

## Smoky Mountain Astronomical Society

Volume 29, Number 4  
April 2006

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

Society's ChRonological Astronomical PaperS

## Apr. 14th SMAS MEETING

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



### **From the President - Lee Erickson**

Now that the new officers have gotten a month behind us, it is time to thank the previous officers for their service and assistance in this transition.  
THANK YOU ALL!

April is a good time to place observing high on your priority list. We are likely to have clear (if turbulent) skies and it is warming up nicely. I hope we will have nice views of the swarms of galaxies visible this time of year. Don't get me wrong, I love to look into the very center of the Milky Way of the summer skies, but this time of year is for looking perpendicular to the plane of the galaxy. It can be quite rewarding.

It was during a spring about a decade ago that I first photographed a galaxy by accident. It was M104 and all I got was a dot in a wide angle photo, but it was gratifying to have "discovered" it. I hope you get a similar surprise with your camera or at the eye piece soon.

### **Hubble & Windows XP Feature Puts Universe in Your Screen - Lee Erickson**

Recently, Bill Dittus posted a link to a wonderful Hubble photo on the SMAS Yahoo Group. The link was of a picture of The Great Nebula in Orion. I navigated the web site to a menu of still more beautiful photos described as wallpaper at: <http://hubblesite.org/gallery/wallpaper/> So you know what happened next? My hard drive lost some of its' free space. For years I have put photos such as these in a folder I simply called "astro" in Windows' My Documents. However, recently I discovered one of those annoying features of Windows. I say annoying because I am annoyed that Microsoft adds these features, and so poorly documents the product, that you do not find out about them and then kick yourself for missing out for so long. Yes, that is my backhanded way of kicking and complementing Microsoft at the same time. The feature I found, and assume is part of Windows XP, is a screen saver option which is a slide show. The slide show is taken from photos you have in your My Pictures folder within your My Documents folder.

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To use this screen saver sideshow, go to Start> Setting> Control Panel> Display. Then select the Screen Saver file tab at the top of the dialog. Within the dialog is a Screen Saver selection tool. Choose the one that says "My Pictures Sideshow". Preview if you like, and select OK. The Slide show will select pictures at random from all of the pictures in the My Pictures folder as well as all the sub folders there. So now I have moved all my astronomy related photos out of my "astro" folder and into a folder I specifically created for astronomy in the My Pictures folder. I hope I was not the very last person to discover this Windows feature and that this helps at least someone put the Universe on their PC's screen.

### **The SMAS meeting of March 10, 2006 – Bill Dittus**

The SMAS met in Room 223 of the Alexander building at the Harden Valley campus of Pellissippi State Community College.

Socializing began at about 7:00 PM and President Lee Erickson presided over the meeting which began at about 7:40 PM, as Secretary Bill Dittus was a few minutes late.

10 Members attended and one guest, Jim Hanson. Thanks for coming Jim!

President Lee Erickson began the meeting per his agenda with a reminder of a few upcoming events in March and early April:

The regularly occurring third Saturday of the month observing at:  
Tamke Allen Observatory or TAO on Saturday March 18<sup>th</sup>.

First SMAS Star Party is scheduled to be held at:

Look Rock #1 on Saturday March 25<sup>th</sup>.

***(Changed from Look Rock #4 to Look Rock #1)***

Second SMAS Star Party is scheduled to be held at:

Unicoi Crest on Saturday April 1<sup>st</sup>.

***Please Note: ALL scheduled Star Parties are subject to local weather conditions.***

Michael McCulloch suggested we might get a better view from Look Rock #1 instead of Look Rock #4. A motion was made and seconded to switch to Look Rock #1, a vote was taken and the motion carried.

Lee announced that Mike Littleton had agreed to plan this years general meeting presentations, and in fact Mike created a Power Point program which Scott Byers presented titled:

### **“Computer Resources for Astronomy, Part 1”**

Scott began his presentation by passing out the help text associated with the web site:

<http://stdatu.stsci.edu/dss/index.html>

The site uses two catalogs to retrieve the RA and DEC of an object.

