

ATLANTA ASTRONOMERS' REPORT

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NEW TELESCOPE FOR AGNES SCOTT

A new Science Hall is to be built at Agnes Scott College in the near future. The plans include an observatory to be placed on the roof of the building, with an area suitable for constellation study. Construction of the building has been postponed for the present, but Dr. McCain, president of the college, has given assurance that the contract for a telescope can be let during this college year. Thus, through the efforts of Dr. McCain, Agnes Scott will be the first college in Georgia to have a department of astronomy and an observatory.

It is greatly to be desired that some friend or organization should contribute to the enterprise, thus giving the people of the Atlanta area the privilege of observing through a really competent telescope. What finer and more enduring memorial could possibly be established?

-- W. A. Calder

CLUB BEGINS SECOND YEAR

With the opening meeting this month the Atlanta Astronomy Club observes the first anniversary of its founding. Last autumn a group of enthusiastic star-gazers and telescope makers came together, and, under the direction of Dr. William A. Calder, formed the nucleus of the organization. Holding meetings monthly thereafter, the club has become firmly cemented and various groups within its structure have engaged in several types of activity.

Throughout the year there were many interesting and informative lectures. From our own group we had Dr. Calder, who talked to us about Binary Stars, Professor C. H. Holton, whose subject was The Sun, and Bill Pinson, who spoke on the Solar System. Among visiting speakers was Dr. J. G. Lester, of the Emory University Geology Department, who gave an excellent address on our own planet, the Earth. Mr. Clarence T. Jones, of Chattanooga, brought with him the inspirational film on the building of the Chattanooga Observatory and twenty-inch telescope. At our final meeting was Dr. Bart J. Bok, Associate Director of Harvard Observatory, who delivered a splendid illustrated lecture on the Milky Way.

Meeting on Monday evenings, members ground six-inch telescope mirrors. Although the group work of finishing the the telescopes is not yet completed, several enthusiasts finished and mounted the instruments during the summer months. Reports of their performance are exuberant.

Regular meetings were suspended for the summer, but club members met several times informally to observe the heavens and to compare notes. Often there were as many as six telescopes in one group, since several owners have instruments with portable mounts.

With the beginning of this year's meetings we look forward to continued and increased activity, with all members participating.

NEW SPRINGFIELD TELESCOPE IN ATLANTA

Mr. F. P. Rose, whom we all know as one of our most active and enthusiastic members, has just completed the building of a Springfield type telescope. This type mounting has the handy feature of having a fixed eyepiece, which remains for all positions of the telescope, aligned with the polar axis of the equatorial mount.

The telescope has been under construction for over a year and began when Mr. Rose purchased a set of unmachined castings (\$30.00). Many delays were experienced in having the castings machined and in assembling all of the necessary accessory optical parts such as prisms, eyepieces and finders. But at last it is completed and we can be sure that no clear nights will go by unobserved from now on.

The primary mirror is nine inches in diameter and was made a number of years ago. A telescope of such size is excellent for observing those faint and hazy beauties of the skies, the clusters and nebulae. The well-known globular cluster, M 13, which is said to contain over 100,000 stars equal in size to or larger than our Sun, is easily resolved into its stars. M 57, the planetary Ring Nebula in Lyra, stands out clearly, and though the fifteenth magnitude central star is beyond the grasp of the nine inch glass, the white thirteenth magnitude star just adjacent to the ring is clearly visible.

One of the greatest problems that confronted Mr. Rose in erecting his telescope was the problem of trees. His backyard and those of his neighbors were veritable forests, at least they were in the mind of an astronomer. Now the trees in his own backyard have been felled, and through the kind cooperation of his neighbors the trees in their yards have been pruned. Now nearly all the sky is available; that is, at some time of the night or in some month of the year.

It goes without saying that Mr. Rose will welcome any visitors on any clear night; or, for that matter, on any night, clear or cloudy, for it is certain that no member of our club loves more dearly to talk about his hobby.

