Contribution ID: **27** Type: **Parallel Talk (Theory)**

QED process in Very Special Relativity

Thursday 29 November 2018 16:45 (15 minutes)

The Cohen and Glashow proposal, Very Special Relativity (VSR), explain the existence of a neutrino mass without introducing new particles and leptonic number violation, only reducing the symmetry from Lorentz to a subgroup, SIM(2). The main feature of this model is the existence of a privileged direction, given by a null vector. In this framework we have explored Quantum Electrodynamics in order to find an observable which we could test the feasibility of this model. We have computed self-energies of photon and electron with new Feynman rules. A calculation in the Coulomb Scattering is presented and we have the same features found in the standard model. In addition, the Photon-Photon Scattering is presented. In the latter case, we have new signals of this null vector, but some problems with the choice of a prescription in the integration are discussed.

arXiv

Authors: Mr SOTO, Alex (Pontificia Universidad Católica de Chile); ALFARO, Jorge (Pontificia Universidad Católica de Chile)

Presenter: Mr SOTO, Alex (Pontificia Universidad Católica de Chile)

Session Classification: Parallel Talks B

Track Classification: Beyond the Standard Model