Meteor for May 2001

Meteor Editor
May 24, 2001

The Newsletter of the Greenbelt Astronomy Club
Volume 8, Issue 10 May 2001

* The Meteor is the official publication of the Greenbelt Astronomy Club, Greenbelt, Md. 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 each month at 7:30 p.m. at the H. B. Owens Science Center. Meetings for 2001 are scheduled for: 1/25, 2/22, 3/29, 4/26, 5/31, 6/31, 7/28, 8/23, 9/27, 10/25, 11,29 and 12/20.

* The Greenbelt Astronomy Club is a not for profit community based organization with the goal of encouraging public interest in science and education in general; astronomy in particular.

* More detailed information on our club activities and organization can be found at our web site. The Editor of this newsletter, Steve Barkes, can be contacted at: barko@toad.net

* The Club's location on the world wide web is:
http://lheawww.gsfc.nasa.gov/docs/outreach/gac/GAC.html

Next Greenbelt Astronomy Club Star Party and Meeting

A star party is scheduled for Saturday, May 19th, at Northway Ball Fields in Greenbelt. A map is available on the club web site. You are invited to attend and bring a friend with cookies. Since star parties are dedicated to observing the night sky, they will only be held if the sky is clear enough to permit observing. Star parties will not be held if skies are overcast or mostly cloudy. A cloud date of May 26th has been set.

The next scheduled meeting of the Greenbelt Astronomy Club will be at the Owens Science Center at Time: 7:30 PM on Thursday, May 31st.

All events and meetings are open to anyone with an interest in astronomy and cookies.

May Meeting Presentation

The topic of the May meeting will be: "Multifractal Properties of the Solar Wind Magnetosphere System" presented by Brinda Thomas. Brinda was the 2nd place winner in the 2001 National Young Astronomers Award competition sponsored by the Astronomical League. Miss Thomas will present her research for which she won the award. Thank you to Bob Gent of the Astronomical League for assisting John Settle in contacting Miss Thomas.
Lyrid Meteors and Supernova 2001bg in NGC 2608
By G.W. Gliba

The maximum of the Lyrid Meteor Shower was seen from Mountain Meadows in West Virginia on the morning of April 22nd. Although there was some haze and clouds to contend with, the rates were pretty good. From 2am to 3am EST I saw 22 meteors, 15 of which were Lyrids, with a limiting magnitude of about 5.6, which wasn't great, but not bad either. If it had been a magnitude better for the magnitude limit, twice as many Lyrids would have been seen. This agrees well with the International Meteor Organization (IMO) results, which show a flat maximum of about 2hr=33 near solar longitude of lambda = 32.0 degrees. No fireballs were seen during the watch, but one -2, one -1, two 0, and four 1st magnitude Lyrids were seen. The next hour was 40% cloudy with more haze, and only three more Lyrids and three others were seen. After clouds stopped my recording of meteors, a 4th magnitude Lyrid bolide was seen around 4:30am.

There is a fairly bright supernova now visible in the barred spiral galaxy NGC 2608. The galaxy is 12th magnitude and the supernova is around 14th. I have not seen it yet, but it looks like it is fairly easy to find, a third of the way between iota and toward chi Cancri, or between the upper sickle in Leo and Castor and Pollux. According to the IAUC7622, it is a type-ia before maximum; so will probably fade in a month or so. Note that NGC 2608 also produced the SN 1920A (m_p = 11.8); so it may get brighter before it fades from view.

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Observatory Needs Your Public Support
By John Settle

The Greenbelt Observatory project is making progress. It was just one year ago this month that the club received IRS recognition as a 501c3 tax-exempt organization. Already we have a structure. Research is being done on permit and zoning issues by the city staff; and meetings are being scheduled with an architect. We have accomplished a lot. More remains to be done and we need your help to realize this goal.

Many people believe that our City itself is going to provide direct funds for the construction of the observatory. This is not the case. The Greenbelt Astronomy Club, Inc. is solely responsible for all the costs of the observatory project. We do not expect to receive any City funds. We are VERY grateful that our city has provided, and will continue to provide, excellent professional assistance from the staff, but direct City financial support is problematical.

