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 Owens Science Center. The address of the Editor is: G.W. Gliba, 58-D Crescent Road, Greenbelt, Maryland 20770.

Gréénbelt Astronomy Club

The March meeting was held at Owens Science Center on the 28th. Dr. William (Tom) Bridgman gave a talk on black holes. It was informative and interesting. Astronomy Day is on April 20th from 6:00 - 10:00 pm at Owens Science Center. There will be the usual planetarium show, light pollution displays, meteorite exhibits, solar observing, an internet demonstration of astronomy web sites, and lectures on various aspects of astronomy by club members. A public star party follows if it's clear. Comet Hyakutake may be visible low in the NW. Door prizes will also be given away in a drawing for the public. Some good prizes have been donated already. Help is needed for the Girl Scout Star Party on May 4th.

Nova Cassiopeiae 1995 - a rare HR Delphini type star

After fading to magnitude 9.5 by March 7th, the nova brightened again to 9.0 magnitude by March 10th. It has stayed around 9th magn. until the end of March. Continue watching the nova as it may rise again before it falls in brightness. Of course, in may just fall slowly, or stay the same. Nobody knows for sure.
Observers are urged to continue to monitor this HR Delphini type star during the coming weeks for any sudden changes that may occur.

Great Comet of 1996 Observing Log Part I - by G.W. Gliba

Comet C/1996 B2 (Hyakutake) has proven to be a great comet after all! It is one of the 32 closest comets in historic times to approach Earth, and is the closest Halley size comet to pass near our planet since 1556! It has proven to be a truly remarkable and beautiful visitor.
Bill Hathaway was the first member to report it after the Full Moon in March on the morning of the 11th with 7x35 binoculars and his 4.25-inch RFT, from Sevren, Maryland. A few hours later, on the same morning member Don Haxton saw it with 7x50 binoculars from Laurel, Maryland. He said it had a 10 arcminute coma, and a very faint tail, despite the strong moonlight. Bill said he thought if the moon were gone, it might have been naked-eye from his site at that time.
On the 12th I saw it with my wife Lynne Gilliland. It had a central conden-
sation and a faint west pointing tail about 1/2 degree long. The comet was just seen with difficulty with the naked-eye, and was around 4.5 magnitude. It looked like a fat guppy with the 8x50 Jena glasses.

By the morning of the 13th it was a easy naked-eye object. Lynne Gilliland saw it with the naked-eye and in 10x50 binoculars. Several club members saw it. It was near the double Zubenelenubi (alpha Lyrae) which made a pretty field. Noticably brighter this morning (about 4th magnitude). It still had a tail about 1/2 degree long, bright central condensation, and large ("15 arcminute) coma.

On the 14th, Don, Lynne, and I saw Hyakutake through holes in the clouds. It was noticeably larger and brighter and had a fan tail, according to Don. I saw it with Lynne in the 5.5-inch f3.5 (Comet Catcher) and saw a stellar central condensation, and a broad tail, possibly forked, about a degree long. Haze made it harder to see with the naked-eye and to determine the tail length and extent in the Schmidt-Newtonian scope from downtown Greenbelt. Bill Hathaway took some pictures from Severn, Maryland and saw it easily with the naked-eye.

Several members saw it the morning of the 16th. It was seen easily with the unaided-eye from downtown Greenbelt dispite the strong haze and light pollution. It was about 3rd magnitude and had a tail over a degree long in 8x50 binoculars. Don Haxton saw two sunward jets from the central condensation, which appeared stellar in his 12" f/16 Cass. using a 20 mm Nagler at the Goddard Optical Site.

The next morning, from darker skies in Vermont, former member Dan Rehner saw Hyakutake from the steps of the Hartness House in Springfield, Vt. Using 7x35s he could see a near 3 degree tail pointing west and a much shorter and fainter tail above. He made a rough mag. estimate of 3rd, and said it rivaled the best view of Halley's he remembered from Skyline Drive.

Although the 19th was mostly cloudy, member Don Haxton was able to see it naked-eye through the haze and said the coma was larger than the Full Moon.

After several days of clouds, a hole opened up on the 20th allowing a short view to those looking for it. By then it was southeast of the star Arcturus. It was much larger than the Full Moon, and easy to see with the naked eye at about 2nd magnitude. A bright central condensation could be seen with the naked-eye as well as a two degree tail from downtown Greenbelt with averted vision! Hints of jets and streamers could be seen with 8x50 Jena binoculars. Best comet in years.

On the morning of March 22nd the comet is wonderful. I saw 5 degrees of tail naked-eye from downtown Greenbelt. It had a teardrop head about a degree wide and a central condensation that was about 3rd magnitude. The comet was about 1st magnitude! There was clearly two components to the tail, gas and ion. The ion was longer, but harder to see. It was better naked-eye than with binoculars. A report from Howard Dew of the Goddard Astronomy Club mentions a 20 degree tail from a dark site! Some reports of twice that length come from really dark skies!

We were lucky to have clear weather the next three nights when we saw the most tail and detail in the inner coma. On March 23/24, Lynne and I got a good look at the inner coma with a 20-inch f5 Dob at the public star party at Bear Branch Nature Center. We saw an elongated yellow-white colored pseudo-nucleus, two sunward fans that were blue-white, and a bright, ~4 arcminute long tail jet that was blue-white to blue-green colored. A shadow of the tail jet and pseudo-nucleus was seen on the NW side of the head. That same night member Chip Kozac saw the comet from Pike's Peak backpacking in Colorado.

