

Seminar Notice

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Theoretical Physics Department

Title:	Lepton flavour violating Higgs boson decay $h \rightarrow \mu \tau$ at the $e^+ e^-$ colliders
Speaker:	Indrani Chakraborty, HRI, Allahabad
Date:	October 16, 2017 (Monday)
Time:	3:00 p.m.
Venue:	Theoretical Physics Seminar Room (C406), 3rd Floor, Centenary Building, IACS
Abstract:	In this work we have studied lepton flavour violating Higgs decay $h \rightarrow \mu \tau$ at electron-positron collider. Our aim has been to gauge the smallest possible branching ratio in this non-standard Higgs decay channel that can be probed at the collider experiments. A lepton collider is likely to provide a much better platform to probe such scenarios due to its cleaner environment. We have performed detailed simulation at different centre-of-mass energies in this context and compare our results with the existing LHC results to highlight the advantage of a lepton collider. Throughout our work, we have adopted a model-independent effective field theory approach. Higgs production is considered for two separate cases. In the first case, hWW and hZZ couplings are scaled upto a factor allowed by the latest experimental limits on hWW and hZZ couplings. In the second case, we have introduced higher-dimensional effective operators for these two vertices keeping the previously mentioned scale factor one, to ascertain whether the presence of momentum dependent couplings improves the precision or not.

All are cordially invited to attend the seminar