Course Instruction

Particle Cosmology

This is a fundamental course in preparation for the study of astronomy and particle physics and their crossing field. Particle cosmology has been one of the most crucial subject that has made numerous breakthrough since the discover of the cosmic microwave background in 1960s. At present, we already have a standard paradigm of modern cosmology, which is dubbed as the hot big bang theory. However, our knowledge about the universe is still dramatically developing along with the high level developments of observational technologies in precision cosmology. Therefore, how to study cosmology lies in the core of hot topics. Particle cosmology is the disciplinary subject between cosmology and particle physics. In particular, it focuses on the very early moments of the universe where the energy scale is much higher than that any particle experiments could reach. Thus, it can help us to better understand the fundamental knowledge of particle physics as well as the origin of the universe. The setup of this course is to advocate the graduate students majored in astrophysics and theoretical physics to manage the basic knowledge about the cosmology study and to learn the research frontiers. Through this course, the graduate students are expected to access the baseline of professional research in their forthcoming study.

Link: https://fusep.ustc.edu.cn/home/details/29