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# Constraining the energy scale of cosmic strings with PTAs

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Pulsar Timing Arrays observe a set of millisecond pulsars at high timing precision over long periods of time, aiming to directly detect gravitational waves. Probing the nHz frequency regime, PTAs are sensitive also to many primordial GW sources, with one of them being cosmic strings; a web of string-like energy concentrations that may have formed right after Inflation and permeates the Universe. In this talk, I will give a brief introduction to these exotic sources, describe why they are so interesting from a cosmological perspective, and show that PTAs is the best tool currently available for the detection of their GW signatures. Since current PTA projects have only managed to set upper limits on the amplitude of a potential SGWB, I will show how these limits can be translated to limits of the energy scale, or tension in other words, of cosmic strings. In particular, I will present the latest upper limits on the string tension by the EPTA and NANOGrav. The generic way in which these limits have been computed, grant them robustness close to those computed by CMB data, and for the first time, such PTA results have reached and surpassed, the best available CMB-originating tension limits from Planck.

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