

Smoky Mountain Astronomical Society

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

Society's Chronological Astronomical Papers

My First Star Party—by Jim Sanders



M 35 in Gemini

I had the pleasure of attending my first star party at Unicoi Crest on April 17, 2004. It was quite an experience and I appreciate all the help I received that night. I was impressed with the views of galaxies through other member's scopes. For the first time I saw the dust lane in the Sombrero Galaxy (M104). There were other great views of M101, M81 and many impressive nebulae. The combination of a dark site and large aperture scopes really made the difference.

I am working on my Binocular Messier Club (Astronomical League) and I was able to observe 5 new objects during the evening. After I locate the object in my binoculars and make my hand sketch, then I like to try and capture it with my 35 mm camera. I mount the camera "piggyback" on my LX200. The photos came out quite well (at least I think so). I used 800-speed film with an exposure of about 90 seconds. I got the film developed for free at the drug store because they did not think any exposures were made. The sky was so dark, that I even thought I had messed up! I can usually pick out the frames because of the sky glow - but not in this case. I scanned the film using my Nikon CoolScan IV and the stars popped right out at me. I traded emails with Michael McCulloch and he showed me a technique to remove some of the film grain that shows up during scanning. I was pleased with the color of the stars and the fact that no field rotation was noticeable. I have included a few examples of the photos taken that evening.

Viewing at Unicoi Crest was wonderful, but the help and tutoring from SMAS club members was the best part of the entire evening.



M 46 & M 47

The Wiz

Dear Wiz,

I bin out when it's 30 degrees and ain't got no dew. How come I get it when it's 65 degrees? I thought it came when the air got cool.

D. Thang

Dear Dewey,

It does. Sometimes. You've heard of humidity. It's usually thought of as the amount of water in the air. Fuzzy thinking.

The problem is Relative Humidity, not just humidity. All air holds some water (maybe only a tiny bit in the winter), but generally speaking, the warmer the air the more water it can hold. At 80°, a cubic yard of air can hold (approximately) a gallon of water. But just barely. We say that that chunk of air is at 100% relative humidity. Another way of saying it is that its dew point is 80°.

Cool it down to 65°, and all it can hold is three quarts of water. What happens to the other quart? It condenses: first dew, then clouds, then rain, as its temperature falls.

What to do about dew? Really, a little common sense is all that's needed. If today isn't muggy and the weather has generally been dry for a day or two, you probably don't have any dew worries.

If the dew point is 10° (or more) below the forecast low, you've got it made, because it's not going to get cold enough to dew. (But UC will certainly be colder to start with, maybe 8-10°) Check the Knoxville weather: it's as close as you're going to get.

If the night's low is predicted to be within a few degrees of the dew point, it may or may not be a problem. A typical nighttime temperature drop is 20°, but the low occurs about sunrise. Will you be out that late?

The real trouble comes if the temperature starts getting down to the dew point at observing time. Then, localized conditions will become dominant.

Will you be observing where there is a concentration of moisture - near a lake, or at a site that has had recent rain? Remember, weathermen deal with averages for a 100-mile radius, not just the Top of Old Smoky. When they say the dew point is 60°, they mean an average for the entire Tennessee valley. If a thunderstorm has dumped on Unicoi Crest all afternoon, they will not notice it, but UC's dew point might be 70°!

(continued)

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Supposedly, Clear Sky Clock is sensitive to this very issue, and takes such local conditions into account. But these are based on historical data (read probabilities) not immediate observations, and on a given night can be dead wrong. (For instance, depending on a slight breeze, the influence of Santee-lah reservoir, 5 miles away, may or may not affect UC's dew point.)

I recommend checking the forecast low and the dew point before you leave the house. If the dew point and the forecast low at your proposed location will be near each other at observing time, take your anti-dew equipment and full batteries with you. Put your dew shield on as soon as you set up, and keep your eyepieces inside their case when they're not in use. If you have electric heaters, turn them on as soon as you set up.

Don't wait for the first sign of dew before you fight back. Equipment that is already warmed can delay the dew for an hour, perhaps all night. When all else fails, you may be able to put a piece of equipment inside your car under the dashboard for ~10 minutes and give it a quick hot air bath. It works!

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Editor—Peter Bush

Please direct articles and pictures to me at: **865-453-8376** or pbush1@bellsouth.net. Also note the deadline for submissions posted on the calendar (attached). It's my goal to work on the newsletter the last weekend of the month so members will receive it by the 1st of the following. Any and all ideas regarding SCRAPS content are welcome, and will be given due consideration.

*** Special call for Pictures *** I'd like to include some of your pictures and drawings of celestial objects. If you have some you'd like to share, e-mail me a copy for an upcoming SCRAPS!

May 2004

SUN	MON	TUE	WED	THU	FRI	SAT
<div style="border: 1px solid black; padding: 5px; width: fit-content;"> UTK—roof of Neilson Physics Building on The Hill at UT TAO—Tamke-Allan Observatory Public Stargaze Watts Bar Lake, Roane County </div>						1 TAO
2	3	4	5 <u>Comet Neat</u> low in Southwest Evening	6 	7 UTK	8
9	10	11	12	13	14 SMAS Meeting PSTCC RM 223 7 PM	15 Star Party Unicoi Crest TAO
16	17	18	19 <u>New Moon</u>	20	21 UTK	22 Public Star Party Look Pebble
23	24	25	26	27 <u>Comet Linear</u> low in west- southwest Evening	28 	29
30	31			<div style="border: 1px solid black; padding: 5px; width: fit-content;">Transit of Venus Coming - June 8th</div>		