

Comet Tails

TREASURE COAST ASTRONOMICAL SOCIETY MONTHLY NEWSLETTER

July 2004

2004 OFFICERS AND BOARD MEMBERS

OFFICERS

President
David Brown

Vice president
Larry Crary

Treasurer
Charlotte Bilder

Secretary
Sue Prill

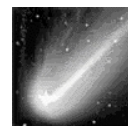
COMMITTEE CHAIRS

Public Outreach Coordinator
Patty Mayer

Librarian Historian Parliamentarian
Sue Prill

Web Site
John Biondo

Planetarium Director
Jon U. Bell



FROM THE PRESIDENT'S UNIVERSE
David Brown

CONGRATULATIONS to Jon and Lisa Bell on the early, but safe, arrival of Ruth Elizabeth Bell. She arrived on July 5, 2004, weighing 6 lbs 4 ozs. Having just arrived in Spain, Jon had to make an emergency trip home. Ruth hung on until he arrived home and then made her grand entrance. Lisa and Ruth are doing well and the rest of the family is doing great as well. Unfortunately, Jon was not able to get to Valencia to receive his award, but I think he is happy with Ruth!

Persides Meteor Shower On August 12, 2004, the shower will peak. We are planning a public viewing on August 14, and with a new moon August 16, we will have great skies! We are planning to meet EARLY Saturday morning, about 1:00 in the morning. Patty is working with the city to get permission for us to be there and to be sure the lights are all off in the area. More news will be sent out later this week.

Astronomy Day is only 7 months away. PLEASE remember to mark February 12 on your 2005 calender so you can attend. Meetings days will be announced in the next newsletter.

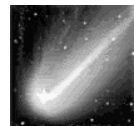
Hallstrom Planetarium shows will begin this fall, I believe in October. Please remember that it is great PR for the club and the planetarium to have club members out before and after the shows. Even if it is cloudy, we have had telescopes set up and the discussions have been great. If your schedule permits, please plan to attend the shows this season. Watch the newsletter for the 2004/2005 season shows.

Chiefland Star Party is November 7 through 14, for those of you who can attend. Unfortunately, I have to work that weekend that, but hope others plan to attend and bring back some great pictures and stories.

Another congratulations to Patty's daughter, Amanda, for surviving Navy boot camp. Patty went up to see her in July and attend her graduation. Amanda is doing great and while in boot camp was promoted again. She was nominated to interview for an honors award, she came in second for it, but was happy that she did well enough to be chosen for the interview. Her hospital corpsman classes begin on Monday and we all wish her well.

Board meeting A reminder that the TCAS Board Members will have a meeting on August 8, 2004, at Applebees, Port St. Lucie Blvd & US 1, at 1:00 p.m.

July meeting This month we will be selling tickets again for the raffle items Patty was able to obtain for us.. Tickets are selling for \$1.00 each or \$5.00 for 6 tickets. All money raised goes directly into the public outreach fund



EDITOR'S STUFF

Patty Mayer

CAMPING! CAMPING! CAMPING!

Anyone care to go? It is ALWAYS a good thing to plan ahead! TCAS has reserved Kissimmee Prairie Preserve State Park for the weekend of March 11, 2005. Yes, that is right, 2005! I know it seems like it is a long way off, but, now is the time to plan! The cost will be approximately \$30.00 per tent or camper, (two tents on each site) and up to eight people on each site. On Friday night, before we begin a night's viewing, dinner and drinks will be provided for all who attend. I know there are a few of us who are planing to go out on Thursday night as well.

So we can keep track of who is going to attend and other medical information, there will be a short application for each family to complete.

You can check out [Kissimmee Prairie Preserve State Park](#) on the web. They have hot showers and the bathrooms are always kept very clean. They offer swamp buggy rides and it is a very quiet park with lots of wildlife to observe

JPL/NSN Advisory Board

I have my first teleconference with JPL and the Night Sky Network on July 28, 2004, it is an exciting project to be a part of, developing ways to encourage girls to become interested in science and astronomy. If any of you have any suggestions, please contact me via email or call me at home at 460-5264.

MAGAZINE REVIEW

Charlotte Bilder

AMATEUR ASTRONOMY – published quarterly by Tom and Jeannie Clark in Chiefland , Florida. It is “News for, by and about Amateur Astronomers around the world”.

I have been reading AA for a long time and enjoy the articles on telescope making, star parties, club activies from around the world (such as Australia), readers experiences in the observing field, people in astronomy and all kinds of astronomical information.

I plan to bring some old issues to the meeting on 7/27 to loan to anyone interested. Hope I can encourage you to subscribe and learn and enjoy a different kind of astronomy magazine.

Cost of AA is \$20.00 per year or 2 years for \$36.00 You can mail your check to 5450 NW 52 Court., Chiefland, Florida 32626. To charge it, call 352-490-9101 for Visa and MC and leave message on answering machine. This subscription order cannot be placed through TCAS.



