



University of Crete
Department of Physics



FORTH
INSTITUTE OF ASTROPHYSICS



Joint Physics & IA/FORTH Colloquium

Thursday, 29 October 2020 | 17:00 – 18:00, Online with ZOOM

Studying neutron stars with gravitational waves

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ABSTRACT

Neutron stars, the most dense astrophysical bodies we know of, are at the heart of many interesting astrophysical phenomena from their birth in supernova explosions to their deaths in collisions with other dense objects. Even though we have been witnessing the births of neutron stars in the night (or even day!) sky for thousands of years, the collision of two neutron stars was detected for the first time only three years ago through gravitational waves.

In this talk I will discuss the properties of the signal detected during the merger of two neutron stars, GW170817, and describe what information it has offered about the properties of astrophysical neutron stars. I will also discuss what we expect to discover in the next few years with a focus on understanding the properties of matter that is more dense than the nuclei everyday atoms are made of.

ZOOM Link: <https://us02web.zoom.us/j/89646988168?pwd=N3lsd1NoaWp5VVcxdkFkcXhoT2hEdz09>