Abstract Submitted
for the APR20 Meeting of
The American Physical Society

GW190425: A Compact binary coalescence with an exceptional total mass 3.4 Msun[1] SURABHI SACHDEV, Pennsylvania State University, LIGO-VIRGO COLLABORATION — On 2019 April 25, the LIGO Livingston detector observed a highly significant compact binary coalescence with signal-to-noise ratio 12.9. The component masses were inferred to be between 1.1 and 2.5 solar masses, indicating a likely binary neutron star origin. However, both the total mass and chirp mass are significantly (5 sigma) larger than those of any previously known binary neutron star system. In this talk, I will present the detection of this event, its source properties, and possible origins of the system based on its inconsistency with the known Galactic binary neutron star population.

[1]LIGO-Virgo Collaboration

Surabhi Sachdev
Pennsylvania State University

Date submitted: 14 Jan 2020 Electronic form version 1.4