The Meteor
The Newsletter of the Astronomical Society of Greenbelt
Aug. 2008

The Meteor is the official publication of the Astronomical Society of Greenbelt, Greenbelt, MD. Articles and other contributions are welcome. Membership in the Astronomical Society of Greenbelt is open to anyone interested in astronomy. The Astronomical Society of Greenbelt is a not for profit community based organization with the goal of encouraging public interest in science & education in general, astronomy in particular. More detailed information on our club activities and organization can be found at the website of the Astronomical Society of Greenbelt.

The editor of this newsletter, Craig Levin, can be contacted at: clevin@ripco.com.

Editor’s Notes

This is the first issue of the Meteor to be placed on the website of the Astronomical Society of Greenbelt. This was done to ensure that every member enjoys the Meteor in as timely a fashion as possible. If you would like to see something in the Meteor that you currently don’t see, please contact me, & I will do my best to fit it in. I would like to invite everyone to write something for the Meteor—book reviews, observing notes, whatever you’d like to write of an astronomical nature.

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For a preview of this month's celestial events, see the Harvard/SAO's [Current Night Sky](https://currentnightsky.org) webpage.
Aug. Sky Notes:

If you were lucky enough to travel to the Far North, an eclipse of the Sun took place on Aug. 1. Its complement, an eclipse of the Moon, will take place on Aug. 16. Unfortunately, Americans will mostly be deprived of its pleasure, as the eclipse will have all but passed by Moonrise on the East Coast. For more on these eclipses, see the NASA Eclipse Web Site.

If you're planning to stay home, as I am, this month's big celestial event is the Perseid meteor shower. This year, its peak will be on the midnight between 8/12 & 8/13. The Perseids were one of the first meteor showers to be noted. Unlike other major showers, like the Quadrantids, the Perseids arrive in summer, when nights are warm. Before fans & air conditioning became common, many people would set their beds outside or on balconies to catch the breezes, so the Perseids would naturally attract their notice. In some parts of Europe, the Perseids are called Saint Laurence's Tears. This custom started in the Late Middle Ages, because the peak night of the Perseids is close to Saint Laurence's Day in the calendar of the Catholic Church (Aug. 10).

Metors, unlike their parent comets, have a low profile in folklore. Because St. Laurence was done to death on a grill, the Persids were sometimes said to be his white-hot tears. Some people thought metors were faeries or angels winging their way to Earth. Others said that if you wished upon a metor, that wish would come true over the course of the year. Although Tycho Brahe showed that novas & comets were phenomena that were outside the Earth's atmosphere, it took another two centuries after his death for scientists to come to the conclusion that metors were the products of the erosion of minor planets as they pass close to the Sun.

Star Party & Business Meeting Reports

7/12, by Matt Eliott:

It was my intention to get to the star party between 8:30 & 9:00. However, life happened, and it was 9:45 when I got there. At that point, I was the only one there. However, as I walked down the gravel part of Northway, I passed two cars and one pedestrian - if appearance are any guide, the pedestrian wasn't out to star gaze.

Visibility was lousy. It was hazy and at times breezy. When I first got there, I couldn't even find Albireo. With a little self-convincing, I decided I was seeing 3 stars in the Little Dipper, so by that rule of thumb, limiting magnitude was 3.

Using 8 x 56 binoculars, I looked at Jupiter. I thought I could just make out one moon. Then I turned my attention to our moon for a bit. Then I skinned around the sky, but seeing was bad. After about 15 minutes, I was getting attacked by mosquitoes and was about to leave when Tom Teutsch arrived. He had his Astroscan and we used it to try to find Albireo - no luck, since visibility was decreasing. We did look at Jupiter (saw two moons with the Astroscan) and the moon for a while. We both left about 11:00, and no one else came during that time.

Clear skies!
7/26, by Martha Gay:

Carol Beigel and I were there, starting at about 8:30 PM. As has often been the case, a couple of members of the public beat us. I set up my refractor and showed off Jupiter, which was about the only thing we could see. It wasn't cloudy, but the transparency was poor. Poor transparency plus light pollution results in scarcely being able to make out the Big Dipper, let alone any DSO's, so I was very thankful for Jupiter. I packed up about 10, just as some other folks arrived - Tom Teutsch and two new folks who had recently moved to the area. They had their own scope.

We need more participation at these events, but I can't fault people for not coming - conditions were quite awful.

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**When the Amateurs Ruled the Skies**


Professional astronomy in the 19th century was very different from today's science. The government observatories of the day, such as Greenwich or the USNO, were devoted primarily to the measurement of the motions of the Sun, the Moon, & the planets & mapping the stars for the purpose of providing navigators with better & better charts & tables. This facet of astronomy-uranography & astrometry-is as old as the science itself.

On the other hand, descriptive astronomy-the study of the planets & of deep-sky objects in their own right-was the nearly exclusive province of amateurs. As an amateur astronomer who is fascinated by the history of astronomy, & especially of astronomy as a hobby, I was delighted to read Chapman's book. Some amateurs, like Lord Rosse of Parsonstown or the Herschels, were wealthy enough to construct observatories that were as good as the government observatories, if not better: Rosse's 72 inch reflector was the the world's largest telescope until Mount Wilson's 100 inch was built in 1917, more than a generation after Rosse's telescope was no longer used, & nearly three generations after its first light! Other amateurs, with smaller resources, were mapping the Moon & Mars, studying the storms of Jupiter & Saturn, & discovering most of that century's minor planets. Chapman also tells the story of how the British Astronomical Association was founded, & how amateurs reacted to the encroachment of professionals moving into the field of descriptive astronomy.

