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QED Near the Decoupling Temperature SAMINA MASOOD, University of Houston Clear Lake — We study the effective parameters of QED near the decoupling temperature and show that the QED perturbation theory works perfectly fine at temperatures, below the decoupling temperature. Temperature dependent selfmass of electron, at T = m, gives two different values when approached to the same overlapping point. It ia shown that at T = m, change in thermal contribution of the electron selfmass is 1/3 of the low temperature value and 1/2 of the high temperature value. The difference of behavior measures the electron background contributions at T = m. These electrons are emitted through beta decay. This rise in mass affects the QED parameters and change the electromagnetic properties of the medium with temperature also. However, these contributions are ignorable near the decoupling temperature.

Samina Masood
University of Houston Clear Lake

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