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Limits on anomalous short-range spin-dependent interactions from spin-exchange collisions[1] ALEC BOYD, Pomona College, DEREK KIMBALL, California State University - East Bay — Spin-exchange between light alkali atoms and noble gases proceed mainly due to the Fermi contact interaction in binary collisions, leading to small spin-exchange cross sections ($\sim 10^{-24}$ cm^2). We investigate constraints on short-range ($\sim$1 nm) anomalous spin-dependent forces between nuclei based on the agreement between theoretical predictions and experimental measurements of spin-exchange cross sections for collisions between light alkali atoms and noble gases.

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