

January 24, 2019
MSE 2103 topics

- Life of a star:
 - contraction from the primordial interstellar cloud
 - free-fall into a protostar
 - life on the main sequence of the H-R diagram
 - transition to the red giant phase
 - the geriatric period: white dwarfs, neutron stars, black holes
- Our Universe – exploding or expanding?
- The notion of space-time
- Newton's theory of gravity vs. Einstein's generalization
- What causes gravitational force?
- The notion of *curved* space-time
- The Twins paradox and special theory of relativity
- In search of quantum gravity
- Expansion of the Universe and the Big Bang in a nutshell
 - a notion of an open, flat and closed Universe
 - dark energy as means of accelerated expansion