



Contribution ID: 508

Type: **Talk in a parallel session**

Superfluid dark stars

Thursday, 11 July 2024 17:20 (20 minutes)

We present a superfluid dark star model consisting of relativistic dark bosons with two-body self-interaction. The obtained masses, radii, and tidal deformability depend in a simple way on the boson mass and interaction strength. We report first results on binary mergers: the distinctive amplitude and frequency of the emitted gravitational waves are well within reach of terrestrial interferometers.

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Session Classification: Absolute stability of strange quark matter: from dark matter to stellar evolution

Track Classification: Compact Objects and Stellar Evolution (CO): Absolute stability of strange quark matter: from dark matter to stellar evolution