

Proposal Abstract:

PSR J2021+4026 is a young γ -ray pulsar located within the supernova remnant SNR G78.2+2.1. The PSR J2021+4026 is the only known γ -ray pulsar observed with mode switching, its γ -ray flux shows variations between two states at quasi-periodic about 3.5 years, when the pulsar exhibit an abrupt drop in its gamma-ray flux, with a simultaneous increase in its spin-down rate,. A state change occurred in October 2011, suddenly decreased by 20%, the flux decrease was concurrent with an increase in its spin-down rate about 5%. The spin-down rate changes corresponding with the flux states switching, this resemble with glitches show in some young middle aged pulsars. As this is the so far only γ -ray pulsar to show such correlated state switching behaviour, so it offers a an opportunity to study the pulsar magnetosphere. Here we propose to conduct a search for radio emission from the variable γ ray pulsar PSR J2021+4026 with FAST telescope.