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Strong magnetic field impact on the neutrino process inside the SNe explosion

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Strong magnetic fields such as MHD-Jet SNe could exist in the inner region of the explosive astrophysical site. The phase space of the electrons is quantized inside the magnetic field so that the weak interaction rates deviate from the field-free case. This talk focuses on the (anti)neutrinos absorption process. This process is essential since it determines the opacity of the neutrino and the position of the (anti) neutrino sphere. Moreover, we will show that the evolution of the electron fraction Y_e is also affected by the magnetic field since its value depends on the inverse reaction of the neutrino process. Such impact could leave an imprint on the r -process nucleosynthesis yields.

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