DETROIT ASTRONOMICAL SOCIETY

Volume 4 No.6 **Newsletter** OCTOBER 1967

9900 EAST JEFFERSON DETROIT, MICHIGAN 48214

Sunday Meeting Oct. 8 to Feature Movie & Talk

Do you enjoy music? art (people swarmed to New York and Detroit to view the Mona Lisa)? games (baseball or chess)? science? Do you know the basic foundation of these and many other subjects?

Galileo had the answer. We know him as an astronomer and a physicist, but he had studied the classics, theology, music and painting by the time he entered, at age 17, the University of Pisa to study medicine. As a boy of 19, he was credited with noticing that a swinging lamp took the same time to move through a large arc as through a small one. He applied this principle to measuring the human pulse and to constructing clocks. We know him as the man who first used the telescope to view the moon, to resolve the Milky Way into a host of individual stars, to find four moons circling around Jupiter, and to prove the Copernican theory.

Yes, Galileo had the answer. He said: 'Mathematics is the alphabet with which God has written the universe.'

Sunday, October 8, the D.A.S. program at of D. will feature the half hour color movie 'MATHEMATICS FOR TOMORROW' - a lucid, interesting trip starting with the simplest steps. This will be followed by:

••• a talk on the romance of the Astronomer with mathematics ever since the time that man tried to puzzle out the secrets of the starry universe about him. Through the past ages the astronomer has served as the catalyst or prime mover in the development of modern day mathematics, The talk, non-technical, will point out many little-known facts that shows the true force of the astronomer in bringing about the science and technology that provides us with many of the 'nice things' we enjoy today.

The Sunday Meeting is at 3:15 p.m. in the Science building (facing Livernois) at U. of D. No admission charge - Free Parking, Public Invited - - Bring your friends.

It Was Early in September

The weather went all out to make the Labor Day week-end a success for astronomers, Saturday, September 2, the sun shone brightly although the air was not too warm. More than 40 persons showed up at the Rattle Run Obser-vatory Site, Some came to picnic in the after - noon and remained to view the stars after dark. Others came just at dusk and stayed until the wee hours of the morning. The Harvey Johnsons and the Don Campbells brought their campers and stayed until Monday evening as did the Dick Lloyds, This enabled them to put in all of the daylight hours for 3 days working on the building project, Also many of the picnickers on Saturday got in a chance to put in some time on the project. Frank Lipke and John Hartleib spent the afternoon clearing and burning under-brush and weeds. Past President, Vic Velasco and Pete Lloyd showed up with trenching machinery and a crew of four, and before dark had laid 400 feet of pipe five feet deep in the ground between the observatory building site and the lake,

John Lloyd and Steve Velasco spent most of the day filling mud holes on Newman Road. In spite of their efforts the road still presented the appearance of an obstacle course. Still it couldn't frighten a couple of the girls,

Ann Olmstead and Sophie Gruca, who arrived early in the afternoon.

Among those who set up their telescopes were Gerald Gainor, Richard Greenwald, John Hartleib, Larry Kalinowski and Nelson Lewis. The next to last arrivals were Dave Roberts and his mother who had the courage to brave the road. The last to arrive were the Dellald family

On Sunday the work crew was joined by Leen Goonis, his son Danny and a friend of Dan's, Mr. and Mrs. Grabowski also drove out to help, On Monday Fred Mathews joined the crew. It was a great week-end and a great deal was accomplished,

OCTOBER Program of Events at Sylvia Allen Center

Friday, *October 6*, *1967*

8:00 p.m. - Astrophotography

'Processing Ektachrome Color Film'

At past Friday evening meetings the processing (developing) of black and white films has been covered by U.S. Navy Photographic Training films. In this session an actual demonstration of color film developing will be presented.

9:30 p.m. - Lecture

'The Case for going to the Moon'

The first in a series of 3 talks aimed at answering the question 'Why go to the Moon' w (see article on page 3).

Sunday, *October 8*, *1967*

Monthly Meeting at University of Detroit

(See article on page 3)

Friday, *October 13*, *1967*

8:30 p.m. - Taped Lecture

'UFO' s' (Unidentified Flying Objects)

A playing of the Library copy of the Stellar Venture Record described in The Book Corner, page 3 of this issue

9:30 p.m. - Observing Talk

'Lunar Occultations'

As the Moon circles the Earth it fre-quently blots out the brighter stars. Timing of these occurrences is one of the projects which may be undertaken by the serious amateur.

