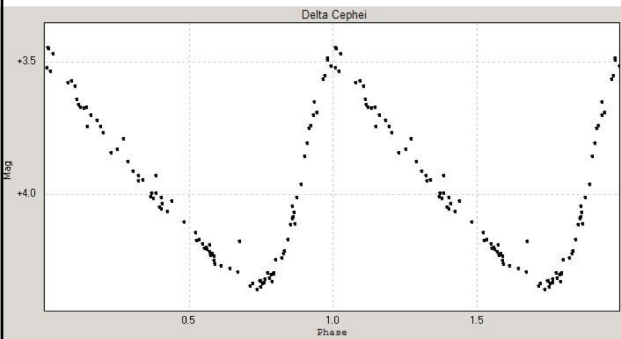


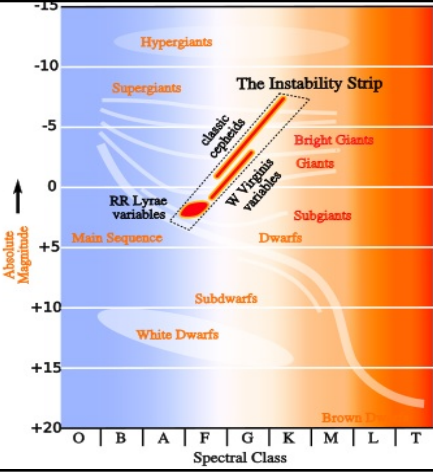
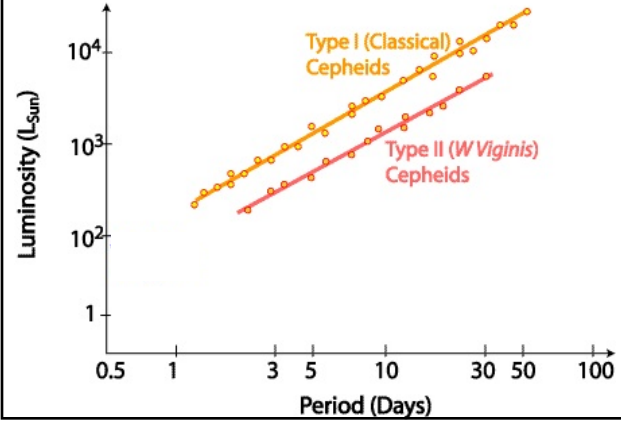
### Cepheid Variables



Henrietta Leavitt (1868-1921)

Discovered the Period-Luminosity relationship for Cepheid stars by measuring the brightness of hundreds of stars on the Harvard plates.

### PERIOD - LUMINOSITY RELATIONSHIP



## Why do Cepheids Pulsate

- With increasing heat the atmosphere starts ionizing, which leads to the increase in “opacity”, which traps in the heat, which leads to more ionizing.
- The excess temperature expands the star, which then starts to cool. This leads to recombination, which then leads to a decrease in “opacity” and cooling, thus the shrinking of the star.

## Cepheids Important for “Cosmic Distance Ladder”

