

HIGHLIGHTS OF AN EXHIBIT
TO HONOR ANNIE JUMP CANNON

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Abstract

An exhibit at the Harvard University
Pusey Library is described.

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In 1918 Miss Cannon published the first of nine volumes of the Henry Draper Catalogue. For the catalogue, its two extensions, and miscellaneous other publications, she classified objective prism spectra of almost half a million stars. Her work enabled astronomers to undertake statistical studies to determine the structure of the universe. After sixty years the catalogue is still extremely useful because it gives the spectral type for thousands of stars consistently classified by a single individual. To honor Miss Cannon, Margaret Mayall and I set up an exhibit at the Harvard University Archives to show the founding of the Henry Draper Memorial, the work that Miss Cannon and others did pertaining to it, and the honors that accrued to Harvard and to Miss Cannon for that work.

As Miss Cannon's assistant, Margaret Mayall inherited her scrap-books, photograph albums, notebooks, correspondence, papers, diaries and miscellaneous memorabilia dating back to over a century ago. What a treasure trove! Miss Cannon saved everything: from ticket stubs and concert programs in the 1880s, when she was at Wellesley College, to cryptic notes signed HS (Harlow Shapley) in the 1930s. At Margaret's home I saw Miss Cannon's candelabrum with its cut-crystal prisms. In her childhood home in Dover, Delaware, Miss Cannon had delighted in gazing at its colored beams, and later in Cambridge she enjoyed it as a symbol of her life work. Because of its beauty as well as its significance, we placed the candelabrum in our central exhibit case. Entitled "Annie Jump Cannon - Her Science and Honors," this case also contained the first three volumes of the HD Catalogue as well as letters and documents pertaining to three of the six honorary doctorate degrees bestowed upon her. The most interesting and significant doctorate was the one granted in 1925 by Oxford University. She was the first woman ever to receive such a degree from Oxford. An avid diarist, Miss Cannon recorded the event in detail. We displayed her small brown notebook opened to the pages on which she recalled the emotions she felt during the official ceremonies.

To illustrate other facets of Miss Cannon's life, Margaret and I set up another exhibit case entitled "Annie Jump Cannon - Her Travels and Talks." In 1892 Miss Cannon embarked on a grand European tour taking pictures everywhere with her new camera. For the tour she made extensive historical notes and kept a lavish red leather-bound diary. When she returned, she wrote up a booklet for the Blair Camera Co. to use as a souvenir for the Chicago World's Fair in 1893. We displayed her diary opened to pages for a typical day on which she kept track of all her meals and expenses. The souvenir booklet was opened to what she considered her best picture, the Mosque of Cordova. She recorded in detail how the Cathedral impressed her and the difficulties she had encountered while capturing a picture of it. In this case we also exhibited photographs of the x-ray apparatus which Professor Sarah Whiting had set up at Wellesley

when Miss Cannon was there as a graduate student in 1895. In a letter to her cousin, Ned, she described how excited she was to develop an x-ray photograph and see in it the shadow of a coin in a purse.

Miss Cannon treasured special Christmas cards. She saved one from Pickering dated 1913 on which he wrote "for a Merry Classification and Happy New Type of Spectrum." We displayed this one as well as several of her own. Her card for 1922 carried a sonnet she had written to commemorate the season she spent in Peru photographing the spectra of southern stars. In 1924 after she had moved into her charming home across from the Observatory on Bond Street, she sent out a picture and a poem about it entitled "Star Cottage" and in 1925 she greeted her friends with "The Story of Star Light."

To give the context in which Miss Cannon achieved fame at Harvard, Margaret and I entitled an introductory exhibit case "The Observatory - A Place for Women." In the center of this case we hung a chart showing the "Years of Service at Harvard Observatory for Some of Its First Women." Probably influenced by the role of Maria Mitchell as America's first woman astronomer, Charles Eliot, who became president of Harvard in 1869, encouraged the employment of women at the Observatory. Thus, in 1875 the first three women computers joined the staff. The chart shows that the number of women increased significantly after Pickering had secured the Draper endowment and that many worked at the Observatory all their lives.

