

Novel decay and scattering signatures of light dark matter

Friday 25 May 2018 15:00 (30 minutes)

I will discuss experimental and observational signatures of dark matter with mass at and very well below the MeV scale. The first signature regards dark matter decay into dark radiation states. I will comment on the experimental detectability of dark radiation, and further show that 21 cm astronomy becomes a probe of very light dark radiation; an explanation of the EDGES result is offered. The second signature regards dark matter scattering on nuclei and electrons in direct detection experiments. I will show how smaller but irreducible signal components can be tapped to dramatically extend the low-mass reach of existing searches.

Presenter: PRADLER, Josef

Session Classification: Plenary Session