What we have been told repeatedly is that we, the astronomy club, need to recruit prominent members of the Greenbelt community to publicly support this project. This needs to be done to show that this is a substantial project, that it has community support and is something that can actually be achieved. The majority of our club members are Greenbelt residents; many of them are long-time city residents and long-time club members. These members set the goal of building an observatory for the city of Greenbelt. We need your help Greenbelters. I have and will continue to invest a considerable amount of my time and money into achieving this goal. We would like to get your assistance in soliciting support from our entire Greenbelt community. Just a handful of people cannot accomplish this large community project alone. The observatory project needs public support from Greenbelters. Please seek public endorsement and financial support from your friends, neighbors and community groups in the city for Greenbelt. We need people who will stand up and support our project and are willing to have the fact publicized. I will be glad to make the time to go to any organization's meeting or make a direct one-on-one appeal to any individual if you Greenbelters can work with me and provide an introduction.

We have a great opportunity now. The observatory can be a wonderful asset for the community of Greenbelt. The extent to which we can successfully employ this opportunity depends on the degree to which you will support it. Your direct, personal involvement is needed now. Call me; write to me (the number and address follow); let me know how I can help you achieve this community goal: johnsettle@learn.com or by phone at the club information line at (301) 277-4041.
Mail to: PO Box 727 Greenbelt, Md. 20768
Stellafane and State Reach Prison Lighting Agreement
Springfield, Vermont

The Springfield Telescope Makers (i.e. - "Stellafane") through the help of their attorney Stephen L. Saltonstall, Esq. and Dave Burley, Chief Engineer of the Vermont Dept. of Buildings & General Services, have reached an agreement by which the dark skies over Stellafane will be protected from the light emanating from the proposed Southern State Correctional Facility.

The conditions of this agreement shall make it possible for Stellafane to become a party in favor of the project should the mutual agreement be made a condition of the Act 250 permit by District Environmental Commission #2.

To protect the skies over Stellafane, the State of Vermont hired Stellafane's first choice of lighting consultant, the acclaimed Nancy Clanton of Clanton & Associates, Denver Colorado, to create the lighting design. Clanton, a highly respected lighting designer and fellow of the IESNA Board of Lighting Standards and Practices, produced a subtly clever lighting design for the Southern State Correctional facility that maximizes visibility for the guards while minimizing it for the prisoners. It also utilizes "full cutoff" lighting - a form of lighting which allows no direct wasted upward light component. Full-cutoff lighting is rapidly becoming the standard for all new roadway, industrial, and shopping center lighting across the United States. Lighting designers have found that uniform lighting levels of low intensity allow for better visibility by allowing the biology of the human eye to adapt from viewing a darker area to viewing a lighted area or vice-versa. The slow rate of adaptation of the human eye is well known to astronomers, who must often wait as much as one half hour for eyes to re-adapt to the night sky after seeing a white light.

Even with full cutoff lighting, however, some percentage of the prison's light will be reflected off the ground to become a visible upward bounce. In order to offset the diffuse glow that the prison will add to the sky, the State has agreed to do some off-site light pollution mitigation of approximately 150,000 lumens of currently wasted direct upward lighting. Stellafane has pointed out some preferred sites that could be improved by shielding, bulb wattage reduction or lighting re-design that could help improve some sections of the sky where light pollution is already limiting Stellafane's research potential.

In addition to its research-grade new-technology McGregor Observatory, 3.8 miles from the prison, the Springfield Telescope Makers are also fabricating a 27 inch diameter reflecting telescope, which will need even darker skies to function properly at full power. It is greatly hoped that some of these other sites can be mitigated to enable study of certain galaxies and celestial objects that are presently being hindered by light pollution.

Stellafane is very pleased that Engineers Dave Burley and Mike Kuhn technically understood the damage that light pollution can do to Vermont's premiere astronomical observatory -- Stellafane.

