

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

Society's Chronological Astronomical PaperS



From the Chair by Tom Rimmell

Since becoming the chairperson a couple of months ago I have had a great opportunity to get involved in the club as never before. I have set a couple of immediate goals for the club:

Club bylaws and constitution: A committee was formed, and they located a copy of the bylaws from 1988. It is uncertain if that bylaw and constitution was ever made official.

SMAS club logo: A few logo's are done and ready to present to the club for voting. If you have a design that you would like to present, bring it to this month's meeting so that we can have an opportunity to vote on it.

SMAS can truly function better if we do our best to share our hobby with others. For instance, one idea that was proposed in our last meeting was that we share astronomy to the public. That is a wonderful proposal, and I am sure there are many children and adults who would love the chance to look through a telescope. Please share with me your experiences and ideas on how we can find a way to take astronomy to those who would enjoy what we know of the sky. Please call or e-mail me at TomRimmell@cs.com if you want to discuss any ideas that you have that will make our club better.

Presentation for July

This month's presentation is a video called "Comet Odyssey." This is a real life journey about a group of amateur astronomers from Canada who travel to Arizona to expose several pictures of comet Hyakutake to create a time-lapse video.

THE SKY

STARGAZE BOOK: SUMMER MILKY WAY BY BOB ARR

*No telescope required
for this celestial treat*

The summer sky is inevitably a study of the heart of the Milky Way, which reaches our meridian about midnight in July. Its wonders are the high point of the year for amateur astronomers. Normally, a tour of the sky proceeds chronologically; that is, it starts with whichever constellation reaches our meridian first, then visits successive constellations as they arrive at the meridian. But the Milky Way is far larger than any constellation, extending from the southern horizon to the northwestern horizon, not quite vertically. Like a broad banner draped across the night, it divides the summer sky into three portions: that west of itself, itself, and that east of itself.

So our tour will echo the natural divisions of the summer night sky, beginning with that portion west of the Milky Way, then the Milky Way itself, and finally, that portion east of the Milky Way. Since the Milky Way lies diagonally across the meridian, some of the constellations in the three sections will necessarily be out of chronological sequence, but not by much.

Even though the Big Dipper is in the west, it points the way to the summer sky: follow its arc to Arcturus, the bright giant that anchors Bootes. The summer sky begins with Bootes. The center of action is mostly overhead, about 36 degrees declination, the same as our latitude (hard on necks and dobsonians). Following Bootes comes the semicircle of Corona Borealis, chased by the butterfly of Hercules and the Summer Triangle. Vega leads the summer triangle westward. Deneb, in Cygnus, is the northern tip of the triangle; Altair, in Aquila, the southern tip. Hercules' butterfly seems to be fleeing westward, chased closely by Vega. Note that the leading three stars of Hercules (i.e., the leading edge of the westward flying butterfly's wings) align directly toward Polaris (pretty close, anyway.) The Corona Borealis is just in front of the butterfly's head and slight south (just in front of the lopsided wing, the wing away from Polaris.) It's halfway between Hercules and Bootes.

The Milky Way extends southeast from Cassiopeia to beyond the southern horizon. (Of course, it actually extends beyond Cassiopeia all the way to the northwestern horizon and around the earth, but that portion near the northern horizon is faint and obscured by haze.) Near the southern horizon, we can see Scorpius just west of the Milky Way (red Antares gives it away, at the same declination as Sagittarius' Teapot which marks the exact center of the Milky Way). To the east of the Milky Way, Delphinus, Equuleus and Capricornus are the only easily recognized constellations. The widespread Aquarius is also there, to be sure, but hardly recognizable because it is mostly dim stars. This is the summer sky. Much later in the evening, the Great Square of Pegasus will rise in the east: it heralds the autumn sky.

ASTRONOMY CORNER LEVELS OF ASTRONOMERS

By John Sparks

*Sparky takes a look at our hobby and for some
obsession*

If you pick up almost any astronomy book or magazine, you may see a type of rating that is given for Astronomers. You will see words like "Novice, Beginner, Intermediate, Advanced and Expert" and wonder what these words mean. I have often asked myself; "What kind of Astronomer am I? What MAKES an Advanced observer...?" While I know of no true guide to answer this question, I have been able to create my own comparison, which I doubt anyone will agree with. While it is written from the male point of view, most of this article can easily apply to women amateur astronomers. The article is written with humor in mind and I do not wish to offend anyone:

Novice: Buys a 60mm refractor "For his son" for Christmas, looks at the Moon. Discovers the scope has malfunctioned because the girl next door appears up side down. If she is ugly, the scope goes into the trash because the dang thing won't show the foot-prints on the moon.

Beginner: Buys a 3-4.5" reflector from a department store to impress the girl next door. Invites her over to observe the Moon, Mercury, Venus, Mars, Jupiter, and Saturn and denies ever looking through her window. Now that she is suspicious, it's time to be more careful. He discovers that store-bought binoculars are better for looking at her and still does well on the moon. If he doesn't get caught peeping, he might advance to Intermediate.

