UNIVERSITÉ
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FACULTÉ DES SCIENCES
Département de physique
nucléaire et corpusculaire

SÉMINAIRE DE PHYSIQUE CORPUSCULAIRE

SUJET: **Searching for Dark Matter at ATLAS**

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RÉSUMÉ:

Despite decades of studies, the nature of Dark Matter remains one of the largest open questions in physics. In particular, it is not known if elusive Dark Matter particles can interact with normal matter. If such an interaction exists, and if the Dark Matter particles are not too massive, then they can be produced in high-energy collisions at the LHC. Collisions producing only Dark Matter particles are invisible in ATLAS, as the Dark matter particles escape the detector without interacting. Instead, searches focus on events where invisible Dark Matter particles are balanced by visible objects.

One particularly sensitive topology at the LHC is where the visible objects are jets (the hadronization of quarks or gluons). This specific scenario is investigated, and results are interpreted in terms of several different Dark Matter models. The expected sensitivity to Dark Matter at an upgraded LHC is also briefly discussed.

INFORMATION : http://dpnc.unige.ch/seminaire/annonce.html
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