**SIMBAD** (in Strasbourg, France) and **NED** (in Pasadena, California) are centralized astronomical databases that provide services like taking an object name and returning its coordinates. That's how they're used here: to redraw the DSS form with your object's RA and Dec in place, so you don't have to go look them up.

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He then discussed the Digital Sky Survey web site, which covers the “E, V, J, R and N bands. He ran through several examples to show how to use the web site. M100, M63 to name a couple. We were most impressed that almost any object visible was available to find from this site.

**GREAT JOB Scott!!!!**

Next Michael McCulloch made a presentation on:

### “The Southern Winter Sky”



Michael had created a hand out and a GREAT Power Point presentation in which he discussed many deep sky objects of interest, such as **M41, NGC2362, NGC2360, NGC7789, NGC 2374, SHARPLES 2-301**, and my personal favorite **NGC- 2359 “Thor’s Helmut”**

Michael also discussed the stellar phenomena called Wolf-Rayet. Wolf-Rayet’s are rare and massive blue giants blowing off massive amounts of dust and gases at millions of kilometers per hour, providing the bow shock features which glow so beautifully.

The last item to be discussed was a beautiful variable star called R Leporis.

The Red Giant, which is a Mira variable star with a period of 430 days, is the reddest star we know. On its relatively cool 2050 degree Kelvin surface, many carbon compounds can be found.

**Constellation:** Lepus  
**Distance:** 820 light-years  
**Spectral class:** C6  
**Visual magnitude:** 5.5 - 11.7  
**Luminosity:** 1 - 300 \* Sun  
**Diameter:** max. 150 \* Sun



**GREAT JOB Michael!!!!**

DR Fudge informed SMAS members that David Fields wants to organize a public outreach event for Astronomy Day. This year Astronomy Day is May 5, a week day. David wants to do the actual event on a Saturday in Oak Ridge. They hope to have a digital camera on the Moon and a projection of the image on the side of a building to attract the public. David would like participation of SMAS members and telescopes. There will be more information as details emerge.

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The final portion of our meeting, President Lee Erickson discussed SMAS appointed positions. These include:

- |                              |  |
|------------------------------|--|
| Meet & Greeter               | - <b><i>OPEN, waiting for YOU to Volunteer</i></b> |
| Librarian                    | - Accepted by Bob Arr                              |
| Publicity                    | - <b><i>OPEN, waiting for YOU to Volunteer</i></b> |
| Property Manager             | - Accepted by Bill Dittus                          |
| Yahoo Group Moderator        | - Accepted by Bill Dittus                          |
| Web Manager                  | - Accepted by Michael McCulloch                    |
| Badge Maker                  | - Accepted by Bob Arr                              |
| Dark Sky Project coordinator | - <b><i>OPEN, waiting for YOU to Volunteer</i></b> |
| Observing Chair Coach        | - Accepted by Ron Dinkins                          |

Any open appointments are just waiting for **YOU** to volunteer!!!!

Lee tabled discussion on the subject of “***Future Goals***” until our next meeting.

Below are two images reflecting members and guest attending our March 10<sup>th</sup> 2006 meeting.

From Left to right are: Bill Dittus, Bob Arr, Scott Byers, and Guest – Jim Hanson



Left to Right are: Sharon & Peter Bush, D.R. Fudge, Jim Sanders, Michael McCulloch, Ron Dinkins, Brent Holt.



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Missing of course was our president, Lee Erickson, who took the pictures. This was my first act as club secretary to present the minutes of our last meeting in March. A good time was had by all and we hope Jim Hanson will come back.

