

## Neutron stars as axion laboratories

*Wednesday, 3 February 2021 17:00 (1 hour)*

The QCD axion is a well-motivated dark matter candidate that may also solve the strong CP problem related to the absence of the neutron electric dipole moment. Multiple experimental efforts are currently racing to try to discover this particle in the laboratory. In this talk I will show that astrophysical observations are also a promising path towards detecting the axion and related axion-like-particles, which arise in some String Theory compactifications. I will focus in particular on neutron stars as laboratories for searching for axions, leveraging the strong magnetic fields in these systems. I will discuss two recent neutron star axion searches, one in the radio band and one in the X-ray band, that probe new regions of axion parameter space and perhaps even uncover hints of new physics.

Join Zoom Meeting

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Meeting ID: 931 0775 2292

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