

# Comet Tails

## TREASURE COAST ASTRONOMICAL SOCIETY MONTHLY NEWSLETTER

May 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

Venus Transit is coming up on June 8, 2004. Two members from the Fort Myers club will be joining some of at south jetty in Fort Pierce to watch the transit. We are the lucky and will be able to see this again on June 6, 2012!

We will only see the last of the transit, approximately 20 minutes. Sunrise on June 8, is 6:26 a.m. and we should be able to see the 3<sup>rd</sup> and 4<sup>th</sup> contacts of the transit. The 3<sup>rd</sup> contact begins at 7:07 a.m. and the 4<sup>th</sup> contact begins at 7:27 a.m. The following was taken from an on line article at Sky and Telescope which explains the "contacts."

"During the transit there are four instants when the disks of Venus and the Sun make contact with each other at a single point. Contacts I and IV occur just as Venus initially touches (I) or finally departs (IV) the solar disk. At Contact II Venus appears fully entered upon the Sun, and a thread of light is seen between the planet and the Sun's edge. At Contact III the reverse is true; Venus begins to leave the solar face and the last thread of sunlight separating the planet from the blackness at the edge of the solar disk vanishes." <sup>1</sup>

Remember solar safety and if you have any inexperienced viewers with you, remind them as well. Happy viewing and I look forward to some pictures!

## EDITOR'S STUFF

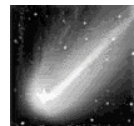
### Patty Mayer

I apologize for the lateness of the newsletter this month, I was down with the flu for the first time in a long time and unable to get it done and out on time.

Jon Bell will be attending the Middle Atlantic Planetarium Association and South East Planetarium Association Conference in Richmond, Virginia in mid June and is hosting the "Constellation Shootout." I spent some time sending out many letters of request for door prizes/gifts for him to bring with him for the Shootout contestants. (I hope to use many of the addresses for Astronomy Day next year when asking for drawing prizes!) When Jon leaves Virginia, he will be flying directly to Valencia, Spain. As many of you know, he placed second for "The Whale's Tale" in the international Eugenides Foundation/International Planetarium Society script writing contest. He will receive his award and while there, he will again be hosting the "Constellation Shootout." Congratulations to Jon and we all hope you have a safe trip!

---

<sup>1</sup>Used with permission by Sky and Telescope, 2004  
[http://skyandtelescope.com/observing/objects/planets/article\\_1021\\_1.asp](http://skyandtelescope.com/observing/objects/planets/article_1021_1.asp)



Our web page at IRCC is being taken off line in the near future. Debbie Gibbons has changed the link for TCAS on Hallstrom Planetarium's page to our new home. I'd like to thank Debbie for her help and for what she has done for TCAS in the past.

My daughter, Amanda, left for Great Lakes Training Center on May 9<sup>th</sup>. I have been somewhat of a wet mop lately but look forward to a great road trip this July to see her graduate. She was allowed one phone call once she got to GLTC and was only able to say, "Hi, I am here, it is crazy and I love you. Tell James." and then she hung up! This is nothing like sending your kids off to school for the first time but I know she and the Navy will blend well together!

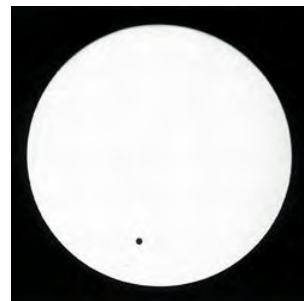
## UPCOMING EVENTS

### MAY 29 - Girl Scout viewing

On May 29, 2004, a few club members will be meeting with girl scout troops at Jonathan Dickenson State Park at 6:00 p.m. We will be talking about telescopes in space, doing some viewing of the Moon, Jupiter and the comet(s). It would be great to have a good number of club members down there. Please meet us if you are able to, the girls will be thrilled!

