Journées Théorie PNHE



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Small-scale structuring of Galactic dark matter and impact on indirect searches

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Cold dark matter is known to structure on scales much smaller than typical galaxies. This structuring translates into a large population of subhalos in galactic halos that impact indirect dark matter searches by boosting the annihilation signal (gamma rays, antimatter cosmic rays). I will present the first model of the Galactic subhalo population fully consistent with dynamical constraints. The mass, concentration and spatial distributions of these objects are predicted from first principles and inherit from cosmological properties. I will detail the impact of this subhalo population on indirect searches with gamma rays and cosmic-ray antiprotons.

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