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## Abstract:

There is no consensus regarding the progenitors of FRBs. The only Galactic event FRB 20200428A has been identified with a magnetar and dozens of other FRBs have all been localized in extragalactic systems including one in a globular cluster, all of which suggest FRBs to be stellar-scale events. FAST has the ability to detect FRB bursts from galaxies at low to high redshifts, presenting a unique opportunity of examining the relation between FRB and star formation rate (SFR). We thus propose a survey of high SFR galaxies, including UltraLuminous (ULIRGs), HyperLuminous Infrared Galaxies Infrared Galaxies (HyLIRGs), and SubMillimeter Galaxies (SMGs) at a range of redshifts, to meaningfully constrain the relation between FRBs and SFR. If FRBs has a positive correlation with SFR as one naturally expects, then based on the demonstrated FRB detection rate by FAST, this project will likely detect new FRBs. Our proposed observations will thus either produce a major discovery or place meaningful constraints on the relationship between FRBs and SFR, and thus help discern FRB progenitors.