INTERNATIONAL SOCIETY OF PLANETARIUM EDUCATORS

ISPE Special Reports

No. 4

August 15, 1973

A BIBLIOGRAPHY FOR PLANETARIUM EDUCATORS

Part II

Compiled and annotated

by George Reed

Professor of Astronomy, West Chester State College, PA

ispe

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PREFACE

ISPE Special Report Number 4 is a continuation of ISPE Special Report Number 2. The academic year, June, 1972 to May, 1973, produced as many planetarium articles as previous years. There was, however, a significant difference this past year. The publication of *THE PLANETARIAN* made this year the first that the articles were readily available to the entire planetarium community.

ISPE Special Report Number 4 also includes some articles that were not included in ISPE Special Report Number 2. I would like to thank those people who called my attention to articles and sources that were previously missed.

I would be extremely interested in hearing from people who have found the bibliography of value.

George Reed

West Chester, PA

July, 1973

FOREWORD to ISPE Special Report No. 2

This work was started during a literature search for a doctoral dissertation at the University of Pennsylvania. It was actively kept up to date with a 3x5" card file system and finally brought into its present form for the purpose of a literature review for the undergraduate course in planetarium education at West Chester State College (Pa.).

The original intent of the bibliographic review was to assess the "state of the art" of planetarium education and to define a relevant problem area. The final intent is to allow undergraduate students to assess that "state of the art" today. The bibliography allows these students to pursue topics with an economical use of library time.

It is the editor's belief that the journal articles presented are a realistic reflection of the development of planetarium education. The publications of the early 1960's show a great confidence in the ability of the planetarium as an educational tool. This confidence was based upon a priori assumptions. The early articles also reflect the tremendous growth taking place in the number of planetariums being constructed. Toward the late 1960's, a more critical eye was being turned toward the planetarium as reasearchers began to assess its use, not with the goal of destroying it as an educational medium but of making it as productive a medium as possible.

The greatest potential use of the bibliography probably lies in its use by graduate students and new members of the planetarium community. A unique feature is a short analysis or description of each listing. One finds the content of a listing is not always adequately reflected in its title. The analysis should save library time for the researcher. New members of the planetarium community can use the bibliography in the development of curricula and planetarium teaching strategies.

The majority of the listings are obtainable from most college or university libraries. The ones most difficult to obtain are those that appeared in the publications of the various planetarium societies; however, the Regional Editors listed in *THE PLANETARIAN* can normally help. The doctoral dissertations listed may all be obtained from University Microfilms, Inc., Ann Arbor, Michigan. Master theses are not included - with a few exceptions - because of the lack of a central listing of master thesis titles and their general inaccessibility. Newspaper articles are not included because they are not normally of an academic nature.

The degree of completeness of the bibliography could not have been obtained without the help of Michael A. Bennett of Spitz Laboratories and Ronald N. Hartman of the Pacific Planetarium Association, both of whom lent me their personal copies of several journals. Also of assistance were Linton Pitluga, Gerard Muhl, Terence Dickinson, and John Christian. I would also like to thank Joan Harmer for her library assistance and typing of the original manuscript. Frank Jettner gets my special thanks for believing that the bibliography

was worthy of becoming ISPE Special Report No. 2.

George Reed

West Chester, PA
July, 1972

1964

Haarstick, Maxine B., "How to Succeed in the Planetarium," *Museum News*, 43 (Dec.), pp. 17 - 21. A discussion is given of the effect the space program will have on planetarium education. Some ideas are presented to meet the increased demands.

Johnson, Robert I., "The Astrologer's Point of View," *Museum News*, 43 (Dec.), pp. 23 - 28. An astronomer's view is given of planetariums, the programs and personnel, and their relationship and responsibility to the public and astronomy. The title seems to be a misprint.

Spitz, Armand, "The Philosopher's Point of View," *Museum News*, 43 (Dec.), p. 22. A short view is presented on the role of the planetarium in astronomical education.

1965

Gilbert, Rose Bennett, "Space Age Education," *Museum News*, 44 (Nov.), pp. 25 - 30. A description is given of the Morehead Planetarium (Zeiss, VI) at the University of North Carolina in Chapel Hill and their program to train NASA astronauts star identification for navigational purposes.

