Abstract Submitted
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Symmetries of Nucleon-Nucleon Scattering ROLAND FARRELL, University of Washington — The S-matrix for low-energy nucleon-nucleon scattering shows many properties that are not transparent in the effective action. Parameterized by momenta, the S-matrix can be viewed as flowing inside a region bounded by unitarity constraints. At the corners of this region, the S-matrix is at a fixed point of the RG and furnishes a representation of the Klein four-group. At leading order in the effective range expansion, the path that the S-matrix traces out has an isometry corresponding to a conformal (Möbius) transformation. It is found that the curvature of this trajectory is related to the entanglement power of the S-matrix, a state-independent measure of operator entanglement. This is a new, more geometrical, way to think about entanglement.

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