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Proposal Abstract:

We propose the observation of pulsars in M3, aiming to capture more dynamic spectra and related scintillation arcs to study their scintillations, and searching for more pulsars. By using FAST archive data, we updated the phase connection timing solutions of M3B and D, and obtained the phase connection timing solutions of M3A, E, and F for the first time, and we have captured the dynamic spectra of M3A, B, and D, but only captured the scintillation arc in M3B. In FAST observations, M3B with a high detection rate in M3 only appeared 16 times (20.5%). Compared with Arecibo, FAST can greatly improve the detection rate of pulsars in M3 (~ 3 times). With the extreme sensitivity of FAST, we believe that it can bring us more scintillation arcs and dynamic spectra to study the properties of the interstellar medium between M3 and us. On the other hand, we will also use these data to obtain the proper motion and polarization information of these pulsars and search for more pulsars.