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Highly Spinning Initial Data: Gauges and Accuracy YOSEF ZLO-CHOWER, Rochester Inst of Tech, IAN RUCHLIN, West Virginia University, JAMES HEALY, CARLOS LOUSTO, Rochester Inst of Tech — We recently developed a code for solving the 3+1 system of constraints for highly-spinning black-hole binary initial data in the puncture formalism. Here we explore how different choices of gauge for the background metric improve both the efficiency and accuracy of the initial data solver and the subsequent fully nonlinear numerical evolutions of these data.

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