Friday, *October 20*, *1967*

8:30 p.m. - Lecture

'The Case for Going to the Moon' (Part 2)

Mining of the Moon for its materials and records of the early stages of the Solar System (see article on page 3)

9:30 p.m. - Movie

Friday, *October 27*, *1967*

8:30 p.m. - Taped Lecture

'Mysteries of Mars'

A playing of the Library copy of the Stellar Ventures Record described in The Book Corner, page 3 of this issue

8:00 p.m. - Astrophotography

'Resolution Limits of Optical Systems and Films'

The problems of the photographer in attempting to record details of objects many millions of miles away - - what can be expected under optimum conditions.

We wish to welcome

. . . . for September

Richard Collins, another Livonian who treks eastward on Friday nights to take part in the Junior activities at the D.A.S. He is making a telescope and attending the Jr. 'powwows' chaired by Joel Goldstick who, incidentally, introduced Richard to the D.A.S. (e hear he's a good canteen customer.) Welcome, Richard.

Frank Davis, Curator of Communications at the Henry Ford Museum, is the gentleman who was responsible for the thoughtful carte blanche invitation to D.A.S. members to the Antique Wireless Meeting (Sept. Newsletter). Long-time friend of our Solar Eclipse Chairman 'Dick' Love, and many another 'ham' - - - - - we Welcome Mr. Davis to our Honorary Membership Roll.

Observing is Gary Gibson's interest. His inquiry found its Ry to DA.S. sky pathfinder Nelson Lewis (remember Nels' yet to be surpassed moon photo?) Gary and his Dad visited Sylvia Allen Center (they're from Southgate) and we hope to see them every Friday.

D.A.S. Director Leigh LaChapelle has been busy doing just that. He pointed the way from Garden City to the E. Jefferson Center for a new Family Membership. We Welcome Leon and Pat Goonis with their budding astronomers Danny, Linda and Sabrina. We hear that Leon and Danny have spent more time and energy at the Rattle Run site than at the Sylvia Allen Center! (Danny, l0 years old, is also inter-ested in aviation.) With their enthusiasm and 'work output' we know their new 6 inch kit will soon be a beautifully working Newtonian.

Some have hurdles to clear before joining the D.A.S. Allan Jacobs, 7th grade student at Clinton Jr. High, Oak Park, is one of these people. Allan 'phoned Mr. C. Johnson and put his name on the Newsletter list. A few weeks later, another call - Allan's Sept. S & Thad not arrived. Why? The check got lost enroute to E. Jefferson. Hurdles are now cleared — hope to see Allan Friday at the Workshop to test his 6 inch mirror.

You met John Hayes in the May Newsletter. He has been busy sharing his enthusiasm with others. Because of this interest we now intro-duce his friend Bill McHargue. Bill has a 4 in. refractor which serves him well for his ob-serving program. We will have more about these stargazers in a future Newsletter. 'Til then . .

WELCOME ONE AND ALL

THE CASE FOR GOING TO THE MOON

Frequent Editorials in newspapers and period -icals criticize the so-called 'moon race' between the U.S. and U.S.S.R. Often it is pointed out that the money spent could be better used to alleviate some of the many problems confronting mankind right here on earth. Defenders of this space program sometimes let their enthusiasm carry them far afield into areas that verge on the absurd. Wild arguments are advanced, such as 'the only answer to the population explosion' or 'the country that controls the missile launching sites on the moon will control the earth'. The Astronomer should be aware of many genuine benefits to be derived from such a program in the area of advancing man's knowledge of the Universe, not only as it exists *today* but as it was in the past., On the surface of our satellite, unaffected by the erosive effects of air and watex, we may find a record of the formative stages of the solar system. In the perfect vacuum of the moon research experiments may develop new technologies that will have a marked effect on our future.

