Theoretical Physics Seminars

SIMP: An alternate dark matter candidate

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From: Physical Research Laboratory, Ahmedabad

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Place: Room No. 469

A Weakly Interacting Massive Particle (WIMP) has been the preferred Dark Matter (DM) candidate. But the tightening of the constraints on the standard thermal WIMP scenario has forced physicists to propose alternative scenarios of DM. One such alternate scenario is the strongly interacting massive particle (SIMP) mechanism of dark matter freeze out. In this talk I will discuss one such DM model in which, under the assumption that DM annihilation into SM particles is suppressed, the SIMP mechanism dominates the freeze out of DM. I will show that a DM of MeV order mass with sufficiently strong self interaction gives the correct relic density of dark matter.

All are welcome