

# DETROIT ASTRONOMICAL SOCIETY



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## NEWSLETTER

June/July 1981

### FROM THE PRESIDENT

Since the last Newsletter, our club activities have been going well. Throughout the Newsletter you will find details of the next two months activities. A review of the April/May activities are as follows:

- 1) The Space Shuttle trip with "DAS" and "WAS" was a great success. The tour and launch were well worth the drive down and two day wait. Photos taken by the members were wonderful.
- 2) The First Annual "DAS Awards" Program was fantastic. There were almost fifty people in attendance with approximately seventy-five awards given out. Based on the comments later in the month, the Awards Program will be an annual event.
- 3) The "DAS Dinner" came off very smoothly, and the food was good. It appears that next years Dinner will be the same format.
- 4) Motel reservations have been made for Stellafane, and the trip organization is well under way.
- 5) Apollo Rendezvous motel reservations have been made and driving arrangements will be worked out May 29 and June 5. Please contact Gary Frey on those nights. Gary Frey will be presenting his "Intensification" lecture at the Apollo Rendezvous on Saturday June 13.
- 6) The college level astronomy course is closed for the summer. Watch the Newsletter for future information regarding the course.
- 7) We received many articles from members for our last Newsletter. Keep them coming.

—Gary Frey  
President

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### \*AN OPEN LETTER\*

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Dear DAS Members:

I believe this letter is appropriate to inform the general membership and in particular to reach those members who were active in the past years or who were among the faithful at the U. of D. Sunday meetings that; Dr. Gerhard Blass has retired from his position on the faculty of the University of Detroit after thirty years of academic service.

Allow me to take you back a few years to retrace the roots of how Dr. Blass became affiliated with the DAS. During the 1960-1961 years Dick Lloyd was president and the DAS was thirty years old. The society met regularly at Wayne University on Sundays playing host to the fairly large segment of the public who were interested in astronomy. I have heard that

their Sunday programs were presented to a packed house with standing room only and active membership numbered upwards of three-hundred. Some of those very active members were John Hartleib, Charles Johnson, Larry Applebaum, Doc Marshall, Dick Love, Bob Loomis, Vic Velasco, Newell Saigeon, Nelson Lewis, Roy Stickney, Frank Boscovitch, Ed Denslow, and Jerry Rath- and no doubt others that I've overlooked, but these were the real sparkplugs of the organization, the prime movers who made things happen.

Now things were really moving and there was a lot of pressure on the people up front to handle the needs of the public and our membership. The image of the DAS had come a long way under the guidance of Dr. Everett Phelps who was chairman of Wayne's Physics Department. However Dr. Phelps was in poor health and could no longer function in the capacity of lecturer and consultant.

It was about this time (1960) that Mr. Lloyd met Dr. Harmon who was chairman of the Physics Dept. at the University of Detroit. Mr. Lloyd asked Dr. Harmon if he knew of anyone who could Lecture on astronomy and fill in for Dr. Phelps. As it turned out, Dr. Harmon had just the person in mind; a man who had been at the U. of D. for about ten years. He had the ability to take the very complex subject of astronomy and present its concepts in a fresh, understandable manner that would hold an audience composed of people with a wide ranging interest in physics, general science and astronomy, such as our DAS. This man was Dr. Blass.

Before we go forward, it is necessary to pause for a little background concerning the U. of D. This was one of the country's finest universities with an outstanding reputation for its Schools of Law and Dentistry and had attracted only the finest professors from throughout the country. Indeed it was an honor to be affiliated with the university as part of its staff or as a student or alumni. It was evident that the DAS would like to somehow be affiliated with U. of D.

So the movement began. Dr. Blass was contacted and was agreeable to be consultant and occasionally lecture at Wavne which allowed us to conduct business as usual. Although Dr. Blass was not a member he was sympathetic to our cause and was instrumental in making the transition from Wayne to U. of D. for the DAS. Now, somewhere around 1961, Dick Lloyd started a move to obtain an honorary membership for Dr. Blass and we can see the net tightening. Some more time passes and in 1961, Vic Velasco became president. Dr. Blass was nominated for president, but of course before he became eligible he has to be a paid-up member in good standing as per our by-laws and this was the classic case of entrapment. He, of course, was elected president and served continuously from 1962 to 1979.

To many of us who had the privilege of knowing Dr. Blass personally, we realize that he was very adept at teaching and had developed unique styles that could only come from one who was eager to share the fruits of the academic world. He had many out standing students who were greatly influenced during their years at U. of D. and have gone ahead to preserve the basic concepts for which Dr. Blass has always defended.

On behalf of the present and past members of the DAS, I acknowledge you for all the years of genuine interest and service to our organization.

