PID:PT2022_0120

Abstract:

We propose 3 radio pulsars, to obtain their polarization and single-pulse emission characteristics. Previous observations conclude that PSR B0950+08 and PSR B1929+10 have detectable emission over an unusually wide range of pulse longitude. Moreover, almost of the single-pulse's phenomena have been detected from PSR B2016+28, but the polarization characteristics of this pulsar is not presented (Lu et al. 2019). Recently, we detected that the radio signal of PSR B0950+08 over the whole pulse phase (Wang et al. 2022). The weak emission characteristics ("bridges" components) of this pulsar are firstly detected, thanks to the extremely high sensitivity of FAST. It is believable that the radiative behaviour of weak emission regions of others are also possible detected by FAST. Meanwhile, the polarization characteristics of the whole pulse phase radiation could only be believable in the phase of weak emission if the baseline is determined with certainty. Therefore, new technic will be tested to determine the baseline, that is not only essential for polarization observation, but also important for monitoring FAST’s performance.