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Abstract:

We propose to make polarization observations of 30 pulsars in the north Galactic cap at Galactic latitudes $b > 60$ degree. These new measurements will determine their rotation measures (RMs) with high accuracy, which will put a stringent constrain on the direction and strength of the weak vertical component of Galactic magnetic fields. The new observations are benefited from the high sensitivity of FAST and excellent positioning ability with the snapshot mode of the 19-beam receiver. Tracking and/or snapshot observation mode are required according to position accuracy of the pulsars.