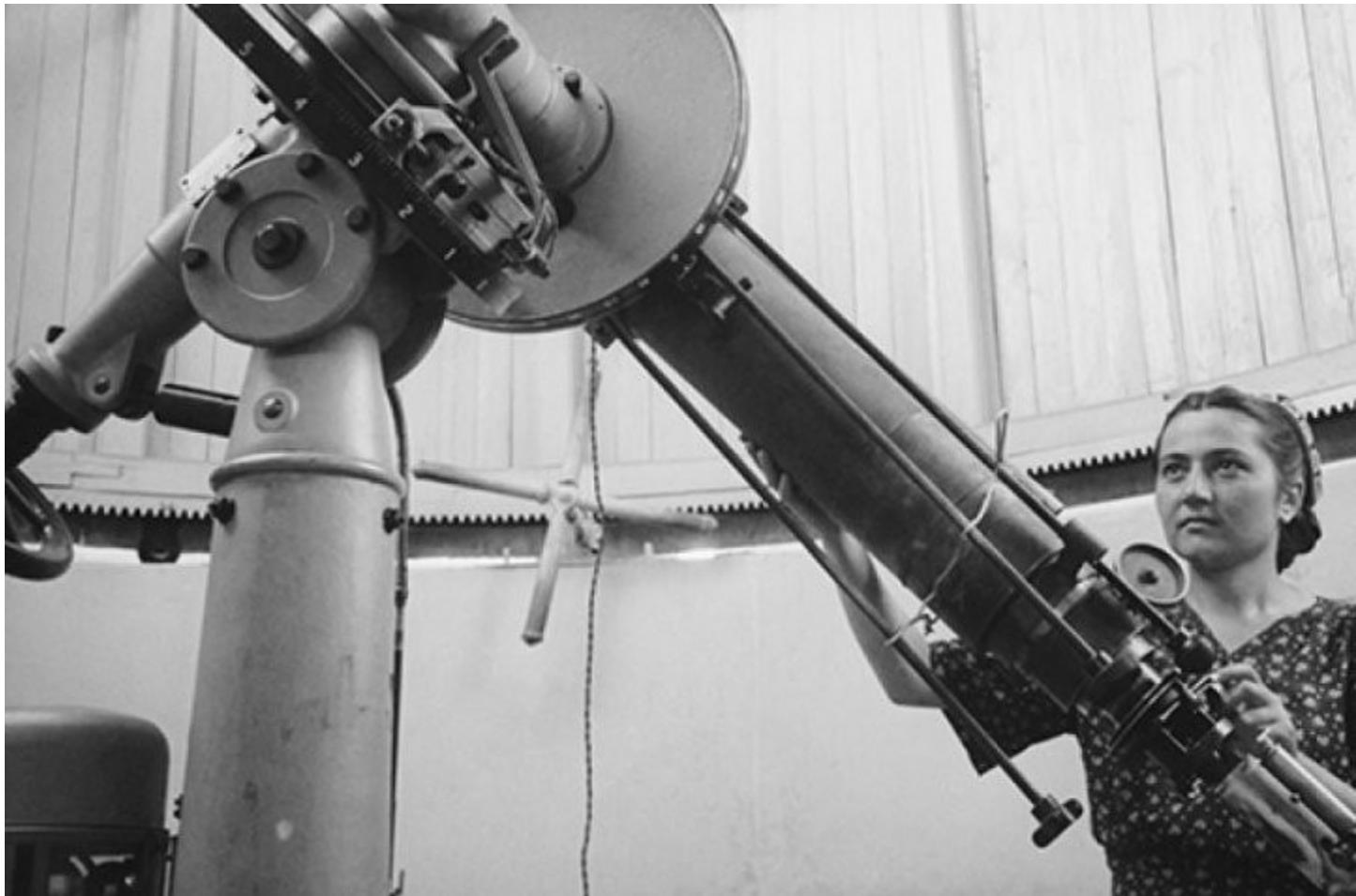


The Stars Like Dust – Coffee with Cecilia



Date: [May 15, 2020](#) Author: [williamrablan](#) 3 Comments — [Edit](#)

She was an old woman and when she showed up at the Harry W. Zacheis Planetarium and Observatory on the [Adams State College](#) campus, I was pretty sure she was lost. Perhaps she'd walked away from the old folks' home a few blocks away. I looked over at the card that had Campus Security's number on it. If she was indeed from the home, then I'd call them.