### JUNE 8 - Venus Transit

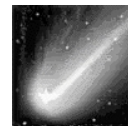
On Tuesday, June 8, 2004, Venus will transit the sun and will be in progress here during sunrise. This has not occurred in over 100, so no one alive has ever seen this. There will not be any organized public viewing but I do look forward to going down to the beach and watching it. A few of us are going to go to South Jetty and will be meeting some people from the Southwest Florida Astronomical Society. Please join us if you can.



Students at Vassar College, New York, acquired this image of the transit of Venus on December 6, 1882. Small specks on the Sun's face are photographic flaws, not sunspots. Courtesy Vassar College. (Sky and Telescope, 2004)

### NOVEMBER 7 -14, 2004

The 2004 Chiefland Star Party this fall will be held during the week of November 7 through 14. This is the Star Party web page where you can open the application and get other information about it. <http://www.chiefland.org/2004reg.html> For those of you who receive the newsletter via US mail, a copy of the application is attached. (I sent my registration in already and am looking forward to attending this year!)



## MONTHLY WEB LINK HIGHLIGHT

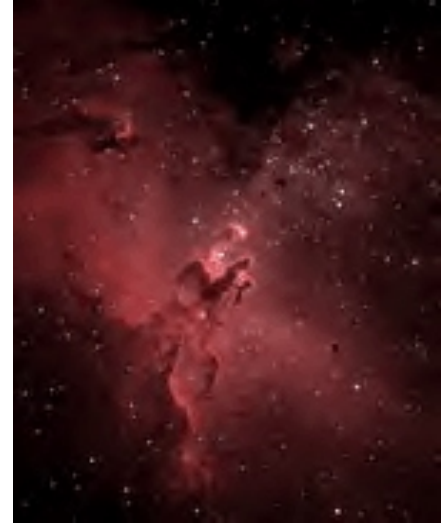
John Biondo

This month's web page is an on line friend of Patty's who does imaging on a regular basis at Chiefland. Charlie Warren has many beautiful pictures on his web page, Astro Turf, as well as many interesting links to other sites and plenty of information about astrophotography. Just taking the time to look through his image library would give inspiration to any one who does their own imaging! Hope you enjoy all his images!

<http://hometown.aol.com/astrofx/index.html>

Messier 16

NGC 6611 is a large open cluster (IC 4703) and emission nebula in the constellation Serpens Cauda. It is frequently called the "Eagle of Star Queen Nebule". It lies about 6,500 light years away in the Sagittarius-Carina Spiral arm of our Milky Way galaxy.

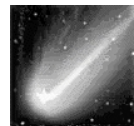


## MAY'S MEMBER HIGHLIGHT

Scott Frank has been a member of TCAS for a year now and has grown quite a bit in knowledge since his first meeting. He lives in Port St. Lucie, Florida with his wife, Charlotte and their daughter, Brandy. He works as an equities investor, specializing in stocks, bonds and estate building. Besides astronomy, he also enjoys boating, fishing, traveling with his wife and working in his yard.

After he graduated, he got married, started a family and pursued his career. A few years back Scott decided to try and work less and enjoy more free time. This gave him the opportunity to develop his interest in astronomy. He says he has always been interested in the "beauty and grander of the night sky. Astronomy was a natural, since I was always curious about the universe around me. I believe human kind's destiny will ultimately be the stars, given that we are explorers by nature."

Scott has a 10 inch Meade Schmidt-Cassegrain. If it can be handled by one person and can fit in the trunk of his car, he would like to move up to a larger scope. Scott was "lost in the night sky" when he first started with the club, but thanks to the help of many members he is able to find and recognize many objects and now is well on his way to learning more and more. Scott has recently become interested in and has done some astrophotography with Charlotte.



One of his joys is sharing his new knowledge and views with people who otherwise would not be able to see the night sky up close. He says "My greatest satisfaction is when an individual sees a celestial object for the first time and I hear the Oohing and Aahing!

No matter where he views from, he finds personal satisfaction in improving his understanding of astronomy. "Astronomy allows us to expand our earthly universe through the lense of a telescope and imagine wonders yet to unfold."

