METEOR


METEOR is the official publication of the Greenbelt Astronomy Club and is distributed monthly as a privilege of membership. Articles and other contributions are welcome. Membership in the Greenbelt Astronomy Club is open to anyone interested in astronomy. The club meets on the last non-holiday Thursday of the month at 7:30 pm EST at the H.B. Owens Science Center. The Editor's address is: G.W. Gliba, 58-D Crescent Road, Greenbelt, Maryland 20770.

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Greenbelt Astronomy Club

The monthly meeting was held on October 24th at 7:30 pm EDT at the H.B. Owens Science Center. President Doug Love mentioned that Astronomical League dues are going up soon, and that we may want to increase our dues to offset the increase. Sue Bassett mentioned that there are still some places left for the Feb. 1998 Total Solar Eclipse Trip to the Dutch Island Curacao. There will be a project STELLAR star party at Brandywine Elementary School on Oct 29, 1996 at 5:15 pm EST. Members are asked to attend and bring telescopes if they can.

Next month, Dr. William T. Bridgman will give a presentation at the Nov 21st meeting titled "What Makes the Stars Shine". Tom is an active club member who is an astrophysicist involved with the NASA/Compton Gamma Ray Observatory.

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Supernovae in NGC 1084 and NGC 5308

Being a type-II SN, this star had stayed at its discovery maximum magnitude of 14th for over two months, but has finally faded from view. We tried to find it on the morning of October 13th, at Mountain Meadow, near Mathias, West Virginia with a 24-inch Dobsonian reflector, but didn't see it. It was last seen on September 21st with the 12-inch Goto cassegrain at the Goodard Optical Site.

However, supernova hunters may want to see if they can spot the newly found SN in NGC 5308 in UMa. It is located about 20" SW from the galaxy nucleus. It was at V magnitude 14.05 on October 13.79 UT, when confirmed. In darker skies a good 10-inch reflector or SCT should spot it. It was found by Italian amateur astronomers Piero Mazza and Stefano Pesci visually with a 16-inch reflector when it was at 14.5-15.0 magnitude (pre-maximum) on October 12.79 UT. According to IAUC 6491, spectra obtained by J. Huchra and L. Macri on Oct. 15.1 UT with the 1.5-m Tillinghast telescope show that this is a type-Ia supernova. It probably will not stay at maximum for very long if it is a type-Ia.

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Comet Tabur and Comet Hale-Bopp

Comet Tabur was seen in early October on the morning of the 5th and 7th. At
that time is was already brighter than 5th magnitude, which is about one magn. brighter than predicted. It was brightest on the 7th, and was an easy naked-eye object, even from downtown Greenbelt. It was near the front paw of Ursa Major. It was about 5th magnitude on the 5th and 4.8 magnitude on the 7th. It reminded me of the inner oval of the Andromeda galaxy (M31) seen with the naked-eye from downtown Greenbelt on the 7th! There was also a hint of a tail visible in 12x63 binoculars, but light from the crescent Moon was nearby; so it was hard to tell.

On the 7th the coma was 8 arcminutes wide, with an elongation 10 arcminutes long, with its major axis toward the Sun. A fairly bright and somewhat diffuse central condensation was also visible with the 12x63 binoculars. By October 9th the comet had faded back down to about 5.2 magnitude, and was harder to see with the naked-eye, but was still a nice object in binoculars. By the 11th it was not visible to the naked-eye, and was about 5.3 magnitude, but it was also getting lower in the sky. Maximum brightness occurred during closest approach to Earth, when it was distinctly brightest, on October 7th.

As it moved further north it finally became an evening object. It was seen on October 12th, and was holding at about 5.3 magnitude. About a week later, it fading from about 5.5 on the 19th to 7.8 magnitude on the 23rd, according to the International Comet Quarterly, which is much more rapid than predictions. This is a good example of the unpredictable nature of some comets. Below are predictions as taken from IAUC 6493:

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<th>Date</th>
<th>RA</th>
<th>Decl.</th>
<th>Delta</th>
<th>r</th>
<th>Elong.</th>
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Comet Hale-Bopp was also seen in early October on the night of the 3rd. It was about 5.5 magnitude, which means it had faded somewhat, but as it was seen from downtown Greenbelt, it may not have faded as much as it seems, as it was last seen before that in a dark sky without light pollution. It had a fan tail and a moderately diffuse central condensation.

