

The writing of the KLASH Conceptual Design Report

Monday 3 June 2019 18:10 (20 minutes)

The KLASH (KLoe magnet for Axion SearchH) experiment has been proposed to search for galactic axions with mass between 0.2 and 1 μeV using a large volume resonant cavity (22 m³), cooled down to 4.5 K and immersed in a 0.6 T magnetic field generated inside the superconducting magnet of the KLOE experiment located at the National Laboratory of Frascati of INFN. In September 2018 INFN approved one-year study for writing the Conceptual Design Report. In this talk we will show the recent results on the KLASH sensitivity based on the full electromagnetic simulation of the resonant cavity. We will discuss the choice for the cryostat and cavity cryogenic and mechanical design, in particular for the tuning system, and the readout system based on a microstrip SQUID amplifier. Moreover we will discuss recent advances in motivating an axion in this relatively low mass region.

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