

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

Society's **Ch**Ronological **A**stronomical **P**apers



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Message from the President

In just a few weeks, SMAS will be hosting the Cades Cove Star Party in conjunction with the Great Smoky Mountain National Park Service. This is our most important public event of the year and I hope we can get a good turn-out by our own members. I want to thank Michael Littleton for shouldering the responsibility to organize this event for our club.

We want people to leave this event with a good impression of SMAS and also know how to contact us if they want to pursue activities in amateur astronomy. There are 2 things each member can do to help publicize our club during this event:

1. Donate some old "Sky and Telescope" or "Astronomy" magazines to be handed out at the event. Bring the magazines to our September 9th meeting and we will place a SMAS label over the mailing address label. This will protect your privacy and at the same time get our Web address in the hands of the public.
2. Bring a supply of "SMAS Business Cards" to the event. There several templates in the Files/SMAS folder on our Yahoo Web Site. Choose the style you want, print them on card stock paper, cut them into the proper sizes, and give them out at Cades Cove anytime someone indicates an interest in our club or in Astronomy in general.

However, the most important thing to do is to "BE THERE". We need plenty of scopes because we always have a large public turnout. Please support our club and help out with our Cades Cove Starparty Event. Attend our next meeting (September 9) and learn all the details and timetable of the event.

Note: We will be having our annual club picnic on the observing field before the Star Party begins.

Jim Sanders

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Profile of SMAS Member

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Viewable only by SMAS Members

Upcoming Club Events

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SEP 7, 2011 – ORION Amateur Science and Astronomy Club, Grove Theater, Oak Ridge, Tn

Tentative program:

SEP 9, 2011 – Regular SMAS meeting at PSTCC

Tentative program:

1. Business Session
2. Michael Littleton – Planning for Cades Cove Event (Sept 24)
3. Michael Reuter – Stellar Nucleosynthesis
4. Jerry Kornegay – Quick update on “Constellation of the Month Project”
5. David Fields – Group discussion on Fighting Light Pollution

SEP 24, 2011 – Cades Cove Star Party (weather permitting).

OCT 1, 2011 –SMAS Star Party at Look Rock (weather permitting).

