

**Chapter VII**

**Poster Papers**

**Harlow Shapley**

**Globular Clusters in the Milky Way**



**Drs. McCarthy, Gingerich, Hazen, and Alcaino examine historic plate**



**Bob McClure explains his pivotal poster to Rene Racine, Juan Forte and others**

HARLOW SHAPLEY: A VIEW FROM THE HARVARD ARCHIVES

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**ABSTRACT:** This exhibit featured facsimiles of some letters that Shapley exchanged with George Ellery Hale, Henry Norris Russell, and Heber Doust Curtis from 1917 when he was at Mount Wilson working on globular clusters to 1921 when he became Director of Harvard College Observatory.

The Harvard University Archives holds a rich collection of Shapley's correspondence and memorabilia that spans seven decades of his life: from his diary begun in 1902 when he was 16 to letters received in 1972 when he died. Facsimiles of his correspondence with Hale, Russell, and Curtis were selected to reveal his aspirations for the directorship of Harvard College Observatory, as well as his intensity in studying the clusters at Mount Wilson from 1917 to 1920. His work, which revolutionized previous notions about the scale of the universe, led Hale to invite Shapley to present his novel views before the National Academy of Sciences. To enliven the presentation, Hale also invited Curtis to state his more conservative views. Engaged in nebular photography at Lick, Curtis was skeptical of the "startling if true" results from Mount Wilson: Shapley's calibration of the Period-Luminosity diagram and Van Maanen's rotational velocities in spirals.

Among the facsimiles exhibited was a proposal from Shapley to Hale in 1917 to publish a series of papers in both the *Astrophysical Journal* and the *Contributions from Mount Wilson Solar Observatory* on the colors and magnitudes in globular clusters. In reply Hale wrote to Shapley very supportively:

*I have always felt that a comprehensive investigation of star clusters should prove exceedingly valuable, and it is a pleasure to see that you are fully realizing my expectations [sic] in this regard.*

Also supportive of Shapley was his former mentor at Princeton University, Henry Norris Russell, with whom Shapley kept up a lifelong friendship and correspondence. However, in February 1919, a few days after Pickering's death, when Shapley wrote to Russell that he aspired to become the next director of Harvard College Observatory, Russell rebuked his ambition:

*... I would be very glad to see you in a good position at Harvard, free from executive cares, ... under a sympathetic director, ... But I would not recommend you for Pickering's place, and I believe that you would make the mistake of your life if you tried to fill it.*

Less than two years later when Shapley did, indeed, receive a Harvard appointment, Russell did an about-face in his letter of January 24, 1921:

*Glory, glory, hallelujah! I "did my possible" ... to induce President Lowell to appoint you...*

*I am delighted to think of you at Harvard. ... It is a man-size job, but you can swing it, ... you can get good advice if you want it ... Bailey ... Schlesinger ... myself ... I have learned a good deal in the last three years, — principally what a fool I used to be. But I was no fool when I tried to get you at Harvard.*

Meanwhile, before Shapley received his Harvard appointment, he had to debate Curtis in 1920. In February of that year, Hale sent him a telegram:

PROGRAM COMMITTEE NATIONAL ACADEMY PROPOSES DEBATE BETWEEN YOU AND HEBER CURTIS ON SUBJECT SCALE OF UNIVERSE ...

Hale's request posed a dilemma for Shapley. Because Hale had been so supportive of him, Shapley felt obliged to honor the invitation to debate Curtis. However, because he feared the debate could jeopardize his chances for Harvard, Shapley did not wish to appear in a scientific forum against Curtis, a much more experienced speaker than himself. Letters from Curtis did not allay Shapley's anxiety:

*I agree with you that it should not be made a formal "debate", but I am sure that we could be just as good friends if we did go at each other "hammer and tongs", ... For my part, I am quite willing that you should attack the island universe theory and the smaller dimensions for the galaxy to the limit, provided you will let me support my side and attack yours, also to the limit...*

Ultimately, Shapley need not have worried about the outcome of the debate. He soon stepped into the directorship of Harvard College Observatory, where he spent the next three decades garnering many prestigious honors, gold medals, and scientific positions.

In addition to the facsimile letters, the exhibit contained copies of Shapley's papers on the clusters and the debate, newspaper clippings of his Harvard appointment, Hale's telegram, and period photographs of Curtis, Hale, Russell and Shapley.

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