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Photo caption: The May-June 1941 issue of "The Telescope" magazine was mostly devoted to the memory of Astronomer Annie Cannon. The cover shows how spectra of many stars can be obtained in one region of the sky. This magazine later merged with "The Sky" magazine.

The January 1941 radio address by Astronomer Annie Cannon

Essay by Lauren Likkel

Exactly 85 years ago this month, astronomer Annie Cannon gave a radio talk titled "The Story of Starlight". She was 78 years old and still working at Harvard Observatory. Her research advanced our understanding of stars by her studies of the spectra of stars. The spectra reveal which chemical elements are in stars, and more complicated analysis even reveal the temperature and density of the gas cloud.

Annie Cannon's radio talk about starlight was in a series called "Harvard Observatory on the Air" broadcast on station WRUL. She explained in her talk that we learn about stars only because of the light we intercept from them, and although the work of astronomers is the gathering of light, the only profit from the light is the increase of knowledge.

Or in the more elegant words of Annie Cannon: "May not in truth astronomers be likened to the Utopian "brethren of light" who maintain a trade not for gold, silver or jewels, nor for silks nor for spices, nor for any other commodity of matter, but only for God's first creation which was light. Light coming through space with the marvelous velocity of 186000 miles a second brings all the evidence we have of this great stellar universe."

Resonating with current times where scientific research is rejected by some non-scientists, Annie Cannon discussed how it has been common over the centuries for scientific discoveries to be doubted. Her example was the doubting of the discovery that white light is a mixture of colors, a fact that was a basis of her research. In Annie Cannon's radio address, she said
" We can trace back the beginning of this new astronomy to 1666 when Isaac Newton bought at a country fair a crude prism.... By many experiments he proved that light is a heterogeneous mixture of differently refrangible rays. .... Even as late as 1790 the poet Goeth, who aspired to be a scientist, considered that 'The idea of white light being composed of colored lights is quite inconceivable; mere twaddle, admirable for children in a GoKart'. "

Two months after her radio broadcast she was hospitalized with heart problems and passed away April 13, 1941. After her death, the next edition of the popular astronomy magazine "The Telescope" honored Annie Jump Cannon and her scientific work. It included photographs, remarks from her memorial services, and an article by colleague Cecilia Payne-Gaposchkin titled "Miss Cannon and Stellar Spectroscopy". One of the other 3 articles was the entire transcript of that January 1941 radio broadcast.

At her memorial service, Harlow Shapley (director of Harvard Observatory) said this about Annie Cannon: "Universally acknowledged as authority on the spectral classification of the stars, she built for the future more than for her contemporaries. Her forty years of service to one field of science enabled her to erect a scientific castle in which man's imagination long can dwell – a structure that probably never will be duplicated in kind or extent by a single individual. "

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