1966

Hall, Donald S., "What's 'Up' in Space," *Popular Astronomy*, 60 (May - June), pp. 6 - 8. A description is given of the Morehead Planetarium's (University of North Carolina) involvement in the navigation, recognition, and simulation training of Mercury and Gemini astronauts.

1968

Lewitt, I. M., "The Silent Stars," *Museum News*, 47 (Oct.), pp. 18 - 19. A description program, "The Sun and the Stars," that was given for deaf children by use of sign language.

1969

De Graff, Jerome V., "Some Thoughts on Planetarium Programming," *Journal of Geologic Education*, 17 (Feb.), p. 54. A discussion is presented of the use of the planetarium as an aid of teaching

astronomy. "The best possible use of a planetarium can be made if it is not used as an isolated experience. When teaching and laboratory experiences in the classroom are combined with the appropriate presentation, the planetarium fulfills its most valuable role."

Knapp, Richard S., "A Major Advance in Planetarium Projectors, Zeiss Model VI," *Museum News*, 48 (Nov.), pp. 12 - 15. An extensive description is given of the capabilities of the Morehead Planetarium's (Chapel Hill, N. C.) Zeiss Model VI.

1970

Lunetta, Don, "The Denver Space Transit Planetarium," *Museum News*, 49 (May), pp. 24 - 27. A description is given of the planetarium facility (Spitz, STP) of the Denver Museum of Natural History. The philosophy behind the acquisition of the STP television - telescope system is presented as well as some aspects of the programs. . . "Skill of communication, not just sophistication of equipment, made the difference between success and failure in teaching scientific concepts."

1971

Battaglini, Dennis Wood, "An Experimental Study of the Science Curriculum Improvement Study Involving Fourth Graders' Ability to Understand Concepts of Relative Position and Motion Using the Planetarium as a Teaching Device," unpublished doctoral dissertation, Michigan State University, 1971. As an alternative to a written test, a planetarium oriented evaluation process was developed to test the "Relativity" unit of the SCIS project. The test consisted of 30 items with a reliability coefficient of 0.6995. The test was administered to a class of SCIS fourth graders and 6 classes of non - SCIS children. An analysis of covarience showed that fourth graders enrolled in the SCIS project had a significantly greater ability to understand the concept of relative position and motion than a comparable group of students who had not received such instruction. The difference was significant at the 0.05 level.

1972

Abell, G. O., "And Now May I Wish You All a Very Good Morning," *THE PLANETARIAN*, 1 (Sep.), pp. 35 - 40. This article is a transcription of the Fourth Annual Armand Spitz Memorial Banquet Lecture of GLPA at the October, 1970 CAPE meeting at Michigan State University. A description is given of the activities of three astronomers who became interested in astronomy through planetariums. "Many administrators, I fear, have the misconception that the way to have an

astronomy program is simply to buy a planetarium." The relationship that should exist between general public, the planetarium, and academic astronomy is explored. "With imagination and intelligent and thoughtful organization, an astronomy program for liberal arts students can be built around the planetarium as the central focusing point."

Branley, Franklyn M., "Education in Major Planetariums," *Annals of the New York Academy of Sciences*, 198 (Aug.), pp. 192 - 198. A description is given of total astronomy education programs that exist at the American Museum - Hayden Planetarium in New York City and the data from a survey of 20 other major planetariums. A major planetarium is defined as one with a dome diameter of 50 feet or more and a seating capacity of 250 or more.

Cobia, Le Ron W., "Abrams Planetarium," *THE PLANETARIAN*, 1 (June), pp. 10 - 11. A short description of the Abrams Planetarium (Spitz, STP) at Michigan State University in East Lansing, Michigan.

Curtis-Stasiuk, Anne, "Project Delphi, A Choice of Futures / A Future of Choices," *THE PLANETARIAN*, 1 (Dec.), pp. 95 - 96. Project Delphi is an attempt to determine "The probability, feasibility, and possibility of events and conditions which will occur within the planetarium community, up to and including the year 2021." The project is described and a request is made for prognostications.

De Graff, Jerome and De Graff, Sandra, "Magic Sky: A Planetarium Program for Pre-schoolers," *THE PLANETARIAN*, 1 (Dec.), pp. 70 - 71. A description is given of the Strasenburgh Planetarium Nursery School Program called "Magic Sky". The program is designed to develop an awareness of the sky with the concentration being on the differences between the day and night sky and the apparent movement of objects in the sky.

