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The RIT Binary Neutron Star Initial Data Library¹ JOSHUA FABER, TANMAYEE GUPTE, Rochester Institute of Technology, GRACE FIACCO, Montana State University, TRUNG HA, University of North Texas — We report on the RIT Binary Neutron Star Initial Data Library, a publicly available repository of quasi-equilibrium data generated using the Lorene code, for use in dynamical simulations of merging neutron stars. Our initial data include both equal-mass and unequal-mass configurations, for a variety of neutron star equation of state models including piecewise polytropes as well as tabulated models motivated by nuclear physics calculations. We will discuss the step required to construct such models, including the most robust ways to generate a sequence of configurations at different binary separations.

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