ICHEP2012

Contribution ID : 47

Baryon asymmetry, dark matter and neutrino mass via exotic multiplets

Saturday 07 Jul 2012 at 14:45 (00h15')

Content :

We demonstrate that by adding three exotic fermion 5-plets and one scalar 6-plet to the standard model, a consistent solution to the problems of baryon asymmetry, dark matter and neutrino mass can be obtained. This is possible because renormalizability and standard model gauge invariance allow the lightest exotic particle in this model to be a dark matter candidate if the new 6-plet scalar does not develop a nonzero vacuum expectation value. Furthermore, light neutrino masses can be generated radiatively at one-loop while the baryon asymmetry is produced by the CP-violating decays of the second lightest exotic particle.

Travel Support for Early Career Researchers :

The ICHEP conference series has established itself as one the most important events for high energy physicists. Therefore, it is essential that early-stage researchers (like myself, PhD graduated in 2009) will not miss out due to financial difficulties. In Taiwan, funding for postdoc travel has a fixed limit regardless of the destination. As a result, overseas travels are often limited to local Asian areas only. Besides, the weakness of TWD compare to AUD means that there is an extra burden on any costs. Hence, I believe that support in the form of a waived or reduced registration fee would be very helpful given the large amount of spending expected elsewhere for such a distant trip already.

Primary authors : Mr. LAW, Sandy (National Cheng Kung University (TW))

Co-authors :

Presenter : Mr. LAW, Sandy (National Cheng Kung University (TW))

Session classification : Room 219 - BSM - Non-SUSY - TR3

Track classification : Track 3 - BSM - Non-SUSY Exotics

Type : Parallel Sessions