

Proposal Abstract:

The equation of state (EoS) of neutron star is still mysterious. Many methods are proposed to solve this problem. One of this method is waveform method from X-ray observations of milli-second pulsar. When using waveform method, the geometric parameters of emission are very vital for constraining the EoS. Radio pulse emission could supply more information of magnetosphere of pulsars, such as the inclination angle and view angle. Here, we first select PSR J0952-0607 as the possible target to constrain the EoS, mass of which might be 2.35 solar mass. Its geometric parameters of radio emission are very important of constrains the EoS when using waveform method to measure pulsar mass and radius measurement. Here, we propose 10 hours exposure to study radio pulse profile of PSR J0952-0607. Then, the possible radio emission is also important to study magnetosphere of magnetars. Here, were select 4U 0142+61 and 1E 2259+586 as the targets, which have the X-ray polarization information.