

# Divergences and resonances in particle processes in intense external fields

*Tuesday 18 August 2009 14:00 (1 minute)*

## Please give a brief summary of your poster

The study of fundamental interactions in intense external fields is a broad, interesting and incomplete area of study. Intense external fields are present in the charged bunch collisions at accelerators, being responsible for the beamstrahlung, pair background processes and potentially affecting all collider physics processes. Pair annihilation in the intense fields near the surfaces of magnetars maybe responsible for intense gamma ray bursts. The intense Coulomb fields present in heavy ion collisions are also known to affect physics processes. The general QFT with intense external fields is examined with attention paid to the cancellation of IR divergences, and whether resonances are present in the cross-sections of the second order process cross-sections in the bound interaction picture.

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