



Contribution ID: 199

Type: Poster

## Determination of the mass anomalous dimension for $N_f=12$ and $N_f=9$ $SU(3)$ gauge theories

*Tuesday, 24 June 2014 18:10 (2 hours)*

We show the numerical simulation result for the mass anomalous dimension of the  $SU(3)$  gauge theory coupled to  $N_f = 12$  fundamental fermions.

We use both the step scaling method and the hyperscaling for the Dirac eigenmode to determine the anomalous dimension in the vicinity of the infrared fixed point of the theory.

The continuum extrapolation is carefully taken in both analyses.

We also show our preliminary result of the anomalous dimension for  $N_f=9$  case.

**Primary author:** Dr ITOU, Etsuko (KEK, Japan)

**Co-author:** Mr TOMIYA, Akio (Osaka University)

**Presenter:** Dr ITOU, Etsuko (KEK, Japan)

**Session Classification:** Poster session

**Track Classification:** Physics Beyond the Standard Model