Intermediate: Buys a 6-8" scope of some type that he saw advertised in *Sky & Telescope* or *Astronomy Magazine*. Observes details on the Moon and all planets except perhaps Pluto and some of their brighter moons. Starts observing Messiers and other bright deep sky objects with "monster binoculars" as well as the scope. He has started to harass his family and the girl next door with statements like "Let's observe details on Mars all night!" Something is going wrong! He spends more time looking up then looking next door. He buys a computer for the sole purpose of getting a deep sky planetarium and emailing other astronomers. If he doesn't get psychiatric counseling, he may become an Advanced Astronomer.

Advanced: Buys an 8-13" scope and perhaps a camera and widgets till his Visa is higher than the national debt. He has enough astronomy books to fill a high school library. He harasses everyone he knows with statements like "Let's go into the snow-bound mountains and look for Herschels and the moons of Uranus till the sun comes up! I wonder how many Dark Nebula I can spot with Binoculars?" He forgot about the girl next door and his family wants him in the funny farm. He just used 2 gigabytes of hard drive space on images and software and wants more. He has gone beyond psychiatric counseling and he might become an Expert Astronomer.

Expert: If his house hasn't been repossessed, he buys a 16-40" Light Bucket and drives his bills so high that he has to record the bill total in scientific notation. Otherwise, he makes due with what he has or can make. He has read enough astronomy books to fill the Library of Congress! Either he has observed so long that his eyes look like a member of Devo or he has grown a beard waiting on CCD or photographic images. Either way, he looks like an astro-guru. He has created enough images and complicated programs to crash a mainframe computer. He plans his vacations on taking long trips to nowhere or Caltech or observatories. He can compete with the John and William Herschel for whom has seen the most objects. He spends enough time with other astronomers till the girl next door thinks he's gay. However, his only love is for the sky and he took his telescope to the Justice of the Peace to make vows. In the end, he sits in awesome bliss. He's proud of the fact that his straight jacket holds more observing pins than General Patton had medals. When he passes on to that great observatory in the sky, his last wish will be that he is buried in his tube assembly. They will lower him into the ground to a recording of "When You Wish Upon a Star". His gravestone is a mirror blank that reads: "Astronomers never die, they just sail into the sky!"

TELESCOPE WARS BY MIKE LITTLETON

It was a great turnout at Look Rock on June 23rd for the Mars observing contest. There were upwards of 35 attendees with a range of scopes from small refractor to "light bucket". All present and willing served as judges. Telescope Wars 2001 was won by a 6" Edmund Scientific reflector nicknamed "Beauty" rode by a small plastic "Marvin Martian"! The owner was John Sparks. Ron Dinkins got honorable mention using a 6" refractor for his view of the Red Planet. Mars was its elusive self with only fair elevation above the horizon for this opposition in Scorpio. A blue filter was the filter of choice for observing the polar ice caps. Bob Arr showed up with a support rig for a set of 7x50 binoculars and a comfortable office chair modified for observing. It gave great wide-angle views of the Milky Way without the usual arm fatigue. If next time, Bob would only bring a table for next to the chair with cold drinks.

CALENDAR

- **7/5/01** Full Moon
- **7/13/01** Club meeting 8 PM at the Discovery Center Chilhowee Park Last Quarter Moon
- **7/15/01** Venus rises at 3:37 AM. Jupiter rises at 4:49 AM. Saturn rises at 3:37 AM. Mars rises at 6:16 PM and sets at 3:33 AM.
- **7/20/01** New Moon
- **7/21/01** Star party at Hooper's Bald, NC
- **7/27/01** First Quarter Moon
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UT sponsored events:

- **7/20/01 @ 10:00 PM** Public observing on the roof of the physics building
- **7/21/01** Obed Wild and Scenic River. Overflow parking lot at scenic overlook. Program followed by observing begins at 9:30pm.

Contact Paul Lewis at 974-7815, e-mail at gplewis@utk.edu, or visit his web site at <http://trdc.phys.utk.edu> for more information about these events.

Chill out and GO BALD by John "Sparky" Sparkman

In May, the Astrofreaks "scoped out" (pardon the pun) Hoopers Bald standing at over 5,400 feet. It took about an hour a half to get there from my home not far from the Discovery Center. While this is twice as long a driving time than Look Rock for me, it was WELL worth it! This view is the darkest SMAS has found since they put the casino in Cherokee! Hoopers Bald is just in North Carolina but can be seen from our Look Rock observing area.

Take highway 129S to highway 411S. At the Madisonville bypass, take 68S to Tellico Plains. To the left, you will find Chera-hola (May be spelled wrong) Skyway, also called highway 168. Follow 168 through Cherokee National Forest and into North Carolina. In North Carolina, it changes to highway 143 but is the same road. About 7 miles in North Carolina is the Hoopers Bald parking lot to the right.