## **STAR PARTY REPORT PINELAND SITE**

Friday, May 14, 2004. David, Patty, Nick went out to Pinelands. The sky was beautiful most of the night. We easily found Comet NEAT next to M44 (Beehive Cluster) and the pairing of the two was great. Omega Centauri came over the horizon about 9:00 and was easily visible with the naked eye, as always, it is a wonderful object to study. About 11:00 some light clouds moved in and we left.

Saturday, May 15, 2004. Again, David, Patty and Nick went out to Pineland and were joined by Carol Costa. The clouds did not want to cooperate with us so we pack it up early and went home.

Saturday, May 22, 2004. Nick, John, Larry, Patty, David, and Scott went to Pineland to view. The night was clear and beautiful! There were many pictures taken and I am looking forward to seeing the final produce of some of them. It was a great night for viewing, seeing some of the things we have not seen for the past year and looking at the comet. We packed it in about 12:30 and a few went to Denny's for breakfast afterwards.

## **INDIAN RIVER COMMUNITY COLLEGE**

Friday, May 21, 2004. There were 12 club members in the south parking lot for some public viewing after the Planetarium show Friday night. The clouds gave us chase to viewing but we did hear "WOW!" and "Oh my word!" Many could say nothing but take a deep breath as they looked at the Moon, Saturn, Jupiter and the comet. It was a good night and many of us were there until 11:00! Thanks to all who came out.

**NEXT NEW MOON IS JUNE 17, NEXT STAR PARTY WILL BE JUNE 19**

## **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 calender 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 an 8 inch reflector 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.

SpacePlace at NASA has a nice listing of videos that the club can borrow for meetings. The list of videos can be seen here: [http://spaceplace.nasa.gov/astro\\_clubs/videos/video\\_list.shtml](http://spaceplace.nasa.gov/astro_clubs/videos/video_list.shtml). If anyone is interested in seeing a video at the club meeting, please contact Charlotte or Patty and one of us will order it for the club.

## **CLASSIFIED**

If any member has an astronomical item(s) for sale or if you are looking for a particular item, please email all the information to Patty and it will appear here from month to month until you sell it or find it.

## **CLUB HISTORY**

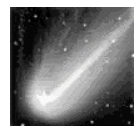
**Sue Prill, Historian**

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.

## **NEWSLETTER**

**Patty Mayer, Editor**

If you have an idea, article or feature you would like to see in our newsletter, please email Patty. Deadline for submissions is the third (3rd) Tuesday of the month.



# 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](http://www.ircc.edu/atircc/commout/planetarium/planet.html)

## MEMBER WEB PAGES

TCAS ..... [www.treasurecoastastronomy.org](http://www.treasurecoastastronomy.org)  
Dave Holko ..... [www.atkmotors.com/defaultx.htm](http://www.atkmotors.com/defaultx.htm)

## INTERESTING WEB SITES

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

## April 2004 Meeting Minutes

Sue Prill

Astronomy minutes from 4/27/2004

Attendance: 30 members and 7 guests

### **Treasurer's Report:**

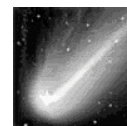
\$1470.28 in the treasury of which \$398.92 is for the astronomy college scholarship

Astronomy league dues are due in June and the club voted on continuing them. (Approx \$225 last year)

Abrahms planetarium sky calenders dues are due in may and the club voted on continuing with them. (Approx \$145 last year)

### **Presidents Report:**

- ★ John Biondo has our web site is up and running.
- ★ Our club newsletter is on the web page and will only be mailed out to club members if requested, otherwise look for it on the web site only.
- ★ Mike Palermitti images are still being emailed. Please let David Brown know if you are not



getting them.

- ★ Comets in our sky, Bradfield and NEAT.. Bradfield in the east in the am and NEAT in the west sky after dusk.

New business:

Pineland site will now make sure that the lights will be turned off at the fairground (close and caused light pollution) as they had been left on for the At. Lucie County fair and if you think about it ahead of time, email the St. Lucie County fairground web site to remind them to turn off the lights.

St Petersburg group would like to sponsor a joint star party at Kissimmee Prairie State Park in February or March of 2005. Talk to Allan Como if you would like to help.

