GLPA Newsletter

1974

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THE PLANETARIUM - ARTISTICALLY SPEAKING

By R. Lynn Bondurant, Jr.
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Introduction

Can you imagine your students visiting the North Pole on a clear winter night with the north wind howling in the background, or being seated on a lake shore, stars shining overhead, and a chorus of frogs trumpeting in the new season of spring, or arriving at Cape Kennedy just in time to hitch a ride with the astronauts to the moon? These are just a few of the numerous possibilities that might be used to motivate students to undertake creating works of art.

Motivating students to do "original" works of art is most difficult. Yet, for all of us employed in the field of planetarium education, one of the best motivating tools that we could ever hope to use is the planetarium instrument. The various types of equipment in the planetarium chamber have the possibility of producing the "right" atmosphere to make students desire to produce original art.

The Lesson

Recently, this writer involved 630 fifth and sixth grade students in the Coldwater Community School System in an art project employing the use of the planetarium. The students visited the planetarium in groups of approximately 30 to do their art lesson. The lesson was divided into two parts, the presentation and the work session. The presentation lasted approximately fifteen minutes and during the work session, which lasted approximately 40 minutes, the students were involved in doing their "creations" in the planetarium chamber.

Before the students made their field trip to the planetarium, this writer met with all of the teachers involved in the project to discuss the topic of the lesson and the type of media to use. Ideas for the art techniques used and materials necessary for the students to do their assignment for each presentation was provided by a local artist. It was planned that during the project each fifth or sixth grade student would visit the planetarium only once. He or she would bring his own materials to the planetarium to develop his idea of the topic.

The Topics

During the art unit, five topics were presented. Nearly 120 students were involved in each of the topics. The first topic presented was the Creation Story. The students began the lesson in complete darkness. As the Creation Story progressed,
the stars, sun, and moon appeared in the sky overhead. The lesson ended with sunrise. For this lesson the students were to imagine that they lived in the center of the earth and were permitted to visit the surface of the earth to see all of the creations of nature for one day and then had to return to the center of the earth. The students were to then draw the most beautiful thing in the universe that they observed.

Motion was the emphasis of the second topic. After the students had seated themselves and the lights dimmed in the planetarium chamber, the presentation of motion unfolded. The students observed a sunset. Whereupon the fall of night found that the stars were marching their way across the heavens from east to west. Next, the moon appeared against the starry background and proceeded to move through the zodiac. Then too, the students were able to observe the planets as these wandering stars shifted their positions among the background of stars. After alerting the students to the fact that they were to watch the sky for various kinds of motions, there was no talking. The only sound heard was the background music from the motion picture "The Yellow Submarine." The art lesson involved the students in depicting their ideas of the motion of the universe.

Lesson three was dependent primarily on the reception of auditory stimuli by the students. With the stars shining overhead, the students were presented a series of space sounds -- various satellites transmitting their messages to earth and rockets taking off. Immediately after this presentation, the students were to describe in their creations the development of one of these two ideas! (1) What was making the sound? (2) How did the sounds make you feel?

The fourth lesson required that the students involved in this aspect of the unit imagine that they were illustrators. With the heavens illuminating in their full glory, the students were told several of the mythological constellation stories. Immediately upon completion of the stories, the students were to illustrate any scene from any of the stories that they found interesting.

The concluding topic of the unit centered around the idea of "Life in the Universe." With the use of the stars, the students were told about the vastness of space and probabilities that life might exist elsewhere in the universe. As dawn approached in the planetarium chamber, the students listened to a portion of the now famous radio broadcast "War of the Worlds." For the last art project, the students revealed their impressions of what life might look like elsewhere in the universe.

The Art Technique

Various art techniques were used by the students to develop the topics. Crayons and chalk were employed by the students to create their ideas of beauty in the universe while yarn glued onto construction paper represented motion. Illustrations of the constellation stories were made by using the technique of crayon resist. For the idea of space sounds, the students painted the sounds onto white construction paper using black tempura paint and sticks of various sizes. Collages were designed by the students to represent their various ideas of life in the universe.

A local artist assisted in the planetarium presentation by explaining to the students of the different classes the "how to" aspect of the project. During the work session, the students worked on the floor, stairs, or at some of the desks in the planetarium. If the student's work was not completed at the end of his visit to the planetarium, he took his work to the classroom to finish. The students were told at the beginning of the lesson that anything they created was correct and they would not be graded on it, but that their art work would be on display at the art show.
Results

In retrospect, this unit was a great success! There is an effable quality about the enthusiasm that each child reflected in his space related works of art. In fact, one teacher said that this was the best art lesson her students had ever had. The unit in the planetarium was climaxed with an art show which included over 600 different works of art depicting ideas related to space. Approximately 300 persons from the community visited the art show on a Sunday afternoon and were very enthusiastic about the results. This program is just another example of the versatility that the planetarium offers for the total school program. The stars can be used to generate many ideas for projects dealing with art. There is no doubt that this unit will be repeated many times in the years ahead in Coldwater.

ABOVE - A fifth grade student adding more yarn to her art work depicting motion in the sky.

LEFT - Student stick paintings depicting space sounds.
"The Conversation of Eiros and Charmion"

Editor's Note: The following is published upon the passing of Comet Kohoutek!

Many claim to be prophets today, but back in the years when Neptune was still a star, Edgar Allen Poe wrote the following about our activities this past trip around the sun. (Please note that this is quoted very much out of context. If there is any ghost I do not wish to have haunting me, it is Edgar's.)

"Wonders and wild fancies had been, of late days, strangely rife among mankind ... with ... the announcement by astronomers of a "new" comet ...

The elements of the strange orb were immediately calculated, and it was at once conceded by all observers that its path, at perihelion, would bring it into very close proximity with the earth... For a few short days, they would not believe an assertion which their intellect, so long employed among worldly considerations, could not in any manner grasp. But the truth of a vitally important fact soon makes its way into the understanding of even the most stolid. Finally, all men saw that astronomical knowledge lied not, and they awaited the comet. Its approach was not, at first, seemingly rapid; nor was its appearance of very unusual character. It was of a dull red, and had little perceptible train. For seven or eight days we saw no material increase in its apparent diameter, and but a partial alteration in its color. Meanwhile, the ordinary affairs ... were discarded, and all interest absorbed in a growing discussion, instituted by the philosophic, in respect to the cometary nature. Even the grossly ignorant aroused their sluggish capacities to such considerations. The learned now gave their intellect - their soul - to ... the sustenance of loved theory. They sought - they panted for right views. They groaned for perfected knowledge. Truth arose in the purity of her strength and exceeding majesty, and the wise bowed down and adored.

... The hearts of the stoutest of our race beat violently within their bosoms. A very few days sufficed, however, to merge even such feelings in sentiments more unendurable. We could no longer apply to the strange orb any accustomed thoughts. Its historical attributes had disappeared. It oppressed us with a hideous novelty of emotion. We saw it not as an astronomical phenomenon in the heavens, but as an incubus upon our hearts, and a shadow upon our brains.

... Thus ended all."

Quoted from: Edgar Allen Poe
"The Conversation of Eiros and Charmion"

Contributed by Arnold C. Nelson,
Planetarium Director, Wausau West High School, Wausau, Wisconsin

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"The Falling Star"

I saw a star slide down the sky,
Blinding the north as it went by,
Too burning and too quick to hold,
Too lovely to be bought or sold,
Good only to make wishes on
And then forever to be gone.

Sara Teasdale
REPORT OF NINTH ANNUAL CONVENTION

Great Lakes Planetarium Association

ONE HUNDRED AND TEN PERSONS registered at the 1973 annual convention of the Great Lakes Planetarium Association, held in Grand Rapids, Michigan, October 25th, 26th and 27th. Hosts were the Roger B. Chaffee Planetarium of the Grand Rapids Public Museum and Reiser Planetarium of the Godwin Public Schools. We are happy to report that this is the largest participation at a primarily regional convention to date, representing about 70% of the total G.L.P.A. membership.

