

Search for Ultralight Dark Matter with Space-based Gravitational-Wave Interferometry

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Ultralight particles are well-motivated in many physical theories beyond Standard Model of particle physics. They can also be Dark Matter candidates. If these ultralight fields couple to standard model particles, they would show as additional signals with characteristic features. We show future space-based gravitational-wave interferometry can serve as a sensitive method to detect these light DM and investigate the sensitivity with time-delay interferometry.

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