



The Mason-Dixon Astronomer
Westminster Astronomical Society of Maryland



October 1986, Vol. 3 No. 10

The October 3 Partial Solar Eclipse

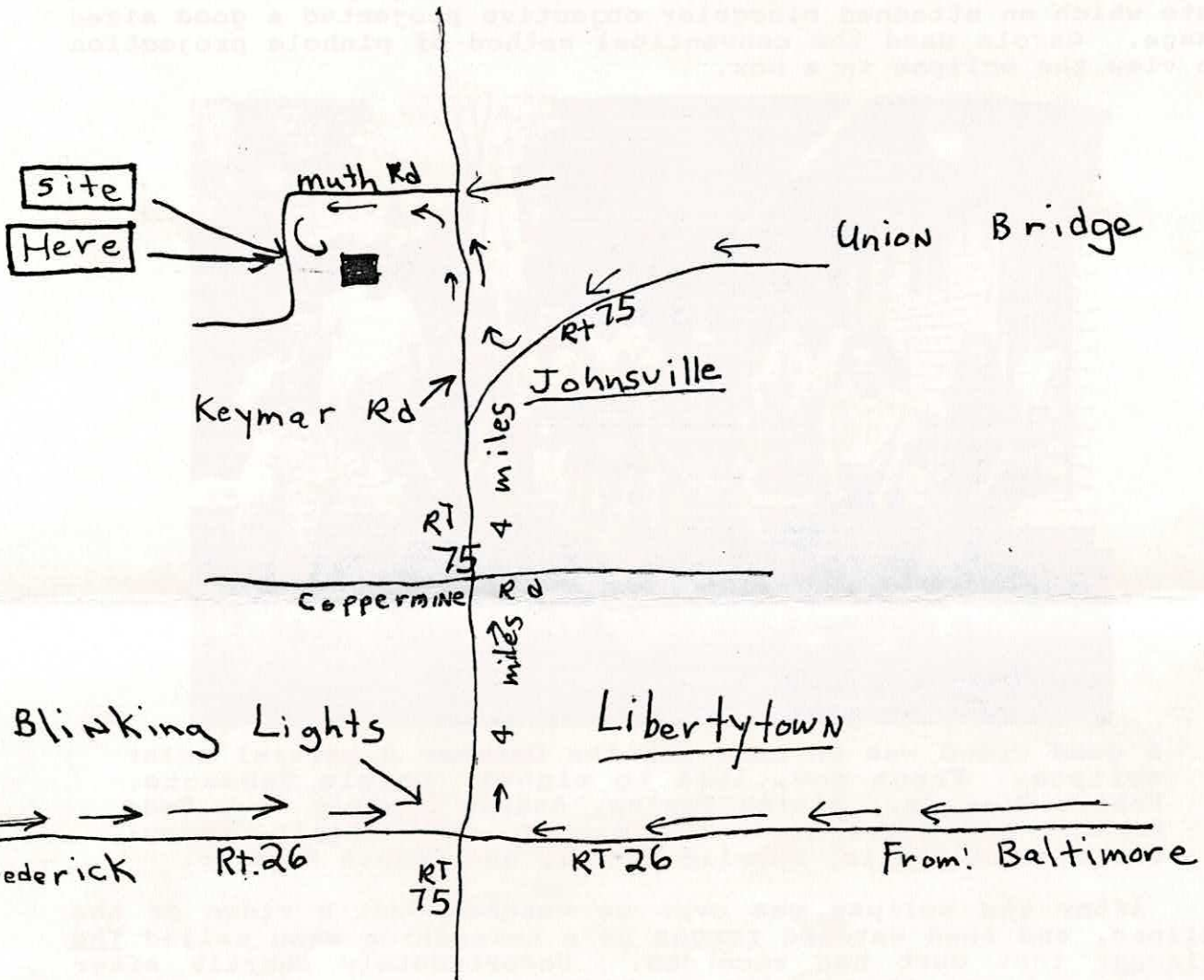
On Friday, October 3, 1986, a partial eclipse was visible from Maryland. Despite the clouds and threat of rain, WAS members in the photograph below met at Curt's house to observe the eclipse. Curt had his 4" SCT set up with a metallic mylar filter and photographed the eclipse. Curt also videotaped portions of the event through neutral density filters. Dennis filmed the eclipse with a time-lapse movie camera using a metallic mylar filter. Charley and Steve used their C8's to project the solar image onto a white background, and Blaine did the same with his 4" Astroscan and attached projection screen. Bobby Jr. had a Welder's mask with #14 density glass, and a box into which an attached binocular objective projected a good sized image. Carole used the conventional method of pinhole projection to view the eclipse in a box.

