PHOEBE HAAS - AN AAVSO VOLUNTEER

Thomas R. Williams
1750 Albans Road
Houston, Texas 77005-1704

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Abstract

When the AAVSO first separated from Harvard College Observatory in 1953, Phoebe Waterman Haas quickly volunteered to assist the AAVSO Director. For over ten years Haas calculated the five and ten day means for light curves of southern variable stars, an involvement that partially fulfilled her early aspirations for a career in astronomy.

1. Introduction

The Dakota Territories provided a hostile environment for the birth of Emma Phoebe Waterman in 1882 (Figure 1). Her father, John Charles Waterman, a West Point graduate commissioned in the U. S. Cavalry, was posted to Fort Totten as part of troops sent to replace Custer's regiment after the disaster at Little Big Horn. Phoebe was the oldest of five children in the family.

Phoebe was taught by her parents through the equivalent of a primary education and was then sent to live with her father's family in Grand Rapids, Michigan, where she attended high school. She received a BA Degree from Vassar in 1904, and then extended her studies of mathematics and astronomy with Caroline Furness at Vassar, earning an MA Degree in 1906 (Haas 1990).

2. Career in Astronomy

Opportunities for women in astronomy were limited in those days, so after graduation Waterman traveled to the Philippine Islands with her father and family. After they returned, she was employed as a computer in the Pasadena offices of the Mount Wilson Observatory, starting work in January 1909. For the next two years, she was immersed in some of the most exciting astronomy being done at that time. She worked with such luminaries as George Ellery Hale, Walter S. Adams, J. C. Kapteyn, and Harold D. Babcock. Her assignments involved classification and reduction of stellar spectra, measurement of laboratory spectra, and special studies of the rotation of the sun (Carnegie Institution). In spite of the merits of her position at Mt. Wilson, however, her real desire was to perform as a full-fledged astronomer, making her own observations and doing the data reduction as well. Not to be denied these ambitions, Waterman applied to and was accepted for graduate studies at the University of California-Berkeley and Lick Observatory. A. O. Leuschner considered her "one of the most unusually well equipped women we have ever had at Berkeley. She is brilliant, quick and accurate and disposes of her work with promptness and accuracy." (Leuschner 1911) Waterman was successful with class work at Berkeley and with research under the direction of W. W. Campbell at Mount Hamilton, and was the first woman to complete work on a PhD in Astronomy at the Berkeley/Lick Observatory. The degree was awarded on May 14, 1913.

3. Career Redirection

A five-year appointment as an astronomer working for C. D. Perrine at Cordoba Observatory seemed sure to fulfill Waterman's ambitions. On the ship to Buenos Aires, however, she met Otto Haas, a German businessman. Haas had just founded a small chemical company to manufacture hide-tanning chemicals in Philadelphia. He was on his way to sell these chemicals to Argentine leather manufacturers. As Campbell later put it, "They sailed from New York in August or September and before the ship landed at Buenos Aires her fate was settled. She was married about a month ago in Des Moines, Iowa." (Campbell 1914)

The Haas household soon expanded, with the birth of sons Fritz Otto in 1915 and John in 1918. Phoebe was a devoted wife and mother, and supported fully the business that Otto had founded. John describes his mother as "a very home oriented person with a practical yet sensitive and even poetic nature." Life in the family was very private, and John does not remember his parents ever going out to dinner (Haas 1990).

4. Marital Involvement in Astronomy

With the degree of commitment to professional status as an astronomer expressed by Phoebe Waterman, it is difficult to imagine that her interest in astronomy could remain submerged in family and business interests forever, and in fact it did not. She actively maintained contacts at both Lick Observatory and at Vassar. Correspondence with Caroline Furness, her mentor at Vassar, eventually produced a new outlet for Phoebe Haas' astronomical interests.

At Furness' suggestion, in 1927 Haas wrote to Leon Campbell, Recorder for the American Association of Variable Star Observers (AAVSO) at Harvard Observatory. Through Campbell she was able to purchase a Clark refractor, and she began doing observational astronomy again. In a letter to Campbell the following year she commented on the telescope: "You will be glad to know that I am enjoying the telescope I got through you last June (4" Clark from Mr. Cranis estate). Mr. Wm. H. Wright of the Lick looked at sunspots with it one day and said it was an excellent glass, good enough for anything. It does give good images almost all across the screen." (Haas 1928) This telescope was put to use helping her sons understand and appreciate the night skies.

