



LABORATORY FOR ELEMENTARY-PARTICLE
PHYSICS (LEPP)

Theory Seminar



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Twin Two Higgs Doublet Models: Explanation of Twin Z2 Breaking and Dark Matter Candidate

The twin Higgs scenario introduces a twin Z_2 symmetry to protect the Higgs mass against quadratical divergence. This Z_2 symmetry should be broken at electroweak scale, but its origin is still unknown. I will focus on the mirror twin two Higgs doublet models (twin 2HDMs) and utilize this framework to explain origin of Z_2 symmetry breaking via spontaneous and radiative Z_2 breaking mechanisms. This twin 2HDM setup could also be extended to the left-right twin Higgs without introducing the soft mass term. In a special twin 2HDM setup, I also discuss a new dark matter candidate under a new T-parity.

Wednesday, Jan 31, 2018
2:00pm
401 Physical Sciences Building