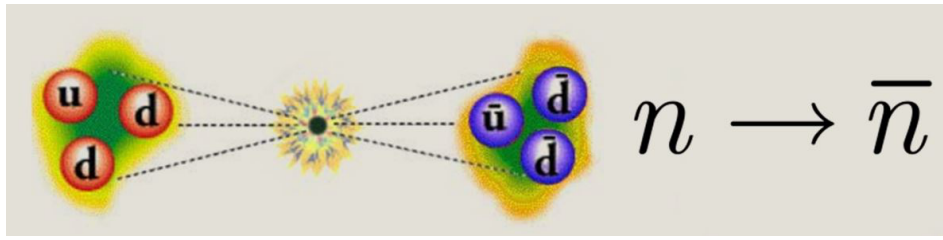


# Theoretical Innovations for Future Experiments Regarding Baryon Number Violation, Part 1



Contribution ID: 12

Type: Oral Presentation

## Update on the post-sphaleron baryogenesis model prediction for neutron-antineutron oscillation time

*Tuesday, 4 August 2020 13:00 (30 minutes)*

Post-sphaleron baryogenesis (PSB) is an attractive low-scale mechanism to explain the observed matter-antimatter asymmetry of the Universe. The same  $\Delta B=2$  operator that gives rise to baryogenesis in this scenario also leads to neutron-antineutron oscillation. We show that the PSB mechanism, when embedded in a quark-lepton unified model based on the Pati-Salam gauge group, leads to an absolute upper limit on the neutron-antineutron oscillation time, which might be within reach of future experiments. The multi-TeV-scale scalar diquarks in this model could also be searched for at the LHC and future hadron colliders.

### Contribution Title

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