POPULAR ASTRONOMY MAGAZINE AND THE DEVELOPMENT OF VARIABLE STAR OBSERVING IN THE UNITED STATES

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Abstract

Popular Astronomy magazine and its forerunner, the Sidereal Messenger, played important roles in the growth of amateur variable star observing in the United States. Their contribution during the interval 1882 - 1911 is discussed.

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Mayall (196la,b) has well described the origin of the AAVSO and Ashbrook (1971) has recounted the story of variable star observing in the United States before the AAVSO. Less has been written, however, of the role played by Popular Astronomy and its forerunner, the Sidereal Messenger, in promoting amateur observing of variable stars in the three decades before the AAVSO became a reality. My purpose, therefore, is to trace the ups and downs of amateur interest in variable stars as revealed in the pages of these magazine between 1882 and 1911.

The Sidereal Messenger began publication in March, 1882. William W. Payne (1837-1928), professor of mathematics and astronomy at Carleton College, Northfield, Minn., was the editor and driving force of this venture. Payne's Sidereal Messenger was the second American journal of that name, the first having ceased publication in the 1840s. Payne tried to make the Sidereal Messenger of interest to both armchair and observing amateurs and the first issues contained articles on comets, double stars, the planets, and other topics of astronomy. Not until the end of 1882 did the subject of variable stars find mention, however, and then only in a few brief notes.

In 1882, Edward C. Pickering, Director of Harvard College Observatory, issued a pamphlet entitled "Plan for Securing Observations of Variable Stars". He offered HCO as a clearinghouse for the distribution of variable star charts and for the reduction of observations made by amateurs. Payne echoed Pickering's plea in the March, 1883, Sidereal Messenger, writing that Carleton College would provide copies of the "Plan" to interested persons.

The "Plan" foreshadowed the extensive program for observing long-period variables inaugurated at Harvard in 1889. At first, however, it enjoyed only modest success. Few of Payne's readers were among those submitting observations to Harvard, and variable stars were little mentioned in succeeding volumes of the Sidereal Messenger. Still, observations of long-period variables totaled some three or four thousand per year through the 1880's, three or four times the number achieved in each year of the 1870's (Pickering 1890).

The Sidereal Messenger disappeared in 1892, replaced by the more technical Astronomy and Astrophysics, which Payne and George Ellery Hale jointly edited. The real successor to the Sidereal Messenger was Popular Astronomy, which began publication in late 1893. Ten issues of PA were published each year. Payne was again editor, assisted at first by Charlotte Willard and later by Herbert C. Wilson (1858-1940). From the beginning, PA encouraged amateurs to observe variable stars. Possibly inspired by the recent establishment of the amateur-oriented

British Astronomical Association, the editors noted on p. 91 of Volume I that "we have been in correspondence with several variable star observers in order to organize a section in this line of observing".

The next issue contained the first in a series of articles on variable star observing by John A. Parkhurst (1861-1925). Parkhurst had observed variable stars for some years with a 6-inch reflector at his private observatory in Marengo, Illinois. He was author of numerous notes and papers on variable stars in the Astronomical Journal and, after the founding of Yerkes Observatory, he joined its professional staff. He continued his observing at Yerkes and obtained many minima of faint long-period variables with the 40-inch refractor. Parkhurst encouraged amateurs to observe those stars being studied at Harvard (mostly long-period variables), and his articles provided information on how to observe these stars. Soon, his contributions were complemented by papers by Paul S. Yendell (1845-1918) on short period variables. Both Parkhurst and Yendell were Charter Members of the AAVSO. Yendell made over thirty thousand observations, mostly with his 4¼-inch telescope at his home in Dorchester, Massachusetts.

Despite the flurry of articles on variable star observing, no independent organization was established to observe variable stars. Pickering's program did gain some additional observers, but throughout the 1890's and into the 1900's a majority of the observations reported to Harvard were made by members of the HCO staff.

By the late 1890's and early 1900's, the number of papers in PA which dealt with observing variable stars had greatly diminished. However, in part because of the photographic and visual work being done at Harvard, professional interest in variable stars registered a steady increase during these years. PA kept its readers up to date on the discoveries in this field and by 1905 the space devoted to variable stars was again on the increase. In 1905 and 1906, Yendell published a three-part article "On the Observation of Variable Stars", and he offered to advise anyone wishing to undertake these observations, but no attempt was made to found a variable star organization.

By 1911, Wilson had succeeded Payne as editor of PA. In the March issue of that year, William Tyler Olcott (1873-1936), a New England amateur astronomer and popular astronomical writer, published an article titled "Variable Star Work for the Amateur with a Small Telescope". The article both encouraged amateurs to observe variables and told them how to go about making the observations. Several months later, in the August-September issue, there appeared an editorial note entitled "What an Amateur can do". It concluded by asking, "Can we not have in America an association of observers with a 'Variable Star Section', a 'Jupiter Section', etc.?". To Olcott, the answer was definitely yes as far as variable star observing was concerned. A report by him in the November issue (p. 586) marks the real beginning of the organization which he suggested be called "The American Association of Variable Star Observers".

Why was this organization established in 1911, as it had not been in 1894? Perhaps the time was more ripe for such a venture. Pickering's cooperative variable star observing program at Harvard was firmly established by 1911 and interest in variable stars as a field may have been higher. Certainly, however, a large part of the credit must go to Olcott. If he had not responded to the editor's query, the AAVSO might never have been begun. And his tireless work in subsequent years insured that what was well begun would succeed. The contribution of H. C. Wilson (and assistant editors R. E. Wilson and Curvin H. Gingrich) must also not be ignored. It was their editorial note which sparked the founding of the AAVSO, and for many years PA

remained the means by which AAVSO observations were published. Articles on variable stars appeared in every issue of the magazine until it ceased publication in 1951. Had this widely circulated periodical not existed, it seems probable that the AAVSO would not have been born.

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