

The Mason-Dixon Astronomer
Westminster Astronomical Society of Maryland

ed Diana Margosky • January 1986, Vol. 3 No. 1

Challenger and the End of an Era

The explosion that occurred at 11:48 EST, January 28, which claimed the lives of seven crew members of the Challenger, leaves each of us with deep feelings of anguish over the tragic loss. It is impossible to reconcile in our own hearts and minds something so sad. We are numbed and moved at the same time while contemplating the impact of this sorrow that has seized the world. We have also reached the end of an era. In a single brutal instant we were awakened to the reality of the risks faced by our modern explorers, and feel humbled by their courage. Never again shall we be able to witness another manned launch without a lump in the throat as a reminder of today's painful loss.

not - not to be used
Diana Margosky, President
Westminster Astronomical Society
Volume XVI

A dissipating trail of smoke lingers above an empty pad following a launch of the space shuttle Discovery. But the trails that Challenger and her crew blazed during their lives will be remembered forever and shall not fade away.

Photograph by
C. Roelle



Another consequence of the accident is the postponement and probable cancellation of shuttle-based observations of Halley's Comet that were to be performed following Halley's February 9 perihelion passage. In addition, the Spartan-Halley spacecraft

[see August 1984 Newsletter p.1], which was to be used to observe the comet, was lost during the explosion.

At the February 5 meeting, a 30-minute videotape shall be shown of mission 51-L. The tape contains segments broadcast by the NASA/KSC Video Release System during the week before, and on the day of, the launch. A photograph of an earlier Challenger launch appeared in the November 1984 Newsletter.

Business Meeting February 5

The annual WAS business meeting has been scheduled for Wednesday, February 5, in Rm. 111 Lewis Hall, Western Maryland College, Westminster. A program shall follow the business portion of the meeting. Elections for the five club offices will be held, as well as the selection of a logo design for the society. Elections are closed-ballot. Any motions for other club business may be resolved at this time also.

After business is completed, a video tape of the television program "Comet Halley", prepared by the Planetary Society, shall be shown. A videotape of the space shuttle Challenger shall also be seen. Total video program will last 1 1/2 hours.

Reminder of February's Comet Program

This is a reminder to all members of the important program scheduled for the February 26 meeting. Dr. John Brandt is a comet expert and coordinator of large scale phenomena (comet tails) for the International Halley Watch (IHW). Dr. Brandt is currently Chief of the Laboratory for Astronomy and Solar Physics at NASA-Goddard Space Flight Center.

This meeting promises to be one of our most informative ever. Please plan to be there at 8:00, Wednesday, February 26.

President's Message

I had hoped that the January business meeting and club elections would be rather festive, but in light of events in Florida this past week that would be asking too much.

Last year at our first business meeting we had eight members. Five of them showed up and everyone carried home a title (there are five offices in our society). This year there are 28 members and still only five offices. Please come and exercise your right to vote and run for office.

It has been my pleasure to serve you during 1985 and I thank each of you for joining the Westminster Astronomical Society.

Curtis W. Roelle

Nominations For 1986

Nominations shall be open until election time at the February 5 business meeting. Nominations to date are shown below. Encumbants are indicated by asterisks. Nominations shall remain open until election time. The election shall be closed ballot.

President

- Curtis Roelle *

Vice President

- Todd Bonner *
- Dave Pessagno

Secretary

- Tom Prall *

Treasurer

- Blaine Roelke *
- Joe Pekala

Director At Large

- Tom Appler *
- Steve Rice

OBSERVATIONAL ASTRONOMY

To ensure timely arrival of Mike Potter's periodical newsletter "Observational Astronomy", you are reminded that OA can be delivered to the homes of astronomers who supply Mike with self-addressed, stamped envelopes. His address is 2809 St. Paul St., Baltimore, MD 21218.

