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## **The Second Love Number of Dark Compact Planets and Neutron Stars with Dark Matter**

*Tuesday 19 July 2022 19:00 (1 hour)*

In this study, we calculated the effect of self-interacting dark matter on neutron stars. Properties like the mass, radius and the tidal deformability are affected by the presence of dark matter in neutron stars. We show that the Love number can be used to probe the presence and the properties of dark matter inside of neutron stars in future gravitational wave measurements.

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