A new innovation this year was the holding of workshop sessions during the opening afternoon of the conference. Concurrent sessions on "Student Involvement in Planetarium Programming" (conducted in the Reiser Planetarium by David Hoffman), specialized slide processing (conducted by Ron Cobia) slide and script duplication and distribution (by John Soroka), and "Music Selection and Recording Procedures" (with Dave DeBruyn) were held concurrently, and repeated twice during the course of the afternoon. Thus, each early arriving delegate could choose two sessions of interest to him. The workshops were conducted informally, with appropriate demonstrations. It is estimated that about half of the attending delegates arrived early enough to participate in these sessions, and comments received strongly indicate that the innovation should be continued and expanded upon at coming conventions.

Thursday evening, some delegates elected to attend the Chaffee Planetarium's sky show "Journey to the Edge of the Universe", while others were taken on guided tours of the James C. Veen Observatory. This facility, built and owned by the Grand Rapids Amateur Astronomical Association, a group of about 100 amateur astronomers of all ages, and operated in cooperation with the Chaffee Planetarium, contains two fine telescopes, a six inch refractor and 12 1/2 inch reflector. In addition, there is a fully equipped photographic darkroom, lecture room, and library. Following this, delegates were treated to a social hour hosted by Mr. Kenneth Mosley, operator of Conic Instrument Company, a Grand Rapids firm specializing in planetarium orreries and other auxiliary devices.

The welcoming session at 9 A.M. on Friday morning featured the Honorable Lyman A. Parks, Mayor of Grand Rapids, W.D. Frankforter, Director of the Grand Rapids Public Museum, and other dignitaries such as Don Tuttle and Dave DeBruyn. The General Session for papers followed, with contributions entitled "The Planetarium in Education," by Dennis Sunal, "Art in the Planetarium," by Lynn Bondurant (Featured in this "Newsletter"), and the hilarious highlight of the session, "Smell Effects in the Planetarium," delivered by the incomparable Ken Perkins.

At most conventions, committee meetings are squeezed in at some moment when delegates' energies are completely depleted or in some dimly lit bar. Not so here. In their planning, the executive committee placed committee meetings at a prominent time on the first morning of the convention. Those who were not members of any of the several standing committees attended a showing of "Journey to the Edge of the Universe," while the Education, Instructional Materials, and Publications Committees attended to their business. Particularly vital here is the functioning of the Education Committee, which developed subcommittees and a revitalized approach to their task at the Grand Rapids meeting. Several new members were welcomed to the committee. Further report on the affairs of the Education Committee can be found in the COMMITTEE AND REGION REPORTS section of the "Newsletter."

The first of several major speakers was featured at the Friday buffet luncheon held in the Museum Multipurpose Room. We were fortunate to have Dr. William E. Brunk, Chief of Planetary Astronomy, N.A.S.A. Office of Space Sciences, who spoke on the subject, "Understanding Our Neighbor, the N.A.S.A. Planet Program." Dr. Brunk discussed some of the research findings of the Mariner 9 mission to Mars, the anticipated circumstances and hoped-for objectives of the Mariner 10 flight to Venus and Mercury and

LEFT - Among the audio-visual devices illustrated at the technical sessions was a combination Copernican-Tychonic orrery produced by Conic Instrument Co. of Grand Rapids.
ABOVE - President-elect John Soroka presiding at the buffet luncheon in the Multipurpose Room, Grand Rapids Public Museum.

RIGHT - Dr. William Brunk of N.A.S.A. addresses the opening luncheon on the subject "Understanding Our Neighbors, the N.A.S.A. Planet Program."

LEFT - Dr. George Pitluga delivers the Armand Spitz Lecture at the Association banquet.

RIGHT - Kenneth Perkins cracks up his listeners with his illustrations of "Smell Effects in the Planetarium."
the Pioneer mission to Jupiter. He then turned to space projects of the future. He detailed the problems of the 1975 Viking mission to Mars, and prospects for outer planet exploration late in the 1970's and early 1980's. He explained that while the "Grand Tour" had been canceled, other somewhat less ambitious missions to Jupiter, Saturn, and perhaps Uranus and Neptune are still in the works.

The afternoon was given over to concurrent technical demonstrations and seminars, presented in the Reiser and Chaffee Planetariums. David Hoffman demonstrated his automated and programmed Viewlex Venus Planetarium, and further discussed its use in the educational programs of the Godwin Heights School System. Mr. Larry Gwinn, Associate Curator of the Chaffee Planetarium, demonstrated numerous special effects and a slide programming device that he has developed for that installation. Several technical papers were presented, including one on the use of 8 mm movies in the planetarium by Joseph Noffsinger (summarized in this "Newsletter") and a very informative presentation on the use of polarization techniques by Ron Cobia.

The annual banquet, held at the headquarters, Hospitality Motor Inn, was preceded by a social hour sponsored by Spitz Laboratories. Highlight of the evening was the annual Armand Spitz Lecture, delivered by Dr. George Pitluga of Oswego, New York, who is now retired after a career spanning many years as a planetarium educator. He was a collaborator with the late Armand Spitz, and he admonished the delegates to be equal to the important tasks to which they were called. He noted the importance of celestial bodies to the affairs of men, particularly the need for tapping solar energy in the face of depleted supplies of fossil fuel. Following the lecture, about 30 delegates journeyed to the Veen Observatory on Kissing Rock Hill, where fair skies prevailed and delegates were treated to views of Mars, Saturn, and other wonders of the heavens through the observatory telescopes. Some delegates were heard to say that they seldom had the chance to observe a dark real sky, and they marveled at how well it simulated the planetarium.

The Saturday morning sessions were given over to a business meeting (that ended on time, believe it or not) and an Education Seminar. New officers were elected to assist John Soroka, incoming Association president. The new president-elect is David DeBruyn, and David Batch was re-elected to another term as secretary-treasurer. The Education Seminar featured education committee members Jeanne Bishop, James Pike, Dr. Dennis Sunal, and Larry Sabbath, moderator. Their major theme dealt with changing science curriculum emphasis and the need for use of the planetarium to be broadened to disciplines other than astronomy in order to adequately fulfill its new function. Panelists discussed the seemingly perennial question of the effectiveness of the planetarium as an educational device, illustrated how the planetarium could be used in an interdisciplinary approach, and pointed out where certain resource materials could be obtained.

At the closing luncheon, Dave DeBruyn thanked all of the local participants in planning and executing the convention and then introduced Dr. Freeman D. Miller, Professor of Astronomy at the University of Michigan, who gave a very timely lecture entitled "The Latest on Comet Research and the Great Comet of 1973." Dr. Miller discussed the origin and composition of comets, and then described the various elaborate research programs planned for the apparition of Comet Kohoutek. He hastened to point out that his long experience studying these celestial visitors had taught him to use caution in predicting the circumstances of a given apparition, and he warned delegates against going the route of the news media and possibly overplaying Kohoutek. He reminded his audience that these things sometime fizzle badly. Oh, what a prophet he turned out to be!

Following Dr. Miller's lecture, about a half dozen lucky people who viewed the total eclipse of June 30th, 1973 gave brief reports. Don Tuttle, Mark Boyd, and Lloyd Bodie reported on the Elgin, Illinois, Grand Rapids, Michigan and Terre Haute,
Indiana excursions aboard the Canberra respectively, followed by Roger Hoeffer of Dayton, Ohio who gave a humorous account of the problems encountered in observing the phenomena from the Sahara Desert. Several other delegates also participated.

Following this, there were the brief remarks of retiring president Don Tuttle, climaxxed by a vigorous round of applause for a fine gentleman who has led the Association with distinction for the past two years.

David L. DeBruyn

THE USE OF HOMEMADE 8MM MOVIES IN THE PLANETARIUM

Joseph B. Noffsinger
Robinson Planetarium
Adrian College
Adrian, Michigan

As in the case of many special effects projectors, the initial cost of a super 8 mm camera and a projector is relatively high. But if these are already available, the cost of making a 50 ft. homemade movie is modest. For example, the total cost of our camera and projector combined was less than $500. The cost of purchasing a 50 ft. super 8 mm movie and having it developed will be between $5 and $6 depending upon what type of film you buy. The advantage is that you can illustrate ideas that would cost much more if purchased commercially.