Good luck to you in your retirement.

Ed Dvorak

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\*CALENDAR OF COMING EVENTS\*

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- June 5 - Board of Directors Meeting, 7:00PM  
- Movies: "Flaming: Sky" 8:30PM  
"Moonwalk"  
- Workshop activities.
- June 12 - General-Meeting, 8:00PM  
- Lecture, 8:30PM  
Richard Lloyd on "Celestial Coordinates"  
- Workshop activities.  
- Apollo Rendezvous
- June 19 - Workshop activities.
- June 26 - Lecture, 8:30PM  
Jeffery Fesko on "Building A 12.5 inch f5 Modified  
Dobsonian"  
- Workshop activities.
- July 3 - Board of Directors Meeting, 7:00PM  
- Movies: "Comets, Meteors, Planetoids", 8:30PM  
"Exploring Planets"  
"Exploring Space" - Workshop activities.
- July 10 - General Meeting, 8:00PM  
- Lecture, 8:30PM  
Richard Lloyd on "Circumpolar Coordinates"  
- Workshop activities.
- July 17 - Workshop activities.
- July 24 - Lecture, 8:30PM  
Don Misson on "Simple Measuring Instruments For  
Mirror Making" .  
- Workshop activities.
- July 31 - Movies: To be announced, 8:30PM  
- Workshop activities.  
- Stellafane

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\*OBSERVERS REVIEW\*

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June;

Mercury is visible about  $16^\circ$  above the western horizon at about sunset at the beginning of the month, but by June 21 it is no longer visible.

Venus can be seen low in the west just after sunset all month.

Mars can be seen just before sunrise toward the end of June.

Tues. 2) New Moon 7:32A. '11 E.D. T.

Wed. 3) Tau Herculid Meteor Shower peaks (May 19-June 14) up to ten per minute?!

Sat. 6) DAS star party at Gary Frey's

Tues. 9) 1st Quarter Moon 7:33AM, E.D. T.

Mercury passes  $1.7^\circ$  south of Venus (170 east of sun).

Sun. 14) Alpha Scorpiid Meteor Shower peaks (June 2-17) up to five per hour.

Mon. 15) Lyrid Meteor Shower peaks 11:00PM E.D.T. (June 10-21) 8-10 per hour.

Wed. 17) Full Moon 11:04AM E.D.T.

Sat. 20) Ophiuchid Meteor Shower peaks (Jun~ 17-26) up to 20 per hour.

Sun. 21) Summer Solstice 7:45AM E.D.T.

Thur. 25) Last Quarter Moon 12:25AM E.D.T.

Third -Intelsat spacecraft will launch from Cape Canaveral on an Atlas Centaur. Fleet Satcom 5 will also be launched by an Atlas Centaur about this time. RCA Sat Com 4 (replacing "lost" RCA Sat Com 3) goes into geostationary orbit aboard a Delta launch vehicle.

Observers Review (cont.)

June:

- Fri. 26, and Sat. 27) Point Pelee observing session.  
Mon. 29) June Draconid or June Bootid Meteor Shower peaks  
(June 27-)0) up to 6 per hour.

July

Mercury is very low in the east just before sunrise all month.  
Venus can be seen low in the west just, after sunset this month.  
Mars is low in the east at sunrise.

- Wed. 1) New Moon 3:03 PM E.D.T.  
Wed. 8) 1st Quarter Moon 10:39PM E.D.T.  
Fri.17) Full Moon 12:39AM E.D.T. Partial eclipse of the Moon 12:47AM  
E.D.T.  
Fri.24) Last Quarter Moon 5:40AM E.D.T.  
Tues.28) Delta Aquarid Meteor Shower peak (July 27- Aug 12) 19-35 per  
hour.  
Thur.30) -Jupiter passes 1°12' south of Saturn 6:00PM E.D.T. Capri-  
cornid Meteor Shower peak (July 25- Aug 5) 5-30 per hour.  
Fri.31) Solar eclipse- not visible in this area. Dynamics Explorers 1  
and 2 are to be launched together from Calif. aboard a Delta  
launch vehicle.  
Fri. 31 and Sat. Aug. 1) Point Pelee observing session.

-Nancy Waggoner-

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\*MIRROR ACTIVITY UPDATE\*

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Brian Keller and Kevin Dehne are still grinding their 8" mirrors.  
Duncan Payne, grinding a 6" mirror, and Frank Grondzieleski, polishing  
his 8", have been away from grinding and polishing for a while. We hope they  
have not give up. If they need some help we are here for their assistance.  
Two new members are making a 6" mirror jointly.

