Short Presentations

Chair: Lu-Hsing Tsai (NTHU, Taiwan)

16:40 PM - 16:55 PM, April 3

Nguyen Thi Thuy (Yonsei University, Korea)

Title: The 3-3-1-1 model with neutral fermion

Abstract: We extend the SU(3)_C x SU(3)_L x U(1)_X model with neutral fermion into the SU(3)_C x SU(3)_L x U(1)_X x U(1)_N model, in which the extra U(1)_N symmetry behaves as a gauge symmetry, N=B-L+2/\sqrt{3}T_8. W-parity, resulting from broken B-L, similar to R-parity in supersymmetry, is conserved. In the 3-3-1-1 model with neutral fermion, all particles that have wrong lepton numbers are odd under W parity. This characteristic does not exist in other versions of 3-3-1-1 model such as the minimal version or version with right handed neutrinos. The three Higgs triplets, \chi, \eta, \rho, and one Higgs singlet, \phi, are introduced to give mass for all fermions and gauge bosons in this model. The right handed neutrinos get Majorana masses in order of <\phi>. This model can be a good model to explain the baryon symmetry of the universe in our next work.

16:55 PM - 17:10 PM, April 3

Sumit Kumar (Yonsei University, Korea)

Title: **Vector like leptons with extended Higss sector**

Abstract:

17:10 PM - 17:25 PM, April 3

Shivani Gupta (Yonsei University, Korea)

Title: **Parametrizing the Lepton Mixing Matrix in terms of Charged Lepton Corrections**

Abstract: We consider a parametrization of the lepton mixing matrix in which the deviations from maximal atmospheric mixing and vanishing reactor mixing are obtained in terms of small corrections from the charged lepton sector. Relatively large deviations for the reactor mixing angle from zero can be obtained in this parametrization. The Jarlskog rephasing invariant measure of CP violation at the leading order has a single phase difference which can be identified as Dirac-type CP violating phase in this parametrization.

17:25 PM - 17:40 PM, April 3

Jeong, Yu Seon (Yonsei University, Korea)

Title: Color Dipole Cross Section in DIS

Abstract: We investigate the way to extract color dipole cross section from the deep inelastic structure function F_2. In the dipole picture, the structure function can be expressed as the convolution of the dipole cross section and the photon wave function. Instead of starting from the presumed dipole cross section in order to obtain the structure function, we find the dipole cross section from the parameterized structure function using the Fourier transform and its inverse.