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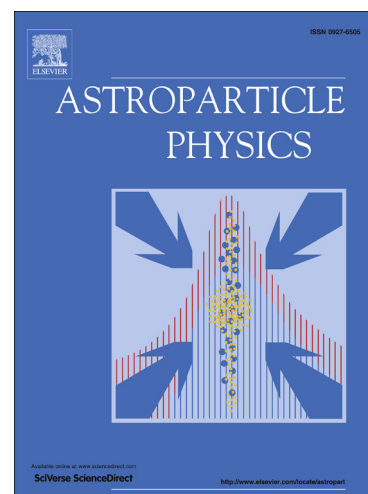
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# Dark Neutrinos as Cold Dark Matter

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## Abstract

It is shown that heavy sterile neutrinos can be a consequence of a new broken  $U(1)_X$  symmetry. This sterile symmetry is further speculated to be related to the conservation of the dark number associated with Dark Matter particles, corresponding to a dark neutrino mass  $m_{N_D} \geq 1 \text{ keV}$  with a high scale  $\geq \sim 10^2 \text{ GeV}$  dark symmetry  $U(1)_D$  breaking.

**Key words:** Standard Model, Sterile neutrino and Dark Matter.

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