My objective in telling you about some of our films is to throw out some potential ideas that you might also want to try. It is not for the purpose of bragging about professional quality, since I am certain some of you would be able to do much better than I and my two lab assistants have done. In fact, we intend to do some of these over to improve them when time permits.

If you purchase a super 8 mm camera, make certain that it has single frame capacity which time lapse movies can be made with. Time lapse movies allow us to speed up the motions of nature. For instance, we have found that the motion of the sun at sunrise and sunset is satisfactory if we take a frame every 3 seconds to be shown at the standard 18 frames per second. This speeds up the motion by a factor of 54. On the other hand, the tree shadow photographs were made once every minute, and the motion was speeded up by 1080. Try to plan out your speed ahead of time. Likely not all motions will turn out as you thought they would, however. As an example, we photographed clouds at 3 second intervals but it went slower than we preferred. We have a projector that will project the movies at 18 but also 6 and 54 frames per second. So we show our cloud movies at 54 frames per second or at a speed of 162 times normal.

Some things are better illustrated by movies at normal speeds. We did the illustrations of Doppler shift and convergence-divergence and the tidal bore at normal speed. You could even slow the motion down with the proper equipment.

The following are suggestions we have for you after some painful learning experiences at times.

1. Use a sturdy tripod. Otherwise you may have the camera move.
2. Use plenty of lighting when indoors.
3. Make certain the batteries are operating correctly. The lightness of the tree shadow is a result of the exposure battery malfunctioning.
4. Try and get a camera with a zoom lens.
5. It was a simple matter to add to our camera a converter to make use of A.C. current when near an outlet.
6. Make certain that any extra material is not in your picture, including the cable release.
7. Do not expect all of your efforts to be successful. Feel gratified if 50% turn out as you expected.

8. Do not jump into this procedure unless you can devote time to it. The actual photographic time spent in filming the movie you saw at last autumn's convention was about 60 hours. This does not include the time spent in setting up or traveling to a location, both of which can be time consuming.

9. Expect to have to edit and splice in any case. My set of clocks required 10 hours of splicing.

If you are cognizant of the problems and feel that it is worth your while, we encourage you. Let your imagination roam for ideas. We have other projects lined up to do, if we just had a little more time.

WALLACE TAKES ON A NEW DIMENSION

ALL G.L.P.A. MEMBERS, and the innumerable friends of Maxine Haarstick, Planetarium Director in Minneapolis, Minnesota, will be interested in the following "Newspaper Story", which appeared in the Minneapolis Sun on September 13, 1973. We all are happy to hear that things are going better for Wally and Maxine, and we hope that she can attend one of our meetings soon. We miss her!

For 26 years, people have been going to Wallace's of Minneapolis, 93 South 10th St., for an unusual shopping experience. The owner, Wallace Haarstick, was a man considered ahead of his time. He was willing to stock his shop with interesting surprises, unavailable in other stores - origami sets, Japanese brush paintings and flowers, handmade crafts, ceramics, jewelry, furniture - all displayed with the Wallace flair.

LITTLE BITS of wisdom showed up here and there - "Timid clerk on duty"; "This is not a museum - all items for sale"; "Make a door out of your table".

The shop became a favorite among all ages, especially the young, who related to Haarstick's unpredictable personality.

That personality took on a new dimension in recent years, when Haarstick began doing portrayals of Abraham Lincoln in local schools. Refined and developed and carefully researched, the portrayal grew popular with high schools, colleges, clubs and organizations.

TWO YEARS AGO in May, Haarstick suffered a stroke. For anyone, a stroke is unnerving; to Haarstick, it seemed the end of his Lincoln portrayal and the end of his active life.

The doctors predicted he would not walk again; the stroke affected his coordination and vision on the left side; fortunately, his speech was intact.

The negative aspects of the stroke didn't last long, thanks to Haarstick's wife, Maxine, a storehouse of humor, energy, and positive thinking. She started bringing tapes of the Lincoln program to the hospital, and the two of them worked out new material, hoping that someday Wallace would be able to do the program from a wheelchair.

AS MRS. HAARSTICK said recently, they decided to "use this whole experience to inspire and help others; to play the role and give others an opportunity to see how
you can come back from something like this."

In their daily disciplines of exercise, trial and retrial, they retained their positive attitudes despite frequent frustration. Wallace began to believe that he would indeed do his Lincoln portrayal again, from a standing position. He graduated to a fitted brace, than a short brace; now, he walks with the help of a cane.

"OUR GOALS were realistic," said Mrs. Haarstick. "We reviewed each week what we had accomplished. I tried to help Wally, and show him compassion, not sympathy, to help him lock into a positive attitude."

Together they come each week to Courage Center, comprehensive rehabilitation facility in Golden Valley, operated by the Minnesota Society for Crippled Children and Adults, Inc., a United Way organization.

Here, they have an hour of "one terrific up-time," as Mrs. Haarstick puts it. The therapy, exercise and treatment are augmented, she says, by the sensitive attitudes of the staff — a staff that believes in "the dignity of man."

Progress has been steady, and today, Haarstick is again performing his tribute to Lincoln - standing up. He now spends part of each day at the store, with Mrs. Haarstick helping each evening after her regular fulltime job at the Planetarium downtown.

Their conclusion, after many months of hard work, frustrations, and lots of hope: "When you have faith, you have everything."

SOME SOURCES OF ASTRONOMY MATERIALS

Compiled by Jeanne Bishop and Robert Allen

Personalized System of Instruction Newsletter (includes application to all subjects):
free, but suggested contribution of $1-$3

PSI Newsletter
Psychology Department
Georgetown University
Washington, D.C. 20007

Guide to Resources of Laboratory Activities in Astronomy, compiled and annotated by Haym Kruglak (July, 1973)

Department of Physics
Western Michigan University
Kalamazoo, Michigan 49001


Physics Department
Oklahoma State University
Stillwater, Oklahoma 74074

An Astronomy Bibliography Selected and Annotated for the Layman and the Science Teacher, Project on the Teaching of Astronomy and selected Keller-method materials prepared by Wm. H. Jefferys

Dr. William H. Jefferys
The University of Texas at Austin
College of Natural Sciences
Department of Astronomy
Austin, Texas 78712
Lab-Inquiry Texts in Earth Science, booklets "The Earth in Space" and "Earth and Time" junior high curriculum with activity approach. Direct application of the planetarium possible. $0.34 each
Cambridge Book Company
488 Madison Avenue
New York, New York 10022

Intermediate Science Curriculum Study (ISCS), 9th grade level curriculum booklets "What's Up?" and "In Orbit". In most cases only indirect application of the planetarium with activities given. However, since modification and "Excursions" are encouraged, additional activities in the planetarium with inquiry approach, when students in self-paced program are ready, would be desirable.
Silver Burdett
General Learning
Morristown, New Jersey or Park Ridge, Illinois

Planetarium Director's Handbook, bi-monthly issue, $10 for five issues. Seems expensive but is very good.
Spitz Space Systems, Inc.
Chadds Ford,
Pennsylvania 19317

Under Roof, Dome, and Sky, 45 student-centered activities for the Planetarium, developed in a Cooperative College School Science Program proposed by the Middle Atlantic Planetarium Society and the University of Maryland in cooperation with associated school systems, funded by the National Science Foundation. This is, I believe, the best source of activity and inquiry-centered planetarium presentations in existence. One can easily adapt presentations to many school requirements.
Mr. John Richardson
Mid-Atlantic Planetarium Society
c/o 555 Red Lion Road
Huntingdon, Pennsylvania 19006

Educational Materials in Astronomy and Astrophysics by R. Berendzen; order from Arnold Strassenburg cost $.50
Executive Officer, AAPT
Drawer AW
Stony Brook, New York 11790

Elementary Observations in Astronomy - free from John Loomis,
John Loomis
Department of Physics and Astronomy
University of Massachusetts
Amherst, Massachusetts 01002

(12)
THE 1974 ANNUAL CONVENTION OF THE GREAT LAKES PLANETARIUM ASSOCIATION will be held October 24th, 25th, and 26th at the South Vigo High School and Holiday Inn of Terre Haute, Indiana. Host is Lloyd Bodie Junior, who is planning an exciting agenda. Again this year, there will be the Thursday afternoon pre-conference workshops, with duplication of tapes and slides, discussion of trick slide preparation, and also continuous planetarium shows, illustrating program material for various age groups. The Autumnal Equinox "Newsletter" will list the shows and slide sequences that will be available for duplication.