For more than 3 billion years the moon has acted as a giant vacuum sweeps: gathering up cosmic debris that may provide us with many rare metals which are in short supply on earth. Using solar and nuclear energy, we may find it economical to smelt metals in the absence of an oxygen atmosphere and fabricate items for shipment to earth, or build space ships for exploring the solar system. Here, too, may be the ideal base from which to search the nearer parts of our galaxy for evidence of extraterrestrial life. The two items most necessary for maintaining a lunar colony are free oxygen and water, which apparently do not exist on the moon. However, the technology of obtaining these items from the iunar rock does exist today, as does the means of transporting men and materials from the earth.

Neil Ruzic, Editor and Publisher of Industrial Research Magazine, has 'assembled an enormous fund of data by means of many question -naires to thousands of research scientists. It is planned to describe much of this information in a series of three lectures to be presented at the Allen Center on October 6, October 20 and November 3 (see program times on page 2).

SIGNAL '66

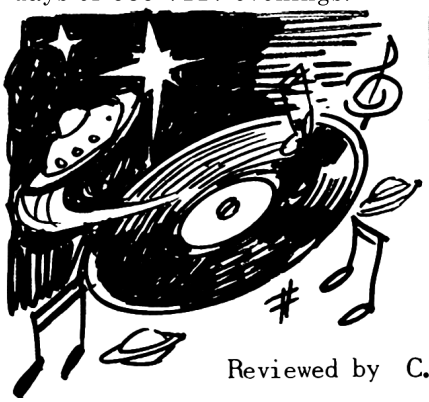
Watch for the second Installment of Ken Burgess' August article 'SIGNAL ' 66'.

The BOOK CORNER

This column will not be concerned with literary style or skill but will look at books from the standpoint of interest to our members.

For October this column has a review which is 'off the record'.

If you know of a particularly good book you think should be included, call Doc Marshall at 393-6631 days or 535-7117 evenings.



Reviewed by C. D. 'Doc' Marshall

Stellar Ventures has produced four records based on planetarium lectures of interest to astronomers. Hubert J. Bernhard, lecturer at the Morrison Planetarium in San Francisco narrates with musical and sound background.

LIFE AMONG THE STARS

In this record, Bernhard presents the latest theories about how life originated on the earth. He then discusses the possibilities of life on each of our sister planets, the moon and planets of solar systems of distant stars.

The record is well-narrated, is easy enough' for the neophyte but still interesting to the advanced astronomer.

Unfortunately, the organ background is rather poorly done. However, the story is still good enough so that one can overlook or dismiss the background.

THE CHRISTMAS STAR

Second in the series. Bernhard first presents the difficulties of establishing the precise date of Jesus' birth. He then discusses whether the Star of Bethlehem could have been a meteor, comet, nova, super-nova or a triple conjunction which occurred in 7 B.C.

The record is done in good taste and should not offend anyone's religious sensibilities. The musical background is much better than in Life Among The Stars.

THE UFO'S

Number three is an interesting presentation of the problem of UFO' s. Mr. Bernhard starts with the history of UFO sightings back in biblical times. After describ-

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THE BOOK CORNER ..cont. from page 3

ing other sightings up to the present time, he asks the questions, 'What are they? Where do they come from? Are they spacecraft from other planets?'

Naturally enough, he does not offer any firm answers to these questions but presents an intriguing discussion,

MYSTERIES OF MARS

The last, to date, of the series, This record explores the geography and climate of Mars and discusses the riddles of the ice-caps, changing coloration and markings on the red planet, All this is done as a foundation to the speculation as to whether life can and does exist on Mars,

Tapes were made from the D.A.S. records and are available in the library at the Sylvia Allen Center,

To obtain your own record, send a check or money order to:

Stellar Ventures
353 Sacramento Street
San Francisco, California

LIBRARY

The list of missing magazines which Bob Bologna compiled is too long to be printed in one News - letter, We will start with a few early issues of Sky and Telescope, If you can supply any, please bring them to the Allen Center or 'phone: Linda Lloyd VE 7 -7857 (Bob is moving to Farmington, so his 'phone is not available as yet).

1940 - Sept. thru Dec. (inclusive)
1941-45 - all issues
1946- Feb. thru Dec. inclusive)
1947-.49 - all issues
1950- Jan. thru July (inclusive)

'A Guide to the Messier Objects' catalogs have arrived. Inquire at the Canteen,

Mr. Hartleib did not receive enough requests for A.L. car emblems to make up an order, However, Astro League decals are available at the Canteen.

