METEOR is the official publication of both the Greenbelt and Goddard Astronomy Clubs and is distributed monthly as a privilege of membership in one or both of these organizations. Articles and other contributions are welcome. Membership in the Greenbelt Astronomy Club is open to all, but membership in the Goddard club is only open to NASA civil servants and contractors. The Greenbelt club meets on the last non-holiday Thursday of the month at 7:30 pm EDT at the Owens Science Center. The Goddard Club meets on the second Tuesday of the month at the Goddard Space Flight Center at noon in Bldg. #3 Rm. #200. The address of the Editor is: 58-D Crescent Road, Greenbelt, Maryland 20770.

Goddard Astronomy Club

The Goddard Astronomy Club held its monthly meeting on Tuesday, Sept. 13th in Bldg. #3 Rm. #200. The major topic of discussion was on what could be done with the unused HST Fixed Head Star Tracker unidentified object data. Interest was shown among some observers to check out some of these unknown objects, some of which are as bright as 7.5 magnitude. The next Public Star Party with our sister organization, the Goddard Astronomy Club, will be held on October 8th at the Northway Fields in Greenbelt.

Greenbelt Astronomy Club

The monthly meeting of the Greenbelt Astronomy Club took place Thursday the 29th of September at the Owens Science Center. Guest speaker Robert Landis of the Space Telescope Science Institute gave a talk on the HST observations of the comet SL-9 Jupiter impact events. Before the talk by Dr. Landis, Don Butler gave a talk on accessories for astrophotography and observing. Doug Love also gave a brief talk on observing aids for amateur astronomers. George Gliba reported on the confirmation of the annual Triangulis meteor shower around Sept. 12th each year that was discovered by amateur astronomers recently.

Northway Fields Star Party

The September Star Party was held at Northway Fields on the 10th. Several people showed up to look at the Moon, Jupiter, and other objects of interest. The last Public Star Party of the season will be held on October 8th at the Northway Fields. Please attend and bring a telescope and a friend.

Labor Day Festival - Small Light Pollution Victory

The Light Pollution displays at the Greenbelt Labor Day Festival were a big success. Besides the usual posters on light pollution was the interactive light pollution adorama that Doug Love made that was entered in the Art Show. Also, a model of the proposed Northway Fields Observatory, made by Russ Waugh, was displayed. Several members of the Greenbelt and Goddard Astronomy Clubs attended. Thanks go to Don Haxton, Sue Bassett, Matt Elliott, Nick Isacone, Russell and Carol Waugh, George Gliba, Lynne Gilliland, and Doug Love for helping out.

We also found that it was because of our efforts at creating public awareness last year that the Greenbelt Co-op installed full horizontal cutoff streetlights. We found this out when Greenbelt City Council member Judith Davis stopped by to tell us she submitted our recommendation and it was accepted. Cudos to Greenbelt City Council member J. Davis from the Greenbelt and Goddard Astronomy Clubs.
New Annual Meteor Shower - Triangulids - by G.W. Gliba

A new annual meteor shower in the Aries-Triangulum area has been confirmed by several meteor observers in the USA and Europe. I was up at the dark sky site in Mathias, West Virginia and saw 22 meteors in five hours in two nights that were coming from this area of the sky. Other observers from the Greenbelt and the Goddard Astronomy Clubs, including Don Haxton, Lynne Gilliland, and Forrest Hamilton saw meteors coming out of the Aries-Triangulum region on Sept. 9/10, 10/11, and 11/12.

On the first night, September 10/11, between 8:07 UT and 9:07 UT I saw 4 meteors coming from a radiant just south of Alpha Trianguli. The next night, September 11/12, under even clearer skies, I saw 18 more meteors coming from the Aries-Triangulum region, mostly from an area just south of Alpha Trianguli, between 4:17 UT and 8:17 UT. The average magnitude of them was about 2.5 Mr. Author and observer Gary W. Kronk, from Illinois, saw 7 Triangulids in two hours and fifteen minutes on September 9/10, and 10/11. Although there have been a few negative reports, most other reports are positive. It will be interesting to see what Sky and Telescope hears from other observers in this country.

Gary W. Kronk sent me electronic mail about an observer in England, Malcolm Currie, who observed on five night, from September 9th thru 17th. Over a period of seventeen hours of observing he noted 35 meteors coming from a radiant that went just south of the star alpha Trianguli. Thus providing still another strong confirmation of this new annual shower in Triangulum, and from another country.

Some people have wondered why a major minor shower like the Triangulids was not recognized before, and there are several possible reasons. One, that most radiants from AMS and other organizations are not confirmed or are just chance alignments of sporadics. The late Charles P. Olivier, founder and director for life of the American Meteor Society (AMS) often mentioned that most of the many AMS radiants were either one time events or chance alignments. This is more true in the Fall than any other season as this is the time of year when the highest number of sporadic meteors are seen. Most importantly, was the good research by Gary W. Kronk in finding "evidence" for annuality in the literature.