Haas also requested that Campbell send her charts so she could begin to observe variable stars. "Being strictly a beginner in Variable Star work, or much that involves identifying a star field, I hope you can send me one easy field to begin on. The others I should like to have harder. Will you please send me the regular directions for reducing and plotting my observations." She was moderately successful as an observer of variable stars, reporting 338 observations between 1928 and 1933 (AAVSO 1986). After that time the press of family and/or business activities seem to have made continued observational work less attractive. Her lack of activity was not without regret, however. In a 1941 letter to Leon Campbell, she commented, "Some day I hope I can join in again-each time I put the new Julian calendar into my folders, I think 'well now-maybe it will be put to work'. There is nothing I enjoy more than an evening out with my telescope, the thrill of finding a faint prick of light where last time I looked, I could see nothing, then seeing that point brighten. I'll be at it again yet!" (Haas 1941)

Another type of involvement in astronomy was to emerge about ten years later. In 1953, the AAVSO, by then under the leadership of Margaret W. Mayall as Director, was evicted from its home of over 42 years at Harvard College Observatory. Furthermore, funds available to support the AAVSO were sharply curtailed when

Harvard withdrew use of the Pickering Memorial Fund which had supported the AAVSO for a number of years (Robinson 1990). The plight of the organization was obvious to many in the astronomical community and soon came to the attention of Phoebe Haas. Within weeks she had volunteered to assist with the work of the AAVSO. "Is there perhaps some part of the paper work, the statistics, the figuring of mean light curves, which could be done, by mail, at home, by volunteers? I, for instance, did computing, of a different sort, and worked on star spectra at Mt. Wilson and at Lick years ago (1909-1913). I think I could 'come back' - and I have the time and the interest. Any how, I send you my best wishes in solving your problem of keeping up the records with such greatly reduced funds. Perhaps you will know something which could be done to relieve you-- I hope so."(Haas 1953)

Mayall accepted the offer of assistance. For a number of years she mailed forms and observations to Haas, who calculated five or ten day means for southern variable stars. These means formed the basis for the light curves published periodically by the AAVSO. Over an eleven year period, Haas became familiar with the observers as well as the stars, and eventually grew confident enough to do modest editing of the observations, always with advice to Mayall on what she had done.

One other important form of support to the AAVSO deserves comment. As early as 1941, and every year thereafter, the Haas family were financial supporters of the AAVSO. A traditional "seasons greetings" from Phoebe Waterman Haas was received each year in early January enclosing a check and, for example, "Greetings and best wishes for 1954! I do hope you are weathering the storm in good shape. Thanks for your card. I enclose my usual New Years check toward your expenses." (Haas 1954)

5. Conclusion

Phoebe Waterman Haas was unable to fulfill her original career goal to practice astronomy as a professional. But in the career she ultimately chose, Haas did stay interested in and involved with astronomy to the extent her commitments to family and business interests would permit. She did manage to make substantive contributions to astronomy through the AAVSO as an observer, volunteer computer, and benefactor.

W. H. Wright had stayed in touch with Haas and summarized the situation rather well as it existed in 1936: "There is just one point on which I am moved to remark, and that is Mrs. Haas' relation to astronomy during her married life, which began shortly after she received her degree. As you have said, she gave up strictly professional work when she married, but I know of no one who has kept alive a keener interest in the science. Shortly after her change in social status she bought a 3 or 4-inch telescope, which she has kept in fairly active use. I am under the impression that she is a member of the [American] Association of Variable Star Observers, and occasionally contributes observations. She writes us frequently on astronomical matters and reads all of the L. O. Bulletins. More important than any of these things, she has carried her enthusiasms for, and knowledge of astronomy as a powerful cultural influence into her very charming family, and to her friends. In doing so it seems to me that she has fulfilled and is fulfilling the purposes of a scientific education quite as effectively as though she were actively engaged in professional work." (Wright 1936)

Haas' later support for the work of the AAVSO adds substantial justification for Wright's assessment. Her volunteer efforts came at a crucial time in the AAVSO's history and were an important part of the efforts of a small band of committed volunteers that stabilized the organization and insured its survival.

6. Acknowledgements

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Figure 1. Phoebe Waterman Haas, (1882-1967), taken c1914. Photo courtesy of J. C. Haas.