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Abstract:

The Galactic black-hole X-ray binary GRS1915+105 is famous for its markedly variable X-ray and radio behavior with relativistic jets. After 26 year outbursts since 1992, it appears to undergo a new phase of transient system since 2018. More dramatic variabilities both in fluxes and time scales, from minutes to several hours were detected. The complexity of the variability observed in GRS1915+105 is unique and difficult to model. We propose to use the joint commissioning array of FAST plus EVN and LBA, which already successfully observed, and will provide the most sensitive and sharp resolution along the jet direction for studying this transient system in the new phase. With aid of FAST, we could make snapshot images at minute scale to reveal the mechanism of transient variability, as well as measure the proper motions of jet ejection. That would be essential to understand this transient better.