	19	20 Cox Field Observing, PTC Cubs Scouts Observing	21 Cox Field Observing & Club Picnic (4pm), Orionid meteor shower
22 New Moon	23	24	25	26	27	28
29 First Qtr Moon	30 Public observing at Fayetteville Library 6:30-9:00 P.M	31				

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