

April 8, 2021
MSE 2103 topics

- The Great Debate continued!
 - Exhibit #5: Shapley's measurement of the Cepheids
 - Exhibit #6: Shapley's measurements of globular clusters
 - Exhibit #7: van Maanen's proper motion measurements
 - Exhibit #8: the observations of novae/supernovae in M31
 - The Shapley-Curtis Debate on Apr 26, 1920
 - Resolution: Edwin Hubble's discovery of Cepheids in M33
 - Affirmation: Cepheids in M31 and Barnard's galaxy
- But ... shouldn't galaxies hurl towards each other?
- That said ... shouldn't stars hurl towards each other?
- But of course: infinite universe!
- Yet ... why is the sky dark at night then?
- The statement of Olbers' paradox
- Proposed solutions:
 - perhaps the universe is *young* and *infinite*?
 - stars are not uniformly distributed?
 - how about obscuring dust?
 - perhaps the number of stars and galaxies is sufficiently low?
- The actual solution of the Olbers' paradox
- But ... but ... but ... why isn't stuff hurling in then?