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A FAST study of the slowest pulsar

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I will discuss the results from a recent simultaneous observing campaign involving FAST and LOFAR to study PSR J0250+5854, the slowest known pulsar with a period of 23.54 seconds, across a wide range of frequencies. This will be one of the early science results from the currently-being-commissioned Five-hundred-metre Aperture Spherical Telescope (FAST) in Guizhou, China. FAST is the largest filled-aperture telescope in the world with an effective collecting diameter of 300 metres, offering an unprecedented means to study radio pulsars. The frequency evolution of the pulse profile of PSR J0250+5854, combined with the polarisation information provided by FAST allow us to infer geometrical information regarding the emission region of the pulsar, and highlights interesting unexpected frequency evolution of the pulse profile. It will be illustrated that FAST is ideal for the study of single pulses from radio pulsars which are otherwise too faint to be observed in this fashion.

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