As the problems of light pollution are better understood by all citizens, the Springfield Telescope Makers are hopeful that they can continue to develop their telescope making craft to help Stellafane Observatory achieve its true potential as an astronomical research facility in the hometown of telescope making giants Russell W. Porter and James Hartness.

According to Maryann Arrien, former Stellafane president, "This is really an example of win-win all around. Not only will this agreement benefit Stellafane Observatory and reduce electric costs, it will help to preserve the view of the stars for all the citizens in the area, and their children's children."

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Mid-Atlantic Occultations and Expeditions to Early Sept. 2001, & some later

First, predictions for asteroidal occultations are given; then, planned expeditions for lunar grazing occultations; and third, predictions of total lunar occultations visible throughout the region.
Asteroidal Occultations through early Sept. 2001 and some later ones

DATE Day EDT Star Mag Asteroid dmag s in. Location

May 19 Sat 3:33 TYC68524784 10.5 Admete 5.1 5 6 Florida
May 25 Fri 6:21 SAO 145940 6.5 Klotho 6.5 5 1 s. Florida
May 27 Sun 5:15 TYC56390173 11.5 Bavaria 2.1 6 8 S. Carolina
Jun 7 Thu 2:26 TYC74170820 11.3 Dudu 1.8 5 7 Michigan
Jun 10 Sun 2:46 TAC-14 7591 11.9 Circe 1.2 11 8 s. Florida
Jun 17 Sun 22:59 ZC 2785 7.0 Ophelia 6.2 10 3 Yucatan
Jun 19 Tue 4:45 TYC52261173 11.2 Nemaus 1.1 25 7 Florida
Jun 21 Thu 5:26 SAO 210513 7.9 Dudu 4.6 5 4 s. Texas; CDT
Jun 25 Mon 3:45 TYC04480099 10.9 Philippina 2.4 5 7 N. Carolina
Jun 26 Tue 0:29 SAO 187999 8.1 Tomyris 6.5 3 2 Cuba
Jun 26 Tue 1:57 TYC68300021 11.4 Ella 2.0 4 7 Georgia
Jul 6 Fri 2:09 TYC74240996 11.0 Chimaera 3.7 4 7 Georgia
Jul 9 Tue 2:18 SAO 185522 10.4 Admete 4.9 4 6 s. Mexico
Jul 11 Wed 23:11 SAO 188447 8.7 Alauda 2.8 14 2 Florida?
Jul 12 Thu 1:06 TYC57520973 11.1 Carmen 2.5 5 7 Virginia
Aug 7 Tue 23:59 TYC63600178 11.6 Hanskya 2.2 6 8 Cuba
Aug 17 Fri 4:26 TYC12191522 11.0 Carnegie 4.5 6 7 n.w. Penn.
Aug 17 Fri 4:52 TYC63600349 11.1 Astraea 0.8 9 8 Wisconsin
Aug 19 Sun 2:03 TYC51961596 10.5 Asterope 1.3 12 6 Cuba
Aug 20 Mon 21:21 TYC63171743 11.9 Fama 2.6 5 8 n. Florida
Aug 22 Wed 2:27 TYC11690037 11.3 Lusicina 2.1 15 8 Ohio
Aug 25 Sat 3:41 TYC52361162 11.9 Hygiea 0.2 34 10 n.e. USA; wide
Aug 29 Wed 22:02 TYC62762441 11.4 Latona 2.0 16 7 Wisconsin
Aug 31 Fri 5:47 TYC06400186 11.0 Thetis 1.7 22 7 New England
Sep 7 Fri 2:45 ZC 0983 6.1 Metis 4.7 6 1 n.Calif.; PDT
Sep 7 Fri 22:02 ZC 3167 7.2 Titania 6.4 76 1 Venezuela
Sep 9 Sun 0:16 SAO 165635 8.4 Antigone 2.7 9 2 Iowa & El Paso

Notes:

In general, only for stars of 9th mag. and brighter will we consider an expedition outside of the Mid-Atlantic states region. Especially for the fainter stars and events of shorter duration, we will plan no observations unless an astrometric update indicates a reasonable chance for an occultation in the Mid-Atlantic states.

