

Cecilia Payne (1900-1979)

1st woman graduate student in
Astronomy at Harvard

1st Ph.D. in Astronomy at Harvard

1st woman to receive tenure at
Harvard

1st woman to chair the Faculty of
Arts and Sciences at Harvard

awarded tenure in 1938 but denied
a professorship for 18 years

forced to recant her findings that
the sun is not dominantly iron
but rather hydrogen

How does spectroscopy reveal chemical composition? Each element has its own set of characteristic lines. Imagine that each letter in this character string is a peak in the spectrum.

theysaidironagaien

could this be iron?

theysaid**iron**agaien

what about the misspelling of again? no excuses! try another element. be more imaginative as was Cecilia Payne.

theysaid**iron**aga**ien**

theysaid**iron**aga**ien**

h y d r o g e n

“The enormous abundance [of hydrogen]... is almost certainly not real.”

- Cecilia Payne, Ph.D. Thesis, Harvard College



painting by Patricia Watwood hangs in the faculty room of University Hall, Harvard U.