

## **Masashi Aiko "Higgs Probes of axion-like particles"**

We study axion-like particle contributions to the Higgs boson decays. The particle is assumed to couple with the standard model electroweak gauge bosons. Although direct productions of axion-like particles have often been discussed, we investigate indirect contributions to the Higgs boson decays into fermions, photons,  $W W$ , and  $Z Z$  bosons at the one-loop level. We found that the corrections to the fermions are suppressed, whereas precise measurements of the di-photon channel of the Higgs boson decay can provide a significant probe of the model especially when the axion-like particle is heavy and its coupling to di-photon is suppressed.

**Session Classification:** Short talks