

Abstract Submitted
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Pulsar Timing Constraints on the Fermi Massive Black-Hole Binary Blazar Population¹ A. MIGUEL HOLGADO, Univ of Illinois - Urbana, ALBERTO SESANA, University of Birmingham - UK, ANGELA SANDRINELLI, Universita degli Studi dell'Insubria, STEFANO COVINO, Istituto Nazionale di Astrofisica, ALDO TREVES, Universita degli Studi dell'Insubria — Blazars are thought to be active galactic nuclei whose jets are almost aligned with our line-of-sight. Electromagnetic observations of blazars have found quasi-periodic behavior in their light curves on timescales of order years. One interpretation of such behavior is that the quasi-periodicity is due to the presence of a massive black-hole binary. We test the binary hypothesis of the cosmic blazar population as discovered by the Fermi Gamma-Ray Space Telescope with recent pulsar-timing array upper limits on the stochastic nanohertz gravitational-wave background. We find that the binary interpretation is inconsistent with pulsar-timing upper limits; thus, binarity alone cannot fully explain quasi-periodicity in the cosmic blazar population.

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