May 19: Steve Preston's update moved the path a little north, but not far enough for an expedition from the DC area for this small asteroid.

May 25: The star is a spectroscopic binary that probably can be resolved during this occultation. The Sun alt. in s.w. Fla. is -4 deg. so we probably will not have an expedition from the DC area.

May 27: The magnitude of the star was copied from the dm column in last month's message, 2.1, which is wrong; it is actually 11.5, as given here.

June 17: ZC 2785 = SAO 187686, a possible close double.

Sept. 7, Metis: ZC 983 is double; both components will be occulted, for some observers at the same time.

Sept. 7, Titania: This is the large satellite of Uranus, which might have a tenuous atmosphere, somewhat like that of Triton. So this rare event is attracting much attention.

Some of the better events later in the year are listed for advance plans.
Grazing Occultations through mid Sept. 2001, and some later ones

EDT/DATE Day EST Star Mag % alt CA Location

Jun 16 Sat 4:52 ZC 0208 7.0 29- 27 5N Barco, NC; Sun alt. -10 deg.
Jul 13 Fri 1:33 ZC 0151 8.2 55- 10 4N St. James, MD
Jul 15 Sun 4:12 85 Ceti 6.3 34- 26 8N Butler, PA
Aug 13 Mon 2:40 ZC 0600 6.6 40- 22 11N se Salisbury,MD; s.Petersbg.,VA
Aug 22 Wed 20:31 80 Vir. 5.7 20+ 22 8N Currituck, NC; ZC 1950; Sun -9
Sep 9 Sun 5:36 ZC 0577 6.0 65- 69 14N La Plata,MD & Fredericksburg,VA
Sep 11 Tue 3:53 SAO 077418 7.7 44- 42 5N Lexington Park, MD
Sep 12 Wed 6:00 SAO 078733 7.8 33- 58 12N Clinton & Nags Head, NC
Sep 13 Thu 2:54 SAO 079621 7.4 23- 9 13N Pea Island, NC
Oct 9 Tue 0:04 11 Gem 6.9 60- 78 13N Urbana & Westminster,MD; ZC 962
Oct 13 Sat 7:05 46 Leonis 5.4 16- 43 5N n. Staunton, VA; Sun -4; ZC1544

*** Dates and Times below are EST ***
Dec 8 Sat 4:08 nu Vir 4.0 44- 43 6S Augusta, ME

Dec 14 Fri 17:30 The Sun -27 0 13 N Liberia, Costa Rica; eclipse
Dec 20 Thu 19:54 tau Aqr 4.0 32+ 24 12S Currituck, NC; ZC 3349
Dec 21 Fri 22:29 ZC 3484 6.9 42+ 9 6S Chesapeake, VA

Notes:

* means no expedition is planned from the DC area, but I can provide more information if local observers want to attempt them, including contacts for others in the area who might also be interested.

June 16: Unfortunately, I will be out of the country for this good weekend graze between Norfolk and Kitty Hawk. Contact Bob Stewart, rhhrs1@msn.com, for a possible expedition from the DC area.

July 15: The star may be a close double, but no evidence of duplicity was apparent during the s. limit graze of this star observed in N. Carolina in March.

Sept. 9: I may be away for the Antigone asteroid occultation. If so, contact Bob Stewart, rhhrs1@msn.com, for an expedition from the DC area.

Dec. 14: Annular solar eclipse. For information about our planned expedition, see http://iota.jhuapl.edu or ask the undersigned.

Some of the better grazes later in the year are listed for advance plans.

Total Lunar Occultations

The better total lunar occultations through early Sept. 2001 visible from throughout the Washington-Baltimore greater metropolitan area are listed below. Many can be accurately timed by aiming a camcorder into a low-power eyepiece of your telescope and recording WWV with the audio.