On the evening of October 12th, from the dark skies of Mountain Meadows, at Mathias. West Virginia, Hale-Bopp was a beautiful sight in 10x50 binoculars. It had a nice 2 degree bent fan tail, that resembled the letter 'J'. In the 24-inch dobsonian reflector, the main tail was forked. and an anti-tail was also seen pointing directly toward the Sun. The central condensation was stellar. It was a pretty sight and was about 5.2 magnitude in 12x63 binoculars, but it was hard to see with the naked-eye.

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Northway Fields Public Star Party
by Thomas Trunk

I believe the following Club members were at the Northway Fields Saturday October 12th: Doug Love, Matt Elliott, Tom Trunk, Nelson Wallace, and Frank Coorsen. Guests: Jim (Doug's guest from Columbia, MD, astronomy club) and approximately 10 people from the public, including a young couple with their own 8-inch reflector.

Doug, Jim, Matt, and Tom, took advantage of the dark skies at 7:30 pm and viewed comet Hale-Bopp through Matt's table-top Astroscan. The comet,
about half the way up from southwestern horizon, appeared more star-like and lost its bluish nebulosity when compared to its appearance in binoculars. After about 20 minutes this scope began to lose its battle to the increasing humidity blanketing the softball field. The larger, longer focal length scopes with their deep-seated mirrors fared much better.

Among the early attractions of the evening were Jupiter, which is still in the vicinity of Sagittarius, and Arturus then setting in the northwest sky. Jupiter showed well with three of its satellites tightly grouped ellipsis-like near and to the planet's left side. Yet, the real beauty of the evening was the red and green scintillation of Arcturus. This very dramatic coloration and bright twinkling makes this star a must see for evening observing.

Several minutes later the Star Partiers were delighted to focus on the now ascending Saturn in the east. Saturn appeared very luminous and displayed its beautifully bright pastel color atmosphere complete with equatorial bands. If you strained your eyes you could almost see the secondary, midlatitude bands! The rings were observed to be bright and the adjacent "dark gap" had become more evident. Special thanks go to Nelson who shared with us this view through his homebuilt high-power 8" reflector.

The damp and chilly evening ended for some of us around 9:30 pm with a clear view of the Pleiades through one couple's 8" tracking reflector. This narrowfield view of Pleiads was observed to show only the central formation.

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The Amazing October 3rd Fireball - Taken from meteorobs network

Many sightings of a bright fireball being seen from Texas to California have been reported on various computer networks. A pair of scientists has determined these reports on October 3rd were actually two different events and that they might be related in a very unusual way. Mark Boslough, a physicist from Sandia National Laboratories, and John Wasson, a meteorite researcher from UCLA, now think that a meteoroid was captured by the Earth in its first pass over New Mexico and Texas, and became Earth's second moon for an orbit before reentering the atmosphere and exploding over California.

The main fragment, however, was moving so fast that its momentum carried it back out into space. Its velocity had been slowed from roughly 45,000 mph to 18,450 mph, too slow to allow it to escape the Earth's gravitational field. As a result, it went into orbit around the Earth. It circled the Earth once, and returned about 1 hour and 40 minutes later. By that time, the Earth's rotation had moved Texas out of the way, and replaced it with California. The object re-entered the atmosphere over the Pacific and reached the California coast near Point Conception. Several glowing embers were seen descending, as it passed just north of Bakersfield. Sonic booms were heard throughout this area. As yet, no meteorites have been found.

This meteor was similar in many ways the so-called "Peekskill fireball" on Oct. 9, 1992, which was captured on videotape from several locations throughout the eastern U.S., and resulted in the impact of a meteorite into a 1980 Chevy Malibu in Peekskill, New York. It was also similar to the Earth-grazing fireball of August 10, 1972, which skimmed through the atmosphere above the northern U.S. and Canada, and was filmed by tourist at Grand Teton National Park. That object was not captured, but was thrown into a new orbit that may bring it back near the Earth next year around August 11.

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