

March 26, 2019  
MSE 2103 topics

- The Great Debate!
- The Plot: William Parsons' observation of M51 (1842)
- Local star-forming clouds or Island Universes?
- Exhibit #1: Scheiner's 7.5-hr exposure of M31
- Exhibit #2: Slipher's 21-hr exposure of the Merope nebula
- Exhibit #3: Slipher's radial velocity measurement of M31
- Exhibit #4: Slipher's RVs of 11 "spiral nebulae"
- Exhibit #5: Shapley's measurement of the Cepheids
- Exhibit #6: Shapley's measurements of globular clusters  
by the way, Earth ain't so special after all!
- 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