The opening day of the conference will include a general paper session, a major luncheon speaker, and the planetarium program "The Seasons," developed by the Cleveland Regional Association of Planetariums. The annual banquet will be highlighted by the Armand Spitz lecture, given by VonDel Chamberlain, the first president of G.L.P.A. and now chief of education and presentations at the Air and Space Museum of the Smithsonian Institution. This will be followed by tours of local observatories. Following the Saturday morning business session, there will be something new. This will be a session in the planetarium, where delegates will be invited to discuss and illustrate their particular tricks for teaching and illustrating the concept of "motions in the sky" to audiences of various ages and backgrounds. Other details will be forthcoming in the Summer Solstice and Autumnal Equinox "Newsletters."

THE INTERNATIONAL SOCIETY OF PLANETARIUM EDUCATORS will hold their bi-annual convention October 7th through 11th in Atlanta, Georgia. To date, the editor has received no specific details concerning headquarters or agenda, but assumes that he will be informed of developments in time for publication in the Summer Solstice "Newsletter."

G.L.P.A. MEMBERS WHO, ACCORDING TO THE SECRETARY'S RECORDS, also are I.S.P.E. members, have an asterisk by their names on the new GLPA membership list. Apparently, there is a problem with keeping I.S.P.E. records up to date, originating within that organization itself. Therefore, Dave Batch requests that anyone who did not receive the September issue of The Planetarian, and who is sure that he is a member in good standing of I.S.P.E., report this to him at once. It should be noted that The Planetarian, has been experiencing some publication difficulties and issues are behind schedule. The December issue will be forthcoming very shortly, and members of I.S.P.E. should have it in their hands by mid-May. The editorial staff is now making a gallant effort to catch up.

APOLOGIES FROM YOUR "NEWSLETTER" EDITOR for the absence of a "Winter Solstice" issue, which is being combined with the Vernal Equinox Edition. He too has had some publication difficulties, combined with some pressing local matters which must take precedence over G.L.P.A. responsibilities, in addition to all the Kohoutek hoopla. Hopefully, the summer issue will be out approximately on time. The autumnal equinox will be the first under the responsibility of a new editor, whose name will be announced in the summer issue. More on this when the details have been worked out.

THE ILLINOIS PLANETARIUM GROUP will hold a spring meeting May 11th at Triton College, where Linton Pitluga, Director of the Cernan Planetarium, will be host. Inquiries can be made to Mr. Pitluga at Triton College, River Grove, Illinois 60171.

THE MICHIGAN PLANETARIUM WORKSHOP will be held May 11th at the Vollbrecht Planetarium in Southfield, Michigan. For information, contact President John Soroka, Building 6, Apt. A-3, 4772 Washtenaw Avenue, Ann Arbor, Michigan 48104.

THE FIFTH ANNUAL GREAT LAKES ASTRONOMY SYMPOSIUM, sponsored by the Adams Astronomical Society of Rogers High School, Toledo, Ohio, will be held this year on May 17th and 18th at the school. Robert Gardner, a G.L.P.A. member and Planetarium Director at
Rogers, reports that the keynote address will be delivered by W.A. Hiltner, Chairman of the Department of Astronomy at the University of Michigan and former director of Yerkes Observatory. Dr. Hiltner's topic will be "X-ray Sources, Neutron Stars, and Black Holes". Other professional and amateur astronomers will also participate. Registration forms are available from Mr. Gardner at Rogers High School, 5539 Nebraska Ave., Toledo, Ohio 43615.

POLARIZING MATERIAL, for those interested in producing technimation type visuals easily and inexpensively, is available from American Polarizers Inc., 141 South 7th Street, Reading, Pa. 19602. Inexpensive 30 rpm. motors, stands, and polarizing wheels are available from Edmund Scientific Company, Barrington, New Jersey.

COMMITTEE AND REGION REPORTS

THE EDUCATION COMMITTEE, under the chairmanship of Larry Sabbath, has established several subcommittees to develop resource materials on the general theme, "The Inter-disciplinary Use of the Planetarium." Hopefully, in coming months, the committee members will provide for the general membership, through the "Newsletter" and other means, bibliographies, outlines, and suggestions that will be useful in applying the planetarium to education in its broadest possible setting. Subcommittee chairman and their members are: Robert Thomson (Planetarium Research), Dennis Sunal, Robert O'Dell, Jeanne Bishop; Larry Sabbath (Interdisciplinary Use of the Planetarium), Walter Bisard, Mark Somtag, Ruth Howard, David Hoffman. The editor is happy to report that he has already received interesting material from Miss Bishop. Some of this appears in this "Newsletter" (See "Some Sources of Astronomy Materials"), and a paper on "Mini-research in the Planetarium" will appear in a forthcoming issue of The Planetarian. It is hoped that the revitalized education committee will continue to broaden their efforts and will report their results to the membership through the "Newsletter".

The CLEVELAND REGIONAL ASSOCIATION of PLANETARIUMS (Ed. Note - Somehow I get the feeling that the abbreviation of the above does not aptly describe the group or its objectives) held a meeting on January 29th at Warrensville Heights. Host Bob Andress demonstrated many of his auxiliary projectors and other teaching aids, followed by such topics as "a skyline of Stonehenge made with scotch tape", "a supernova-pulsar sequence", and "black light zodiac figures". New commercial films and audio-visual aids were also shown. Plans were discussed for an Ohio regional meeting on March 30th (See below) and responsibilities were assigned. Plans were made for a presentation entitled "The Seasons" which will be given by the C.R.A.P. group at the state-wide meeting and also at the fall G.L.P.A. meeting in Terre Haute. This group meets about every two months and will convene again May 29. Any Planetarians interested are welcome to attend, regardless of location. The editor would like to note that the Ohio group (and particularly the Cleveland Regional delegation) have been the most active of the regional subdivisions of late. Detailed reports of the above meetings, and also a meeting held last November, have been received. Now, either the other state groups have been inactive, or else lax in reporting their events to the editor. Let's hear from y'all.

AN OHIO STATE-WIDE MEETING of planetarium personnel was held March 30th at Midpark High School, Middleburg Heights, Ohio. Highlight of the session was the premiere showing of "The Seasons", a program developed by the collective membership of the Cleveland Regional Association of Planetariums. This was followed by a "How I Do It" Session in which numerous delegates showed some really unique tricks of the trade. Bob Andress demonstrated an overhead projection device for showing measurement of angular separation between double stars, and other things, and Warren Young demonstrated a number of "technamated" (polarized) slides which he had made. Dave Sanford gave an excellent survey of applications of the Repronar slidecopy camera, revealing
that its versatility is limited only by the creativity of the person applying it.

Following lunch, the new N.A.S.A. film "Mars - The Search Begins" was shown, followed by a second "How I Do It" session. Jeanne Bishop shared some additional resources (some of which are published elsewhere in this Newsletter) and distributed copies of her "Mini-research in the Planetarium" paper, which will be published in a forthcoming issue of The Planetarian.

Ken Perkins discussed membership in I.S.P.E., of which he is Treasurer. He asked for suggestions for improvement of the Society's services to members. He said the organization currently has about 300 members. Although the journal, The Planetarian, has not been published lately, an issue is planned soon. Plans for next fall's meeting are being made. Ken reported that he was upset that the announcement of the meeting was poorly distributed. Full addresses were not given, and many persons did not receive it, and the wrong announcement was sent recently. If you have problems with I.S.P.E., please report these to Ken Perkins, 528 Bennert Drive, Vandalia, Ohio 45377.

