Abstract Submitted
for the APR15 Meeting of
The American Physical Society

Dark matter in new regions of the NMSSM with a 125 GeV Higgs[1] AUGUSTO MEDEIROS DA ROSA[2], FRANCESC FERRER, Washington University in Saint Louis, ROBERTO FRANCESCHINI, CERN — The large higgs mass and the null results of the searches for supersymmetric particles at the LHC, are more easily accomodated in non-minimal extensions of the Standard Model, such as the NMSSM. We outline the dark matter properties in a very interesting region of the NMSSM, where the large ~ 125 GeV higgs mass is the result of mixings between the SM-like higgs and the singlet higgs. At variance with the usual large λ NMSSM, the higgs sector is weakly self-coupled, and the reduced higgsino/singlino coupling assists in attaining the observed relic abundance from thermal decoupling.

[1]Supported by the D.O.E. at Washington University
[2]Graduate student

Francesc Ferrer
Washington Univ

Date submitted: 09 Jan 2015 Electronic form version 1.4