

KEK Theory Meeting on Particle Physics Phenomenology (KEK-PH2018
winter) and 3rd KIAS-NCTS-KEK workshop on Particle Physics
Phenomenology

Contribution ID: 12

Type: **not specified**

Realistic axion model with "Gauged" PQ mechanism

Wednesday, 5 December 2018 11:30 (30 minutes)

The Peccei-Quinn (PQ) symmetry may be badly broken by the quantum gravity effect. I suggest the general prescription to protect the PQ symmetry by the gauge symmetry. Then, I mention its potential cosmological problem due to extra fermions which are introduced to cancel the self and the gravitational anomalies. Finally, I show the simple model with the B-L gauge symmetry, where the PQ symmetry can be sufficiently protected without adding extra fermions.

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Session Classification: Plenary Session