ID contributo: **5** Tipo: **Oral presentation**

Observable Signatures of Cosmic-Ray Scatterings With Light Dark Matter in Starburst Galaxies

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Star-forming and starburst galaxies are well-motivated astrophysical emitters of high-energy neutrinos and gamma-rays through hadronic collisions. Indeed, they are well-known cosmic-ray "reservoirs" thanks to their high magnetic fields capable to confine high-energy protons within their cores. Interestingly, the cosmic-ray transport in such extreme environments can be affected by the elastic scatterings with sub-GeV Dark Matter (DM). In this talk, I will present this scenario and investigate the implications of the DM-proton interactions for the diffuse high-energy neutrino and gamma-ray flux as well as for the point-like emission from nearby galaxies. I will show that the non-observation of the expected features in the gamma-ray and high-energy neutrino measurements implies stringent constraints on the DM parameter space, thus providing a complementary and alternative way for DM investigation with respect to standard direct and indirect searches.

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Classifica Sessioni: Gamma Rays