De Graff, Jerome V. and Hamil, Fred, "Seeing Stars," *THE PLANETARIAN*, 1 (Sep.), pp. 54 - 55. A description is given of the Strasenburgh Planetarium's (Rochester, N. Y.) adaptation of a regular program for students of the National Technical Institute for the Deaf, by the use of captions.

De Graff, Jerome V. and Seebach, James R., "Project Adelante Meets the Planetarium," *Museum News*, 51 (Dec.), pp. 30 - 31. Project Adelante is a federally-funded bilingual education program of the Rochester City (NY) School District. The Strasenburgh Planetarium in cooperation with the project developed a bilingual adaptation of a regular kindergarten to third grade planetarium presentation. A description is given of the bilingual planetarium program and its planned extension to the secondary level.

Del Chamberlain, Von, "Planetarium Programming for the General Public," *THE PLANETARIAN*, 1 (June), pp. 15 - 18. Chapter I from "Principles of Planetarium Operation" (to be serialized) is presented. Topics

include: selection of topics, researching the topic, format and sequencing, and writing the program.

Del Chamberlain, Von, "Planetarium Programming for the General Public," *THE PLANETARIAN*, 1 (Sep.), pp. 47 - 50. The second segment of chapter I from "Principles of Planetarium Operation" is presented. Topics include: preparing the program, recorded and live, completing the program, presentations, and evaluation.

Del Chamberlain, Von, "Planetarium Programming for the General Public," *THE PLANETARIAN*, 1 (Dec.), pp. 79 - 82. The last segment of chapter I from "Principles of Planetarium Operation" is presented. The narration of a sample program, "Journey Through the Universe," is given along with media notes.

Guilbert, Edward Hunt, "A Standardized Test in Collegiate Descriptive Astronomy on Selected Concepts Which Can Be Demonstrated in the Planetarium," unpublished doctoral dissertation, University of Southern Mississippi, 1972. A standardized test was developed for collegiate descriptive astronomy on selected concepts which can be demonstrated in the planetarium. The 43 item test has Kuder-Richardson Formula 20 reliability of 0.7441. An "Examiner's Manual" and normative data are available.

Harrison, Phillip, "The Vanderbuilt Planetarium," *Sky and Telescope*, 44 (Aug.), pp. 72 - 76. A description is given of the Vanderbuilt Planetarium, Long Island, NY (Goto J. H. S. Custom) and glass-lined Observatory (Ealing 16 inch Cassegrain reflector). An "optional program" is available to schools or groups that wish to prepare their own demonstrations or laboratory exercises. A total of 21 graded presentations are available to local schools.

Jamison, Marion Merle, "A Consideration of the Planetarium and the Lecturer as Agents to Effect Change in Administrators Regarding Social Attitudes in the School and Community," unpublished doctoral dissertation, University of Illinois at Urbana - Champaign, 1972. A "Computer Research study into area of learning theory, attitudes, community participation: Developments, innovations and change, and finance; by using the planetarium and the lecturer to affect change among some administrators in the community regarding social issues." A pre-test question/statement response form of 40 items was given to 228 community leaders. The administrators later attended a transcription tape program dealing with the man's relationship with the universe. The same test attitude sampling statements were administered following a 40 minute presentation in the planetarium chamber.

Jettner, Frank, "A Directory of Institutions Offering Coursework in Planetarium Education," *THE PLANETARIAN*, 1 (June), pp. 24 +. A list is presented of 14 institutions that offer some coursework in planetarium education. A short description is given of each program along with the address.

Jettner, Frank C. and Soroka, John J., "The Planetarium in Modern Science Education," *Annals of the New York Academy of Sciences*, 198 (Aug.), pp. 178 - 191. A report is given of the growth and distribution of planetariums in the United States, the academic training of planetarium personnel, and planetarium programs. It is stated that a communication gap exists between the professional astronomer and planetarium personnel who act as local spokesman for the astronomical profession. Paper was delivered at the International Conference on Education in and History of Modern Astronomy which was sponsored by the American Astronomical Society and the New York Academy of Sciences.

Knapp, Richard S., "Graduate Training at North Carolina," *THE PLANETARIAN*, 1 (Dec.), p. 85. A description is given of the University of North Carolina Morehead Planetarium/Observatory Graduate Trainee Program in Planetarium Administration and Education.

