

Effects of pseudoscalar condensate on the rate of cooling of neutron stars.

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We consider the effect that the appearance of pseudoscalar condensates in a neutron star can have on its cooling rate. We make no particular assumption on the origin and characteristics of these possible condensates and only assume that in regions where the pseudoscalar density varies the propagation of photons is governed by modified Maxwell-Chern-Simons electrodynamics. We find that this gives non-trivial reflection coefficients between regions of different pseudoscalar density and may affect the star cooling rate.

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