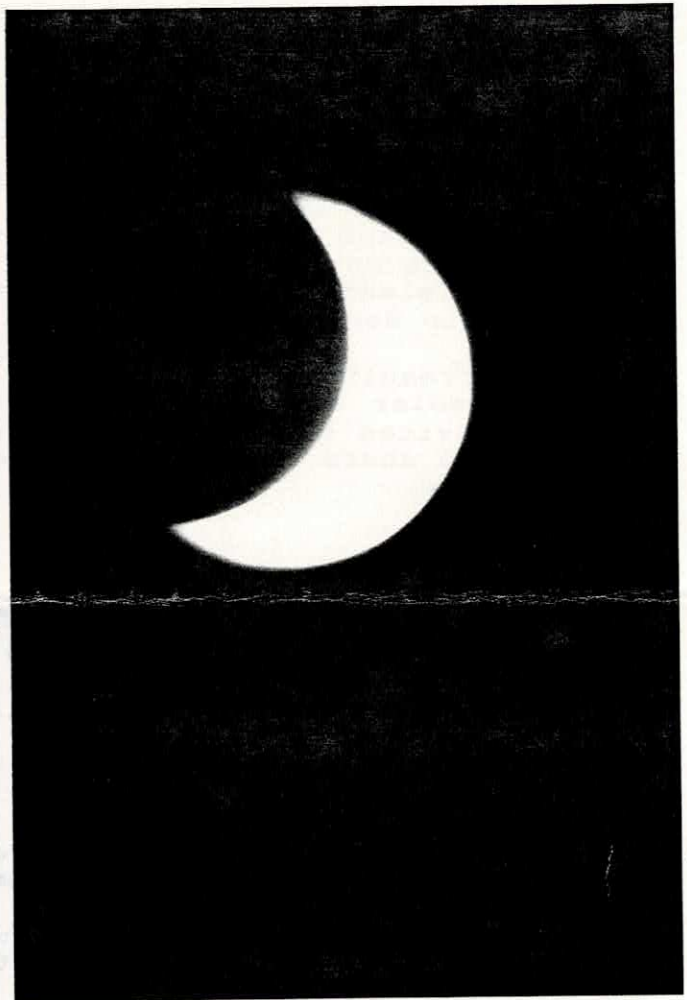
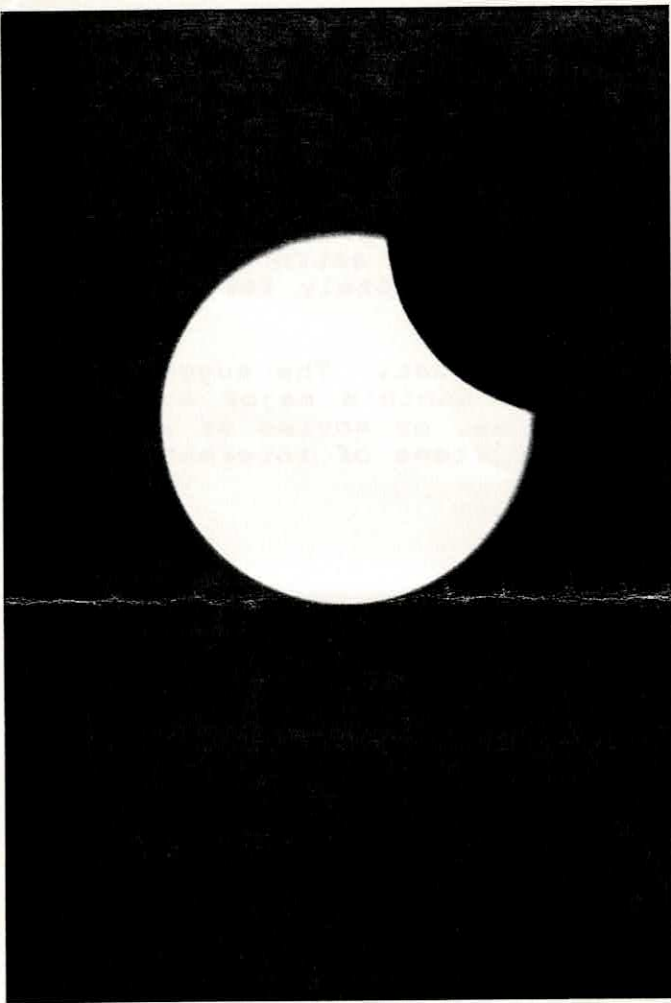


A good crowd was on hand for the October 3 partial solar eclipse. Front row, left to right: Carole Sakamoto, Robert Sier Jr., Blaine Roelke, Andrew Demario Jr., Todd Bonner, and Steve Rice. Back row: Curt Roelle, Cheryl and Shannon Roelle, Charlie Mantel, and Dennis Mishler.

