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Pulsar Kicks from Electrons in a Large Magnetic Field[1] ERNEST HENLEY, Univ. of Washington, M.B. JOHNSON COLLABORATION[2], L.S. KISSLINGER COLLABORATION[3] — We derive the momentum asymmetry given to a proto-neutron star during a time (10-20 s) that the neutrino sphere is near the surface of the star, using the modified Urca process. The electrons are in Landau levels due to the strong magnetic field, and this leads to an asymmetry in the neutrino momentum and thus to a pulsar kick. Our kicks reach 1000 km/s for a $T = 8.5 \times 10^{10} K$.

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