

F-term loop driven electroweak baryogenesis

Wednesday, 25 April 2012 14:00 (25 minutes)

The nondecoupling phenomena of the Higgs sector is essential for successful electroweak baryogenesis and its collider test. It is known that in the 2HDM, the strong first order phase transition can be realized by the nondecoupling loop effects of the heavy Higgs bosons, and its effects inevitably lead to a significant deviation of the triple Higgs boson coupling from the standard model value and thus testable at the ILC. In this talk, we consider such a possibility in a SUSY model. Its Higgs sector is composed of four Higgs doublets and the pair of the charged singlets. Unlike the MSSM or NMSSM, the electroweak phase transition can be strongly first order due to the sizable F-term loop effects, which indicates that the nondecoupling effects appear in the triple Higgs boson coupling and measurable at the ILC.

Presenter: SENAHA, Eibun (KIAS)

Session Classification: ACFA Physics