Proposal Abstract:

We propose to conduct a Virgo cluster search for the potential FRBs. We select three sub cluster, Virgo A, Arp 116, and Markarian's Chain. We can use the FRB luminosity function to calculate FRB event rate from the Virgo cluster, and assuming a fixed total rate of 10000 FRBs per day per sky above the detection threshold 5 mJy out to redshift = 1. The expected FRB event rate from the Virgo cluster is 0.4 per hour within the FoV of FAST SnapShot mode. The major science outcomes are: we maybe detect radio transients, and discover new faint FRBs. Those faint FRBs can provide new limits on the faint FRB population, constraining the lower cut-off luminosity Lmin and slop of luminosity function. Hence we can give a tight constraint on the faint end of the FRB luminosity function. Besides, the potential FRBs in Virgo cluster can provide a FRB sub-population with similar properties, which is crucial for FRB population study.