Time Domain Gamma Ray Astrophysichs from Fast Radio Bursts to Massive Black Holes



Principe Giacomo

giacomo.principe@ts.infn.it

Research group: Prof. Francesco Longo, Dr. Giacomo Principe, PhD Irene Burelli and Alessandro Vigliano + other colleagues UniUd - SISSA



The most powerfull astrophysical phenomena







Gamma Ray Burst vs Fast Radio Burst





Discovered just over a decade ago, FRBs are one of the newest astrophysical enigmas!!

Last year, for the first time, an FRB-like event was associated with a Galactic magnetar (Soft Gamma Repeaters). *Search for gamma-ray counterparts to the known FRBs*. To answer at:

What are FRBs? How/where/when are they originated?





Investigating the gamma-ray flaring emission in Massive Black Holes

EHT (2019)





Study of the most powerfull events seen at gamma-rays

Possibili tirocini (presso INFN) e tesi (triennali e magistrali) sullo studio con i dati di Fermi-LAT / MAGIC e CTA (simulazioni):

- Fast Radio Burst
- Magnetars
- Gamma Ray Burst
- Flaring galaxies
- Sviluppo nuovi algoritmi e strumenti per analisi gamma-ray

