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Abstract:

We propose to perform follow-up observation for a sample of low-luminosity non-repeating (so far) Fast Radio Bursts (FRB). All the sources selected from CHIME/FRB catalog 1 have luminosity lower than  $10^{42}$  erg/s, suggesting they could be repeating FRBs. Then faint bursts with one or two orders of magnitude weaker than the reported values are expected to be detected by FAST, if the FRB repeats. The observation will enlarge the repeater samples and can be used as probe of intergalactic medium and intergalactic magnetic field etc. Importantly, the luminosity dichotomy of FRBs can be a important evidence that the repeating and non-repeating FRBs are two independent population. If we get no detection, we can put stringent upper limits on the flux of repeating emission and measure the upper limits of event rate at such low flux threshold.