EDT/DATE Day ED MStar Mag % alt CA Sp. Notes

May 18 Fri 4:56 R ZC 0018 5.8 23- 13 61N K1 double?; Sun -10 deg.
May 25 Fri 21:47 D SAO 078906 8.9 11+ 14 76S F5
May 25 Fri 21:55 D SAO 078912 7.6 11+ 13 65N G0
May 26 Sat 22:26 D SAO 079865 9.0 19+ 18 38N F8
May 26 Sat 22:56 D SAO 079884 8.0 19+ 12 58N K0
May 26 Sat 23:28 D SAO 079909 8.1 20+ 7 70N K0
May 28 Mon 22:21 D SAO 098892 7.7 40+ 37 70N K0 mg2 8.8,sep.9.6",PA100
May 28 Mon 22:48 D SAO 098897 7.6 40+ 32 90N K0
May 30 Wed 19:42 D nu Vir 4.0 62+ 57 75S MO ZC 1702; Sun alt. +7
Jun 2 Sun 0:24 D 80 Vir 5.7 83+ 35 79N G6 ZC 1950
Jun 4 Tue 2:16 D omicronLib 6.1 96+ 24 84S F2 ZC 2183
Jun 7 Thu 1:33 R 4 Sgr 4.7 99- 27 57S B9 ZC 2589
Jun 11 Mon 1:36 R ZC 3150 6.6 76- 12 31N F3
Jun 23 Sat 21:27 D ZC 1304 6.7 9+ 15 69N A2 dbl,Sun-9,outer Praesepe
Jun 27 Wed 23:54 D ZC 1796 7.6 50+ 16 61S A5
Jun 29 Fri 1:06 D ZC 1923 6.8 61+ 8 86S K0
Jun 29 Fri 21:17 D ES Vir 8.2 71+ 42 56S M Sun -7; Var. 8.15-8.33
Jul 4 Wed 22:12 D 24 Sgr 5.5 100+ 17 86S K3 term. 5" away; ZC 2692
Jul 5 Thu 22:13 R chi2 Sgr 5.5 100- 11 71S K3 term. 5" away; ZC 2836
Jul 9 Mon 1:18 R 29 Aqr 6.4 88- 23 28N AO ZC 3228; double
Jul 10 Tue 1:20 R tau2 Aqr 4.1 81- 19 35S K5 ZC 3349
Jul 11 Wed 4:24 R ZC 3484 6.9 73- 40 85N G5
Jul 15 Sun 4:15 R ZC 0398 6.5 34- 30 73N K0
Jul 15 Sun 4:25 R 85 Ceti 6.3 34- 32 36N A2 very close double
Jul 16 Mon 4:13 R SAO 93489 7.6 24- 23 50S M
Jul 17 Tue 3:34 R ZC 0663 6.9 16- 8 38S A0
Jul 17 Tue 14:30 D Venus -4.1 13- 32 -78N 38s to disappear
Jul 17 Tue 15:36 R Venus -4.1 13- 19 71N 34s to reappear
Jul 24 Tue 21:55 D SAO 119272 7.6 24+ 16 88S F5
Jul 27 Fri 22:26 D ZC 2110 6.3 57+ 24 55S K0
Aug 2 Thu 0:13 D ZC 2811 6.3 96+ 26 68S F8
Aug 7 Tue 22:40 R 30 Psc 4.4 87- 4 41N M3 Az. 101 deg.; ZC 3536
Aug 8 Wed 0:59 R 33 Psc 4.6 86- 28 67N K1 ZC 0005; close double
Aug 8 Wed 4:43 R ZC 0018 5.8 85- 45 42S K1 maybe close double
Aug 11 Sat 1:56 R SAO 110502 7.6 61- 26 33S F0
Aug 12 Sun 0:57 R SAO 093301 7.2 51- 9 71S G5 Az. 81 deg.
Aug 12 Sun 2:03 R ZC 0464 6.1 50- 21 56S K0 maybe close double
Aug 13 Mon 2:21 R ZC 0610 5.9 39- 40 26S K5 triple star
Aug 15 Wed 3:45 R 141 Tau 6.4 19- 16 87N B8 double?; ZC 0911
Aug 15 Wed 4:17 R SAO 077887 8.3 19- 22 71S F8
Aug 15 Wed 4:19 R SAO 077891 7.9 19- 22 65S K2
Aug 16 Thu 3:59 R 44 Gem 6.0 11- 8 34S B8 Az. 67 deg.; ZC 1078
Aug 16 Thu 4:23 R SAO 079056 8.3 11- 12 41S G0
Aug 16 Thu 4:46 R Gem 7?? 11- 16 39S 33 Mira var. 6-14; SAO 79070
Aug 24 Sat 20:11 D omicronLib 6.1 41+ 29 58N F2 Sun alt. -5; ZC 2193
Aug 31 Fri 0:45 R SAO 189666 7.8 93+ 26 50S K1
Aug 31 Fri 0:50 D 17 Cap 5.9 93+ 26 77N A1 ZC 3031
Aug 31 Fri 20:50 D ZC 3150 6.6 97+ 18 53N F3
Aug 31 Fri 21:26 D SAO 164449 7.2 97+ 22 80S F0
Sep 1 Sat 1:42 D SAO 164516 6.9 97+ 28 72S K3
Sep 1 Sat 2:28 D SAO 164524 7.2 97+ 23 51N F3
Sep 6 Thu 4:48 R ZC 0210 6.6 89- 51 81S B9
Sep 6 Thu 5:07 R SAO 109899 7.6 89- 49 51N K2
Sep 6 Thu 23:09 R ZC 0306 6.8 84- 16 37S F0
Sep 9 Sun 2:56 R SAO 093615 7.2 65- 47 63S F5
Sep 10 Mon 9:17 D Saturn 0.0 53- 52 -71N Disk duration 47s; Sun +29
Sep 10 Mon 10:29 R Saturn 0.0 53- 39 74N Disk duration 42s; Sun +41
Sep 11 Tue 1:41 R ZC 0843 6.9 45- 17 84N F8 mg2 7.8, 3.9" in PA 277
Notes: Aug. 13, ZC 610: The star is double, with equal mag. 7.0 components 0.05” apart in P.A. 358. A 3rd 9.3-mag. star is 4.4” away in PA 326 deg.