UPCOMING EVENTS & STAR PARTY REPORTS

Celestial and Terrestrial

Celestial

August 12 &13, 2004 -Perseids Meteor Shower Peak

August 16, 2004 - New Moon

October 27, 2004 - Total Lunar Eclipse

November 9, 2004 - Jupiter occulted by the Moon

December 7, 2004 - Jupiter occulted by the Moon

Terrestrial

August 13, 2004 - Perseids Meteor Shower public viewing at * Beach.

August 14, 2004 - Star Party

February 12, 2005 - Astronomy Day 12:00 through 9:00

March 11, 2005 - TCAS's first annual Messier Marathon camping weekend!

Pineland Star Party Report

Saturday, July 10, 2004 - A few people went out and got smoked out. There were fires in the area but not close enough to worry about the flames.

Friday and Saturday, July 16 & 17 - No one left home on either day but when I looked at the sky on Sunday evening, we should have gone out then!

**NEXT NEW MOON IS AUGUST 16
NEXT OFFICIAL STAR PARTY WILL BE AUGUST 14**

MONTHLY WEB LINK HIGHLIGHT JOHN BIONDO

This month's site is Bad Astronomy. This site points out some of the misconceptions and bad ideas that are floating around about Astronomy. The author of the website, Phil Plait, is very knowledgeable and makes sure his articles point out the bad, and verify the truth. If you have a question, it is a place worth checking out.

He has also written a book, *Bad Astronomy: Misconceptions and Misuses Revealed, from Astrology to the Moon Landing 'Hoax'* which is available on the web site.

<http://www.badastronomy.com/>



JUNE'S MEMBER HIGHLIGHT

This month we are going to get to know Charlotte Bilder, the club's treasurer. Charlotte lives in Stuart with her husband Jim and their pet cockatiel, Sammie (named after Sammy Sosa, but the bird is a female). They have two children, Sandy and Anne, and three grandchildren, Michael, Haley and Corey. Charlotte retired from the Visiting Nurses Association in 1999 where she was Fiscal Coordinator for 20 years.

When Charlotte is not viewing she stays involved with church activities, growing orchids, bowling, reading and traveling. Most of us also know that when Charlotte travels to other Florida Star Parties, she wins many good things, like her telescope and her massive binoculars!

Her start in astronomy began when she watched Jack Horkheimer, the planets and when she went with TCAS to go view Haley's comet in 1985 (?) She was completely hooked!

Charlotte's favorite part of astronomy is when she observes at a star party where she is camping. She observes with her Meade EXT 125 (which she won at the 2001 Chiefland Star Party) Her most exciting astronomical experience was with her husband, when they observed a solar eclipse from a cruise ship in Aruba in 1998. She has also met and talked with John Dobson and David Leavy at the Winter Star Party.

MEMBERSHIP

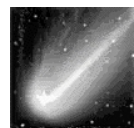
Membership dues are \$12.00 per fiscal year, September 1 through August 31. Membership includes; membership to the Astronomical League and their quarterly newsletter *The Reflector*; monthly sky calendar from Abrams Planetarium; discounted subscriptions to Sky and Telescope (\$32.95) and Astronomy (\$29.00 a year and \$55.00 for two years) magazines; access to club resources and the monthly newsletter from TCAS.

Dues and magazine subscriptions can be given to Charlotte at the club meetings or sent to Charlotte Bilder, TCAS Treasurer, 102 Cove Road, Stuart, Florida 34994. **WHEN RENEWING SUBSCRIPTIONS, PLEASE GIVE THE RENEWAL FORM, ENVELOPE AND YOUR CHECK MADE OUT TO TCAS, TO CHARLOTTE.**

CLUB RESOURCES

The club has a green laser pointer; a laser collimator; and two 8 inch reflectors available to any club member who wishes to use them. Please contact David if you would like to use any of the resources.

The club also has a book and video library. Books and videos are available to club members to borrow for one month periods. Please contact Sue Prill to borrow any books or videos. Also, if you have any books or videos you would like to donate to the library, please contact Sue, or bring them with you to the next club meeting.



CLASSIFIED

David Brown has the field version of the Sky Atlas, 2000.0, white stars and deep space objects on a black background. It is 18 3/8 by 13 1/2 inches, laminated in clear plastic. New, they sell for \$69.95. David is selling his for \$35.00, such a deal!

David is also selling his Orion 10 inch telescope with the 9mm and 25 mm eyepieces; an 8X50 finder scope; the Telrad and the full aperture solar filter.

You can see David about both items at the next meeting or call him at 772-878-6233.

CLUB HISTORY Sue Prill, Historian

Sue is looking for any help with the Club's history. If you have any pictures, news articles, stories and the like, please bring it to the next meeting or email Sue.

