

## Contribution submission to the conference Münster 2017

**Measuring the branching ratio of  $h \rightarrow \mu^+ \mu^-$  at the International Linear Collider** — ●SHIN-ICHI KAWADA, JENNY LIST, and MIKAEL BERGGREN — Deutsches Elektronen-Synchrotron (DESY), Notkestraße 85, 22607 Hamburg, Germany

After the discovery of a Higgs boson at the LHC, the precise characterization of this particle is one of the most important topics in particle physics. Any deviation from the Standard Model (SM) prediction of its properties would indicate the existence of physics beyond the SM. In this talk, we will present the prospects measuring the branching ratio of  $h \rightarrow \mu^+ \mu^-$  at the International Linear Collider (ILC). The focus will be a new study in full, Geant4-based detector simulation assuming  $4 \text{ ab}^{-1}$  at 500 GeV, as foreseen in the official running scenario. The result will be discussed in the context of projections for operating the ILC at 1 TeV, as well as for the HL-LHC.

**Part:** T  
**Type:** Vortrag;Talk  
**Topic:** 2.11 Higgs-Boson: Zerfall in Fermionen  
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