



Contribution ID: 139

Type: **not specified**

J. L. Rosa: Recent developments on observational properties of bosonic stars from hot-spots and accretion disks

Tuesday 20 December 2022 15:00 (15 minutes)

In the recent years, our understanding of the galactic centre has grown rapidly with the joint efforts of large international collaborations like the GRAVITY, who detected infrared flares close to the innermost stable circular orbit (ISCO) of the supermassive black-hole at the galactic centre, and the Event Horizon Telescope (EHT), which recently published the first picture of a black-hole shadow from Sgr A*. These observations are consistent with the predictions from General Relativity (GR) in black-hole spacetimes. However, due to the large experimental imprecisions, the data are not able to exclude the possibility of the central massive object in our galaxy not being a black-hole but instead some exotic compact object that mimics the qualitative properties of black-hole exteriors. In this talk, we explore a particular example of such alternative compact objects: bosonic stars (Boson and Proca stars), and the possibility of these observations being consistent with the presence of one of these exotic stars at the galactic centre.

Session Classification: Session 7 A