You can also take I40E to I75S to Exit #60, highway 68 and follow through. The time is about the same from my home but I use more gas going that way.

The trip takes less time than Clingmans Dome from Knoxville and is much closer than the Big South Fork. You will rarely if ever see car lights and when you do, they pass almost harmlessly below. The light pollution is less than Clingmans Dome though you get a trace of it from metro Knoxville. The Northern view is fantastic and one only loses about 20 degrees to the southwest. If you like the darkest skies around, astrophotography or even planetary viewing, (or just want to cool off) you need to be there!

So if you want perhaps the best Starparty of the year, come join us at Hoopers Bald on July/21st. We will be there at 0-Dark Thirty should Mother Nature be kind enough to permit it. Be sure you have gas, coffee and snacks before you leave the BP in Tellico plains because you will see little if any civilization soon after that. Bring a thick jacket and blankets for tired guests, as it will be colder and windier than you may think. After you leave for home, put your car in second or even third gear if you hate flying because this isn't Look Rock where you can hit Neutral to highway 321! This is as close to nowhere as SMAS may ever get! However, there are restroom facilities at the parking lot that are very convenient if you use a flashlight. Your optics should be well prepared after Telescope Wars last month so I hope to see you there! **Clear skies:"Sparky"!**

JUNE CLUB MEETING BY LEE ERICKSON

The June meeting of SMAS was held on June 8, 2001. There were 19 persons in attendance. There were five were guests and two new members, Terry Kiraly and Steve Rothschild. Bob Arr reports first light for the club's refurbished 20 telescope, SASQUATCH, was a success Wednesday May 16th at Look Rock. Bob Arr was kind enough to loan his 9'-ladder, his telrad and his eyepieces for the events. Note to those who have used the 20 inch before, all bolts requiring wrenches have been replaced by thumbscrews. The regularly scheduled party for 5/19 was clouded/rained out and was recalled for 5/26. Again SASQUATCH shone. Bob Arr also reports that member donation have been received sufficient money to offset the cost of rebuilding SASQUATCH and with some to spare. Bob made a motion that the remaining funds be used to purchase a 9' ladder for the club and a telrad. The motion was seconded by Sparky. After some debate of the merits of telrad and finderscopes the motion to purchase a telrad and ladder was passed. Pete Youmans has offered a big finder scope.

Several members were trying their hand at creating SMAS logos, but that remains a work in progress.

Tom Rimmell has asked Bob Arr to be the interim co-chair. (The recently found bylaws indicate that Bob will still require confirmation at the next club meeting.) Bob has accepted the interim position. Also with the materials transferred to the president and the new treasurer is a 80-mm refractor. This refractor uses 1 1/4 eyepieces and is in need of cleaning. Tom Rimmell has begun cleaning the telescope. When the cleaning is completed, it will be available for use by club members.

Rob Feldhege reports that he has finished the 2" collimator for SASQUATCH. Mike Fleenor reports on Observing Reports on the Internet web site. He stresses that these are not to take the place of the newsletter. Articles are still needed for the newsletter.

Lee Erickson suggested we organize an introduction to astronomy for children. Lee described how the Experimental Aviation Association organizes events where children are introduced to aviation as something they might do, not just something other people do. Lee reports that Scouts and Home School Organizations are fertile grounds for finding groups of well-behaved children (with adults to supervise) to introduce to astronomy. Lee suggests we consider having an observing event unrelated to our star parties. We could choose an evening where there is more moon than we would like for a star party and show kids the Moon as most of them have never seen it before. There is a Scout astronomy merit badge. We could greatly help Scouts pursuing this merit badge.

Sparky gave a report on the impromptu star party on 5/26 at Look Rock. The clouds were intermittent and at midnight everyone decided to call it quits, but good use was made of the time with clear skies. Then for the viewing pleasure of those present, Sparky performed "Marvin the Martian" (Boogie on the face of Mars). Now, we know how the first man landing on Mars is to sound.

The meeting wound down with an "Understanding the Universe" videotape on the Solar System. We learned that Mercury has an unusual rotational period linked to it's orbital period, Venus has a runaway green house CO₂ atmosphere. Mars presently has insufficient atmosphere for much greenhouse effect even though CO₂ is the major component of the atmosphere. And just like in Goldylocks and the Three Bears, Earth is just right.

WANTED: AUTHORS FOR SCRAPS-NO EXPERIENCE NECESSARY!

Have you made a modification to your telescope that you are proud of? Find a piece of sky that is overlooked in *Burnham's Celestial Handbook*? Have you just attended the Cleveland Star Stare? Share your experience with the rest of SMAS and potentially anyone with access to the Internet by writing an article for SCRAPS. It doesn't have to be Shakespeare and the SCRAPS editor will clean up the grammar if needed.