Contribution ID: **31**   Type: **parallel talk**

Electroweak phase transition and Higgs boson couplings in the scale-invariant two Higgs doublet model

Tuesday 5 May 2015 15:15 (15 minutes)

We revisit an electroweak phase transition in the scale-invariant two Higgs doublet model in light of 125 GeV Higgs boson. The analysis is conducted by using the finite temperature one-loop effective potential with thermal resummation. We also discuss its impact on the
Higgs boson couplings. We find that the so-called sphaleron decoupling condition is more severe than the conventional one by about 20% in phenomenologically allowed regions.
It is also found that even when the Higgs couplings to the gauge boson and fermions are the same as in the standard model, a large deviation may appear in the triple Higgs boson coupling due to nondecoupling effects in this model.

Author: Ms FUYUTO, Kaori (Nagoya University)

Co-author: Dr SENAHA, Eibun (Nagoya University)

Presenter: Ms FUYUTO, Kaori (Nagoya University)

Session Classification: Cosmology III