My only regret is that this book is very hard to find for sale. I was able to read it through the good services of my local library, which obtained a copy through interlibrary loan.

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**Early Perseid, the Real Northern Coalsack, and Sucker Holes**

by G.W. Gliba

We had partly cloudy to mostly cloudy observing conditions at our cabin in Mountain Meadows, West Virginia on July 5/6. The nice celestial alignment of the Moon, Regulus, Mars, and Saturn was seen during twilight making a straight line on the ecliptic. We got some nice views of the Moon; then Saturn with the 50 year old 4-inch F/11 Dynascope. I was able to get in two hours of meteor observing later, and Lynne and I both had some great views of the Summer Milky Way though some sucker holes with both the naked-eye and a pair of 12x63
Optolyth binoculars.

Although I was able to observe several meteors for two hours with fairly good transparency, I still needed to take a 20 min. break during the observing periods, because of low batteries at the end of the first hour. Although the average limiting magnitude was fairly good, for brief periods it was as good as 6.7 magnitude, and structure could be seen well in the Milky Way starclouds. It looked somewhat like curdled milk in Cygnus near Sadr, and the dark (Barnard) nebulae stood out well against the starry background.

One thing that this made me aware of was that the popular astronomy literature often mentions the Northern Coalsack as being located in the Northern Cross, SE of Deneb. This is considered the northern counterpart to the Coalsack that is located in the constellation Crux, the Southern Cross. However, a far more prominent dark nebula region is located just NW of Deneb. It stands out like a sore thumb in a dark sky! I call this object "the real northern coalsack".

From 5:09 to 6:09 UT I was able to see 14 meteors with an average of 35% clouds and a LM of around 6.2 magn. After a 20 minutes break, I observed meteors again from 6:30 to 7:30 UT. For this hour there was 20% clouds and an average LM of around 6.3 magnitude. There were 12 more meteors seen then.

The best meteor seen was a nice -1 magn. blue-green July Andromedid seen at 6:41 UT that has a 2 second train. It may have actually been an early Perseid, as it was close to the predicted location of that radiant too! There were also a couple early slow Alpha Capricornids, 5 Anthelions, and 18 sporadics seen as well. Despite the variable cloudiness, it was a pleasant night observing the Summer sky.

Mason Dixon Star party report
by Carol Beigel

Editor's note: This is also in the current NOVAC newsletter.

Summer star parties usually have two threads - the sky and weather - and the Mason Dixon Star party had notable moments on both fronts. I arrived on Wednesday and left on Sunday, and this report is based on what I could see using my Canon 10x30 IS binoculars.

Wednesday night showed a progression of of ever increasing sucker holes, and between 2-4am the North, East and Zenith were showing very clear views of Cassiopeia to the Pleiades and the Summer Triangle. The Milky Way, Andromeda Galaxy were visible naked eye, and all the stars in Kemble's Cascade were visible in the binos.

Thursday night was hazy but ok to start. About 3:15am there was a loud explosion with a shock wave that just went through me and shook my camper trailer. We thought a propane cylinder had exploded, but there was no other noise, or flame, or distant fire engine sounds, or anything!!! Probably a sonic boom.

Friday evening started off clear, but no one paid attention to the cloud bank in the West as the sun set. There was a light dome in the South (Wed-Fri) so only the above was somewhat decent in all the humidity. Clouds moved in and the partying started. At midnight, fireworks could be spotted on the Western horizon just above the tree line. They were far enough away that we could not hear them, and the bursts were about the size of a quarter in the distance. Without warning, the sky opened up to a heavy rain for about 40 minutes. I had just gone to bed when the rain started, and I never hear such running and scurrying about as the astronomers stampeded to cover their gear!
Saturday was memorable. A thunderstorm struck early in the afternoon during the picnic. The poolside drawing for the door prizes started at 5:00 pm and a super whopper of a thunderstorm struck. This time the rain came sideways, so even sitting under a wooden roof we got wet and dime size hail struck our legs. It poured forever and lightning struck all around us and the drawing had to be interrupted. The damage on the astronomy field above us was notable. Most free standing canopies and awnings were pranged and many covered dobs were full of water. It took hours to towel off the equipment but nothing could dry in the ground fog that covered the field. It was a most beautiful evening, serenaded by gun shots, with billowing clouds to the East that reflected the awful lightning hitting the ground somewhere else! A very long light show indeed! When it got dark, the sky was awesome! The Southern sky had no light dome and the Milky Way was totally visible with the naked eye. I could see M4 in binos! It’s a shame so many telescope set ups were knocked out by the evening thunderstorm because it was a night that astromoners dream about!

Once again, the Mason Dixon star party was a pleasure to attend - especially with a 7-yr old! There is a nearby state park with free swimming, boating and fishing as well as a very nice pool on location - not to mention the free donuts and pastries every morning! We plan to attend again next year!