

Proposal Abstract:

The microquasar GRS1915+105 demonstrates rich flaring activities in X-ray and radio observations. Recently the source switched on after a few years of dimming state in x-rays, and giant flares were also observed in the radio bands. FAST has high sensitivities with high time-resolution capabilities, which is crucial in detecting multi-scale flares. By multi-scale and multi-band timing (FAST and X-rays by HXMT) and polarization analysis, we could derive the evolution and the physics of quasi-period oscillations (QPOs) and polarization variation patterns, then constrain the jet mechanisms and general relativity effect during accretion to the fast-spinning black hole, uncover the multi-time scale corona jet interaction, and reveal magnetic configuration during the coronal jet coupling and local jet acceleration.