After the eclipse was over we watched Curt's video of the eclipse, and then watched reruns of a television show called The Prisoner that Curt had recorded. Unfortunately shortly after maximum eclipse it clouded up and the evening star party at Blaine's was postponed. (Andy Demario Jr. -- Secretary)

Star PARTY: Wes Lynch
DATE: Nov. 1, 1986 Sat. Nite
Time: Dusk





First contact began at 2:01 p.m. in Maryland. The photograph at left was taken shortly after first contact when rain showers ceased. The sun continued to dodge in and out of the clouds as the moon covered up more and more of the sun's visible surface. At 3:15 p.m., two minutes before maximum eclipse, a large hole opened in the clouds for the photograph at right. Photos by Curt Roelle.

Short Notice For An October Star Party

Dave Pessagno shall be having a star party on Saturday October 25 at his home in Reisterstown. It is near the third quarter moon so observing shall be good until at least midnight. The main instrument at the star party will be Dave's 17.5" Coulter Odyssey. His address is 45 Franklin Valley Circle. A map appeared in the August MDA.

WAS Welcome Wagon

Ken Killian and family of Sykesville are the newest family members, and Bruce Davidson of Westminster is the newest single member of the Westminster Astronomical Society. We welcome these new members into the club and look forward to their participation.

Members Blaine Roelke and Nancy Raab were married on October 11. Best wishes to the new couple!

WAS Meets Wednesday, October 29 at WMC

The October WAS meeting is scheduled for 7:30 p.m., October 29, in room 111 of the Lewis Hall of Science, on the campus of Western Maryland College, in Westminster. The planned program was a lecture on the evolution of galaxies, by an astronomer from the Space Telescope Science Institute. Unfortunately for us she has moved to Berkeley, California.

As a result the meeting will be open format. The suggested topic is solar eclipses, in light of this month's major event. You are invited to bring slides, photographs, or movies of solar eclipses to share with the members. Other items of interest are also welcome.

President's Report

It seems that we were lucky at our eclipse party. Boston, the major city with the best view was clouded out, and the central region of the country was being deluged with rain during the eclipse. All in all we had a good view of the eclipse despite mostly cloudy skies. I want to thank the members who came and helped celebrate my birthday. Hope nobody got crescent suns burned into their eyes like the pumpkin head on the cover.

There are three star parties scheduled within one week of each other. There may still be a chance to view Halley's Comet as it fades in the distance. A dark site has been found near Libertytown, and if some of you bring your large telescopes perhaps we'll see it. Later in this newsletter is an ephemeris for those of you who would like to try finding it. Don't expect to see much. It should look as faint as in September, 1985, when first viewed by WAS members.

Our program fell through for this month's meeting. However, I am sure that some of you will be able to provide entertainment. Bring eclipse shots if you have any. I'll be digging out mine and may bring a brief videotape of the October 3 eclipse.

-- Curt Roelle

Astronomy Subscriptions Due Soon

Treasurer Joe Pekala reports that subscription fees are due immediately for anyone wishing to obtain Astronomy magazine through the club. Members can receive Astronomy for \$14/year, 1/3 off the regular subscription price of \$21, and over 1/2 off the newsstand price of \$30. See the inside back cover of this issue for your application and instructions for ordering.

November Star Parties

Depending on your schedule and geographic location, you have your choice of two star parties on Saturday night, November 1. Mike Scallion's monthly star party is that night in Hampstead. His address is 2201 Green Haven Way, telephone 239-3105. A map may be found in last month's MDA.

For your late night observing pleasure a dark site has been

selected that could possibly offer observers one final chance to see Comet Halley near dawn on the morning of the 2nd. This star party is at Wesley Lynch's near Libertytown, in Frederick County. See this issue for a map.

Success in observing Halley depends on the weather as well as observing skill; it will not be an easy task as the comet is getting quite faint. Also we must have some aperture available, so it is hoped that at least one of our members with a portable dobsonian will be there. Later in this newsletter is an ephemeris for observing Halley in case some readers would like to attempt it on their own.

