

International Workshop on Grand Unified Theories: Current Status and Future Prospects



Contribution ID: 59

Type: **not specified**

Discrete Gauge Symmetries and Proton Stability in grand unified theories

Monday 17 December 2007 11:00 (50 minutes)

We discuss the results of a search for anomaly free Abelian Z_N discrete symmetries that lead to automatic R-parity conservation and prevents dangerous higher-dimensional proton decay operators in simple extensions of the minimal supersymmetric extension of the standard model (MSSM) based on the left-right symmetric group, the Pati-Salam group and $SO(10)$. We require that the superpotential for the models have enough structures to be able to give correct symmetry breaking to MSSM and potentially realistic fermion masses. We find viable models in each of the extensions and for all the cases, anomaly freedom of the discrete symmetry restricts the number of generations.

Primary author: Prof. MOHAPATRA, Rabindra. N. (University of Maryland)

Presenter: Prof. MOHAPATRA, Rabindra. N. (University of Maryland)

Session Classification: Plenary Talks