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A Particle Description of Black Holes HAL HAGGARD, Bard College, LAURENT FREIDEL, Perimeter Institute for Theoretical Physics — Leveraging the Kerr-Schild form of the metric, we show that a Schwarzschild black hole can be described as a particle-like defect in a family of spatial slices. This solution can be characterized by a system of gravitational charges that are locally conserved. This unusual perspective on black holes should help to identify their distinctive nature in quantum gravity.

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