

March 19, 2019  
MSE 2103 topics

- Questions on the math homework?
- The discovery of variable stars
  - 1572: Tycho's "stella nova"
  - 1596: Fabricius' discovery of Mira
  - 1786: John Goodricke's discovery of  $\delta$  Cephei
  - 1836: 26 variables discovered to date; astrophotography
- Light curves – general description
- Henrietta Swan Leavitt
- Light curves of Cepheids
- Leavitt's survey of the Small and the Large Magellanic Clouds
- The period-luminosity relationship of Cepheids
- Implications on measuring cosmic distances
- Crucial missing ingredient: calibration of the PLR
- Hertzsprung and Shapley to the rescue!
- Alas, *two* types of Cepheids, but order of magnitude right!