Interestingly, there appears to have been an outburst of activity from the Alpha Aurigid meteor shower the night of September 11/12. I saw 10 meteors from this radiant in four hours, which is above average. However, Robert D. Lunsford, the meteors recorder for the Association of Lunar and Planetary Observers, who also saw some Triangulid meteors that night, saw 10 Alpha Aurigids in one hour! He also thought he noticed a possible meteor radiant near the Pleiades cluster in Taurus. Although my Alpha Aurigid rates were lower than his, I did see a point meteor near the star Epsilon Aurigae that may have nailed that radiant! This is the first, or possibly the second, point meteor I have ever seen. True point meteors are very rare. It was seen at at 7:27 UT.

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New White Spot on Saturn

Observer and telescope maker Tom Dobbins from Ohio has discovered a new white spot on Saturn. He found it with an 8-inch refractor of his own making. Dobbins is well known for his manufacturing of fine medium size refractors. He found the elongated white spot in the equatorial zone of the planet. It can be seen with a good 6-inch refractor or 8-inch reflector if the seeing is good. The planet Saturn is well placed for telescopic observation this month.

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PERIODIC COMET MACHHOLZ 2 (1994o)

Improved orbital elements from MPC 23956:

\[
\begin{align*}
T &= 1994 \text{ Sept} 18.8010 \text{ TT} & \text{Peri.} &= 149.2566 \\
e &= 0.750261 & \text{Node} &= 246.1808 \ 2000.0 \\
q &= 0.752551 \text{ AU} & \text{Incl.} &= 12.7877 \\
a &= 3.013353 \text{ AU} & n &= 0.1884209 \\
P &= 5.231 \text{ years}
\end{align*}
\]

Sept. 25 9 06.69 +20 55.9 0.731 0.760 49.0 84.5 8.0
30 9 20.42 +17 33.2 0.791 0.777 49.7 79.4 8.3
Oct. 5 9 33.52 +14 26.7 0.848 0.802 50.6 74.6 8.7
10 9 45.99 +11 34.4 0.902 0.834 51.7 70.1 9.1
15 9 57.83 + 8 54.8 0.953 0.873 53.1 66.0 9.5
20 10 09.01 + 6 26.4 1.000 0.916 54.7 62.4 9.9
25 10 19.50 + 4 08.1 1.042 0.964 56.4 59.3 10.3
30 10 29.29 + 1 59.0 1.080 1.014 58.4 56.5 10.8
Nov. 4 10 38.37 - 0 01.8 1.113 1.067 60.6 54.1 11.2
9 10 46.70 - 1 54.9 1.141 1.121 63.0 51.9 11.5
14 10 54.29 - 3 40.9 1.165 1.176 65.6 50.0 11.9
19 11 01.11 - 5 20.2 1.185 1.232 68.4 48.2 12.2
24 11 07.16 - 6 53.4 1.200 1.288 71.4 46.6 12.5

The orbital elements and ephemeris above refer to the principal nucleus, designated component A. Components B, C and D are designated in order eastward from component A and are thus the fourth, third, second and fifth components, respectively, mentioned on IAUC 6071, 6070, 6066, and 6071. Their positions can be described well with the above orbital elements, provided that T is changed to Sept. 18.866, 19.199, 19.206 and 19.267, respectively.

Total visual magnitude and coma-diameter estimates of component B (cf. IAUC 6071): Sept. 9.45 UT, 12.0, 2' (Keen); 11.51, 11.9, 1'.4 (Morris).

Total visual magnitude and coma-diameter estimates of component D (cf. IAUC 6074): Sept. 9.45 UT, 11.0, 3' (R. A. Keen, Mount Thorodin, CO, 0.32-m reflector); 11.48, 11.3, 3'.3 (C. S. Morris, Pine Mountain Club, CA, 0.26-m reflector).

1994 September 21 (6081) Daniel W. E. Green
HOPEWELL OBSERVATORY OPEN HOUSE, OCTOBER 7: Members of the Goddard and Greenbelt Astronomy Clubs and their guests are invited to an open house/star party on FRIDAY OCTOBER 7 at Hopewell Observatory, a private observatory near Haymarket Virginia. Equipment includes a 12" Wright-Newtonian and a 12" Cassegrain. The observatory is surrounded by a grassy field with plenty of room to set up your own scope. Electricity is available (bring your own extension cord), but there is NO water or sanitary facilities. DIRECTIONS: Take I-66 west to Exit 40 at Haymarket, turn left/south on US15. After 0.25 mi, turn right onto VA Rt.55, then after 0.7 mi turn right onto Antioch Rd., Rt. 681. Follow Antioch Rd. until it ends (3.2 mi), and turn left onto Waterfall Rd. (601). After 1.0 mi turn right onto Rt. 629. In 0.9 mi, enter at the orange pipe gate on the right; opposite to the entrance, on the left, is a stone gate. Proceed around to the right of the microwave relay station, and continue through the white gate behind it. Park among the trees at the observatory, or near the microwave station. The trip is about 45 minutes from the Beltway. We will probably open around sunset or so (bring a picnic if you like), and will continue until everyone leaves. For more information, contact Bob Bolster at 703-960-9126.