D following the time denotes a disappearance, while R indicates that the event is a reappearance. When a power (x; actually, zoom factor) is given in the Notes, the event can probably be recorded directly with a camcorder of that power with no telescope needed. The times are for Greenbelt, MD, and will be good to within +/-1 min. for other locations in the Washington- Baltimore metropolitan areas unless the cusp angle (CA) is less than 30 deg., in which case, it might be as much as 5 minutes different for other locations across the region.
Mag is the star's magnitude. % is the percent of the Moon's visible disk that is sunlit, followed by a + indicating that the Moon is waxing and - showing that it is waning. So 0 is new moon, 50+ is first quarter, 100+ or - is full moon, and 50- is last quarter. The Moon is crescent if % is less than 50 and is gibbous if it is more than 50. Cusp Angle is described more fully at http://www.lunar-occultations.com/iota. Sp. is spectral type-color, O,B,blue; A,F,white; G,yellow; K,orange; M,N,S,C red
Note that my last more general message described occultations observed at the (UT) change of the millennium (early evening of December 31 EST), when it was clear across the region. Did anyone besides Tony Cook observe any occultations that evening?

Phone the IOTA occultation line, 301-474-4945, for weather go/cancel decisions, and other updates and details, or check IOTA’s Web site at http://www.lunar-occultations.com/iota which now has an asteroidal occultation section with finder charts and updated path maps. Timing equipment and even telescopes can be loaned for most expeditions that we actually undertake; we are always shortest of observers who can fit these events in their schedule, so we hope that you might be able to. Unfortunately, the IOTA phone line is still down, you'll get no answer if you call it. We hope to fix it in about a week. Good luck with your observations.

David Dunham, 2001 May 17
Phone home xxx-xxx-xxxx; office xxx-xxx-xxxx; car xxx-xxx-xxxx.

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Board of Directors Meeting - 12 April 2001
By Valerie O'Brien

The Board of the Greenbelt Astronomy Club met on Thursday, April 12th, 2001.
The Board met in the Dining Room of the Greenbelt Community Center at 7:30 PM.
All officers were present. The meeting was called to order by Club President John Settle. John Settle requested that Valerie O'Brien read the minutes to the March Meeting. The minutes having been read, the floor was open for new business.