The Eagle Eye Observer

The solar eclipse on October 3 was a success; many members showed up to watch the moon partially cover the sun's surface by about 65%. While observing the eclipse we noticed the strange effect where the moon's valleys and hills were visible along the moon's limb against the solar photosphere.

On August 5, 1986 a new comet was discovered by Christine Wilson. She found the comet during a sky survey with the 48" Schmidt photographic telescope on Palomar Mountain. Comet Wilson should reach third magnitude by April 22, 1987, if everything goes o.k. and it doesn't fade out before then. Bobby Sier and I viewed Comet Wilson in September. It looked about magnitude 11.5 in brightness, very stellar, and no tail was visible in my 8" telescope. As of this writing I have not seen the comet since. Is Comet Wilson fading out? I guess we will have to wait and see what happens.

Last month I wrote about A Guide to the Messier Objects. This month I will talk about a few of them. M31, the Andromeda Galaxy, should be almost overhead about 1 1/2 hours after midnight at the November 1 star parties. At magnitude 4.8, M31 is the brightest galaxy in the sky for observers in the northern hemisphere, and can be seen with the naked eye. It is also the closest spiral galaxy to us at 2.2 million light years. A good pair of binoculars will show both the bright central core and the hazy disc of this huge star system. Larger telescopes will start to resolve the dark dust lanes in the galaxy. Also try to observe the companion galaxies M32 and NGC205. The latter is sometimes labeled M110 in Charles Messier's list. These small elliptical galaxies are situated very close to M31, so close that the gravity from M31 might be ripping these two galaxies apart. An 8" telescope shows these galaxies pretty well and a 2-3 inch telescope will just start to pick them up. From the Great Andromeda Galaxy, M32 is just a little to the south. NGC205 is a little farther to the north of M31. A little scanning with your telescope should help you find them.

Good luck and good Observing (Steve Rice -- Observing Chairman).

Last Chance For Halley

The last chance to see Halley is not yet here, but it is getting close. During the fall months, Halley is slowly fading in brightness, but at the same time is inching higher and higher in the morning sky around the time of twilight. The predicted

magnitude reaches 13 by the end of November. This is faint but not beyond the reach of the larger telescopes in the club. The comet was approximately magnitude 13.5 when viewed by several members with a 12.5" telescope at a WAS star party in the late summer of 1985.

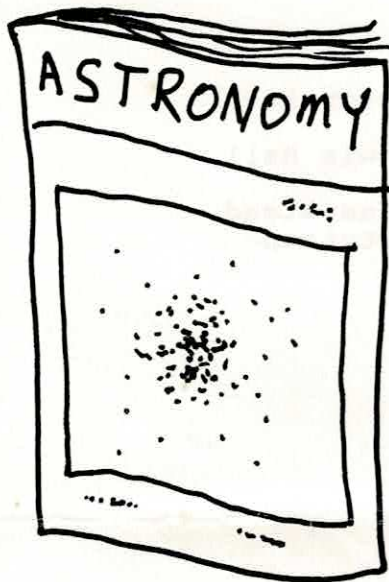
The table below was prepared to aid in the search. Intended for use by the eight or so members with telescopes 10" in aperture or larger, the table gives the altitude and azimuth of Halley near twilight. Dobsonian owners with altazimuth setting circles can use these values to dial-in the comet. Altitude is measured in degrees above (+) or below (-) the horizon. Azimuth is measured in degrees around the horizon East or West of true north.

Calculations for four Saturday mornings have been included. The moon interferes on some dates, but the reader can interpolate to obtain information for weekdays. Comet position and predicted magnitude are based on the IHW Amateur Observer's Manual for Scientific Comet Studies, by Stephen Edberg. All times listed are Universal TIME (UT). To obtain EDT, subtract 4 hours; subtract 5 hours for EST.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Date	Pos 10h R.A. Dec.	Pred Mag	Rises UT Azi	AstTwi UT Azi Alt	NauTwi UT Azi Alt	CivTwi UT Azi Alt	Moon Ris/Set illum
25 OCT	11h 35.2m -12d 10m	12.7	09:10 E105.8	09:58 E113.7 +08.7	10:29 E119.2 +14.0	11:01 E125.3 +19.3	03:32 Rises 55%
01 NOV	11h 37.2m -12d 44m	12.8	08:46 E106.6	10:05 E119.9 +13.9	10:36 E125.8 +18.9	11:08 E132.4 +23.7	10:49 Rises 06%
08 NOV	11h 38.7m -13d 17m	12.9	08:22 E107.3	10:12 E126.6 +18.8	10:43 E133.0 +23.4	11:15 E140.3 +27.5	03:20 Sets 45%
15 NOV	11h 39.7m -13d 49m	12.9	07:58 E108.0	10:19 E133.9 +23.4	10:51 E141.2 +27.5	11:23 E149.1 +31.1	10:57 Sets 93%

