

Scalar (fermion) dark matter with mass in the MeV range coupled to ordinary neutrinos and another fermion (scalar) is motivated by scenarios that establish a link between radiatively generated neutrino masses and the dark matter relic density. With such a coupling, cosmic supernova neutrinos can resonantly interact with the background dark matter particles on their way to us, giving rise to a dip in their redshift-integrated spectra. Current and future neutrino detectors, such as Super-Kamiokande, LENA and Hyper-Kamiokande, might be able to detect this distortion.