One of the women who achieved international fame for her discovery of variable stars was Mrs. Williamina Fleming. She joined the staff in 1881 and classified spectra for the first catalogue of 10,000 stars published in 1890. We displayed photographs of RS Ophiuchi and RR Scorpii taken in 1893 on which she had penned notes about how she discovered the variables by the bright lines in their spectra. For Miss Antonia Maury and her work on the spectra of bright stars, we displayed a letter from Hertzprung to Pickering, dated July 22, 1908, supporting Miss Maury's firm conviction that the width of spectral lines was an important parameter to be considered in the classification of stars. Another woman to achieve fame at the observatory was Miss Henrietta Leavitt. In addition to her work on the North Polar Sequence and variable stars in the Magellanic Clouds, she guided the research of the young women appointed as Pickering Fellows at the Observatory. We displayed one of Miss Leavitt's notebooks opened to a page entitled "Work Suitable for Fellows." The first two fellows, Miss Mary Vann and Miss Dorothy Block, appear in a photograph of the women taken in front of the observatory residence in 1913. Other photographs of the women that we displayed show them working in a pleasant room in the old wing during a visit from Mrs. Draper in 1890 and again in 1898 in a new fireproof wing built to house the astronomical photographs. Over the years the door to that wing became a favorite spot for group pictures of the women. We chose to display an especially appealing one taken in 1918 in which Pickering was surrounded by thirteen of his women computers.

During the 1930s Miss Cannon continued to receive honors for her work. In 1931 she became the first woman to receive the Draper Medal for the National Academy of Sciences. For this honor we displayed not only the official letter to her from the academy but also an affectionate and humorous greeting from Harlow Shapley written appropriately on the back of a photograph of a random star-field. In 1932 she became the last recipient of the Ellen Richards Research Prize given by the Association to Aid Scientific Research by Women. Convinced that women had finally established themselves as scientists, the association saw no further need of its existence.

However, Miss Cannon wished to perpetuate prizes for distinguished work by women. Therefore, she decided to use the Richards prize money to establish a new award for women in astronomy. Administered by the American Astronomical Society, the award was named the "Annie J. Cannon Prize in Astronomy." We exhibited the 1932 letter to her about the Richards prize and a 1934 Science Service press release about the new AAS prize for women.

Having received national and international acclaim since the turn of the century, Miss Cannon was finally recognized by Harvard in 1938. She received a corporation appointment as William Cranch Bond Astronomer. So rare was such an appointment that the certificate we displayed was addressed to "Dear Sir."

In the last decade of her life Miss Cannon continued to classify spectra and began to compile her memoirs. When she died in 1941 she left much work completed but unpublished. Therefore, in 1949 Margaret Mayall published The Annie J. Cannon Memorial Volume of the Henry Draper Extension. And she is writing a biography of Miss Cannon based on the memoirs and on her own personal recollections. The nucleus of the exhibit thus came from the private collection of Margaret Mayall, to whom we all are grateful for sharing with us many rare documents, photographs and, of course, the candelabrum. Supplementary historical material came from the Harvard University Archives, Harvard College Observatory, Wellesley College, Sky and Telescope magazine, Professor Owen Gingerich, and my own collection. The exhibit opened at Pusey Library in Harvard Yard especially for the October, 1978, AAVSO meeting in Cambridge and closed in April, 1979.

LETTER FROM THE EDITOR

I would like to remind potential contributors to read the instructions on the inside front cover and, in particular, to send two copies, double-spaced, of their manuscripts and take care that illustrations are suitable for reproduction.

At the risk of sounding cranky, I should add that we may find it necessary to return manuscripts if these procedures are not followed.

As always, we encourage contributions, and we would be willing to read preliminary manuscripts and provide editorial and scientific comments.

Charles A. Whitney
Editor