

Abstract Submitted
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The beginnings of black hole horizons DIETER BRILL, Maryland Center for Fundamental Physics, University of Maryland — The beginning of a black hole horizon is the set of points where generators enter the horizon. Several properties of this “entry set” and the early horizon near it are shown: It is the locus of the horizon’s self-intersections, and it is spacelike of dimension zero, one or two, where this is defined. It is connected but can bifurcate in possibly complicated ways. On spacelike surfaces the entry of generators manifests itself in a kink in the horizon. The kinks propagate at superluminal speed until they “run out of steam,” slow down to light speed and disappear. Kinks generally run from the main collapse region to secondary collapse events until no more new generators enter the horizon. This is illustrated by collapse of two mass concentrations, and by the case of a large number of particles.

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