

Seminario

Departamento de
Física Teórica/CAPA

“Search fo Light dark matter with Spherical Proportional Counters”

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Abstract:

Compelling astrophysical evidence collected in the last 80 years suggests that cold, non-baryonic, weakly interacting Dark Matter (DM) particles make up $\sim 85\%$ of the mass of the Universe. In the 1980s a generic class of DM candidates, the Weakly Interacting Massive Particles (WIMPs) with masses in the $10 \text{ GeV}/c^2 - 1 \text{ TeV}/c^2$ range, was proposed that could explain the observed relic abundance of DM. As WIMPs remain elusive, new theoretical approaches such as the asymmetric dark model and dark sector predict DM candidates have been proposed, that require novel experimental techniques. The University of Birmingham joined this effort through NEWS-G, an experiment that aims to extend DM sensitivity to the mass range from $0.05 \text{ GeV}/c^2$, using a spherical proportional counter. The current results, status, and future plans of the experiment will be presented, along with a discussion of a new collaboration initiated with the Boulby Underground Laboratory.

Fecha: jueves 25 de febrero de 2021

Hora: 12:00

Lugar: <https://rediris.zoom.us/j/85134053268>