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The hidden population of pulsars in Terzan 5

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We present the deepest radio continuum observations of the Galactic globular cluster Terzan 5. While past timing surveys of Terzan 5 have been highly successful, discovering nearly 50 pulsars, continuum imaging offers a complementary approach to identifying and characterising these sources. Imaging is especially useful for finding eclipsing pulsars, which are often difficult to identify in timing searches. We find a small number of new candidate pulsars, though many more likely remain undiscovered. To this end, we have developed a novel method for constraining the total pulsar population by studying the shot noise characteristics and residual emission produced by faint unresolved pulsars.

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