JUNIORS

Joel Goldstick reports 'no momentous news' as yet on Junior plans - - still in the planning stages.

RAIN CHECK

Length of article and lack of space results in postponement of Mark Christensen's Regional paper (promised for Oct issue) until next month. Sorry.

. . . from the Editor:
The Newsletter received its first monetary contribution, Thanks go to Mr. Stanley Makowski.

. . . from Larry Kalinowski:
Date of presentation of 9 Junior Certificates from the Astronomical League will be given in the November Newsletter.

An Excursion on The Planet Earth

A heretofore unknown talent of the D.A.S. President made visible heretofore unknown (at least to many of us) points of interest on our Earth. Beautiful color slides by 'Photographer' Blass on his sojourn to India were accompanied by an interesting and thought provoking commentary by the Doctor.

Slides reflected the splendor of the white-marbled Taj Mahal in sharp contrast to the squalor of the crowded living quarters of the masses - the severely plain community for the local police, We saw flowering trees blended into a colorful landscape; native shops which by dropping a curtain at the end of the day, were transformed into 'home'; workmen clad in dhotis (clothing envied by the Westerner not accustomed to 110° F) laboring diligently with simple implements for days on a project that in the U.S. could be completed with modern machines in a matter of hours; campus of the University of Boroda; 'before and after' scenes of the parched earth following the dry, hot season,

This is a newly independent India improving itself on a fundamentally democratic system. We learned of a people possessing charm, dignity and abundant tolerance. An overall atmosphere of contentment - happiness, Clearly evident is the caste system - deeply rooted, it cannot be erased overnight with eloquent words or impressive manifestoes. 'Caste system' seems to contradict 'tolerance', but an episode related by the speaker explains the acceptance and simplicity of Indian life, A 'Home for the Aged' was provided as a social improvement -and finally an elderly lady took advantage of this wonderful innovation. Her stay was short - she would rather sleep under a tree!

We were treated to a bonus of a few slides taken in quaint villages such as Birkenstein on Dr, Blass' short stay in Germany on his way back home,

From comments, the travelogue on India, Earth, was genuinely enjoyed.

Eclipse Report

"Vi" Love

'The Unscientific Side of the South American Eclipse'

Chapter V - AREQUIPA (cont. from Sept.)

by V. E. 'Vi' Love

Thursday, November 10, 1966

After breakfast Senor Garcia introduced us to his friend Manuel Zegarro, a geologist at the University of Arequipa. He drove Edgar and some of the other men to the Peruvian Seismograph Station and the nearby U.S. Tracking Station. Dr. Rodriguez, in charge of the Seismograph Station, offered Ken Burgess the use of the roof and power for his converter receiver and strip chart recorder. The station was on the edge of the path of totality and, therefore, unsuitable for projects of the rest of the group.

When Dr. Rodriguez learned of Edgar's concern about the equipment, he offered to contact Dr. Giesecke by radio. He asked if Edgar knew how to operate the transmitter (Heathkit). Edgar explained that he had been a 'ham' for almost 50 years and his profession was communi-cations. So they 'fired up the rig' and Edgar talked to Dr. Giesecke, receiving the heart-warming news that Richard and Jean Fox had left Lima at l pm, in a taxi with the equipment, bound for Arequipa.

Meanwhile, the rest of us were taken on a tour of the city by Sr. Garcia. Again, the greater part of the time was spent visiting churches. The two most outstanding were La Compania founded in 1698 and Church of Cayma built in 1550. The facades were exquisitely carved as were the pulpits. Paintings and frescoes covered the walls, but the most conspicuous feature was the outside stone stairs. We were permitted to climb the steep, narrow steps to the rounded roof for a view of the city and surrounding countryside.

Later we visited Casa del Moral, an old colonial mansion now occupied by an American (Mr. Williams). Only one party of six was allowed to visit the house each day. Since there were six women in our group, the men graciously remained in the carriage court while we looked at the beautiful rooms under the watchful eyes of the maid. There was the usual beautiful inner court filled with flowers, trees and a fountain. The rooms that we were permitted to enter were quite large, with massive Spanish furniture, beautiful paintings and thick carpets.

