

Title: Open questions in GRB physics  
Bing Zhang (UNLV)

Abstract: The field of gamma-ray bursts has been greatly advanced in the Swift and Fermi eras. In this talk, I'll discuss some open questions in GRB physics, including the physics of afterglow and prompt emission, composition of the ejecta, mechanisms of energy dissipation, particle deceleration and radiation, physics of central engine and progenitor, classification, as well as cosmological connection. In particular, I'll discuss a paradigm shift of GRB theoretical framework to understand afterglow and prompt emission driven by the observational data of Swift and Fermi.