December's Public Halley Star Party -- Smashing Success

After many days of poor weather, a cold front plowed through driving away the clouds to make Saturday night December 14 extraordinarily clear. Over a dozen members gathered at the Hashawa Environmental Center north of Westminster to give members of the public the chance to see Halley's Comet. Telescopes ranged in size from four inches up to Walter Richard's 13.1" Coulter Odyssey. A set of fascinating slides prepared by the Astronomical League was shown every hour in one building. The slides were generously loaned to WAS by Judy Nathanson of the Baltimore Astronomical Society. Joe Pekala ran the program each time, spoke to guests, passed out free literature, and sold booklets single handedly. Joe worked so hard he nearly missed his own chance to see Halley's Comet, late in the evening, low over the horizon.

Visitors who brought their own binoculars and telescopes, were amazed when they found the comet themselves, under the direction of WAS members who braved the cold to man at least seven telescopes. In another building, coffee, hot cider, and snacks, including granola trail bars, were served by the Carroll County Parks Department. A wood stove further aided in comforting those who were nipped by the cold, a price many paid in exchange for a look at Halley's Comet.

About 200 people turned out and WAS has been asked to have a repeat performance in the future. Special thanks goes to the Parks Department for their cooperation and for turning off the mercury vapor lamps on the grounds, and to the Baltimore Astronomical Society for their slides. Eugene Sterner coordinated the event with the Parks Department. WAS members who contributed their time were Tom Appler, Todd Bonner, Andrew Jack Demario Jr., Frank Filemyr, Lyndon Gibbes, Joe Pekala, Walter Richards, Blaine and Frank Roelke, Curt Roelle, William Shuey,

Eugene Sterner, and Don Thatcher.

February Star Party

WAS has no special plans for a formal star party in the short bitter month of February. However, Mike Scalion and the Active Amateur Astronomers of Maryland, have a star party every month on the Saturday closest to New Moon. This month that date shall be Saturday, February 8, and as usual any interested WAS member is invited to attend. Mike's address is 2201 Green Haven Way, Hampstead, telephone 239-3105.

WAS asked to Help Out Girl Scouts

The Girl Scouts of America have kindly requested WAS to assist about 150 girls who are working on an astronomy and aerospace merit badge. Because of the size of the group, several telescope operators will be required, so please consider helping if you can. The event shall be on Sunday, February 16, from 6:00 p.m. until 9:00 p.m. More information and a sign-up sheet shall be at the meeting.

Hatter Planetarium Program on February 23

The next show at the Hatter Planetarium in Gettysburg will be "The Solar System Today", on Sunday February 23, at 1:00 p.m. and 3:00 p.m. Those interested in carpooling up for the later show should meet in the Lewis Hall parking lot, for departure at 2:10 p.m.

1985 Treasurer's Report

Blaine Roelke has done an outstanding job during the past year as Treasurer. He has prepared the following financial report for 1985.

INCOME:	\$258	EXPENSES:	\$ 90
Dues	\$258	Postage	\$ 90
Donations	6	Dinners	52
Halley books	49	Halley Books	25
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	\$313		\$167
Initial Balance	\$ 75		
Income	313		
Expenses	(167)		

Balance 12/31/85	\$221		

Messier Marathon Coming Soon

Get ready! The Second Annual Messier Marathon is scheduled for Friday, March 7. Last year's event was rained out, so let us hope for better luck. Start getting plenty of sleep so you can stay up all night.

November/December Meeting

Guest lecturer at the December 4 meeting was Fred Espenak of Goddard Space Flight Center In Greenbelt. Although Mr. Espenak is an infrared astronomer by profession, his topic was solar eclipses. Mr. Espenak also serves as expert tour guide on some of the more exotic eclipse expeditions worldwide.

Mr. Espenak began his talk by describing some of the ancient superstitions that associated eclipses with misfortune in battle, blamed the terrifying event on the anger of the gods, or interpreted this fearful phenomenon as a ravenous black-clawed dragon hungrily devouring the sun. By the middle ages the fear had not abated and even caused the death by fright of the Bavarian Emperor in 840 A.D. Even today the sight of the Sun vanishing before their eyes will hush a crowd of observers below as they gaze and wonder in awe.

Mr. Espenak became hooked on eclipses during a 1970 eclipse in North Carolina while living in New York. The eclipse left him "dumbstruck" and "exceeded his wildest expectations". He traveled to the 1972 eclipse in Cap Chat, Quebec, which was unfortunately clouded out. Twelve months later Mr. Espenak was in Kenya photographing an eclipse, thanks to an "alumni fund". Mr. Espenak has had two of his astrophotos appear on the cover of, as well as having several papers published by Astronomy magazine.

