



Universidade Federal da Paraíba
Centro de Ciências Exatas e da Natureza
Programa de Pós-Graduação *Stricto Sensu* em Física

Colóquio

“Radiative corrections in higher-order Lorentz-invariance violating effective theories”

RESUMO: In this talk we review the issue of fine-tuning that comes in the radiative corrections of Lorentz-invariance violating effective theories. In particular these coming from higher-order operators. We focus on the Myers and Pospelov extension of QED with modified dimension-five operators in the photon sector and standard fermions. At one-loop order approximation we compute the fermion self-energy and show that the even radiative corrections turn to be finite but the odd ones contains unsuppressed effects of Lorentz violations. We use dimensional regularization to deal with the divergencies and a generic preferred four-vector. We show how to implement the correct pole extraction for a Lorentz symmetry breaking theory and how this lead to a renormalized two-point function free of the unwanted large Lorentz violations

<p>Prof. Dr. Carlos Marat Reyes Universidad del Bio Bio - Chile</p>

15/mai/2015	16h00
Auditório da Pós-Graduação em Física (novo prédio)	