-Mike Manyak & Marty Kunz-

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\*TELESCOPE ROSTER\*

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We are attempting to organize an information roster of telescopes of  
the members of DAS. This roster will be in the form of a photograph of each  
members telescope along with optical and mechanical information. These pho-  
tographs will also be used for a club "display board" for the May 9th star  
show. Photographs (black & white or color) of all telescopes is requested  
whether purchased or home made.

The photographs (no larger than 5 by 7) and information are needed by  
April 24, 1981 and must be brought to a Friday night meeting or mailed to  
Gary Frey, 7570 Crestmore, West Bloomfield, Michigan, 48033.

The display that Mr. Lloyd made using the photographs received to date  
is very impressive. I know that there are members with telescopes who have  
not sent photos yet, please send them so we can expand and complete our dis-  
play.

The information needed is as follows:

Mirror: Size, F/ratio, Date Finished  
Telescope: Type, Date Finished, Date Purchased.

—Gary Frey

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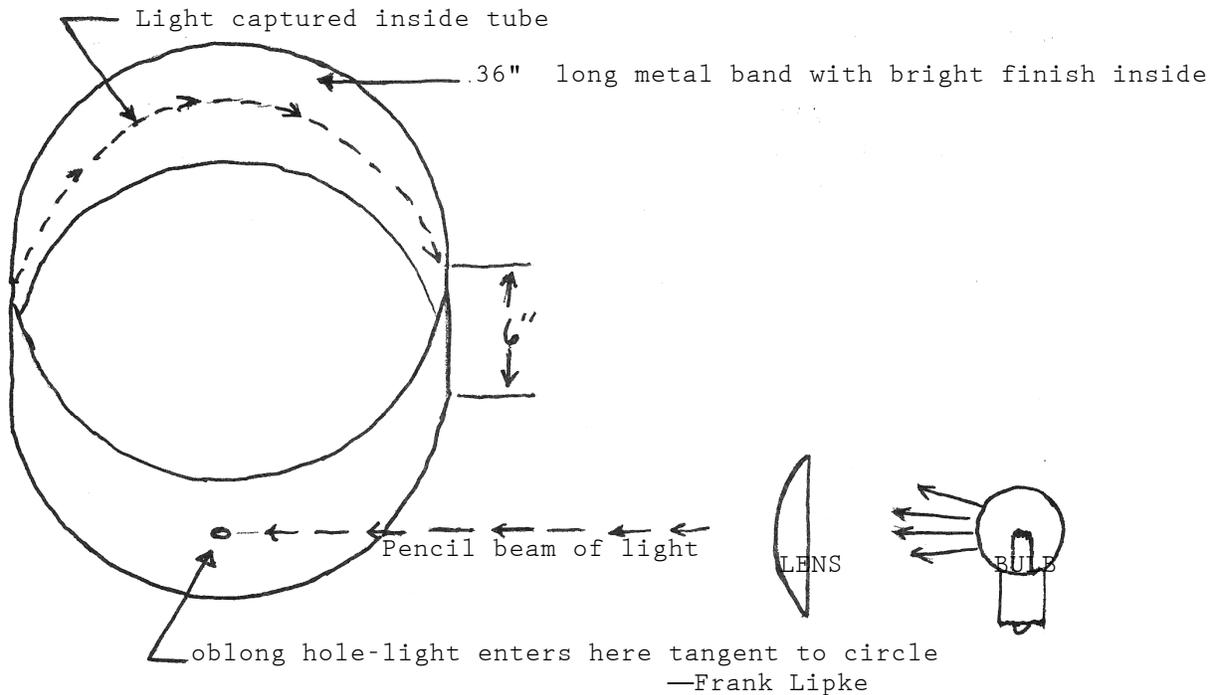
\*A CIRCLE OF LIGHT\*

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Take a 6" wide by 36" long metal band mirrored on one side and form a circular tube which is about a foot in diameter with the reflective surface on the inside. On the 6" width, 3" up, produce an oblong hole about 1/8" by 3/8".

In a totally dark room take a thin pencil beam light and aim it thru the small hole in the tube so that it enters tangent to the reflective surface.

The light rays reaching the inside of the tube will skip around and become captured, thus producing a "circle of light". These light rays will travel around the inside of this 36" long course 1760 times to journey one mile. But in 5/8 of one second the light has made (186,000 miles/second times 1760 revolutions/mile) 327,360,000 revolutions around the inside of this one foot diameter tube.



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\*THE SEARCH FOR EARTH-SUN TROJANS\*

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Most amateurs are familiar with the Trojan type asteroids of Jupiter-Sun system. But a new asteroid search program has been developed with support by the Space Studies Institute under the direction of Dr. Scott Dunbar. The asteroids they are searching for are the highly controversial Earth-Trojans of the Earth-Sun system. The theories and concepts involving celestial mechanics and orbital dynamics add to the controversy. These asteroids are located in the L4 and L5 libration points of the Earth-Sun system.