Several slides were shown which depict the different features seen during a total solar eclipse. These include the pearly corona, the scarlet prominences, planets and stars that become visible in the deep twilight caused by totality, and the dark circular body of the moon which hides the sun.

The visible part of the sun is a layer known as the photosphere, and although it is a gas, the sun appears to have a sharply defined outline. Dark sunspots, caused by intense magnetic storms, may be viewed with a telescope and rarely with the naked eye. Another layer, the chromosphere, may be viewed briefly during total eclipses, several seconds before and after totality begins and ends. Above the chromosphere extends the vacuum-like corona. The coronal temperature is about two million degrees.

Next Mr. Espenak discussed the geometry of eclipses. We are very fortunate that the ratios of the sun and moon's diameters, and their distances from earth are equal, causing them both to appear the same angular size in the sky. The relationship between the umbral and penumbral shadows and partial, total, and annular eclipses were pointed out. Observers within the umbral shadow see a total eclipse, while those within the penumbra see a partial or sometimes annular eclipse. Totality never lasts longer than seven and one-half minutes. Mr. Espenak showed geometrically that solar eclipses occur about twice per year, but as many as five could take place in one year.

On average any given location on Earth shall see one total solar eclipse every 360 years, with a very large standard deviation. For instance Papua New Guinea had two total eclipses 18 months apart in 1982 and 1983. On the other hand London has not witnessed a total eclipse for hundreds of years.

The moon's orbit is elliptical and therefore its distance,

and thus size as well, varies. At a certain distance the moon will appear smaller than the sun. During an eclipse at this time, a ring of sunlight is seen around the dark lunar disc, and the event is known as an annular eclipse.

Mr. Espenak then discussed in detail the Great Annular Eclipse of 1984, which was visible in the southeastern United States. This eclipse was viewed by a few WAS members who journeyed independently to several southern states. Mr. Espenak described the mad dash he made, with a busload of tourists under his expert guide, from Williamsburg, Virginia to Greensboro, North Carolina, in an effort to beat the miserable weather.

The presentation ended with the replay of an audio tape Mr. Espenak recorded during annularity. Slides taken during the eclipse were synchronized with the tape enabling the audience to better appreciate the excited audio comments.

"Solar Eclipses" by Fred Espenak, is available for loan on VHS format VCR videotape.

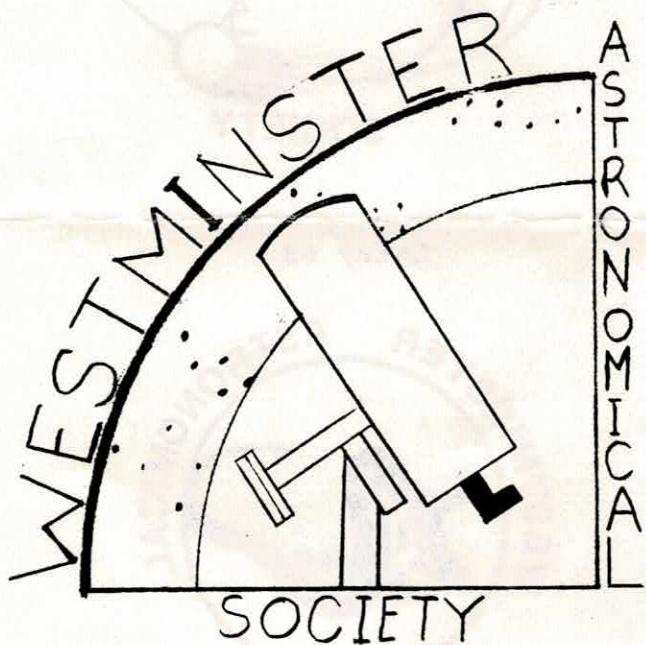
New Name for WAS Newsletter

You may have noticed the new name of this newsletter, formerly known as "The Newsletter". I would like to thank Eugene Sterner for thinking of the new name, the Mason-Dixon Astronomer, or MDA for short.

