

Sub-GeV Dark Matter at large neutrino detectors

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I will review our proposal to observe sub-GeV Dark Matter upscattered by cosmic rays at large neutrino detectors like Super- and Hyper-Kamiokande, DUNE, KamLAND and JUNO. I will show that this technique tests genuinely new parameter space, allowed both by theoretical consistency and by other direct detection experiments, cosmology, meson decays and the LHC. I will present novel strong constraints coming from DM produced in atmospheric showers, and discuss new ideas to possibly test sub-GeV DM at even larger detectors like KM3NeT.

Author: SALA, Filippo (University of Bologna and INFN)

Presenter: SALA, Filippo (University of Bologna and INFN)