THE EXECUTIVE COMMITTEE OF G.L.P.A. had their spring meeting Saturday, April 20th at Abrams Planetarium, Michigan State University in Lansing. All officers and members of standing committees were present, along with Lloyd Bodie of Terre Haute, Indiana, who will host the 1974 conference. Incoming president John Soroka first asked for committee reports. Larry Sabbath reported that sub-committees of the education committee had been doing their assigned tasks, with a couple of exceptions, who had not yet reported to the chairman. He was asked by the "Newsletter" editor to be sure to forward those materials intended for publication as soon as received. The soon to be retired chairman of the publication committee explained his problems in keeping the "Newsletter" on schedule, and submitted the names for possible successors. He also agreed to work temporarily with the conference planning committee in view of his experience with the 73 convention. He also said that he would continue as contributing editor to The Planetarian until moving into the President's chair in two years. However, he made it clear that he wanted to phase out of the "Newsletter" editorship and publications committee chairmanship. Ron Cobia reported that his educational materials committee would again conduct workshops and presentations at the 74 convention, introducing some new tricks of the trade, and helping members master the old ones. I.S.P.E. representative Don Tuttle reported on what he knows of plans for the 1974 meeting in Atlanta, and other problems associated with I.S.P.E. Then secretary Dave Batch read the minutes of the last executive committee meeting and reported that the Association is very solvent.

Following lunch, the committee re-convened and spent most of the remainder of their time together discussing plans for the 74 convention. Several innovations were brought forward by Lloyd Bodie and in general, these were enthusiastically received by the committee. There will be an effort this year to promote more participation and informal repartee among the delegates through use of a discussion-demonstration session on teaching "motions in the sky." (See News Notes) It is hoped that prominent speakers can again be obtained, and that the program will provide things of value to all planetarians.

For, lo, the winter is past,
The rain is over and gone;
The flowers appear on the earth;
The time of the singing of birds is come,
And the voice of the turtle is heard in our land.

Song of Solomon 2:11-12
POSITIONS AND PERSONNEL

PRESIDENT JOHN SOROKA is no longer associated with the Waverly School District, but has now undertaken a doctorate program in education at the University of Michigan. He continues as active head of the Association, and can be reached at his new address: Building 6, Apartment A-3, 4772 Washtenaw Avenue, Ann Arbor, Michigan 48104. His phone number is area code 313-434-2082. John expects to be in Ann Arbor until May, 1975.

DR. LEE SHAPIRO, formerly associated with the Adler Planetarium in Chicago, has been named Director of the Abrams Planetarium, Michigan State University, replacing VonDel Chamberlain, who has moved to the Smithsonian Institution in Washington, D.C.

FRANK JETTNER, Executive Editor of The Planetarian, reports the following changes in the editorial staff. Mr. George Lovi, Vanderbilt Planetarium, 180 Little Neck Road, Centerport, Long Island, New York has been named Editor, replacing John Christian, who has resigned to pursue further graduate studies. Regional editors should now submit their materials to Mr. Lovi. Dorothy Beetle of G.L.P.A. has been appointed International Editor, and several new regional advertising editors have also been added.

SOUTHWORTH PLANETARIUM, UNIVERSITY OF MAINE AT PORTLAND-GORHAM announces the availability of a full time position as Planetarium Assistant. Responsibilities include preparation and presentation of planetarium shows and assisting the director and staff in the general operation of the planetarium. Applicants must have a B.A. or B.S. degree. Though specific training in planetarium activities is not required, preference will be given to applicants with some background or experience to meet with and make presentations to people of all ages. Salary, $7,300 to $8,000, depending on credentials. Applications and inquiries should be sent to: Professor George Ayers, Director, Southworth Planetarium, University of Maine at Portland-Gorham, Portland, Maine 04103.

THE GREAT LAKES PLANETARIUM ASSOCIATION offers membership opportunities to all individuals in any way connected with the operation of planetariums, regardless of geographical location. G.L.P.A. is an affiliate of the International Society of Planetarium Educators, and the National Science Teachers Association. Membership dues are $5 annually, payable at the time of the autumnal equinox. General correspondence and requests for membership should be addressed to Mr. David Batch, G.L.P.A. Secretary/treasurer, c/o Abrams Planetarium, Michigan State University, East Lansing, Michigan 48823. Submission of $10 additional payment with G.L.P.A. membership dues and completion of an appropriate application form entitles G.L.P.A. members to full privileges of the International Society of Planetarium Educators, including receipt of that organization's official journal, The Planetarian.

All G.L.P.A. members in good standing receive the quarterly "Newsletter." Contributions and notices for the "Newsletter" and Planetarian should be sent to David L. DeBruyn, Editor, Roger B. Chaffee Planetarium, 233 Washington S.E., Grand Rapids, Michigan 49502. Deadlines for contributions to the latest "Newsletter" fall at the beginnings of the four seasons.
BEHAVIORAL OBJECTIVES
THE PAPER TIGER OF ACCOUNTABILITY
By John Thompson

Behavioral objectives have become the focus of a great deal of attention in the past few years. Advocates claim they will provide purpose to education and a means of determining whether the student is learning what we hope he will. Skeptics of behavioral objectives say the learning process is too complex to be dealt with in such a superficial manner. And even if we knew what behaviors were good for students (playing God), there are an infinite number of additional behaviors we are unable to observe or are not on our list but are good for students. How do we deal with all of these? As is usually the case, neither the advocates nor the skeptics are completely correct. Like anything in education, behavioral objectives are inanimate until someone does something with them. The "someone" is usually the teacher, but it could be a state legislature, a school district evaluation committee, or a commercial enterprise with a product or service to sell. Rarely is it a student.

The student is usually the focus of the objectives, however. That is, the desired behavior should be observable in the student, rather than in the person suggesting the behavior. The student is almost never in on the decision as to what behaviors are to be manifested by him. Most persons feel they are working for the good of the student when they suggest behavioral objectives a student should achieve.

As an alternative, I would like to set up behavioral objectives for myself as a teacher in the classroom and allow each student to choose his own within the environment I create. Since I am the major contributor to a learning environment, it is important for me to evaluate it. My behaviors, however, are reflected in the student's behaviors. For example, if a behavior I want to see in myself is to create an environment the kids will enjoy, then I must look at the students to see if they are enjoying it. If not, then I must modify my behavior and the environment rather than just accept enjoyment as a nondisplayed behavior in the students. Or worse, apply pressure to the students because they did not perform as I wanted them to. Some behavioral objectives I am comfortable with include providing an environment in which a student can do the following:
1. Be comfortable and relaxed.
2. Find personal pleasure in what he is doing.
3. Inquire into a variety of possible learning experiences within the environment.
4. Exercise his intellect in direct interaction with the environment.
5. Acquire skills and knowledge that may assist him in his day to day living to make it productive and enjoyable for him.
6. Acquire skills and knowledge that may assist him in any future endeavors he engages in.
7. Engage in some activities that make sense to his parents.
These behavioral objectives, as a first cut, are not very specific for the purist. My role is constantly to improve the environment and/or counsel students towards achieving the objectives. If they do not achieve them or reject them, then either I need to modify the environment to assist them or suggest that this learning environment I have generated is not the one best suited to them. If they still persist, then I have to accept that or resort to the use of power. I also must recognize that students display myriad behaviors that I may or may not interpret correctly. Interpretation is another problem in using behavioral objectives.

Within the learning environment, I am an authority. I reject, however, the use of power to demand acceptance of my objectives except as a very last resort (when the student is destroying the environment or interfering with other students' rights to learn). Instead of power, I use my authority to modify the environment, counsel, evaluate, etc. to achieve my goals. That is where I have my expertise and where I must constantly improve myself. Power over students I do not need if I can use my authority to achieve my objectives.