Next we visited the University of Arequipa to see their Archaeological collection which was extremely well presented.

Friday, November ll, 1966

Edgar managed to rise at 4:30 a.m. to see some of the fellows off to the site with Sr. Garcia. Before they embarked, the 'Lima Special' arrived with Richard and Jean Fox, 400 lbs of equipment and a very tired driver. (Jean Fox, publisher-owner of the Southfield Sun, a Detroit Suburban Newspaper, had remained in Lima to complete some interviews for her paper.)

It seems the equipment, upon arrival in Lima, had been impounded by Peruvian Customs because they believed the 10 boxes contained 'personal effects'. It took the combined efforts of the International Eclipse Committee, the Instituto Geofisico del Peru, the Minister of Education, the U.S. Embassy, the Peruvian Tourist Council and the Agency for International Development to convince the officials that the boxes contained scientific equipment. Finally, the boxes were released Thursday noon.

It was urgent that the equipment arrive in Arequipa as quickly as possible so that the group could have a little rehearsal time at the site (the original plan called for one day for set-up and 2 days rehearsal). The next plane would not arrive in Arequipa until noon Friday, so Richard rented a car and driver in Lima for $42.00. Then he and Jean Fox loaded the 400 lb of equipment into the trunk and back seat and started on their 720 mile ride across desert and mountains for 16 hours. Jean described the journey as beautiful and lonely. Among the difficulties encountered were the road dis-appearing in the sand, the lights of the car going out and a flat tire in the middle of the night (remember the 400 lb cargo). One bright spot of the trip was a stop in a small oasis town to rest and have a late supper.

Upon arrival at our hotel, the equipment was immediately transferred to the cars waiting to go to the site. The Lima taxi driver had to be given a large tip because of the unexpected load.

The men worked all day at the site in order to be

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1966 Eclipse Report

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ready for tomorrow. Jim Dominy and Frank Lipke remained 'on guard' all night, The temperature fell to about 45° F and they could find no wood for a fire, There was one compensation for their discomfort - the clear sky gave them a magnificent view of the Southern Cross and the Magellanic Clouds,

Saturday, November 12, 1966

E-Day

We assembled in the dining room at 4: 30 a.m, for a hasty breakfast, Sr. Garcia and his drivers arrived at 5 a,m. to take us to the site, This was the only time the women had been there, The road was a typical unpaved mountain road such as one finds in the Rockies, We passed a mountain with a rocky top called 'the sleeping Indian' or if you were an Arequipan - 'the sleeping Gringo', then the crossroads village of Cachamarca, stopping finally on the nearby slopes of Pichu Pichu where the site was located at about 11,000 ft

Everyone immediately began to check equipment and stand ready for the big event. The projects were:

Dr, Arehart - *photographing prominences and inner corona with his elegant Questar*

Ken Burgess - *measuring magnetic radiation from sun during the eclipse to determine the amount of radiation from the corona*

Ed Denslow - *photographing the flash spectrum On Friday, he and Newell laid out a North-South rhumb line to be used by the group for instrument alignment.*

Jim Dominy - *photographing prominences and corona with special film - Type XR (Edgerton, Germeshausen and Grier)*

Harvey Johnson - *recording ground temperature Frank Lipke - assisted Tom Waineo Richard Lloyd - photographing flash spectrum Edgar Love - photographing prominences and inner corona to determine true color*

Newell Saigeon - *Project timer*

He called time, determined at practice in Detroit, beginning at 1st contact and continuing throughout the eclipse. He used a transistorized radio receiver with which he received time signals from WWV at Boulder, Colorado; WVH at Hawaii and from Buenos Aires. To poles were spaced about 75 ft. apart with wire stretched between them to act as an antenna.

Joe Shires - *photographing shadow bands Richard and Edgar purchased 3 ft. square show cards in Lima and put 4 of them together to form a large screen.*

Frank Sutter - *measuring overhead light intensity*

Tom Waineo - *photographing the corona*

The women were assigned to photographing the shadow cone and taking pictures of the eclipse without benefit of telescopes.

. . . To be continued

The Detroit Astronomical Society

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