



Contribution ID: 87

Type: Oral presentation using Zoom

## Probing electroweak phase transition via relatively heavy additional Higgs bosons at ILC

*Thursday, 28 October 2021 14:40 (20 minutes)*

In this talk, we will discuss the electroweak first-order phase transition in the Two Higgs Doublet Model. First, we show that an upper bound on the mass of the second Higgs boson can be obtained by combining the sphaleron decoupling condition with perturbative unitarity and vacuum stability. This upper bound is obtained even though the  $h(125)$  coupling is standard model-like. Second, we show that both precise measurements of the triple Higgs boson coupling at ILC and gravitational wave observations through LISA, DECIGO, and BBO are important to distinguish whether the mass of the additional Higgs bosons is relatively light or heavy.

### 1st preferred time slot for your oral presentation

13:00-15:00 JST (6:00-8:00 CEST, 0:00-2:00 EDT, 21:00-23:00 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-2: Higgs properties

**Track Classification:** Parallel sessions: Topical Groups: Session F: Higgs properties