

(CANCELLED)Gravitational-wave constraints on the neutron-star-matter equation of state

Tuesday, 26 June 2018 12:30 (30)

The LIGO/Virgo detection of gravitational waves originating from a neutron-star (NS) merger, GW170817, has recently provided new stringent limits on the tidal deformabilities of the stars involved in the collision. In this talk, I will discuss recent analysis of the implications of this measurement for the NS-matter equation of state (EoS). In our analysis, we combine this measurement with the existence of two-solar-mass stars and generate a generic family of NS-matter EoSs that interpolate between state-of-the-art theoretical results at low and high baryon density. Comparing the results to ones obtained without the tidal-deformability constraint, we witness a dramatic reduction in the family of allowed EoSs. Moreover, our construction also allows us to place strict, robust bounds on, e.g., the maximal masses and radii for a typical 1.4-solar-mass star.

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Session Classification : Plenary