Comet Halley Ephemeris For Westminster

Column 1 is the date of the predicted data in that row, and column 2 is the predicted right ascension and declination for 10h UT on that date. Column 3 is the predicted magnitude. Column 4 is the UT that Halley rises, and the Azimuth of that point on the horizon from which it will rise. Column 5 is the UT of astronomical twilight, when the sun is 18 degrees below the horizon, and the altitude and azimuth of the comet at that time. Column 6 is the UT of nautical twilight, when the sun is 12 degrees below the horizon, and comet's altitude and azimuth. Column 7 is the UT of civil twilight, when the sun is 6 degrees below the horizon, and the comet's altitude and azimuth. Column 8 lists the rising or setting times of the moon, and the percentage of illumination of sunlight. New moon is 0% and full moon is 100%; first and third quarter moons are 50% sunlit.



The Kalmbach Publishing Co. has made certain magazines available to astronomy clubs at a substantially reduced group rate. This is the same plan that we were able to offer W.A.S. members last year (almost the same; the prices have increased slightly). Here's how it works:

1. For first-time subscribers, simply fill in the form on the attached page, send it along with a check, payable to Westminster Astronomical Society, to:

Joe Pekala
3300 Hooper Road
New Windsor, MD 21776

The subscription will begin with the January issue for monthly magazines and with the first 1987 issue of quarterly magazines.

2. For current subscribers, you can extend your subscription at the group rate. To determine your cost, look at the expiration date on the mailing label. (Example: 3/87 means March of 1987.) Count the months from expiration through December and prorate your cost (months remaining x cost per issue). Your current mailing label must be included for proper credit.
3. All subscriptions must go through December of 1987 so that yearly renewals can be completed every October.
4. Money must be received by November 15 at the latest to ensure timeliness of order. If we receive less than the minimum required orders, your checks will be returned.

This is a very good offer. I recommend you take advantage of it. Tell a neighbor we will take orders from non-members.

PLEASE PRINT CLEARLY

ASTRONOMY (\$14 per year @ \$1.16 per issue) Minimum group order of 5.
of Orders

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Address _____
Phone _____ Total \$ _____

ODYSSEY (\$10 per year @ \$.85 per issue) Minimum group order of 5.
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DEEP SKY (\$7 per year) Minimum group order of 5.
of Orders

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Address _____
Phone _____ Total \$ _____

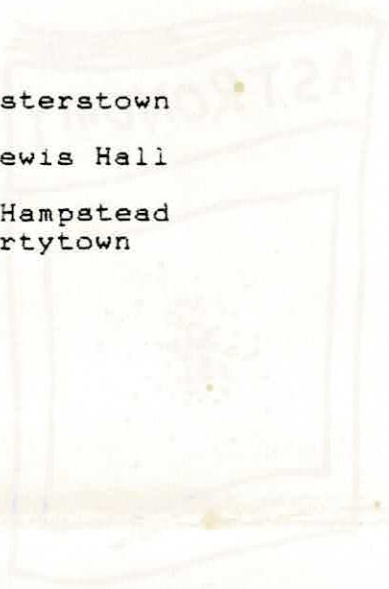
TELESCOPE MAKING (\$7 per year) Minimum group order of 5.
of Orders

Name _____
Address _____
Phone _____ Total \$ _____

You can order any or all of the above. The additional spaces are for friends. Please return your order promptly so that all members can benefit from this offer. If this is a renewal, remember to include a mailing label from a recent issue.

WAS CALENDAR

October 25 dusk	Star Party --D. Pesagno, Reisterstown
29 7:30	WAS monthly meeting -- WMC Lewis Hall
November 01 dusk	Star Party -- M. Scalion's, Hampstead
dusk	Star Party -- W. Lunch, Libertytown



1987

Westminster Astronomical Society

3481 Salem Bottom Road
Westminster, Maryland 21157



SPECIAL SOLAR ECLIPSE ISSUE!



Joelle F-1178
Salem Bottom Road
Westminster, MD 21157