

Proponente: Dott.ssa Ester Piedipalumbo (ester@na.infn.it)

Titolo: "The calibrated GRBs Hubble diagram through the $E_{p,i}$ – E_{iso} correlation: a tool for cosmology"

Descrizione: This project is focused on exploring the correlation between the peak photon energy, $E_{p,i}$, of the intrinsic spectrum of radiation emitted by long gamma-ray bursts (GRBs) and the isotropic-equivalent radiated energy, E_{iso} , independently from the cosmological model. The students will apply a local regression technique to estimate the distance modulus using the recent Union SNIa sample (Union2.1), and to construct a calibrated GRBs Hubble diagram, which can be adopted as a tool for cosmology in different gravity theories.