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Non-Fermi liquid corrections to the kick velocity of a neutron star

In this work we have studied the non-Fermi liquid behavior that enters into the expression of the pulsar kick velocity due to assymetric neutrino emission. We have incorporated leading order as well as next-to-leading order corrections to the velocity and compared the results with the simple Fermi liquid case. The relation between quark phase radius and temperature has been shown.
We have also approximated our results for the case of large magnetic field present in neutron stars.

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