

# Self gravitating scalar field configurations around black holes

*Thursday 19 December 2024 12:00 (15 minutes)*

In this talk I will describe quasi-stationary solutions of the Einstein-Klein-Gordon equations for a scalar field surrounding a black hole. The solutions cover scales from; less than a Schwarzschild radius to several orders of magnitude its value. These self gravitating gravitational atoms are relevant in a wide range of masses, from ultralight to MeV dark matter and for black holes ranging from primordial to supermassive.

**Author:** DEGOLLADO, Juan Carlos

**Presenter:** DEGOLLADO, Juan Carlos