Norton, O. Richard, "The Technical Side," *THE PLANETARIAN*, 1 (June), p. 23. A discussion is given of the technical aspects involved in the production of a circular motion special effects projector. First of four such articles.

Norton, O. Richard, "The Technical Side," *THE PLANETARIAN*, 1 (Sep.), p. 59. A discussion is given of the technical aspects involved in the production of a linear motion special effects projector.

Norton, O. Richard, "The Technical Side," *THE PLANETARIAN*, 1 (Dec.), pp. 89 - 90. A discussion is given of an oval motion projector which produces a simulated elliptical motion.

Perkins, Ken, "Teaching English in a Planetarium," *Ohio Schools*, 50 (Feb.), pp. 22 - 23. A description is given of the Tom Sawyer program performed at the Vandalia Junior High Planetarium (Viewlex, Venus).

Sparks, Jeff, "Busman's Holiday in Moscow," *THE PLANETARIAN*, 1 (Dec.), pp. 75 - 77. A short description is given of the moon planetarium (Zeiss IV, Jena). The Schedule includes several different programs each day.

Spitz, Armand at CAPE, 1970, *THE PLANETARIAN*, 1 (June), p. 7. A transcript of a portion of the tape recorded message from Armand Spitz to the participants at the 1970 CAPE meeting is given.

Stamper, W. Robert, "A Planetarium Program," *American Biology Teachers*, 34 (Sep.), p. 351. A description is given of a program for biology students on the formation of the Solar System with a emphasis on the heterotroph hypothesis for the origin of life.

Sullivan, Michall, "Planetariums Flip Their Lids," *Museum News*, 51 Nov.). A description is given of the Reuben H. Fleet Space Theater Spitz STA) in San Diego, California.

Victor, Robert C., "How Well Do Your Planets Move?" *THE PLANETARIAN*, 1 (Dec.), pp. 84 - 85. A system is described for checking the short run accuracy of the annual motion system of a planetarium projector. A table of events (1973) is given to use as a test. The author wishes to make a comparative study of annual motion systems of various planetariums.

Wieser, S., "The Calgary Centennial Planetarium," *THE PLANETARIAN*, 1 (Sep.), p. 44. A description is given of the Calgary (Alberta, Canada) Planetarium (Zeiss, Jena) and Community Cultural Center.

1973

De Vries, Lois J., "The Creative Press Release," *THE PLANETARIAN*, 2 (Mar.), p. 32. Hints are given on the way to advertise and generate interest in planetarium programs by means of press releases.

Lunetta, Donald M., "Let's Not Jilt the Tilt," *THE PLANETARIAN*, 2 (Mar.), pp. 26 - 30. An examination is presented of some of the major characteristics of the tilted and flat-horizon projection domes.

McDonald, Donald, "The Minolta Planetarium," *THE PLANETARIAN*, 2 (Mar.), pp. 14 - 15. A brief description is given of the Minolta Planetarium (Minolta MS-15) at the De Anza College in Cupertino, California.

Norton, O. Richard, "The Technical Side," *THE PLANETARIAN*, 2 (Mar.), p. 34. The fourth and final article in the Series on the production of motions in the planetarium. Deals with the production of symmetrical and apparently random motions.

Reed, George, "Design for a School Planetarium," *Science Activities*, 9 (May), pp. 20 - 24. A survey of educational research and literature is provided along with guidelines for designing a planetarium that will reflect the educational philosophy and curriculum of the purchasing school. Comparison tables of planetarium instruments and domes are included.

Schultz, Ora Ann, "Planetarium Astronomy for the Hearing - Impaired," *Science Teacher*, 40 (Apr.), pp. 45 - 46. A description is given of word projecting methods for planetarium programs for children with speech and hearing impairments.

Solzman, David M., "The Use of Music in the Planetarium," *THE PLANETARIAN*, 2 (Mar.), pp. 17 - 18. The first segment of Chapter 2 from "Principles of Planetarium Operation" concern the use of music. Part 1 describes planetarium sound systems. Part 2 describes the use of music and sound effects for planetarium pro-

grams. Part 3 considers the selection for a program.

Yarian, Alton, "Pointing's The Way - For Image Projection," *Science Teacher*, 40 (May), pp. 62 - 65. Pointing, or Point-Source, is a projection technique involving no lenses. Its zoom capabilities exceed those of a zoom lens, and projection can take place 360 degrees horizontally and more than 180 degrees in a vertical plane. Several planetarium applications are described. This paper was chosen for a NSTA 1973 Star Award.

