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## Constraints on Primordial Black Holes via Induced Gravitational Waves

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Primordial black holes (PBHs) serve as a compelling candidate for dark matter and a potential probe of early universe physics. One promising avenue for constraining their abundance is through the stochastic gravitational wave background (SGWB) induced by primordial curvature perturbations. In this talk, I will present how current and future gravitational wave observatories—including Pulsar Timing Arrays (PTA), Astrometry, and space-borne detectors—can set limits on the induced SGWB, thereby imposing indirect constraints on the formation and population of PBHs. I will discuss the sensitivity of these observations to different PBH mass ranges.

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