Contribution ID: **43** Type: **not specified**

Non-Abelian Discrete Dark Matter

Tuesday 31 May 2011 17:00 (15 minutes)

We consider the minimal model in which dark matter is stabilized by a non-Abelian discrete symmetry. The symmetry group is taken to be D3, which is the smallest non-Abelian finite group. The minimal model contains (nontrivial) singlet and doublet scalar representations of D3 which couple to the Standard Model fields via the Higgs portal. This construction predicts two species of dark matter over much of the parameter space. Nontrivial interactions under D3 lead to a novel thermal history of dark matter, while the multi-component nature of dark matter can be tested by future direct detection experiments.

Authors: Dr ADULPRAVITCHAI, Adisorn (Max Planck Institute for Nuclear Physics); Dr BATELL, Brian (Perimeter Institute for Theoretical Physics); Dr PRADLER, Josef (Perimeter Institute for Theoretical Physics)

Presenter: Dr ADULPRAVITCHAI, Adisorn (Max Planck Institute for Nuclear Physics)

Session Classification: P6 –DM MODELS & LEPTOGENESIS