I want to help students become self-actualizing people. A self-actualizing person is, among other things, a person who can determine his own behavioral objectives and then act on them.

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**A REPORT ON THE TASK GROUP ON HIGH SCHOOL ASTRONOMY EDUCATION**

By Jeanne Bishop

A group of astronomers, high school astronomy teachers, and planetarium directors met at the University of Richmond, June 17-19, 1974, to consider methods of disseminating astronomical information from the level of the research astronomer to the secondary classroom. Participating astronomers included the four authors of topic-brochures written as resources for high school teachers, to be published by NASA during the coming year: Richard Gammon, "Chemistry Between the Stars," Kenneth Jacobs, "Extragalactic Astronomy," Paul Blanchard, "Atoms in Astronomy," and William Straka, "Stellar Astronomy and Supernovae Remnants." Also present were Gerrit Verschuur, radio astronomer now at the Fiske Planetarium in Colorado, who co-ordinated the writing of these booklets, and Donat Wentzel, American Astronomical Society Task Force on Education Co-ordinator.

For three days the group explored and evaluated ways to bring astronomy topics into the high school classroom. Teachers-Planetarium Directors listed sources they currently use and astronomers listed materials they currently produce. The participants explained to one another the nature of a "typical day" for one of each of the professions represented. Dr. Mike Zeilik gave a very interesting account of his "observational research day" (and night!) at Kitt Peak. At approximately 2:00 a.m., he experiences a "drop-out" in alertness. For most other observational astronomers, this occurs at various times through the night.

Groups composed of representatives of the three professions "brainstormed" methods of improving communication between astronomers and teachers. The methods determined to be of the most promise were workshops, more single-topic brochures, other printed information, and a periodical Newsletter. A lot of time was devoted to evaluating the four single-topic brochures. Some planetarium directors and teachers developed activities to supplement information and the bibliography activities suggested by each of the authors.

A materials room was set aside to display activities and resources developed by both astronomers and teachers. It is amazing to note the variety of both
published and unpublished references and activities currently in use in grades 8-12 and introductory college astronomy courses. However, we realized that there is probably a great deal more which was not there.

Since the group spent a lot of time together, it provided opportunity for informal exchange of information. For instance, it was eye-opening to learn that a number of experienced astronomers are currently looking for positions, as their universities have cut department staffs. Also, typical astronomer salaries seem quite low. It would appear that unless conditions improve, one should not recommend that a student become an astronomer.

The astronomers were struck by the fact that teachers (and some planetarium directors) operate on such closely timed schedules. Gerrit Verschuur noted that many astronomers have more loosely structured time. Astronomers also were unaware that the topic of the constellations is so widely taught in the high school grades. Many astronomers do not know the constellations well. As one put it, "I used to go to the observatory and adjust the setting circles of the telescope; and behold there my star appeared. It was irrelevant to me what constellation it happened to be in."

Teachers and planetarium directors had many astronomy information questions answered informally. The groups expressed appreciation to one another and for the excellent planning and organization of Paul Kanppenberger, astronomer and director of the Science Museum of Virginia, and Rebecca Berg, astronomer-teacher. The workshop was an outstanding success. Funding was by the National Science Foundation.

An explanatory letter of a program agreed upon by this Task Group on High School Astronomy Education will be sent to G.L.P.A. members on September 1, 1974. As the designated "contact person" for the geographical area represented by G.L.P.A., I will appreciate receiving bibliographical information of little known printed reference material and unpublished activities. These items should relate to teaching astronomy in grades 8-12 both in the planetarium and the classroom. In appreciation of participation in the program, I will return to each contributor a package of some of the best collected activities, including those developed and distributed at the University of Richmond Workshop. I hope to hear from you!

Mrs. Jeanne Bishop
1721 Canterbury Road
Westlake, Ohio 44145
DOUBLE-DUTY SLIP RINGS

By Allan R. Bishop

There are occasional times when a planetarium operator-mechanic wishes a few more slip rings in some portion of his instrument. It is possible to double-up two circuits on one slip ring if both the circuits control only light bulbs.

Below is a typical control circuit for a bulb with variable brightness (such as a meridian projector):

```
110v -----(variable control)----> bulb
       ^
       |     slip ring
       |  \\
       |   \\
       |   \
       |   
```

By using a new transformer and four diodes, two bulbs may be controlled separately; but only one slip ring is necessary:

```
110v -----(variable control)----> bulb
       ^
       |     slip ring
       |  \\
       |   \\
       |   \
       |   
```

Note: 1. The direction of the diodes in the circuit is important.
2. A transformer with twice the voltage of the original is required.

This circuit has been used successfully on a Nova instrument to give separate controls for the sun, moon, and planet group, where they were all on a single control originally.

For further information, write:
Allan R. Bishop
Westlake Schools Planetarium
Parkside Junior High
24525 Hilliard Blvd.
Westlake, Ohio 44145

"When I heard the Learn'd Astronomer"

When I heard the learn'd astronomer,
When the proofs, the figures, were ranged in columns before me,
When I was shown the charts and diagrams, to add, divide, and measure them,
When I sitting heard the astronomer where he lectured with such applause in the lecture-room,
How soon unaccountable I became tired and sick,
Till rising and gliding out I wander'd off by myself,
In the mystical moist night-air, and from time to time,
Look'd up in perfect silence at the stars.

Walt Whitman
PLANS FOR THE 1974 G.L.P.A. CONVENTION, October 24th, 25th and 26th at the South Vigo High School, Terre Haute, Indiana are now being finalized. Host Lloyd Bodie reports that while there is still some ambiguity as to who the major speakers will be (other than VonDel Chamberlain, who will be the Spitz Lecturer), most other convention details are firming up nicely. Mr. Bodie will send a preregistration packet, including tentative agenda, to all G.L.P.A. members by September 15th. Those who wish to participate in the planetarium demonstration session on Saturday morning devoted to illustration of celestial motions should contact the chairman of that session, Don Tuttle, Elgin Observatory and Planetarium, 4 South Gifford Street, Elgin, Illinois 60120. (See Vernal Equinox "Newsletter" for further details on this and other sessions).

THE CALL IS NOW OUT FOR PAPERS for the general convention session on Friday morning. Those wishing to submit papers should send short abstracts, along with time and equipment requirements, to the paper session chairman, Mr. Mark Sonntag, 230 West 75th Place, Apt. #1, Merrillville, Indiana 33314. There will also be a TECHNICAL SESSION, in which delegates will again be requested to describe (and illustrate when possible) their homemade special effects. Please remember that these do not have to be elaborate to be of interest to fellow planetarians, most of whom operate on just as rigid a budget as you do. Often in the past, the most impressive and useful demonstrations have been of novel soup can and tinkertoy type devices. If you have something to show and tell, do not hesitate to get in touch with convention chairman Lloyd Bodie, Jr., South Vigo High School, Terre Haute, Indiana 47802.

YE OLE NEWSPAPER EDITOR will be retiring this fall, and this may be his last issue. The backlog of materials and publication obligations is pretty well taken care of with this issue. However, the new editor will not be named until at the time of this fall's convention, so it may be necessary to dust off the typewriter for an "autumnal equinox" edition, providing you, the members provide me with something to print. If you have an item for the "Newsletter", continue to send them to the undersigned until after the autumn meeting and naming of the new editor. Remember, whether we have another edition before the convention (which we should to stay on some semblance of a schedule) depends on you. Get those contributions in today.

PLEASE ADD THE FOLLOWING NAME TO THE MEMBERSHIP LIST ENCLOSED WITH THIS ISSUE: Robert Staron, Schenectady Museum, Nott Terrace Heights, Schenectady, New York 12308. Be sure to keep the membership list in a safe place for easy reference.

THE SECOND BI-ANNUAL CONFERENCE OF I.S.P.E. will be held October 7th through 12th in Atlanta, Georgia. Host will be the Fernbank Science Center and other smaller planetariums in the region, and headquarters will be at the Atlanta American Motor Hotel, Spring Street at Carnegie Way. Room reservations should be made directly with the Atlanta American. The agenda is not yet complete at publication time, but will include major speakers and submitted paper sessions, and also an exhibition of art that is typically used in the planetarium. Details on procedures for contributing planetarium art, as well as the program, when completed, can be obtained from: John W. Burgess, Programs Chairman, I.S.P.E., Fernbank Science Center, 156 Heaton Park Drive, Atlanta, Georgia 30307.

