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The First Evidence for Nanohertz-frequency Gravitational Waves

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In June 2023, pulsar-timing array experiments across the world announced evidence for correlations in the timing properties of millisecond pulsars scattered across the Milky Way. The signature of these correlations is consistent with an all-sky, broadband, background of gravitational waves at nanohertz frequencies, washing through the Galaxy. I will present the analyses that led to these breakthrough findings, the potential origins of the signal, and discuss important questions that must be addressed in order for pulsar-timing arrays to become engines of further discovery.

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