**We look forward to everyone meeting us at TAO, Look Rock #1 and most especially the galaxy filled sky of Unicoi Crest.**



## Planets in Strange Places

By Trudy E. Bell

Red star, blue star, big star, small star—planets may form around virtually any type or size of star throughout the universe, not just around mid-sized middle-aged yellow stars like the Sun. That’s the surprising implication of two recent discoveries from the 0.85-meter-diameter Spitzer Space Telescope, which is exploring the universe from orbit at infrared (heat) wavelengths blocked by the Earth’s atmosphere.

At one extreme are two blazing, blue “hypergiant” stars 180,000 light-years away in the Large Magellanic Cloud, one of the two companion galaxies to our Milky Way. The stars, called R 66 and R 126, are respectively 30 and 70 times the mass of the Sun, “about as massive as stars can get,” said Joel Kastner, professor of imaging science at the Rochester Institute of Technology in New York. R 126 is so luminous that if it were placed 10 parsecs (32.6 light-years) away—a distance at which the Sun would be one of the dimmest stars visible in the sky—the hypergiant would be as bright as the full moon, “definitely a daytime object,” Kastner remarked.

Such hot stars have fierce solar winds, so Kastner and his team are mystified why any dust in the neighborhood hasn’t long since been blown away. But there it is: an unmistakable spectral signature that both hypergiants are surrounded by mammoth disks of what might be planet-forming dust and even sand.

At the other extreme is a tiny brown dwarf star called Cha 110913-773444, relatively nearby (500 light-years) in the Milky Way. One of the smallest brown dwarfs known, it has less than 1 percent the mass of the Sun. It’s not even massive enough to kindle thermonuclear reactions for fusing hydrogen into helium. Yet this miniature “failed star,” as brown dwarfs are often called, is also surrounded by a flat disk of dust that may eventually clump into planets. (Note: This brown dwarf discovery was made by a group led by Kevin Luhman of Pennsylvania State University.)

Although actual planets have not been detected (in part because of the stars’ great distances), the spectra of the hypergiants show that their dust is composed of forsterite, olivine, aromatic hydrocarbons, and other geological substances found on Earth.

These newfound disks represent “extremes of the environments in which planets might form,” Kastner said. “Not what you’d expect if you think our solar system is the rule.”

