

# **Astrophysics**

## **(PhD entrance exam topics)**

1. Astronomical instrumentation, methods of astronomical photometry and spectroscopy
2. Structure of the Solar System, celestial mechanics
3. Physics of stellar structure and evolution
4. Variable stars: types, basic properties, methods for analysis
5. Physics of the interstellar matter, stellar clusters and the Milky Way galaxy
6. Extragalactic astronomy
7. Fundamentals of cosmology

Suggested readings:

B. W. Carroll, D. A. Ostley: Introduction to Modern Astrophysics, Addison-Wesley, 1996