Bluefied site: it is 3 ½ miles farther west and south then Pineland and is still waiting for the shell rock road to be completed.

Transit of Venus will occur at sunrise on 6/8 (Tuesday am) make sure you have your solar filters on!!

Friday 5/21 club/public viewing for the comets during and after the last Jon Bell planetarium show. The parking lot lights will be off. Please everyone show up.

A big thank you to Ray Bettancourt for donating a 8 inch Orion reflector telescope to the club!!!

May and June meeting Patty will bring additional items to be "raffled" to the club members that were held back from the astronomy day raffle.

Our meeting:

Kate has received a scholarship and read us her essay that detailed her objectives and wanted club member input as to what she can petition congress when she goes to Washington D.C.. A lot of good ideas were presented by the club members.

Adjourned at 9:05 pm

## **Farr-out Ideas**

by Patrick L. Barry

Ever had a great idea for a new spacecraft propulsion system, or for a new kind of Mars rover? Have you ever wondered how such "dinner napkin sketches" evolve into real hardware flying real missions out in the cold blackness of space?

The road to reality for each idea is a unique story, but NASA has defined some common steps and stages that all fledgling space technologies must go through as they're nursed from infancy to ignition and liftoff.



Suppose, for example, that you've thought of a new way to shield astronauts from harmful radiation during long space missions. In the first stage, you would simply "flesh out" the idea: Write it down, check the physics, and do some quick experiments to test your assumptions.

If the idea still looks good, the next step is to build a "proof of concept." This is the "science fair project" stage, where you put together a nifty demonstration on a low budget—just to show that the idea can work.

For your radiation-shielding idea, for example, you might show how a Geiger counter inside a miniature mock-up doesn't start clicking when some radioactive cobalt-60 is held nearby. The shielding really works!

Once that hurdle is cleared, development shifts into a higher gear. In this stage, explains Dr. Christopher Stevens of JPL, the challenge isn't just making it work, but making it work in space.

"Some conditions of space flight cannot be adequately simulated here on Earth," Stevens says. Cobalt-60 doesn't truly mimic the diverse mixture of radiation in space, for example, and the true microgravity of orbit is needed to test some technologies, such as the delicate unfolding of a vast, gossamer solar sail. Other technologies, such as artificial intelligence control systems, must be flight tested just because they're so radically new that mission commanders won't trust them based solely on lab tests.

Stevens is the manager of NASA's New Millennium Program (NMP), which does this sort of testing: Sending things to space and seeing if they work. In recent years the NMP has tested ion engines and autonomous navigation on the Deep Space 1 spacecraft, a new "hyperspectral" imager on the Earth Observing 1 satellite, and dozens of other "high risk" technologies.

Thanks to the NMP, lots of dinner napkin sketches have become real, and they're heading for space. You can learn more at the NMP website, [http://nmp.nasa.gov/index\\_flash.html](http://nmp.nasa.gov/index_flash.html)

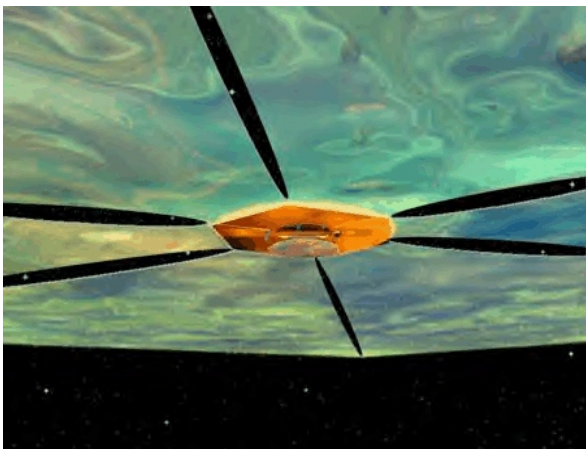


Image caption: This is just one idea of how a solar sail could be used to power an interstellar probe. A solar sail is one possible type of new technology that NASA's New Millennium Program would test in space before it would be risked on a scientific mission.

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

