

Abstract Submitted  
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**Mixed Wino Cold Dark Matter** EUN-KYUNG PARK, HOWARD BAER, JORGE O'FARRILL, AZAR MUSTAFAYEV, Florida State University — We examine the Wino content in neutralino Dark Matter with Nonuniversal Gaugino Masses. In our study, we increase  $M_2$  so the ratio of  $M_1/M_2 \sim 1.2 - 1.8$  to get exact DM density  $\Omega h^2$  in accord with WMAP value. We investigate rates for indirect detection of neutralinos via detection of muons in neutrino telescope, and detect of photons, positrons and anti-protons by balloon and space based detectors. We compare the reach of DM for indirect detection with the reach for direct detection, and with the reach for collider searches. We find the measured wino content of the LSP and reduced mass difference of  $m_{\tilde{W}_1} - m_{\tilde{Z}_1}$  can have effects on the depletion of relic neutralino density. If mixed wino DM solves CDM problem, the mass reconstructions at LHC should be simpler.

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