

Abstract Submitted  
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**Limits on Individual Supermassive Black Hole Binaries from the NANOGrav 11-year data set**<sup>1</sup> SARAH VIGELAND, University of Wisconsin - Milwaukee, NANOGrav COLLABORATION — Supermassive black hole binaries form in galaxy mergers and emit low-frequency gravitational waves (GWs) that can be detected by pulsar timing arrays. We have searched the North American Nanohertz Observatory for Gravitational Waves (NANOGrav) 11-year data set for GWs from such systems. We placed limits on the GW strain, and used these limits to constrain the properties of supermassive black hole binaries in the local Universe. We also used our results to constrain the merger history of nearby massive galaxies.

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