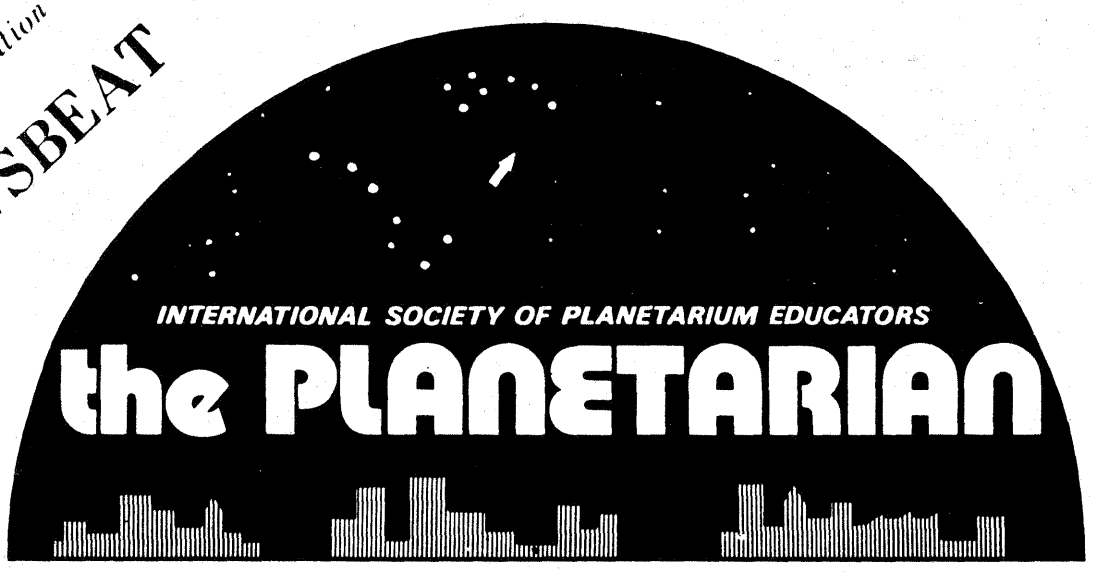
thoughts from fcj

The Technical Side

Planetariums On Parade

Of Stars and Domes

Regional Association NEWSBEAT



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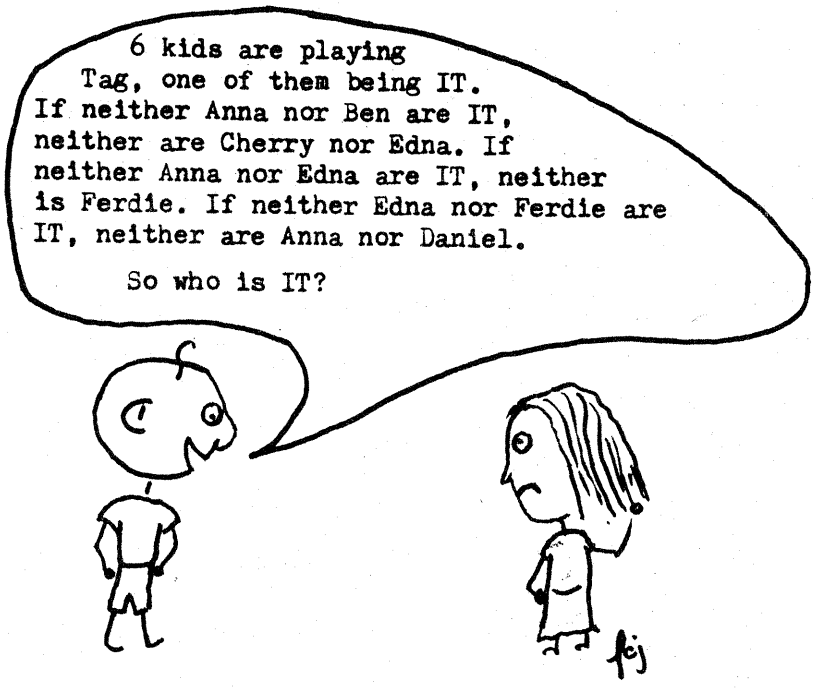

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