HALLSTROM PLANETARIUM Jon U. Bell, Planetarium Director

The Planetarium shows are over until the fall season. The new show dates will be posted as soon as they are available. You can listen to Jon U. Bell every Monday through Friday on "Skywatch" on WQCS 88.9 FM radio at 7:20 a.m. and 1:00 p.m. for daily sky updates.

www.ircc.edu/atircc/commout/planetarium/planet.html

MEMBER WEB PAGES

TCAS www.treasurecoastastronomy.org
Dave Holko www.atkmotors.com/defaultx.htm

INTERESTING WEB SITES

Sky & Telescope Magazine www.skypub.com
Astronomy Magazine www.astronomy.com
Space news junkie www.space.com
Satellite tracking www.heavens-above.com
Free monthly sky map www.Skymaps.com
International Dark Sky Organization www.darksky.org
NASA www.NASA.gov
Night Sky Network <http://nightsky.jpl.nasa.gov/index.cfm>
Universe Today www.universetoday.com



June 2004 Meeting Minutes Sue Prill

ASTRONOMY MINUTES FROM 6/29/2004 ATTENDANCE: 25 MEMBERS AND 1 GUEST

Guests: Ed, Peg, Carly and Edward Piotrkiewicz

TREASURER'S REPORT:

Total in the Treasury (after paying for Abrahms Calendars and rejoining the Astronomical League and Dark Sky Society) is \$1045.13 of which \$398.92 in scholarship funds.

PRESIDENTS REPORT:

See Newsletter

Club agreed to a Public outing for the Persied Meteor shower in August on 8/13 at late night. On A1A (Hutchinson Island) river side of street just North of the FPL Power Plant. Patty will get county permission to use the park.

OLD BUSINESS:

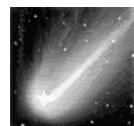
- ★ We are incorporated.
- ★ David Brown will pick up the club scope from Walt Swentzel for the use of the other club members; See Dave about borrowing it.
- ★ Kate updated us on her trip to Washington DC and talking to the Congressmen and their aids. She is moving to New Mexico to go to college. GOOD LUCK KATE! Email us!
- ★ Allan will set up (with help from club) our Star Party (Messier Marathon) weekend camping trip in March 2005 at the Kissimmee Prairie State Park \$500 to reserve entire site \$30 per person to camp.
- ★ Chiefland's Bi-annual Star Party in November/October is taking registration and the number of people allowed to go is limited.. SIGN UP QUICK!

NEW BUSINESS:

- ★ Patty has a bunch of stuff to raffle (draw) for our club members, Books / Star Pointer/ SLR Camera Mount / 2 gift certificates to Lumicon / Meade – Astro Star Suite. The tickets will be \$1.00 each of 6 for \$5.00. This tickets will be available June and July with the drawings in August.
- ★ Astronomy Day 2005 is set for 3/12. Keep your calendar open. First meeting August or Sept.

GENERAL ANNOUNCEMENTS:

Our Patty Mayer is on the advisory Board of the joint JPL/NASA/DARK SKY NETWORK Focus group with the Girl Scouts to bring Astronomy to the Girl Scouts and to encourage girls to enter the



sciences of astronomy. Way to go Patty!!

Anyone, if they can, please help Hank learn to use a 8inch Celestron Schmidt Cassegrain scope.

OUR MEETING:

PATTY MAYER did a report on the term "BLUE MOON" and where it derived from. Our society today labels the 2nd full moon in the month as the "Blue Moon" but according to the Farmer's Almanac in 1937 it is the 3rd full moon in any given season (Spring, Summer, Fall, Winter). There is always 3 moons in a season with 1 season having 4. THANK YOU PATTY!! Very informative!

DAVE BROWN did his wonderful Astro quiz.

Next meeting 7/27 No Topic selected yet.

ADJOURNED AT 8:58 pm

The following is an article provided by the Jet Propulsion Laboratory, California Institute of Technology, under a contract with the National Aeronautics and Space Administration.

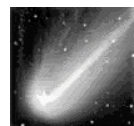
WAITING FOR CASSINI'S "SAFE ARRIVAL" CALL

The evening of June 30, 2004, was nail-biting time at Cassini Mission Control. After a seven-year journey that included gravity assist flybys of Venus, Earth, and Jupiter, Cassini had finally arrived at Saturn. A 96-minute burn of its main engine would slow it down enough to be captured into orbit by Saturn's powerful gravitational field. Too short a burn and Cassini would keep going toward the outer reaches of the solar system. Too long a burn and the orbit would be too close and fuel reserves exhausted.