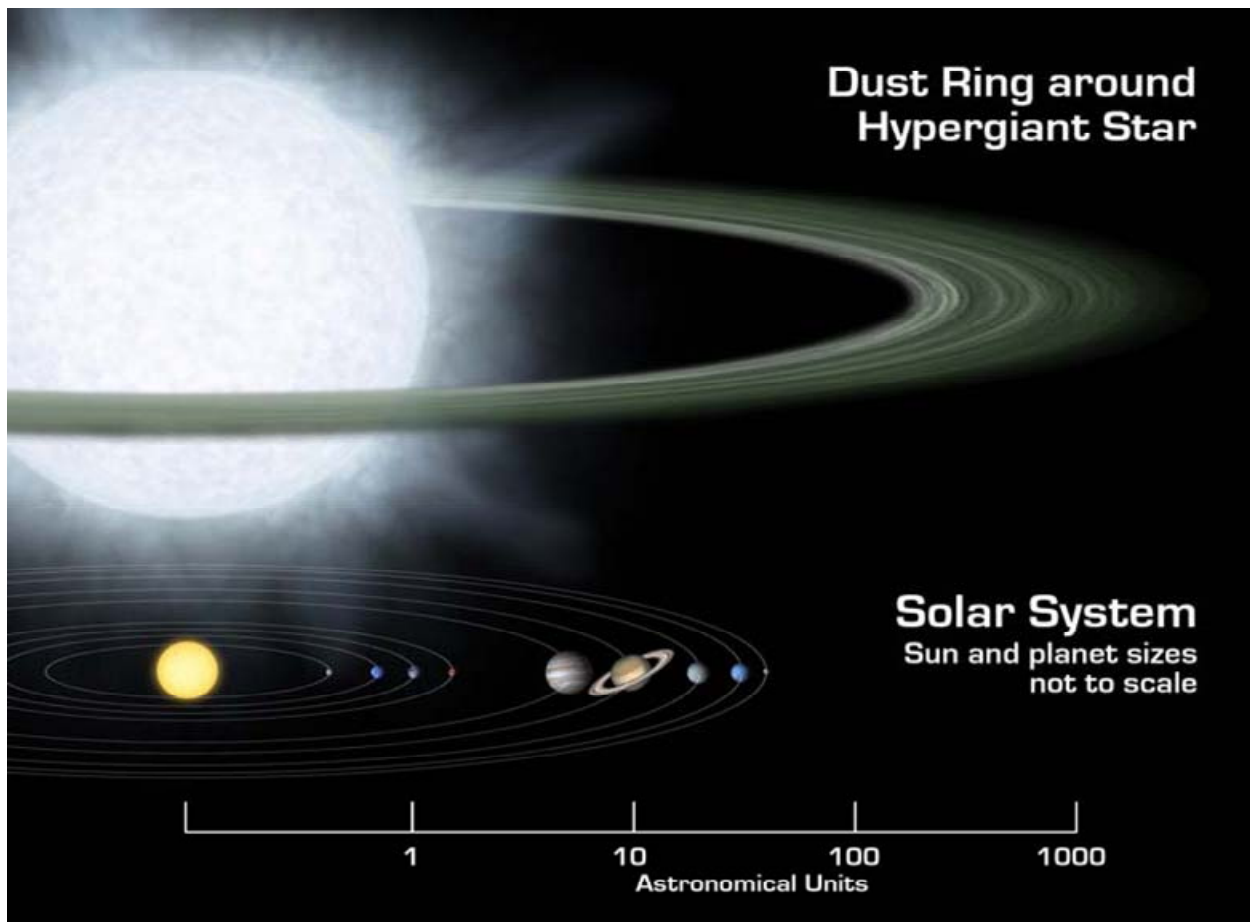
Hypergiants and dwarfs? The Milky Way could be crowded with worlds circling every kind of star imaginable—very strange, indeed.

Keep up with the latest findings from the Spitzer at [www.spitzer.caltech.edu/](http://www.spitzer.caltech.edu/). For kids, the Infrared Photo Album at The Space Place ([spaceplace.nasa.gov/en/kids/sirtf1/sirtf\\_action.shtml](http://spaceplace.nasa.gov/en/kids/sirtf1/sirtf_action.shtml)) intro-

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duces the electromagnetic spectrum and compares the appearance of common scenes in visible versus infrared light.

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



Artist's rendering compares size of a hypothetical hypergiant star and its surrounding dusty disk to that of our solar system.

**Please note that SMAS Dues for the 2006 year are now due.  
Please remit your \$20.00 today:**

**Smoky Mountain Astronomical Society  
P.O. Box 53265  
Knoxville, TN 37950**

The organizational meeting of the East Tennessee Space Society (ETSS) will be held on Thursday, April 13, 2006, at 7:00 p.m. in Knoxville, Tennessee. (The meeting venue is to be announced.) Contact Joe Holloway at (865) 237-7123 for more information.

# April 2006

SUN	MON	TUE	WED	THU	FRI	SAT
<div style="border: 1px solid black; padding: 5px; background-color: #e0e0e0;">                     UTK—roof of Neilson Physics Building                      on The Hill at UT                      1st &amp; 3rd Fridays                      TAO —Tamke-Allan Observatory                      Public Stargaze                      Watts Bar Lake, Roane County                      1st &amp; 3rd Saturdays                 </div>						1 <b>SMAS                      Star Party                      Unicoi Crest</b>  TAO
2	3	4	5	6	7  UTK	8
9	10	11	12	13  <i>Full Moon</i>	14 <b>SMAS                      Meeting                      PSTCC                      Rm 223                      7:30 pm</b>	15  TAO
16 Easter  	17	18	19	20	21  UTK	22
23	24	25	26	27  <i>New Moon</i>	28	29  <b>SMAS                      Star Party                      Unicoi Crest</b>
30						