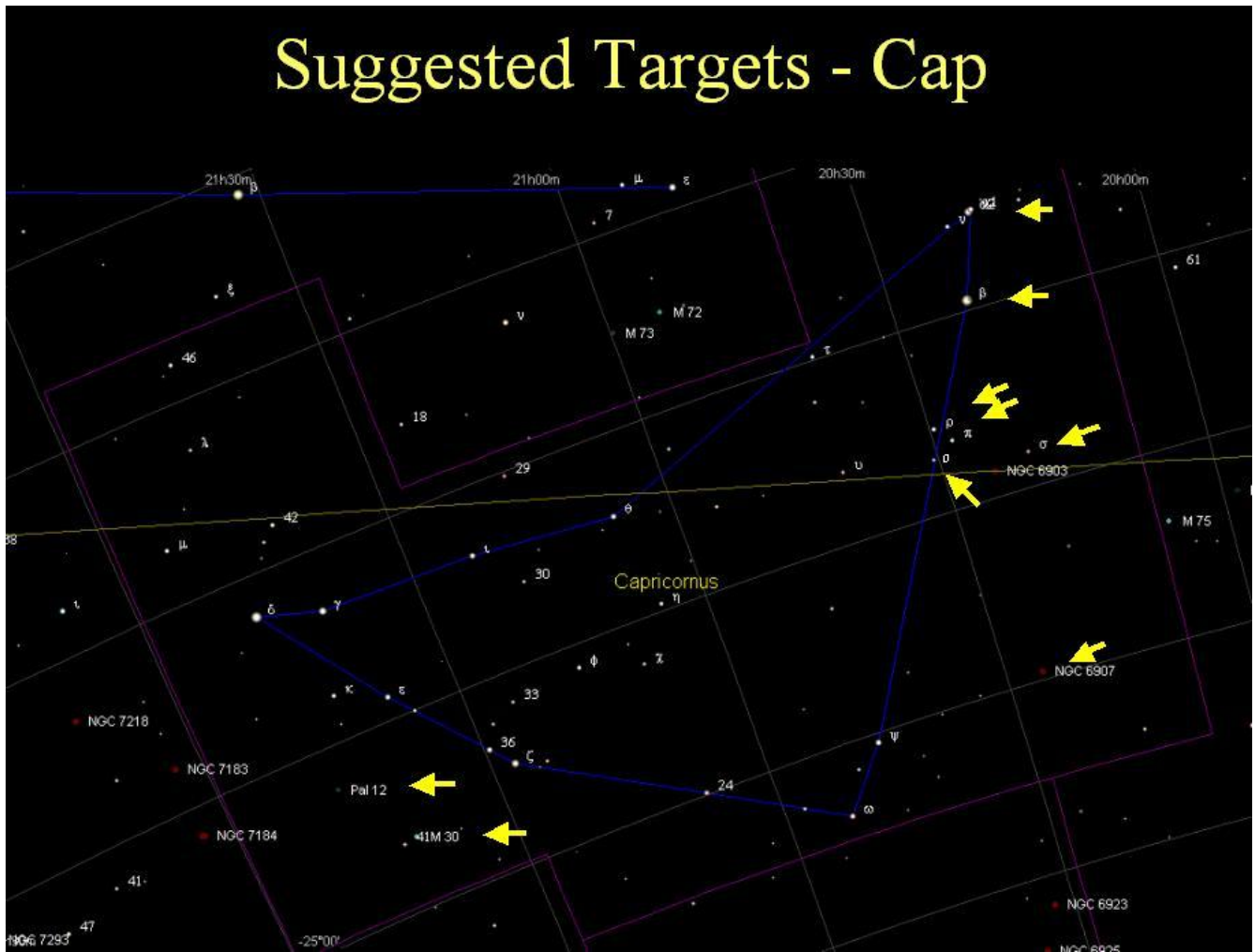
Constellation of the Month

Constellation of the Month - September 2011 - Capricornus

For our September constellation of the month, we continue our movement along the zodiac to its 10th constellation - Capricornus. Capricornus is just east of the rich area of the Milky Way, but surprisingly, is very thin on good deep sky objects. M30 is a major Globular Cluster, but that is the only Messier object in Capricornus – no open clusters, no diffuse or planetary nebula, and only a few faint galaxies. There are, however, several good double star targets – most with wide separations which makes them excellent targets for binoculars or small telescopes.

We hope that SMAS members will report on their observation so that we can compile a guide on expected views from different sized scopes. This guide would be especially useful for persons new to astronomy but the more experienced members may also benefit.

As Lee Erickson pointed out during our July meeting, at one time (about 2000 years ago), the Sun reached its southernmost declination in Capricornus at the winter solstice. Although precession has moved the Sun's position at this time to Sagittarius, the connection is preserved in the name "Tropic of Capricorn".



Suggested Targets for Capricornus

Name	Other ID	Type	Description	Viewing Instrument
M 30	NGC 7099	Globular Cluster	Fairly large Globular Cluster	Can be viewed with Binoculars or Small Telescope
	NGC 6907	Galaxy	A barred spiral, with one spiral arm brighter than the other.	Requires large scope to view details
Palomar 12		Globular Cluster	A relatively young globular cluster	A challenge to see even in larger scopes - very faint
α		Double Star	Optical double - very widely separated	Small Telescope - 25X
β		Double Star	Optical double - very widely separated; one star has a faint companion	Small Telescope - 25X
σ		Double Star	Wide pair; bright reddish-yellow primary star with faint white companion	Small Telescope - 25X
ρ		Double Star	Optical double - very widely separated	Small Telescope - 25X
\omicron		Double Star	Almost identical stars with reasonable separation	Small Telescope - 25X
π		Double Star	Close binary pair	Challenge for small scopes

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Upcoming Celestial Events

- **September 12** - Full Moon. This full moon was known by early Native American tribes as the Full Corn Moon because the corn is harvested around this time of year. This moon is also known as the Harvest Moon. The Harvest Moon is the full moon that occurs closest to the September equinox each year.
- **September 23** - September Equinox. The September equinox occurs at 09:05 UTC. The Sun will shine directly on the equator and there will be nearly equal amounts of day and night throughout the world. This is also the first day of fall (autumnal equinox) in the northern hemisphere and the first day of spring (vernal equinox) in the southern hemisphere.
- **September 25** - Uranus at Opposition. The blue-green planet will be at its closest approach to Earth and its face will be fully illuminated by the Sun. This is the best time to view Uranus. Due to its distance, it will only appear as a tiny blue-green dot in all but the most powerful telescopes.
- **September 27** - New Moon.

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Meeting Minutes

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**Minutes of the August 12, 2011 meeting
of the Smoky Mountain Astronomical Society
Notes taken by Michael Reuter**

Members in attendance:

Roy Morrow, Mike Littleton, Brent Holt, Jerry Kornegay, Gary Bridges, Ralph Bridges, Vince Diaz, Lee Erikson, Yuko Komata, Michael Reuter, Jim Sanders, Duane Dunlap Michael McCulloch.

