Abstract Submitted
for the APR17 Meeting of
The American Physical Society

Gravitational Wave Multi-Messenger Prospects for Pulsar Timing Arrays JOSEPH SIMON, University of Wisconsin Milwaukee, SARAH BURKE-SPOLAOR, West Virginia University — Pulsar Timing Array (PTA) experiments are currently setting limits on the gravitational wave (GW) emission in the nanohertz frequency band. The primary source of GW emission in this band is expected to be a population of binary supermassive black holes (SMBHs) that form following galactic mergers. This population of binary supermassive black holes is representative of a crucial step in galaxy formation theories. During this process, there is the potential for many electromagnetic tracers to accompany the binary's evolution. In this talk, I will present recent work investigating the potential for jointly detecting a binary's electromagnetic and gravitational radiation. Such 'multi-messenger' sources would provide a unique window into a pivotal stage of galaxy evolution, and would revolutionize the understanding of late-stage galaxy evolution.

Joseph Simon
University of Wisconsin Milwaukee

Date submitted: 30 Sep 2016 Electronic form version 1.4