Then she introduced herself and I knew she was anything but lost. "Hello," she said. "I'm [Dr. Cecilia Payne-Gaposchkin](#) and I'm looking for Noble Gantvoort."

I stood and took her offered hand. Of course, I knew who she was. She'd written the textbook we used in the Intro to Astronomy course at the college.

I called the Science Building and had Jenny let Dr. Gantvoort know he had a visitor.

A few minutes later, we all went over to the Campus Cafe where we had coffee. I let them talk. Mostly, it was catch up on their lives, and occasionally I heard a name I recognized but other than that, I failed to comprehend the moment.

Funny, how when you're eighteen you sometimes miss the fact, you're in the presence of true courage. I completely missed that this old lady was one of the people who had shaped our view of the Universe and overcame incredible odds to do it. Had I been a little more thoughtful, I might have asked her what it was like to endure the treatment she went through to get to where she was today.

But I missed the moment.



Cecilia (she told me to call her that), was born in

Windover, England in 1900. The daughter of a well to do lawyer, she was supposed to study music and become a cultured young lady of the era. She was supposed to get married, have children, and drink tea. She was definitely born into an age when women weren't encouraged to set the world on fire.

She had some interesting influences among her teachers. One of her teachers was [Gustav Holst](#), who had composed the "The Planets." While he encouraged her

pursuit of music, she soon fell in love with science. I can't help but wonder if that composition might not have nudged her in that direction.

She studied astronomy at Cambridge University. When she finished her studies, they wouldn't award her a degree. Cambridge didn't give degrees to women at the time. Indeed, for a girl studying the hard sciences, class life at Cambridge must have been hell. They were required to sit up in front of the classes and the guys were encouraged to snicker at them.

