Thesis Proposal for the Master's Degree in Physics

Title: Host galaxies of Fst Radio Busts

Abstract (max 10 lines):

Fast Radio Bursts (FRBs) are brief but powerful pulses of radio waves, lasting generally milliseconds, originating from distant galaxies. Discovered in 2007, their origins are still not fully understood, though they are believed to come from young, energetic sources, often in galaxies with high rates of star formation. FRBs are detectable at distances of billions of light-years, making them valuable for studying the cosmic evolution of the Universe. Currently, about 100 are the known galaxies hosting FRBs. The goal of this thesis is to compile all public data on FRB host galaxies and investigate the relationship between FRBs and their hosts to better understand the extreme environments from which these phenomena arise. Additionally, part of the project will involve working on a database of FRB host galaxie, with the goal of making it publicly available. This will eventually become the largest public archive of its kind.

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Laboratory where the thesis is carried out:

Physics department, University of Calabria

Any participating external structures:

Osservatorio di Astrofisica e Scienza dello Spazio di Bologna, INAF, Italy

Type of thesis:
☐ research: experimental ☐ and☐ data analysis