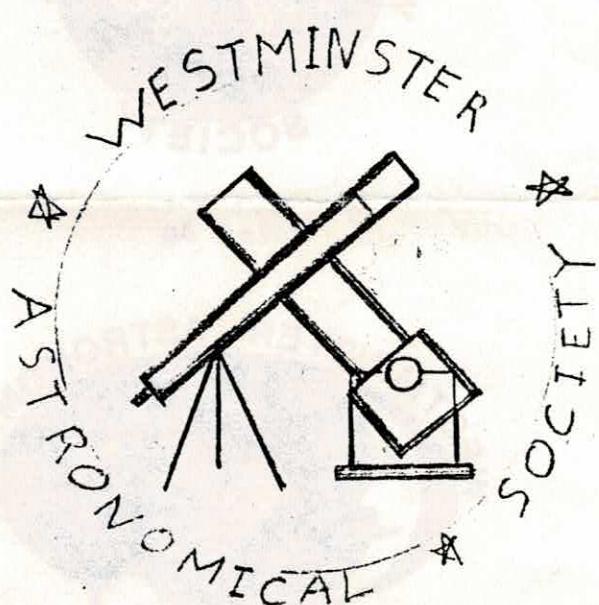
WAS T-Shirts & Logo Contest Continues

This month we continue to present WAS Logo contest entries that have been received during December and January. See the December Newsletter for the first two entries. A winner will be selected at the February 5 meeting, and any last minute entries may be submitted at that meeting.