Technical Difficulties

- Locked out of the projection computer
- Key not out to unlock cabinet in classroom
- Did low-tech presentations: writing on dry erase board

Treasurer's Report: Brent Holt

- Numbers are rounded due to presentation method
- Balance on 01/11/11: \$690
 - Dues: \$1034 (includes donations for tracking platform)
 - Bills
 - Astroleague: \$145
 - Liability Insurance: \$320
 - Post Office Box: \$71
 - Sasquatch Tracking Platform: \$425
- Balance on 08/12/11: \$902

Great Smoky Mountains National Park Star Party Planning: Mike Littleton

- Date: September 24, 2011
- Twilight ends at 20:54
- Lessons learned:
- Keep visitors interested before dark
- Target list vetting so no two scopes have same object
- Vehicles will be allowed on field during loading/unloading, off to side during star party
- Went over proposed schedule of events during the party:
 - 17:00 Arrive at the GSMNP Orientation Shelter
 - 17:30 Escort from GSMNP Orientation Shelter to starparty site
 - 17:45 Picnic and set up telescopes
 - 19:30 Rangers move visitors from assembly area to starparty site
 - 19:31 Sunset
 - 19:45 Introduction by Mike Maslona, Park Ranger Service
 - 19:55 SMAS introduction and description of various telescopes by Jim Sanders
 - 20:15 Cherokee sky folklore by Angela Quick
 - 20:30 Visitors move to telescopes and naked eye astronomy by Angela and other
 - SMAS members assisting with laser pointers
 - 20:30 Observing
 - 20:54 Night starts
 - 22:30 End of starparty and pack up
 - 23:00 Leave GSMNP
- Discussed roles for people who don't have telescopes: laser pointer helpers, magazine

distribution

- Jerry Kornegay will contact Sky and Telescope for pamphlets and extra magazines
- Lee Erikson will be the coordinator (food czar) for the picnic

Award Presentation: Jim Sanders

- Gary Bridges received an award certificate and pin for completing the Astronomical League's Constellation Hunter observing club

Constellation of the Month: Jim Sanders

- CoM is Sagittarius
- Discussed proposed target list:
 - Emission Nebula: M8, M17, M20
 - Open Cluster: M18, M21, M23, M24, M25, NGC6520
 - Globular Cluster: M22, M28, M54, M69, M70, M75
 - Planetary Nebule: NGC6818
 - Double Stars: Arkab, Pz 6, Beta 245 (catalog by Sherburne W. Burnham)
- NOTE: Target list objects are suggestions, please feel free to add other objects that interest you!
- M22 and M8 are must see targets
- Arkab (Beta Sagittarii) is higher in declination than Omega Centauri, so it's visible from Unicoi Crest

Visit to Greenbank Observatory: Duane Dunlap

- Visited during a trip to West Virginia
- Robert C. Byrd Green Bank Telescope (GBT) is largest steerable radio telescope
 - 100 meter diameter, 7854 square meter collection area
 - Panels individually controllable for extreme shape accuracy
 - During visit, the GBT was moved to a new target position
 - Duane will show his photos off at next month's meeting



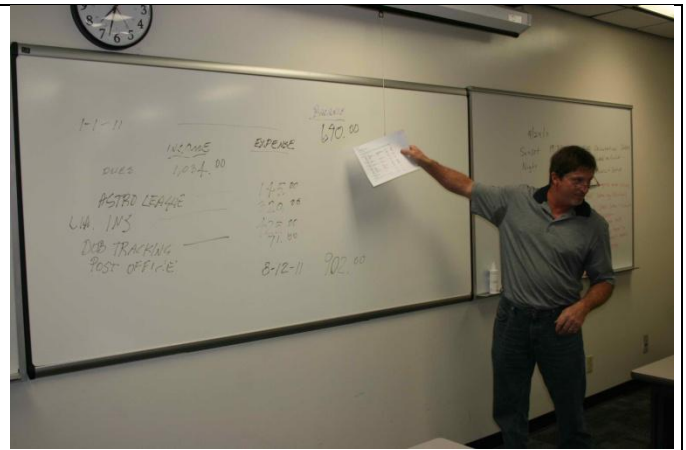
Members



Members



Lee Assembling Name Buttons



Brent giving the Treasurer's Report



Gary Bridges receives the Constellation Hunter Observing Club Award from Astronomy League



Constellation Hunter Award Pin

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September 2011

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
				1	2 UT K	3 TAO
4	5	6	7 ORION club meeting Grove Theater, Oak Ridge, Tn	8	9 7:00 PM SMAS Meeting PSTCC	10
11	12  Full Moon	13	14	15	16 UT K	17 TAO
18	19	20	21	22	23 September Equinox	24 SMAS Star Party and Picnic at Cades Cove
25 Uranus at Opposition	26	27  New Moon	28	29	30	1 SMAS Star Party Look Rock

UTK – roof of Neilson Physics Building on the Hill At UT on 1st and 3rd Fridays
<http://www.phys.utk.edu/trdc/telescope.html>

TAO – Tamke-Allen Observatory
Public Stargaze
Watts Bar Lake, Roane County
1st and 3rd Saturdays
<http://www.roanestate.edu/obs/>

SCRAPS is edited by J.C. Sanders

Please send any comments or corrections to: sandersj@chartertn.net