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BB Scattering at $N_c=4$ for Stealth Dark Matter

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We study baryon-baryon scattering with Luscher's method for $N_c = 4$ gauge theory. To improve signal in our scattering observables, we employ the Laplacian Heaviside or Distillation method to construct low rank interpolating operators with good overlap with low lying energy states. Though of interest for large N_c QCD studies, the LSD collaboration has been investigating a dark matter candidate called stealth dark matter, which would be the neutral composite baryon of an $SU(4)$ gauge theory. In order to place constraints on dark matter self-interactions in this theory, we study BB scattering, and present here our preliminary results.

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