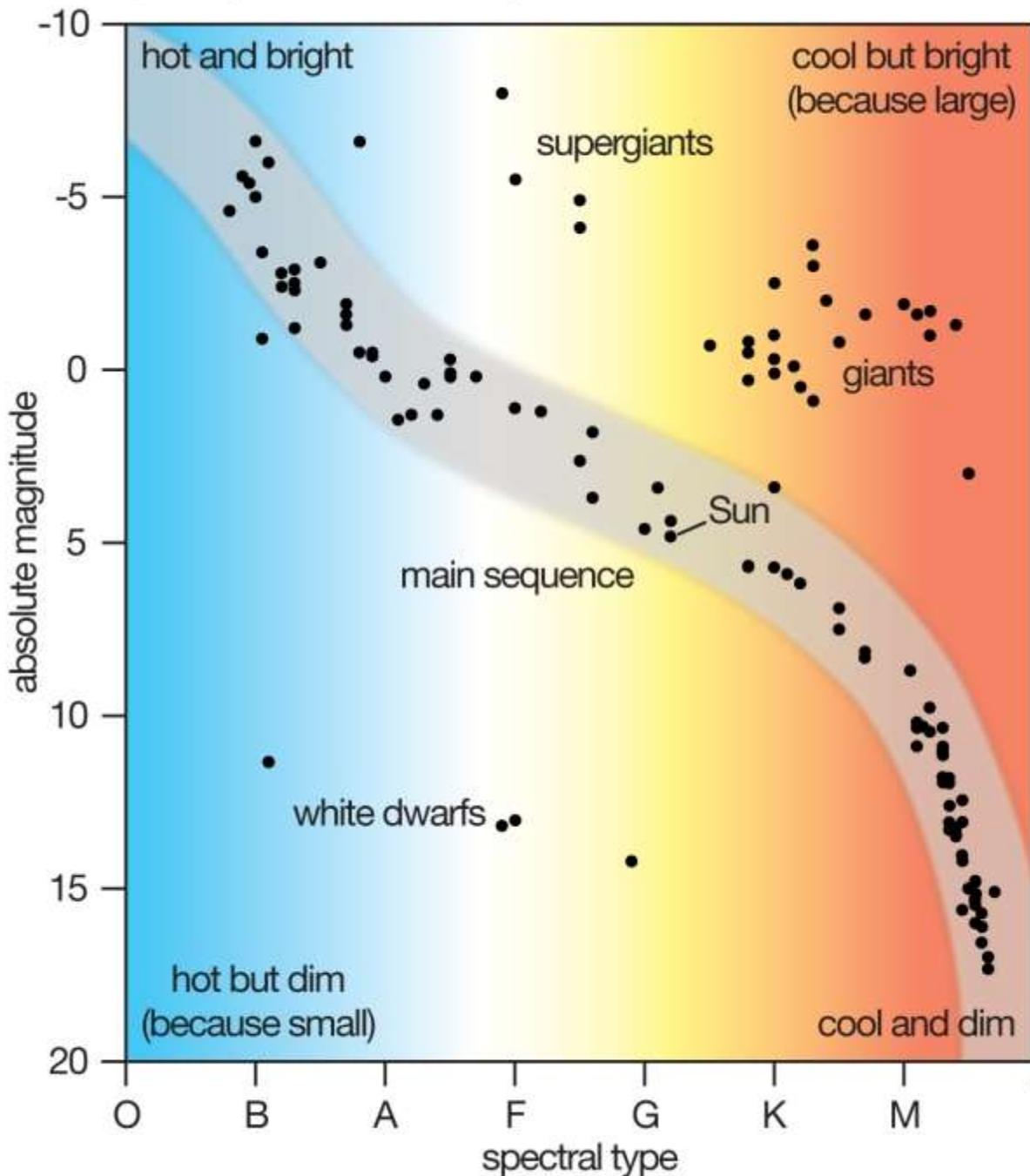
Knowing the best she could hope for in England was to be a teacher, she looked towards America. She met [Harlow Shapley](#), the director of the Observatory at Harvard. They'd established a graduate program in astronomy and Cecilia became one of his first students.

In 1925, she wrote her doctorate thesis, and it went 100% against the common thought of the day. The scientific belief at the time was the stars were made of the same elements as the Earth. While there's some truth to this, Dr. Gaposchkin demonstrated that the majority of the mass of a star is made up of Hydrogen and Helium. She also set the stage for the classification of stars based upon color, luminosity, and size.

At the urging of [Dr. Henry Russell](#), she backed away from her thesis because it ran counter to the thought of the day. Years later, Russell would arrive at the same idea she had. In his Paper, he admitted she was 100% right, and urged that she be given credit

for

Hertzsprung-Russell diagram



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her study. History gave him the credit instead.

Cecilia had also begun the process of cataloguing stars. And while she did that, she began to realize that stars of a certain brightness and etc. had things in common. She had begun the process of figuring out the types of stars we see in the sky.

Unfortunately, that work wasn't named after her, but her professor. That work is enshrined on what we know as the [hertzsprung-russell diagram](#) or the chart that shows the classification of stars. Again, her professor didn't want the credit, insisting she did all the work.

Years later, astronomer [Otto Struve](#) would say that Cecilia's paper and works was one of the most important scientific works of all times.

She later went into teaching the next generation of astronomers, one of which was my old mentor Dr. Noble Gantvoort. Looking at a list of her students is to look at a who's who of great astronomers.

And I sat having coffee with a titan in the business, and didn't have the wit to take advantage of the opportunity fate had tossed in my path.

Dumb!

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