Proposal Abstract:

Magnetars are unpredictable transients. Their active episodes are the best chance to observe and study magnetars and relative phenomena. During previous active episodes of SGR J1935+2154, utilizing the multi-wavelength observations mostly with FAST, HXMT, NICER and XMM-Newton, we proved the magnetar origin of at least some FRBs, found a rare connection between magnetar X-ray short bursts and radio bursts, reviled differences between FRBs and periodic radio pulses, spotted the possible link between magnetar timing anomalies and its radio emission. However, these findings lead us to more questions. In order to further understanding the FRB magnetar origin, emission process and physical character of magnetars, we propose a multi-wavelength follow up monitoring program using FAST to observe magnetars or other similar sources (which emitted magnetar-like bursts) during their burst active episodes. We can coordinate X-ray observations using HXMT, EP or other international telescopes to cover FAST exposures. This campaign will provide valuable data sets to deeply explore FRBs and magnetars.