

EC(H)Os in the dark: Gravitational Wave backgrounds from colliding ECOs at atom interferometers

Friday, 2 June 2023 12:13 (5 minutes)

Long baseline atom interferometers (LBAI) offer an exciting opportunity to explore mid-frequency gravitational waves. In this talk I will advocate for targeting the total ‘gravitational wave background’, surveying the landscape of possible contributions within this frequency band. I will demonstrate that the cumulative signal from the inspirals of the LIGO-Virgo stellar-mass binaries is well within reach of typical terrestrial LBAI and may have much to reveal about the Universe. Finally, I will show that populations of dark sector exotic compact objects harbouring just a tiny fraction of the dark energy density, could generate signatures unique to mid- and low-frequency gravitational wave detectors, providing a novel means to probe complexity in the dark sector.

Would you be interested in presenting a poster? (this will not impact the decision on your talk)

yes

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