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Event Horizons from black-hole rings MARCELO PONCE, Center for Computational Relativity and Gravitation, Rochester Institute of Technology, CARLOS LOUSTO, YOSEF ZLOCHOWER, Center for Computational Relativity and Gravitation and School of Mathematical Sciences, Rochester Institute of Technology — We construct and evolve non-rotating vacuum initial data with a ring singularity, based on a simple extension of the standard Brill-Lindquist multiple black-hole initial data, and search for event horizon with spatial slices that are topologically tori. We find, that it is not possible to produce a finite-sized toroidal horizon, which only occurs in a singular limit where the horizon width has zero size, indicating the presence of a naked singularity.

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