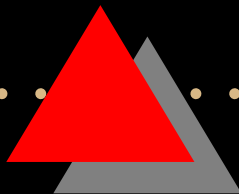





**Lepton flavor violation in 3-3-1 Models**


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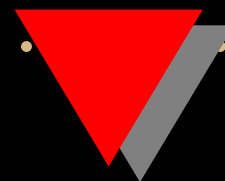
One possible alternative is based on the gauge symmetry  $SU(3)_c \otimes SU(3)_L \otimes U(1)_X$  known as 331 models. The models based on 331 symmetry are build in such a way that the couplings of the fermions with the new neutral  $Z'$  boson are not universal in the interaction basis therefore in the mass eigenstates basis those couplings are not diagonal and flavor changing neutral currents (FCNC) at tree level arise up. This is a special feature of the 331 models and it is because one quark family is in a different representation of the gauge group to the other two families in order to satisfy the chiral anomaly cancellation condition. In some 331 models there are not only contribution of the left handed neutral current but also from the right handed neutral current. There are many studies of these new FCNC in the quark sector where are different observables in the up and down sectors that constraint such a kind of processes. In contrast, there are not so many analysis in the leptonic sector where leptonic flavor violation (LFV) processes at tree level are present.





LFV processes can be explored and it is one of our aims of this work. Different 331 models can be build, they can be distinguished using the electric charge of the new particles introduced in the spectrum and the structure of the scalar sector. In general, the 331 models are classified depending how they cancel the chiral anomalies: there are two models that cancel out the anomalies requiring just one family and eight models where the three families are required. There are two models where all the lepton generations are treated differently. There is one of this 331 model where the leptonic sector is described by five left handed leptonic triplets in different representations of the  $SU(3)_L$  gauge group. This kind of models is our interest in order to study the LFV processes and therefore get some constraints on the leptonic mixing matrix. We show the main features of the model under consideration in the poster.





Processes	$BR(\times 10^{-8})$ BELLE	$BR(\times 10^{-8})$ BaBar
$\tau^- \rightarrow e^- \gamma$	12	3.3
$\tau^- \rightarrow \mu^- \gamma$	4.5	4.4
$\tau^- \rightarrow e^- e^+ e^-$	2,7	2,9
$\tau^- \rightarrow \mu^- \mu^+ \mu^-$	2,1	3,3
$\tau^- \rightarrow e^- \mu^+ \mu^-$	2,7	3,2
$\tau^- \rightarrow \mu^- e^+ e^-$	1,8	2,2
$\tau^- \rightarrow e^+ \mu^- \mu^-$	1,7	2,6
$\tau^- \rightarrow \mu^+ e^- e^-$	1,5	1,8



Table 1: Experimental data