With respect to the Earth-Sun system their orbits are very stationary and create a very stable launch time for material retrieval for Space manufacturing. If we take into consideration the concept of capturing an asteroid and developing it for raw material retrieval and processing, then the lunar material retrieval scenario becomes a disadvantage. Another nemesis of the Earth-Sun system is our brilliant companion Venus. It is believed that Venus creates many problems in calculating the orbits used to designate the search area. Searching for these asteroids is another problem. Mid February

for the L4 period and October for the L5 period are the only possible times.

Because the sun's liberation points are at a low altitude over the horizon, this limits the search time to a little more than one hour per night. Depending on the amount of light that is reflected from the surface of the asteroid and taking into consideration a diameter of a kilometer or two, an estimated magnitude of 20 is calculated. This is considered the limit of the 48 inch Schmidt telescope.

Dr. Dunbar, with support from the Space Studies Institute completed a four night observing run on the 48 inch Schmidt telescope at Mt. Palomar. Approximately 10% of the area down to 20 magnitude was searched. Unfortunately there were no discoveries.

More time has been reserved at Mt. Palomar in autumn of 1981

—Jack Brisbin

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\*EXPLORING ALTERNATE REALITIES\*

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Have you explored any alternate realities lately? Maybe I should put that another way. Have you read any good science fiction lately? If you haven't maybe you ought to give it a try.

But where does one begin? How do you insure that your first experience, in this very complex genre of literature, is a rewarding one? As with most endeavors it will depend on the person's own past experiences. Almost all value judgements are based on an individual's own personal tastes in life generally. Therefore it is probably best to start with a subject or theory that has caught your interest in the past. To do this it helps to know which authors write what types of stories. I hope this article may help.

For those people interested in what I call hard science, I recommend such authors as: Larry Niven, Jerry Pournelle, Isaac Asimov, Arthur C. Clarke, Robert Heinlein.

For stories dealing with planetary conquest, authors such as Poul Anderson, Alfred Bester, Andre Norton, Brian Aldiss, James Blish, Lester DelRey, and Robert Sheckley are very absorbing reading.

Alien cultures are explored in novels by Frank Herbert, C.J. Cherryh, Michael Moorcock, Vonda McIntyre, Ursula K. LeGuin.

The realm of fantasy may be explored through the authors Anne McCaffrey, Roger Zelazny, Leigh Brackett, among others.

Other authors whom I have found very interesting but difficult to categorize are Piers Anthony, Ray Bradbury, Alan Dean Foster, Edmund Cooper, John Brunner, David Gerrold, Joe Haldeman, Walter Miller Jr., H. Beam Piper, Bob Shaw, Clifford D. Simak, Kate Wilhelm and John Varlev.

Undoubtedly, there are many other authors that I have neglected to mention here, though they too have contributed greatly to many hours of pleasurable reading

George Eyster

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\*NASA QUIZ ANSWERS\*

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On the following page you will find the long awaited answers to the NASA Moon Crash Quiz.

SCORER'S SHEET

Items	NASA's Reasoning	NASA's ranks	Group Ranks	Error Points
Box of matches	No oxygen on moon to sustain flame, virtually worthless	15		
Food concentrate	Efficient means of supplying energy requirements	4		
Fifty feet of nylon rope	Useful in scaling cliffs, tying injured together	6		
Parachute silk	Protection from sun's rays	8		
Solar-powered portable heating unit	Not needed unless on dark side	13		
Two .45 caliber pistols	Possible means of self-propulsion	11		
One case of dehydrated Pet milk	Bulkier duplication of food concentrate	12		
Two 100-pound tanks of oxygen	Most pressing survival need	1		
Stellar map (of the moon's constellation)	Primary means of navigation	3		
Self-initiating life raft	CO bottle in military raft may be used for propulsion	9		
Magnetic compass	Magnetic field on moon is not polarized, worthless for navigation	14		
Five gallons of water	Replacement for tremendous liquid loss on lighted side	2		
Signal flares	Distress signal when mother ship is sighted	10		
First-aid kit containing injection needles	Needles for vitamins, medicines, etc., will fit special aperature in NASA space suits	7		
Solar-powered FM receiver-transmitter	For communication with mother ship, but FM requires line-of-sight transmission and short ranges	5		
			<b>Total</b>	<input type="text"/>

Error points are the absolute difference between the croup's rank and NASA's rank. for example, food concentrate is ranked 4 by NASA. If the group ranks this item as either 2 or 6, they would be given 2 error points.