Contribution ID: **70** Type: **Oral presentation using Zoom**

Charged Higgs boson decays with NLO corrections in two Higgs doublet models

Thursday, 28 October 2021 20:40 (20 minutes)

While the Higgs boson with the mass of 125GeV was discovered at the LHC experiment, the shape of the Higgs sector remains unknown.
Hence, one can consider various possibilities of extended Higgs models.
The property of the discovered Higgs boson will be precisely measured in future collider experiments such as ILC.
This requires theoretical predictions for the discovered Higgs boson should be precisely evaluated.
In addition, precise calculations of additional Higgs bosons are inevitable in case that they are discovered.
In this work, we comprehensively studied radiative corrections to charged Higgs boson decays, focusing on two Higgs doublet models (THDMs) with softly broken Z_2 symmetry.
In this talk, we explain why the radiative corrections to charged Higgs boson decays can be important, and describe which type of corrections can be significant.
We also discuss how four types of THDMs can be separated by decay patterns of the charged Higgs boson, assuming the situation that the Higgs boson coupling with the Z boson is precisely measured at ILC.

1st preferred time slot for your oral presentation

19:00-21:00 JST (12:00-14:00 CEST, 6:00-8:00 EDT, 3:00-5:00 PDT)

2nd preferred time slot for your oral presentation

15:30-17:30 JST (8:30-10:30 CEST, 2:30-4:30 EDT, 23:30-1:30 PDT)

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Session Classification: F-4: Higgs properties

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