



# Cecilia PAYNE-GAPOSCHKIN

(1900 – 1979)

Cecilia was able to find out that stars are made up of mostly hydrogen and helium, and although officially she was not credited for this discovery, this revelation has become the basis for many studies of the universe.

She was one of the first women to advance to the rank of professor at Harvard University and the first woman to head a department there.

She was an influential female figure in science, and was also pioneering in her personal life; refusing to give up her career, despite being married with children, which went against the common expectation of women at that time.

She received countless awards in her fields of expertise; The American Astronomical Society recognized her contribution to her field and awarded her the Annie J. Cannon Prize in 1934.

## Cecilia's Childhood

Cecilia was born in Wendover, Buckinghamshire, England, and she was the eldest child of three.

When Cecilia was just four years old, her father, Edward, died, leaving her Mother, Emma, to raise the family alone.

Cecilia's mother worked as a painter and musician to support the family, and encouraged her children to read as much as possible and explore their interests. She recognised that education was very important.

By the age of 12, Cecilia already knew Latin and later became fluent in German and French, and also had an interest in botany and algebra.

### Cecilia's Education

Cecilia worked hard and, in 1919, she won a scholarship to Newnham College at Cambridge University, where she was a student of botany, chemistry, and physics. It was here that her fascination with astronomy began.

In 1923, her studies were complete, but at that time women were not granted degrees at Cambridge. She decided to leave the UK, and travel to the United States, hoping to find better opportunities as a woman in astronomy.



Cecilia Payne Gaposchkin

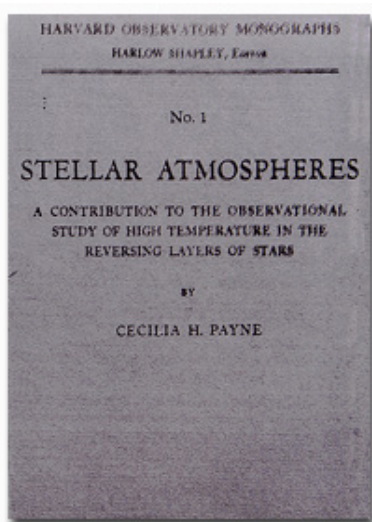
She received the Pickering Fellowship, an award for female students, to study under Harlow Shapley, the director of the Harvard Observatory.

### Cecilia's Discoveries, Challenges and Achievements

In 1925, Cecilia was given a staff position at the Harvard Observatory and by now had published six papers on her research on stellar atmospheres.

In 1925, she was awarded the first-ever Ph.D. in astronomy, from Radcliffe College.

Her research, "Stellar Atmospheres", was a pioneering work in the field. It was the first research paper written on the subject, measuring the temperature and chemical density of stars.



"Stellar Atmospheres"

This research was not without its challenges and critics. Henry Norris Russell, a renowned astronomer at Princeton University, criticised her findings, but then later, in a study of his own, reached the same conclusions and published them, and received the credit for this work.

In 1926, at the age of 26, she became the youngest scientist to be listed in American Men of Science.

In 1934, Cecilia married Sergei I. Gaposchkin, a Russian-born astrophysicist. They had three children and together they pioneered research into variable stars, the Milky Way and the nearby galaxies known as the Magellanic Clouds.

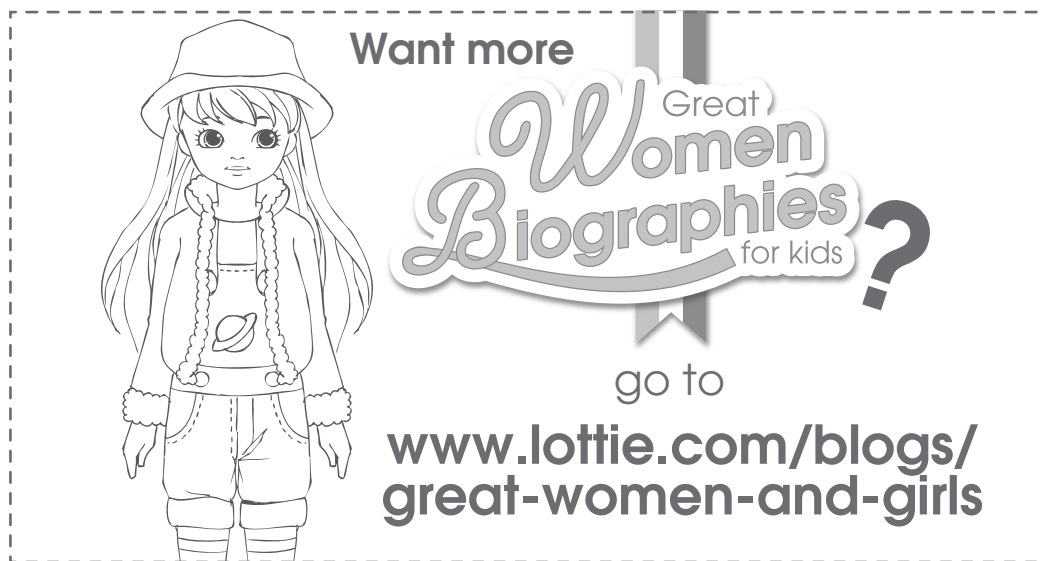


## CECILIA PAYNE-GAPOSCHKIN BIOGRAPHY FOR KIDS

In 1956, Cecilia was promoted to professor at Harvard, and following this she was named chairman of the Department of Astronomy—the first woman to hold a position at Harvard University that was not officially designated for a woman. This was a huge achievement.

She was the first woman to receive the Henry Russell Prize from the American Astronomical Society in 1976.

Cecilia’s last scientific paper was published just before her death at the age of 79, on December 7, 1979 in Cambridge, Massachusetts.



Want more

Great  
**Women**  
Biographies  
for kids ?

go to  
[www.lottie.com/blogs/great-women-and-girls](http://www.lottie.com/blogs/great-women-and-girls)

### Photo Credits

- Cecilia Payne Gaposchkin: [Public domain], via Wikimedia Commons
- “Stellar Atmospheres”: [Public domain], via Wikimedia Commons

