The Bruce Medal. Endowed in 1894 by Catherine Wolfe Bruce, it has become one of the most prestigious awards for contributions to astronomy. (Photographs from the A.S.P. archives.)





a precarious state for some years yet, and, as we shall see, financial straits would be a recurrent problem for the Society through its history.

Two bequests helped somewhat. In 1904 Alvord died, and left the A.S.P. \$5000. The year before, John Dolbeer, a member who had done very well in the lumber business, also willed \$5000 to the Society. These bequests were invested, and the income from these helped keep the A.S.P. afloat.

The original bylaws had called for six meetings of the Society per year: three in San Francisco and three at Lick. By 1895 the Lick meetings were becoming fewer, and in some years (for example, 1897 and 1901) there were no meetings there, due to lack of a quorum. The difficulties of the journey up the mountain deterred many members from going. In 1903 the bylaws were changed to specify three meetings in San Francisco and two at Lick; but already this was out of date with current practice, and Lick meetings occurred only sporadically. In 1909 the bylaws were again amended, to an August meeting at Lick and four San Francisco meetings each year. Though Lick meetings were only held in 1911 and 1917 during the next decade, the policy of at least four meetings in San Francisco or nearby continued in force through the 1920's.

At these gatherings some business typically was transacted, such as the election of new members, and then one or more papers were read to the assembled group. Frequently these were illustrated with lantern slides; they usually dealt with some aspect of astronomy being pursued by the professional members. Often these papers were later published in the *P.A.S.P.*, and served to show the fields of active interest — for example, the planet Mars, comets, or some new observing techniques. Occasionally a member would describe a recent trip to a foreign observatory. Presumably discussion followed these talks, as did socializing.

But, more and more, the business of the Society would be conducted through the mails and through the *Publications*. Today, with members scattered in 50 states and over 70 other countries, we take it for granted that only a small fraction of the Society's members can attend any meeting and that the Society's work must be conducted through the postal systems and the electronic mail networks that now connect the research institutions and astronomy enthusiasts of the world.

## Chapter 7:

## The Bruce Medal

A major event for the A.S.P. occurred in 1897, when Miss Catherine Wolfe Bruce of New York City endowed a gold medal, to be awarded to "that astronomer whose work has most deserved it." Miss Bruce had inherited a fortune from her immigrant father, and was a generous philanthropist to many causes, including astronomy. She previously had made gifts to Holden for Lick Observatory, as well as to other astronomers, such as E. C. Pickering of Harvard and Max Wolf of Germany.

Holden solicited her interest in establishing an A.S.P. medal, which she agreed to do, on the conditions that it should not be restricted to American astronomers, and should be given "for distinguished services to astronomy only when a suitable candidate can be found." The A.S.P. Board of Directors was to select the recipient from a list of one to three nominees presented by the directors of each of six observatories, three American and three foreign. (At first these were Lick, Harvard, Yerkes, Paris, Greenwich, and Berlin).

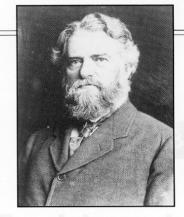
In announcing this gift to the members, Holden wrote: "...not only will the Bruce Medal tend to the advancement of Astronomy, and enable the Astronomical Society of the Pacific to adequately recognize scientific work of the highest class (and these are Miss Bruce's only desires), but it will forever connect the name of the founder with the progressive advances of Astronomy... The time will soon come when the Bruce Medal will be one of the most highly prized recognitions of original and useful service to Astronomical Science."

The first Bruce Medal was awarded in 1898 to the dean of American astronomers (and Edward Holden's mentor) Simon Newcomb. Since then it has been given a total of eighty-two times (as of 1989), and has indeed long been regarded as one of the highest honors in the field of astronomy. Miss Bruce died in 1900, and the *P.A.S.P.* noted her passing by quoting from her

obituary in the *Astrophysical Journal*: "Miss Bruce has...endeared herself to men of science at home and abroad, aiding as perhaps no other has done the progress of research. Recognizing no national boundaries, giving assistance where it was most needed, and seeking no fame for herself, Miss Bruce may well be regarded as one of the most sympathetic and generous patrons astronomy has ever known... Astronomers in almost every country of the civilized world...will sincerely mourn her loss."

Miss Bruce would be pleased with the success and prestige of her Medal. The recipients have been truly international (45 from the United States and 37 from foreign institutions such as the observatories of Leiden, Berlin, Paris, Stockholm, Greenwich, and the Cape (in South Africa), as well as Moscow's Sternberg Astronomical Institute, and many others). The list of Bruce Medalists could be used to summarize the achievements of twentieth century astronomy: Harlow Shapley and his work on our location in the Milky Way Galaxy; George E. Hale on the mechanisms of the Sun's activity; Arthur S. Eddington's and S. Chandrasekhar's contributions to our understanding of stellar structure; Henry Norris Russell on stellar evolution; Edwin P. Hubble on the distances to galaxies; Walter Baade's delineation of two populations of stars; Grote Reber's and I. S. Shklovsky's pioneering work in radio astronomy; Allan

Simon Newcomb, who was awarded the Society's first Bruce Medal in 1898. (Photograph courtesy of Yerkes Observatory.)



Sandage on the large-scale structure of the universe; Jan H. Oort and Bart J. Bok on the structure of the Milky Way; Riccardo Giacconi on x-ray astronomy; Fred Whipple for the theory of comets; and all those others whose work has been fundamental in shaping our present view of the cosmos.

The A.S.P. Board has taken care over the years to preserve the international balance of the nominating observatories and of the Medalists. Substitutions can be made in the list of nominating institutions (no more than one change per year), as long as three are foreign and three American; but they now include universities and institutes of theoretical astrophysics as well as observatories. The Board currently rotates one new institution onto the panel every few years, to insure a broad spectrum of representation by the astronomical community. (For more on the Bruce Medal and a complete list of medalists, see the article by Joseph Tenn in the "For Further Reading" section.)

## A montage of Bruce Medal winners



Jan Oort (AS.P. archives)



Grote Reber (A.S.P. archives)



Arthur Stanley Eddington (A.S.P. archives)



Henry Norris Russell (photograph courtesy Yerkes Observatory)

Allan Sandage (courtesy

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