

Proposal Abstract:

One of the key open issues in high energy astrophysics is that there is no agreement on the origin and the energy source of relativistic jets launched from compact objects. XRBs are more ideal laboratories for study the formation of jets, as they are numerous, display a wide range of accretion, and evolve on human timescales. We propose X-ray and radio coordinated observations of the upcoming outburst of XRBs in the upcoming observing period of FAST. We will focus on hard-to-soft state transition of XRBs, which is most active stage both in X-ray and radio band. With unprecedented time resolution and sensitivity, FAST observations will offer new insight on the connection between jet activities and accretion processes in XRBs. Coordinated FAST and X-ray observation open a window towards a unified model of jets-disk coupling in XRBs.