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Evaluating Entanglement in Stern-Gerlach Dynamics JEAN-FRANCOIS S. VAN HUELE, Brigham Young University, BAILEY C. HSU, National Chiao Tung University, Hsinchu 30010, Taiwan — The Stern-Gerlach experiment that revealed the reality of space quantization in 1922 is also an exemplary model for entanglement between space and spin. Based on the result of analytical and numerical dynamical Stern-Gerlach calculations, we search for a representative measure of space-spin entanglement. We compare different entanglement measures that have been proposed and apply some of them to the dynamics of spin separation in a beam of neutral particles traversing inhomogeneous magnetic fields.

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