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SU(2) non-Abelian gauge field theory in one dimension on digital quantum computers[1] NATALIE KLCO, JESSE STRYKER, MARTIN SAVAGE, Institute for Nuclear Theory, University of Washington — This talk will present the results of a dynamical, multi-plaquette calculation of one-dimensional SU(2) lattice gauge theory implemented on IBM's quantum hardware. By leveraging local gauge symmetry to analytically incorporate the angular momentum alignment variables and to provide computational flexibility, plaquette operators are specifically designed for qubit implementation on quantum registers encoding the link total angular momentum.

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