According to Dave Doody, a Cassini Mission Controller at the Jet Propulsion Laboratory (JPL) in Pasadena, California, there was a good chance the Earth-bound Cassini crew would have to wait hours to learn whether or not the burn was successful. Of the three spacecraft-tracking Deep Space Network (DSN) complexes around the globe, the complex in Canberra, Australia, was in line to receive Cassini's signal shortly after the beginning of the burn. However, winds of up to 90 kilometers per hour had been forecast. In such winds, the DSN's huge dish antennas must be locked into position pointed straight up and cannot be used to track a tiny spacecraft a billion miles away as Earth turns on its axis. "The winds never came," notes Doody.

The DSN complex at Goldstone, California, was tracking the carrier signal from Cassini's low-gain antenna (LGA) when the telltale Doppler shift in the LGA signal was seen, indicating the sudden deceleration of the spacecraft from the successful ignition of the main engine. Soon thereafter, however, Goldstone rotated out of range and Canberra took the watch.

After completion of the burn, Cassini was programmed to make a 20-second "call home" using its high-gain antenna (HGA). Although this HGA signal would contain detailed data on the health of the spacecraft, mission controllers would consider it a bonus if any of that data were actually

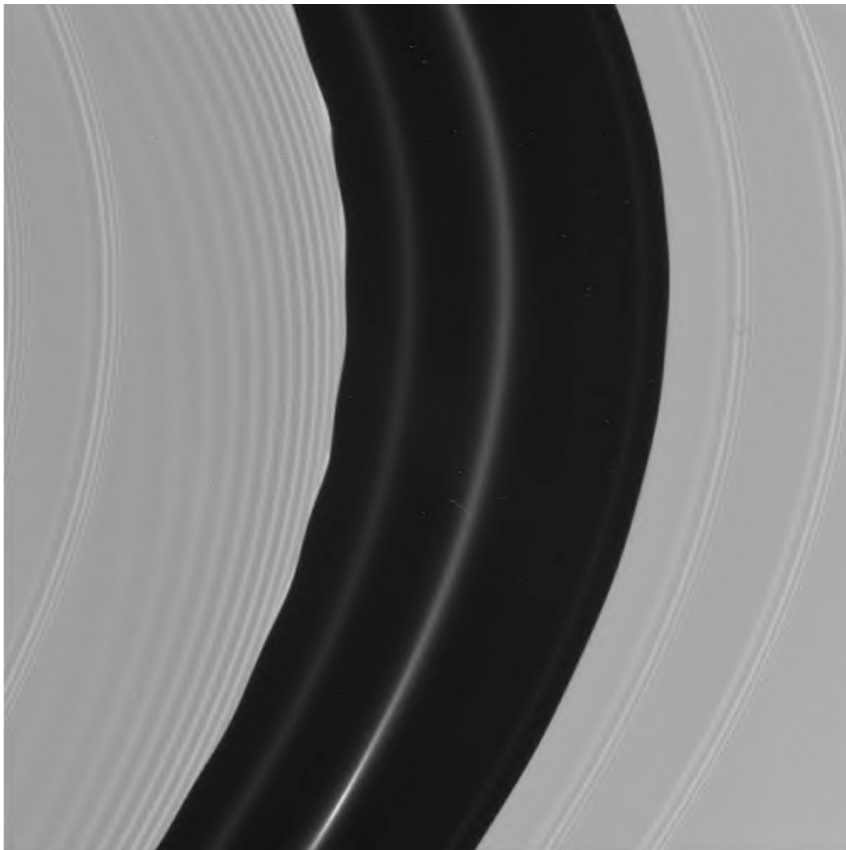


captured. Mostly, they just wanted to see the increase in signal strength to show the HGA was pointed toward Earth and be able to determine the spacecraft's speed from the Doppler data. If possible, they also wanted to try to lock onto the signal with DSN's closed-loop receiver, a necessary step for extracting engineering data.

Normally it takes around one minute to establish a lock on the HGA signal once a DSN station rotates into range. Having only 20 second's worth of signal to work with, the DSN not only established a lock within just a few seconds, but extracted a considerable amount of telemetry during the remaining seconds.

"The DSN people bent over backwards to get a lock on that telemetry signal. And they weren't just depending on the technology. They really know how to get flawless performance out of it. They were awesome," remarks Doody.

Find out more about the DSN from JPL's popular training document for mission controllers, Basics of Space Flight (www.jpl.nasa.gov/basics) and the DSN website at deepspace.jpl.nasa.gov/dsn. For details of the Cassini Saturn orbit insertion, see www.jpl.nasa.gov/basics/soi. Kids can check out The Space Place at spaceplace.nasa.gov/en/kids/dsn_fact1.shtml to learn about the amazing ability of the DSN antennas to detect the tiniest spacecraft signals.



Caption:
Right after entering Saturn orbit,
Cassini sent this image of the part
of the Encke Gap in Saturn's rings.
Image credit NASA/JPL/Space
Science Institute.

