



Contribution ID: 217

Type: **Contributed talk**

Possible scenario of dynamical chiral symmetry breaking in the instanton liquid

Wednesday, 10 July 2024 17:10 (20 minutes)

We compute the vacuum energy density as a function of the quark condensate in the interacting instanton liquid model (IILM) and examine a pattern of dynamical chiral symmetry breaking from the behavior of the vacuum energy density at the origin. This evaluation is performed by using a numerical simulation of the IILM. We find that chiral symmetry is broken in the $U(1)_A$ anomaly assisted way in the IILM with three-flavor dynamical quarks. We also find the instanton-quark interaction included in the IILM plays a crucial role for the symmetry breaking by comparing the full and the quenched IILM calculations.

session

E. Hadron and Nuclear Interactions

Primary author: Mr SUDA, Yamato (Tokyo Institute of Technology)

Presenter: Mr SUDA, Yamato (Tokyo Institute of Technology)

Session Classification: E. Hadron and Nuclear Interactions