* Astronomy Day Preparations
  - Forms
    1. Membership Application Forms - 50 copies on green paper
    2. ?Brief Guide to the Night Sky? - 75 copies on blue paper
    3. Astronomy Club Information pamphlet ? 75 copies on white paper
  - Advertisements
    1. John has a large poster to place out on Greenbelt Road.
    2. John has made an enlargement of the article that was run in the ?Prince Georges County Journal? covering the observatory move in March.
    3. Doug said the Greenbelt Cable Channel (B-10) can run an ad for Astronomy Day at no cost.
  - Miscellaneous
    1. Company 7 has given us 2 20mm Televue Plossl eyepieces that we will have as door prizes.
2. We will plan to have about 12 T-shirts available in a range of sizes to give out for donations of $20.00 or more.

* Labor Day Booth
- We will plan to have a double booth this year.
- Valerie will co-ordinate the plans for the booth decorations and offered the club the use of her yard to begin some of the painting and designs for the booth.

* Observatory
- Doug was requested to contact the ?Greenbelt News Review? to run ads to recruit donors to the observatory. It is projected to cost about $70.00 to run one ad. We are considering putting ads in the P.G. County and Montgomery County Gazettes to recruit donors and this may be more costly.

* Club Business
- It was decided to have new members consent to being added to the e-group at the time that they fill out their application. The wording on the Membership Application Form has been changed to read, ?The club uses a web based Email list, gmbltastro, to communicate with members. It is hosted by Yahoo.com. If you wish to receive Email about club activities and be able to email other members, you will need to join this group. May we add your e-mail address to the list? Please indicate: YES _____ NO_____? This will enable the club to add new members directly to the e-group without going through the process of ?inviting? the new members. Sometimes new members do not respond correctly to the invitation and never are added to the e-group. This will correct the problem.
- Susima will take over the job of adding new members to the e-group.
- The State Corporate Property Taxes have been completed and sent out. No taxes were due.

The meeting was adjourned at 9:15pm.

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Greenbelt Astronomy Club General Meeting
April 26th, 2001
By Valerie O’Brien

The members of the Greenbelt Astronomy Club met on Thursday, April 26th, 2001 in the Planetarium of the Owens Science Center at 7:30 PM. There were 35 attendees at this meeting.

Students from the University of Maryland who are making a documentary on the observatory project filmed parts of the meeting.

The main topic for the evening was extra-solar planets and brown dwarf stars presented by Dr. Tilak Hewagama, research scientist with the University of Maryland, College Park and NASA/GSFC, code 693. Dr. Hewagama discussed how we use our understanding of solar system planets to study the physics and chemistry of extra solar planets. He described the planetary observing program at the Mauna Kea observatories in Hawaii. For more information, access the following web site: http://cfa-www.harvard.edu/planets/

Business Topic: Greenbelt Astronomy Club Treasurer’s Report

Club Treasurer Bill McHale reported that the club had received $753.50 in donations, resulting in a balance of $1930.47 toward the observatory project.
Membership dues totaled $58.00, bringing the Operational Account to $786.12. The club paid $70.00 for the donors ad in the Greenbelt News Review.

Business Topic: Astronomy Day 2001

Member Joel Miller reviewed the final arrangements and preparations for the Astronomy Day activities scheduled for Saturday, April 28. Members were asked to volunteer some of their time to assist at the club information table as well as assisting in the children’s events and outdoor solar viewing Two of the door prizes will be a Celestron 80 mm wide field refractor telescope and a 3 inch refractor telescope donated from George and Lynne Gliba.
On Friday, April 27 the University of Maryland has offered us the use of their observatory and it is suggested that we bring some of our own telescopes to set up in addition.

The meeting adjourned at 8:50 pm.

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Clear Skies!!
Steve Barkes, Editor, The Meteor
The Greenbelt Astronomy Club, Inc.
e-mail: barko@toad.net