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Dark Matter Detection rates in models with a Well-Tempered Neutralino EUN-KYUNG PARK, HOWARD BAER, Florida State University, AZAR MUSTAFAYEV, University of Kansas, XERXES TATA, University of Hawaii — In models with a “well-tempered neutralino”, where the soft SUSY breaking terms are adjusted to give the measured abundance of CDM in the universe from WMAP, the neutralino is typically of the mixed bino-wino or mixed bino-higgsino state. Along with the necessary enhancement to neutralino annihilation rates, these models tend to give elevated direct detection scattering rates compared to predictions from SUSY models with universal soft breaking terms. We present neutralino direct detection cross sections from a variety of models containing a well-tempered neutralino, and find cross section asymptotia with detectable scattering rates. These asymptotic rates provide targets that various direct CDM detection experiments should aim for.

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