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Thick tori and flows around rotating boson stars

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Accretion disks play an important role in the evolution of their relativistic inner compact objects. The emergence of a new generation of interferometers will allow resolving these accretion disks and providing more information about the properties of the central gravitating object. Due to this instrumental leap forward it is crucial to investigate the accretion disk physics near various types of inner compact objects now to deduce later constraints on the central objects from observations. A possible candidate for the inner object is the boson star. Here, we will present the differences between accretion structures surrounding boson stars and black holes. We show that the accretion tori around boson stars have different characteristics than in the vicinity of a black hole. With future instruments it could be possible to use these differences to constrain the nature of compact objects.

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