

Alessandro Baldini

(INFN Pisa)

Experimental Lepton Flavor Violation Searches

Abstract

Lepton Flavor Violation (LFV) searches are extremely sensitive probes of new physics beyond the standard model, up to scales of thousands of TeV, since strong interactions do not play a relevant role and the processes which are being searched for are totally forbidden in the standard model. The most stringent limit on the existence of LFV processes was established in 2016 by the MEG experiment at the Paul Scherrer Institute in Switzerland which published the final result of a first phase of data taking establishing an upper limit of 4.2×10^{-13} on the branching ratio of the $\mu \rightarrow e \gamma$ decay which exclude big portions of parameters space of several strong candidate theories among which various SUSY-GUTs models. In this seminar I will mainly concentrate on the MEG I final result and on the upgrade MEG II experiment but I will also discuss the status of the various new projects hunting LFV processes which are planned around the world.

June 20, 2017 - 2:30 pm
LNGS - "B. Pontecorvo" room