A kink was seen in the tail on March 23rd at about 5:00 UT that was 2/3 the distance (about 13 degrees) from the head, just above Arcturus, which may have been a disconnection event going down the tail. Don Haxton saw a lump in the tail jet ~1 arcminute down the tail on March 25th at 2:15 UT with a 12-inch f16 Cass. at the Goddard Optical Site. Member Matt Elliot saw a 30 degree tail from West Virginia. Below is data obtained by the Gilliland/Ghiba team with the naked-eye:

<table>
<thead>
<tr>
<th>Date</th>
<th>Brightness</th>
<th>Tail Length</th>
<th>Limiting Magn.</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>March 22/23</td>
<td>0.5 magn.</td>
<td>20 degree tail</td>
<td>magn. limit 5.5</td>
<td>Kent Narrows, Md</td>
</tr>
<tr>
<td>23/24</td>
<td>0 magn.</td>
<td>30 degree tail</td>
<td>magn. limit 5.5</td>
<td>Westminster, Md</td>
</tr>
<tr>
<td>24/25</td>
<td>-0.5 magn.</td>
<td>40 degree tail</td>
<td>magn. limit 6.0</td>
<td>Kent Narrows, Md</td>
</tr>
</tbody>
</table>
Even with the First Quarter Moon and light pollution, the comet and tail were seen easily on March 26th and 27th. About 10 degrees of naked-eye tail was seen from downtown Greenbelt, 15 degrees in binoculars. On the 27th, the comet went right by Polaris. The tail was seen going around the pole like the hand of a clock. Rocking around the clock, as I say. Coma still has bright jet and center, and over a degree wide. A bow shock looking feature was seen at the front of the head with the naked-eye that seemed skewed to the SE at 1:30 UT on March 28th. It's still a pretty site, despite the moon and light pollution, but is getting harder to see as the moon gets larger and the comet heads west into the lights.

Observers at very dark sites report seeing up to 100 degree tail (IAUC 6355). Everyone complains about loss of sleep. We are tired and have comet fever, but otherwise feel great. This is the stuff dreams are made of, so who needs sleep?

Comet Hyakutake will still be excellent in April as it approaches perihelion. For the total lunar eclipse on April 3rd, a public star party is planned at the Northway Fields in Greenbelt. This is a chance to show the public Hyakutake. The best view of a bright dust tail may yet be to come as the dust production increases as it gets closer to perihelion and gets brighter, although maximum coma size and tail length has probably already occurred. According to comet and meteor expert Gary W. Kronk, Hyakutake's tail might approach or surpass that of Comet West in prominence in the coming weeks.

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Girl Scout Camping Trip Star Party - May 4, 1996
by Cindy Gray

The directions to Camp Merrick are as follows:

Follow the Beltway to the exit before the Woodrow Wilson Bridge. This puts you on 210 going south to Indian Head. Follow 210 until it intersects 225. Turn left on 225 and follow about 2 miles to 224. Turn right on 224 and follow for about 10 miles until you reach a fork in the road. Veer right and follow for about 10 miles. You will pass Liverpool Road, Smith Point Road and Maryland Point Road. The camp road is on the right about 1/2 mile past Maryland Point Road. The camp scheduler has the Stargazing workshop scheduled to begin at 8:30 PM and end at approximately 9:15 PM. It takes about 1 hour and 10 minutes to reach the camp from Greenbelt. There will be 13 troops in attendance and if you bring along any papers or information for the girls I will be happy to copy enough so that each troop has a set. Let me know in advance and I will take care of it. The troop leaders can then make copies for each of their girls. Please let me know if I can help out in any way. I am in charge of the Stargazing Workshop and I will be more than happy to answer any other questions that you may have. You may get in touch with me by e-mail or call me at 301-474-0083. Thank you for helping us out we appreciate it very much. Looking forward to working with you.

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Astronomy Day - April 20, 1996 - 6:00-10:00 PM
Presentations (20-30 minutes each)
by Tom Bridgman

6:00PM Tom Bridgman: "Astronomy on the Internet" ("The Pit")
6:30PM Russ Waugh: "Introduction to the Night Sky" (Planetarium)
7:30PM Tom Trunk: "Planetariums on your Home Computer" (???)
8:30PM Doug Love: "The New Planets" ("The Pit")
Awarding of Door Prizes
9:30PM Tom Bridgman: "The Care and Feeding of Black Holes" (Planetarium)
Booths
George Gliba: Meteorites
Lynne Gilliland: The Light Pollution Problem
Frank Coorsen: Astronomy Photos

Activities
George Gliba: Observing Comet Hyakutake
Tom Bridgman: Satellite Watching
Russ Waugh (organizer): Making Planispheres (an activity for children)
*Everyone*: General Observing with naked eye, binoculars & telescopes
Doug Love: Contest/"Identify sky objects"

Refreshments
Eileen Campbell

Handouts
Listing of astronomy WWW pages (Tom Bridgman)
Tickets for debate at Smithsonian (Tom Bridgman)
Club flyer (Russ Waugh)

Other items in progress:
Suggestion box and/or guest book
Planetarium programs available for Mac & PC
Volunteers for making planispheres project.

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