ISPE SPECIAL REPORT NUMBER 5, entitled Some Planetarium Programs of 1972-73 June LoGuirato, editor, is now available for $2 for non ISPE members, from the executive editor of The Planetarian, Mr. Frank Jettner, State University of New York at Albany, ES 314, Albany, New York 12222. Twenty-nine North American Planetariums, including a substantial number from the G.L.P.A. region, contributed their most successful program scripts for summarization in this 26 page booklet. The program synopses are arranged by subject format, dealing with a
wide variety of material, some of which is common fare in the planetarium, but also
including hard-to-present subjects. Planatarians will find this publication particu-
larly helpful in gaining ideas for program titles and publicity. While the majority
of the summarized programs are designed for public presentation, some school programs
at various age levels are also included, and much of the material can be adopted for
use in a school setting. The publication is also designed to be of service to those
who are required to often write summaries and program notes about their presentations
for audiences and news media. Stated in her own words in Some Planetarium Programs
of 1972-73, the editor's hope is that the booklet will be used by planetarians,
because by so doing, they can "improve their astronomical vocabulary; increase their
understanding of planetarium work, their ability to locate new programming ideas,
and their ability to write and design program brochures." Included at the end of
the publication is a cross reference for locating programs produced by particular
planetariums, and also an extensive bibliography of commercial education material
sources and publications, as well as brochures distributed by the various planet-
ariums which contributed to Miss LoGuirato's fine effort.

ARE YOU AWARE OF THE AVAILABILITY OF THE FOLLOWING EDUCATIONAL AIDS:

N.A.S.A. films, including the excellent new release, "Mars, the Search Begins,"
available in the Great Lakes area from the contractor for Lewis Research Center;
Sunray Films, 3200 Carnegie Avenue, Cleveland, Ohio 44115.

Hubbard Scientific film loops on a variety of astronomy topics: Hubbard Scientific
Company, Northbrook, Illinois 60062.

Prinz single slide projectors (18 watts): Bass Camera Company, 179 W. Madison Ave.,

"Explorations in Space and Time," a series of excellent computer-generated films
depicting hard to illustrate astronomical topics. Many titles, presently available
only for sale, but may be ordered for preview at no obligation.. Further information
from Houghton Mifflin, Pennington-Hopewell Road, Hopewell, N.J. 08525.

Astronomy Through Practical Investigations, a series of laboratory exercises for
college students taking a general introductory course in astronomy. The investig-
gations emphasize analytic thinking rather than mathematical manipulation. Many
subjects are covered and examination copies of the 15 exercises are available from
L.S.W. Associates, P.O. Box 82, Mattituck, N.Y. 11952. They are complimentary if
bulk quantities are later ordered for classroom use; otherwise an invoice for 35¢
for each exercise ordered will be sent.

COMMITTEE AND REGION REPORTS

THE MICHIGAN PLANETARIUM GROUP held a meeting on May 11th at the Vollbrecht Planet-
arium of the Southfield, Michigan Public Schools. Present were Dave Hoffman, John
Soroka, Art Lusty, Larry Park, Larry Sabbath, Martha Scahefer, and the host, Bob
Thomson. Major topics discussed at this workshop type meeting were (1) plans to
produce a program on African mythology, and (2) the effect on planetariums of
adoption of state-wide accountability and/or minimum performance objectives in the
public schools. While no major achievements were reported at the meeting, assign-
ments of tasks related to the above projects were made, with reports expected at
the fall meeting of the group. This will be held on September 14th at the Cranbrook
Institute of Science in Bloomfield Hills, at which time the group will produce their
program on African mythology.
THE CLEVELAND REGIONAL ASSOCIATION OF PLANETARIUMS met on May 29th for an informal workshop and planning session at the Schuele Planetarium of the Lake Erie Jr. Nature and Science Center. The main topic of discussion concerned the group's presentation of "The Seasons" at the fall G.L.P.A. meeting at Terre Haute. It was agreed that four mini-programs, one for each season, will be presented, involving a number of different members of C.R.A.P. (Ed. Note: There is now a substantial rumor afoot that the group is seriously considering a change of name.) They will be geared to different audience compositions and age groups, which should make for a very interesting presentation at the convention. Bob Andress reviewed the excerpted sequences he had taken from old prints of the Bell Telephone science films and many N.A.S.A. film prints just received. Bob is now serving as C.R.A.P.'s film librarian. Delegates spent a great deal of time copying slides with the two repronar cameras, including many items not readily available commercially. At the invitation of N.A.S.A. Lewis Research Center, C.R.A.P. decided to again co-host an all-state meeting next spring at the new visitor center planned at Lewis. Date, schedule, and other arrangements will be announced later. The next meeting of C.R.A.P. will be on Tuesday, September 17th, with Dave Sanford as host at Shaker Heights High School.

POSITIONS AND PERSONNEL

DENNIS MAMMANA will be graduating from Vanderbilt University with a B.A. in astronomy at the end of the summer, and is very interested in finding a position in planetarium education. He has an impressive list of credentials, including experience both in research and educational astronomy. For two years, he was a teaching assistant at the Weitkamp Observatory at Otterbein College, where he did his undergraduate work, and while there, he also served as program director at the Weitkamp Planetarium. At Vanderbilt, he is a teaching assistant in several astronomy and physics courses, is engaged in research, and is involved with public night activities at the Stevenson and Dyer Observatories. Mr. Mammana's Curriculum Vita reveals a variety of accomplishments and interests. He can be located at 261 White Bridge Road, Apt. 53, Nashville, Tennessee 37209, and will send a copy of the vita and references upon request from a prospective employer.

BOOK REVIEW


Anyone shuffling the card catalogue index of any major library will find an astounding plethora of literature concerning the UFO phenomenon. Unfortunately, the vast majority of these books attempt to lure the public within the spurious penumbra of the supernatural with lurid tales of strange encounters. Written in the genre of "quasi-scientific journalese sensationalism," they abound with carefully selected individual cases of UFO experiences that cater to the imaginations of a public weaned on Buck Rogers and Flash Gordon. Needless to say, the popularizers of the UFO phenomenon have done a detrimental service in terms of legitimatizing the subject as an area for scientific investigation. Allen Hynek has endeavored to use his authoritative expertise to write "a good book on UFOs" devoid of the sensationalism that derogates a legitimate scientific study.

Dr. Hynek's credentials as a scientist are most impressive. As a professor of astronomy at Ohio State University in 1950, he was summoned by the Air Force to serve as an independent consultant to Project Blue Book. At that time, his primary function was to supply plausible astronomical interpretations for reported UFO sightings.
During the course of his 20 years of consultation, he often expressed vociferous criticism of the methodological procedures employed by the Air Force. After Project Blue Book folded its covers and transferred the study to the Condon Committee, Dr. Hynek appeared before the Congressional Committee on Science and Astronautics to participate in the "Symposium on Unidentified Flying Objects." By this time, both the scientific community and the public had become vehemently opposed to the secret practices of the Air Force study.

Dr. Hynek's book appears to be the resulting reaction to his many years of dealing with a phenomenon which, to a large degree, remains unexplained. His bitterness resulting from the official termination of governmental study is often apparent.

Since the publication of the Condon Report in 1968, the uproarious controversy has subsided in large degree. The public has become more aware and less nonplussed about the whirlwinds of technological change. With the launching of Sputnik I in 1957, 1,178 UFOs were reported. Seven-hundred and one of these sightings occurred between October and December, coinciding with the dates of the Sputnik orbit. In 1958 there were only 473 sightings, illustrating public reaction to the unfamiliar and the aftermath of passivity that accompanies awareness. In this respect, Allen Hynek's "good book" on UFOs has arrived too late. We finally hear a rational, intelligible voice attempting to isolate "the signal from the noise." In the heyday of the controversy, when the public needed such a rational spokesman, we heard only the raucousness of the exploiting journalist and the muted murmurs of secrecy from the Air Force.

