

Abstract Submitted
for the APR17 Meeting of
The American Physical Society

Did LIGO Detect Dark Matter? SIMEON BIRD, ILIAS CHOLIS, JULIAN MUNOZ, YACINE ALI-HAIMOUD, MARC KAMIONKOWSKI, ELY KOVETZ, ALVISE RACCANELLI, ADAM RIESS, Johns Hopkins University — There is a possibility that the recent LIGO detection of gravitational waves originated from the merger of two primordial black holes, making up the dark matter. Thirty solar mass black holes, as detected by LIGO, lie within an allowed mass window for primordial black hole dark matter. Interestingly, our best estimates of the number of observable mergers fall within the range implied by current LIGO data. I will explain these estimates and discuss the (considerable!) theoretical uncertainties.

Simeon Bird
Johns Hopkins University

Date submitted: 27 Sep 2016

Electronic form version 1.4