Smoky Mountain Astronomical Society

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S.C.R.A.P.S.

Society's **C**h**R**onological **A**stronomical **P**aper**S**

Oct. 13th SMAS MEETING

PSTCC, Main Campus,
Hardin Valley Road
7:30 pm, Alexander Bldg, Room 223

From the President - Lee Erickson

October 21st 2006, SMAS is again going to bring astronomy to the people, and so for this month's president's message I am going to steal directly off of our previous president's notes regarding the 2005 October SMAS and GSMNP Star Party in Cades Cove. Weather last year was clear each weekend in October except for the weekend of the star party. Let's hope for better weather this year. The odds are with us. As a result of last years efforts by Mike Littleton and Erik Iverson, we have materials ready to support this years GSMNP Star Party. We would like members to bring a telescope to show to the public, and we hope to get a variety of telescopes trained on interesting object to show to the public.

From Mike's notes of last year:

"Each telescope operator should be knowledgeable of the object observed. Erik and I will write up "crib" laminated sheets for some of the common objects. The number of objects will depend on the number of telescopes. We would like a diversity of objects. The preliminary list is Albireo, Ring Nebula, M31, M13, and the double cluster.

Camping is available in the park as well as an efficiency apartment for the night for a few SMAS members. The location, which we will use, is an overgrown gravel lot near the horse stables. It has good views to the south and west. See pictures of the area at our Yahoo group http://tech.ph.groups.yahoo.com/group/smokymtnastro/photos The rangers have agreed to shut off the only nearby lights at the horse stable."

SMAS needs volunteers to host this event. We need both telescope operators and non□operators to direct people, answer questions, etc. If you are interested, please contact Mike Littleton by email at: mlittleton1022@charter.net or by phone 576-1659 (W) or 671-1022 (H) or Lee Erickson at: leeerickson@earthlink.net or by phone 865-977-1242. This event is a very good opportunity to promote interest in astronomy.

I know from past experience it is very gratifying to introduce people unfamiliar with the night sky to the experience of direct observation. Please participate if you can.

SMAS meeting Agenda Friday October 13th, October 2006

Tim Hunt will speak to us about observing the fall sky and his observing experiences in California.

Most of this months meeting will be devoted to preparation for the SMAS and GSMNP star party. Please come and familiarize yourselves with materials already prepared. Feel free to create materials you think would be helpful or interesting. A display of your astrophotos for instance, or a map to your favorite night sky objects.

Welcome to new SMAS member!

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.

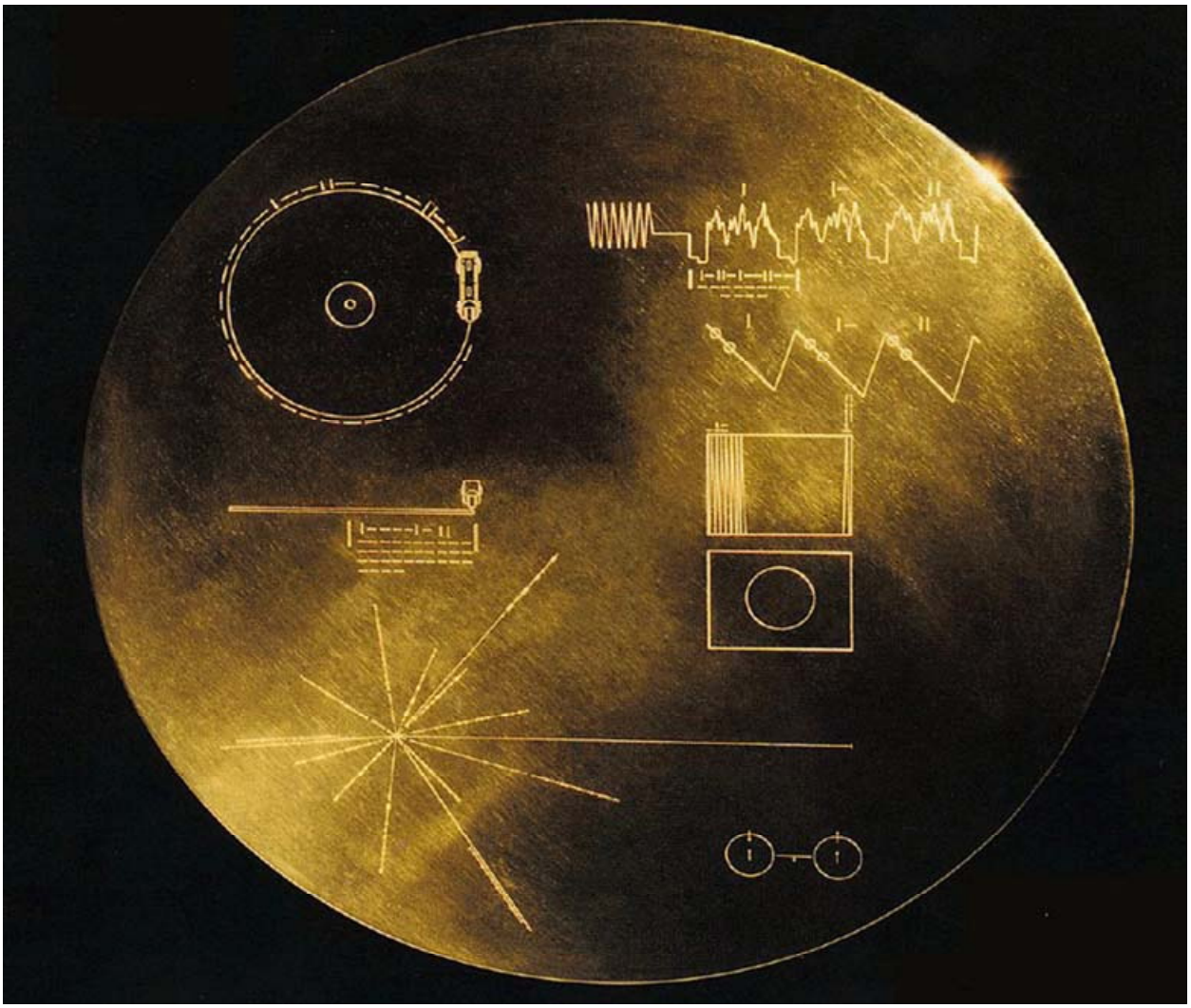
Before Voyager 1 reached its present location, researchers had calculated what the heliosheath might be like. "Many of our predictions were wrong," says Stone. In situ, Voyager 1 has encountered unexpected magnetic anomalies and a surprising increase in low-energy cosmic rays, among other things. It's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

(Continued)

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 .

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



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 2006

SUN	MON	TUE	WED	THU	FRI	SAT
1	2	3	4	5	6 UTK	7 *Full Moon* TAO
8	9	10	11	12	13 **SMAS Meeting PSTCC Rm 223 7:30 pm**	14
15	16	17	18	19	20 UTK	21 **SMAS Star Party GSMNP** **Orion Meteor Shower** TAO
22 *New Moon*	23	24	25	26	27	28 **SMAS Star Party Look Rock**
29 Daylight Savings Time Ends	30	31 Halloween	1	2	3 UTK	4 TAO