The UFO Experience does succeed in bringing the UFO phenomenon into problematic perspective. Dr. Hynek achieves his end by discussing the sociological and psychological factors that often stand as barriers to the scientist involved in the interpretation. UFOs are not merely manifestations of a highly neurotic mind, nor are they simply misidentifications of ordinary meteorological, astronomical and aeronautical events, according to Dr. Hynek. Because of prolific sightings reported by sincere, responsible and often knowledgeable citizens - such as air control operators, pilots, astronomers, military officers and even astronauts - a continuation of UFO study is a necessity. And yet, the difficulties in analyzing their reports present an enormous challenge to the scientific method. To produce empirical evidence ex post facto is almost impossible and often the analyst is left with only the sincere account of an excited observer. In the past, a number of individuals who have reported UFOs have been ridiculed derisively. Pilots have had negative sanctions imposed upon them in terms of flight restrictions. This attitude adds to the problem, since reliable and complete accounts may go unreported.

In order to ensure reliability and obviate the perpetration of a hoax, the author suggests the meticulous screening of select sightings by assigning each case an indexical "strangeness rating" and "probability rating." The index would be plotted on a graph in terms of special categories: "Nocturnal Lights;" "Daylight Discs;" "Close Encounters of the First Kind" -- or simple visual sightings; "Close Encounters of the Second Kind" -- sightings accompanied by direct physical proof; and "Close Encounters of the Third Kind" -- sightings involving interaction between observer and UFO occupant. This method of categorization could serve as an excellent framework with which to analyze the validity of myriad UFO reports.

However, many of the suggestions Dr. Hynek recommends are hardly revolutionary. For the immediate analyzation of the problem, he suggests that a team of "crack investigators" having "immediate reaction capability" should be quickly mobilized to the alleged UFO hotbed. An early warning system established by the Condon investigation produced negative results. A team of investigators with specialized equipment including spectrosopes, geiger counters, elevation indicators, and arc indicators had the capability to reach any sighting in the United States within 24 hours. Also, the installation of "all-sky" cameras during the great Harrisburg "flap" of 1967 proved to be a fruitless labor.
In summary, Dr. Hynek has produced one of the better books on UFOs. His style is easy to read; he presents his argument devoid of exaggeration and sensationalism; and for historical perspective into the debate between the Air Force and the scientific community, the content is fascinating. However, in some respects The UFO Experience remains as merely "another book" about UFOs. Dr. Hynek sheds no new light in terms of unveiling the mysteries of the phenomenon, and his recommendations are old hat. In the final analysis, the reader must surely wonder whether the purpose is "a scientific inquiry", as the title states, or an indictment against Project Blue Book and The Condon Report.

BIBLIOGRAPHY OF BOOKS DEALING WITH MYTHOLOGY

Prepared by Lawrence Sabbath


This is the best source of basic material dealing with celestial mythology. The book covers peoples from all parts of the world, and from almost all time periods. It is organized in such a manner that it is very easy to use. No other single book contains as much basic information dealing with the heavens.

Star Names By Allen, Dover Publications, New York, 1963

This book tries to do the same type of thing as the Jobes book, but does not contain as much material.

Primitive Mythology
Oriental Mythology by Campbell, The Viking Press, New York
Occidental Mythology
Creative Mythology

These books deal, in detail, with many mythological topics. The author deals with the origin and evolution of mythological concepts. They will give the reader an in-depth understanding of an idea, while the Jobes and Allen books will only present the idea itself without any explanation.


This is the abridgment of the classic work by Frazer. It also discusses the origin and evolution of mythological concepts. There is some overlap between the Campbell books and this one, but they are all very well written and each contains information that cannot be found in any other source.


This book examines the Book of Genesis almost word for word and discusses the origin and use of the various ideas. It deals with the Bible from the standpoint of mythology rather than from the standpoint of faith.

African Myths and Tales by Feldman, Dell Publishing Co., New York, 1970

Both of these books are compilations of African folktales. Most of them deal with topics other than the cosmos, but a few would fit into our programs. For the most part they contain the same materials.
Dear Sir:

The following information might be of interest to fellow planetarians. I think that you would agree that Comet Kohoutek has added a large number of Astronomy enthusiasts and telescope owners to our ranks. In fact, the National Observer recently reported that the Unitron Company and Cave Optical Company had run out of telescopes due to the extremely heavy buying demand during the few months around the time of the comet's apparition.

Many of these new telescope owners will get hooked on astronomical observing and will soon be asking you what they can do to contribute significantly to Astronomy. I would like to suggest that you recommend membership in The Association of Lunar and Planetary Observers. The ALPO offers a wealth of material to further stimulate a novice's interests in the Moon and Planets and there is a staff of highly qualified recorders to direct their useful work.

To become an ALPO member, the applicant simply sends a check for $6.00 to Mr. Walter H. Haas, Director, ALPO, Box 3AZ, University Park, Las Cruces, New Mexico, 88001. A new member will get full access to the ALPO services and a subscription to the Journal of the Association of Lunar and Planetary Observers (6 issues of JALPO a year). The ALPO has been training amateur astronomers in the field of useful lunar and planetary observing since 1947.

If you are not a member of the ALPO, you are missing a good source of information on the amateur study of the lunar and planetary sciences. Send your check to Walter Haas today. The ALPO needs your support in continuing useful work in amateur astronomy.

Joe Olivarez
Hutchinson Planetarium
1300 North Plum
Hutchinson, Kansas 67501

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THE FOLLOWING MEMO WAS JUST RECEIVED from the president of I.S.P.E. The reorganization of administrative structure to provide better service and communication to the membership should be welcomed by the 50% of G.L.P.A. membership who are part of I.S.P.E. Maybe publication of the memo here, and indication of the Council to provide more service to the membership, will persuade others from our group to join I.S.P.E.

INTERNATIONAL SOCIETY OF PLANETARIUM EDUCATORS

July 22, 1974

MEMO TO: All Members

MEMO FROM: The President

My dear Colleagues:

The Society we have created to aid us in our profession, the planetarium medium, is victimized by its own success. Conceived as a continental and as an all-encompassing organization, it suffers from severe communication difficulties because of its nature.

Two main reasons for the organizational problems are evident. Some of your elected officers have accepted nomination without full awareness of the magnitude
of the office involved. And the cited communication difficulties resulted in lower memberships and thus financial set-backs.

Your Council has remedied the situation, and no further problems should arise.

May I encourage you to direct all your correspondence with suggestions and complaints, recommendations and observations, requests and statements to one of the following persons:

General I.S.P.E. Concerns
S. Wieser, President
Calgary Centennial Planetarium,
P.O. Box 2100,
Calgary, Alberta T2P 2M5
Canada

or T. Gates, President-elect,
Space Science Centre Foothills College,
12345 El Monte Road,
Los Altos Hills, California 94022

Membership Concerns
R. Hartman,
Mount San Antonio College,
1100 North Grand Avenue,
Walnut, California 91789

or W. Tenschert, Director,
Thomas Jefferson High School
A Fairfax County School,
6560 - Braddock Road,
Alexandria, Virginia 22312

Finances
K. Perkins
528 Bennert Drive
Vandalia, Ohio 45377

Publications
F. Jettner
SUNYA, ES 314,
1400 Washington Avenue
Albany, New York 12203

Atlanta Conference
John Burgess
Fernbank Science Center
156 Heaton Park Drive N.E.
Atlanta, Georgia 30307

We promise to answer your letters and to act on them within three days of receipt.

May I thank you for your interest and for your assistance to our common objective, the building of the International Society of Planetarium Educators.

Yours sincerely,
S. Wieser, President
I.S.P.E.
No autumn issue of the *GLPA Newsletter* was published this year.
No winter issue of the *GLPA Newsletter* was published this year.