

Probing Exotic(Dark) Compact Objects with Extreme Mass Ratio Inspirals

Thursday, 16 May 2019 15:35 (25 minutes)

Exotic compact objects(ECO) like primordial black holes, boson stars, etc., are interesting astrophysical targets and can serve as dark matter candidates. Their existence, however, is still in doubt. In this talk, I will discuss the possibility of using the gravitational waves from the extreme mass ratio inspiral(EMRI) as a new way of probing the ECOs and show that future space-based gravitational wave detectors like LISA will be much more powerful at probing these ECOs than LIGO. Possible electromagnetic counterparts of the gravitational wave signals for boson stars will also be briefly introduced.

Preferred Session

Cosmology

Comments

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Session Classification: Dark Matter