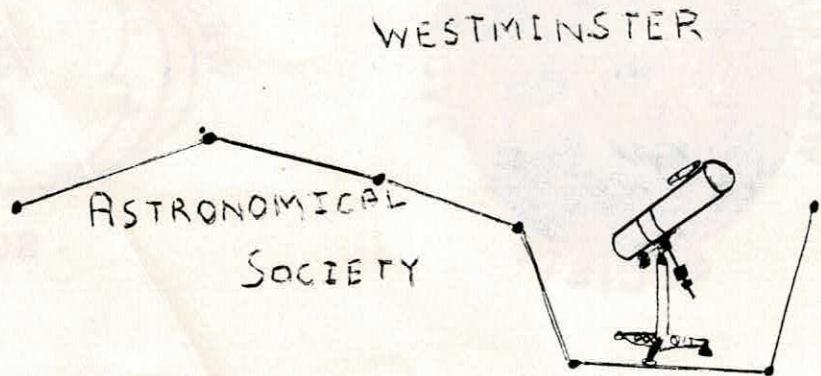
Entry #3



Entry #4



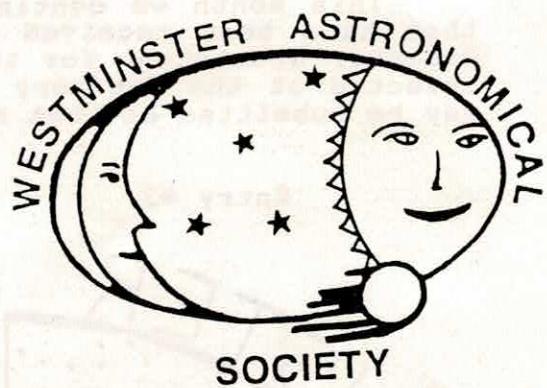
Entry #5



Entry #6



Entry #7



Entry #8



Entry #8



Entry #10



Entry #11



Membership List

Westminster Astronomical Society Membership List
January 30, 1986

Tom & John Appler [F] 11/26/84 : 11/86	737 Lees Mill Road Hampstead, MD 21074	h: 239-8070 o: 825-4454
Jim Bittle [S] 11/15/85 : 11/86	3208 Woodring Rd. Baltimore, MD 21234	254-9169
Andrew S. Blumberg [S] 11/12/85 : 11/86	337 Old Trail Baltimore, MD 21212	h: 337-8717 o: 494-5654
Todd Bonner [S] 11/28/84 : 11/85	518 Geneva Drive Westminster, MD 21157	848-7839
Andrew Jack Demario Jr. [S] 10/30/85 : 10/86	2605 Bert Fowler Road Manchester, MD 21102	374-9177
Russell A. Dick [S] 09/04/85 : 09/86	22 Middlegrove Court West Westminster, MD 21157	848-9054
Frank Filemyr [S] 09/25/85 : 09/86	2112 Woodview Rd. Finksburg, MD 21048	876-1924
Kenneth Flynn Jr. [S] (Janet) 06/20/85 : 06/86	503 David Court Mt. Airy, MD 21771	829-0582
Bernie Fortenbaugh [F] (Josh) 06/29/85 : 06/86	2430 Braddock Road Mt. Airy, MD 21771	635-6397
Lyndon Gibbes [S] 05/???/85 : 05/86	318 Royer Rd. Westminster, MD 21157	876-7649
Dennis Mishler [S] 05/22/85 : 05/86	606 Roundtree Court Sykesville, MD 21784	h: 795-6330 o: 747-7745
Joe Pekala [F] 06/20/85 : 06/86	3300 Hooper Road New Windsor, MD 21176	635-2601
Dave Pessagno [S] 03/07/85 : 03/86	45 Franklin Valley Circle Reisterstown, MD 21136	526-5128
Mike Potter [S] 11/26/84 : 11/86	2809 St. Paul Street Baltimore, MD 21218	(301)235-2017
Tom Prall [S] 01/30/85 : 11/85	440 Lees Mill Road, Hampstead, MD 21074	374-6503
Nancy Raab [S] 11/14/85 : 11/86	1513 Patapsco St. Baltimore, MD 21230	837-3449
Steve Rice [S] 02/27/85 : 02/86	8328 A Walter Martz Rd. Frederick, MD 21701	(301)663-6054
Clifton A. Richards [F] 11/26/84 : 11/86	338 Leyton Road. Reisterstown, MD 21136	(301)833-8247
Walter Richards [S] 08/23/85 : 08/86	2645 Robert Arthur Road Westminster, MD 21157	346-7596
Blaine & Frank Roelke [F] 11/26/84 : 11/86	6700 Keysville Road, Keymar, MD 21757	756-2886
Curt & Cheryl Roelle [F] 11/26/84 : 11/86	3481 Salem Bottom Road, Westminster, MD 21157	848-6384
Mike Scalion [S] 09/???/85 : 09/86	2201 Green Haven Way Hampstead, MD 21074	239-3105

William H. Shuey [S] 10/30/85 : 10/86	96 Carrollview Avenue Westminster, MD 21157	848-0247
Robert Sier Jr. [S] 03/27/85 : 03/86	10219 Liberty-Daysville Rd Walkersville, MD 21793	(301)898-5949
Ray/Sharleen Sternier [F] APL 12/04/85 12/86	6648 Woodbine Road Woodbine, MD 21797	795-6443
W. Eugene Sternier [S] 12/18/84 : 11/85	4625 Old Hanover Road Westminster, MD 21157	346-7725
Don Thatcher [F] 11/03/85 : 11/86	187 Opal Ave. Westminster, MD 21157	876-7762
Barry H. Willen [S] 10/30/85 : 10/86	18 Cree Court Randallstown, MD 21133	521-4269

- Type of membership is indicated by brackets: Single/Family
- Date joined below name (e.g. 11/26/84)
- Month in which membership expires, expires at month's end

WAS CALENDAR

February 5 7:30 p.m. Monthly Meeting - Lewis Hall, WMC
 8 Dusk Star Party - Mike Scalion, Hampstead
 16 6:00 p.m. Astronomy for the Girl Scouts
 till 9:30 p.m.
 23 2:00 p.m. Planetarium - meet at Lewis Hall
 26 6:00 p.m. Dinner with Dr. Brandt, Fan's Rest.
 8:00 p.m. Monthly Meeting - Lewis Hall, WMC

March 7 Dusk 2nd Annual Messier Marathon

Westminster Astronomical Society

3481 Salem Bottom Road
Westminster, Maryland 21157



Curt & Cheryl Roelle
3481 Salem Bottom Road
Westminster, MD 21157

F-11/86