A HOMEMADE PLANETARIUM

Dr. W. A. Calder very soon will show us how we all can have an excellent planetarium in our own homes. The cost can be negligible and the results -- well, those who have seen the widely advertised Spitz planetarium, priced at \$750.00, agree that the homemade planetarium excels the ready-made one, both in number of stars and sharpness of images.

The construction is simple, but incurs a number of hours of work. Dr. Calder began by purchasing an ordinary, discarded twelve-inch geography globe of the earth from a salvage shop. The paper and paint were removed from the metal shell, and the grid of longitude and latitude lines were marked on the metal. Then, using a celestial globe and Horton's Star Atlas, the coordinates of the stars were obtained and marked on the metal sphere. With an electric drill holes were made for each of the stars, each hole being of uniform size. Next, small square patches of dull black paper were pasted over each of the holes. Dr. Calder stated that this proved to be both a sticky and tedious job. Tiny holes were punched in the paper squares to project light from the center of the globe. The size of the holes was, of course, determined by the stellar brightness, which ranged from the brightest to the fourth magnitude. Actually, it was found that only stars to the third magnitude could be successfully projected. Holes more tiny than those for third magnitude stars projected diffraction patterns on the screen, giving images larger though less bright than those of first magnitude.

For illumination, a small flashlight bulb was mounted in the center of the globe. The light is wired to a transformer and rheostat, with which its brightness may be varied by a hand dial. By means of the rheostat the images of stars on the screen could be varied from large, relatively bright spots, to dimmer but much sharper points. It was found that once one's eyes were fully accustomed to the darkness the most realistic effect could be obtained with a minimum of illumination.

A small spring motor gives surprisingly realistic diurnal motion.

For the greatest simplicity projection can be made on the light colored walls of any darkened room, but of course projection on such a rectangular screen entails distortion, much the same as is encountered by the cartographer in projecting a map from the spherical Earth's surface to a flat map. Best results could be obtained from a hemispherical screen which would simulate our natural celestial hemisphere. Dr. Calder has conceived the ingenious idea of using a surplus army parachute for a screen. Such a parachute would provide a white hemisphere over twelve feet in diameter, under which

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a crowd of more than a score of people could assemble. Also, by rigging a few strings, hooks, and pulleys it should be possible easily to mount the screen.

An excellent undertaking at once is suggested that someone should construct one of these homemade planetariums of the southern hemisphere skies.

Dr. Calder hopes soon to have his planetarium and screen completed, so that we may view the heavens even on the many cloudy nights, which plagued us seven out of our eight meetings of the past year.

CHATTANOOGA PAPER FEATURES PHOTOGRAPH BY MEMBERS

The persistence of the amateur can be most rewarding, two of our members discovered recently.

John Brown and Conrad Meaders, defeated by that astronomer's enemy, rain, on their first trip to the Chattanooga Observatory, undertook a second pilgrimage recently. The evening was beautifully clear, and Mr. Clarence T. Jones graciously escorted our two members to the observatory, only to find that his keys would not unlock the door. After trying every entrance, Mr. Jones in despair instructed John Brown to break the basement window. This done, and access to the basement gained, it was discovered that although they were in the main building the door to the second floor stairway to the telescope was still locked. After various fruitless telephone calls Mr. Jones' son finally solved the problem with a pair of pliers, and our members were in at last -- after two hours of effort.

The observatory was theirs for the night, and they spent all the dark hours observing and taking pictures. Mr. Jones had donated negatives. The moon was just beginning its last quarter, and at the request of Arthur Jones the young men took photographs through the splendid twenty-inch instrument. One of the pictures proved exceptionally good, and was left for the Barnard Astronomical Society of Chattanooga.

Imagine the delight of Mr. Meaders and Mr. Brown when, the following week, they received a copy of the Chattanooga Times, bearing their lunar photograph!