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20 Years of Experience With the University of Arkansas Planetarium

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ABSTRACT

The Model A-1 Spitz planetarium was placed in operation at the University of Arkansas in 1954. It was moved to its present location in 1972 and has continued to have a much expanded use. More than 8,000 persons attended demonstrations between 1 August 1972 and 31 March 1974. Approximately one third of these were University students in classes and laboratories; the remaining two thirds were accounted for by school and other youth groups and the public demonstrations.

The modern planetarium using the star-projection principle is only 50 years old as an instrument. At the end of World War II there were only six planetariums in the United States and probably about 25 in the whole world. Most of these were elegant Zeiss instruments (Chamberlain, 1957). There are now more than 700 planetariums in the United States (Gallagher, 1969; Norton, 1968; Sperling, 1971) ranging from small installations that can accommodate only a few dozen viewers to large 60- and 75-ft domes seating hundreds of persons. Small novel instruments and domes also are appearing in impressive numbers. A few hundred stars are projected on the dome by the smaller instruments and several thousand stars are projected by the larger ones. The larger instruments include several other projectors and motions which greatly extend the educational and programming possibilities.

The University of Arkansas purchased the Model A-1 Spitz planetarium (Federer, 1971) in 1954 at a cost of about \$6,400, including \$850 for the dome and \$150 for installation. It was in the Junior Arts Center in the large WW II frame building just north of the Fine Arts building. The planetarium was used effectively for astronomy and physical science classes and for public lectures and schools groups from the beginning, and later by the physics laboratories also. Prof. D. P. Richardson and Dr. B.H. Gunlach were the primary demonstrators in the early years. Prof. Paul C. Sarrah and several of the physics graduate assistants came into the program in 1957 or 1958. Dr. Douglas James of the Zoology Department also used the planetarium for bird studies.

The dome and instruments were installed in Room 117 of the Physics Building during the summer of 1972 and were ready for use by August of that year. The canvas dome was painted to better reflect the light. After the installation had been put into operation only minor maintenance was required. Beginning in late summer and fall of 1972, newspaper publicity and other announcements described the public demonstrations and invited school and youth groups to make appointments for group demonstrations. The number attending the planetarium from August 1972 to 31 March 1974, as well as numbers for other recent years, are as shown in Table I.

The recent programs have been supplemented by slides while the lights dim. Slides of the stars and familiar constellations are used, as well as slides of the moon and planets and the beautiful recent pictures of the earth. Several small telescopes are used for viewing after the planetarium demonstrations on nights when the sky is clear. The programs have been given principally by four members of the physics staff: Michael Lieber, Charles Richardson, Carol Webb and Paul Sharrah. Each program is announced under a special title of current interest and all demonstrations use the planetarium instrument for viewing "the starry sky tonight" or the sky in some other season as appropriate.

The four Christmas Programs in December 1972 and December 1973 were recent high points in the public demonstrations. The early morning planetarium field trips operated 10 November 1973 and 8 December 1973 to view the Comet Kohoutek and the transit of Mercury drew more than 200 people to the first session and at least 50 to the second.

Our experience at the University of Arkansas, verified by other experience nationwide, has proved the effectiveness of the device as a teaching aid in astronomy and related sciences. Furthermore, we have verified the very steady and genuine interest which the planetarium engenders among school groups and public groups.

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Table I. University of Arkansas Planetarium Attendance, 1969-71, 1972-74 *

	1969-70	1970-71	1972-73	1973-74 ^b
University laboratory students	40	153	1269	1242
School & youth groups	260	1290	1503 ^c	2032 ^c
Public demonstrations	----	----	966	1040
Totals	Approx. 300	Approx. 1443	3738	4314

* Planetarium not in operation 1971-72.

^b 1 July 1973 to 31 March 1974 only.

^c Elementary students account for about 55% of this group or more than 20% of the total, and many children bring their parents to the public demonstrations later.