

Quantum-Dimensional Explanation of the J1550-564 Black-Hole Jet

HYPOTHESIS: There is a gravity-vacuum column in the gravity field defined by the black hole which extends above its flat surface to, at least, the distance of the black hole's radius. A black hole consists of a gravitational focal point for a multi-star system with sufficient gravity to collapse the quantum-squared vacuoles defining space. That collapsed quantum space can no longer conduct light radiation nor admit matter to penetrate it. Matter brought in by gravitational influence at the periphery (horizon) of the black hole loses its definition of "mass," but not volume, because matter can no longer expand quantum-space which is absent in the gravity-vacuum column. The black hole can eject captured matter by accelerating it to the speed of light because matter's loss of "mass definition" within the sink hole eliminates inertia. Ejected matter reenters the black-hole gravitational system at the speed of light. The deceleration of that matter when it reenters the black hole gravitational system can be calculated using the quantum calculus formula for mean acceleration in a gravitational system.

The Quantum Calculus Formula for Acceleration within a Gravitational System

x =distance of body as measured in radius units of the source of the gravitational field.

r =radius of the black hole; $x(r)$ =distance in meters. g =gravitational constant at periphery of black hole (accel. value).

From Quantum-Dimensional Gravitational Calculus ¹

$$\left(1 - \frac{1}{x}\right)g = \int_1^x \frac{g}{x^2} dx = \text{mean acceleration from "x" to "x=1"}$$

$$\left(1 - \frac{1}{x}\right)g(t) = \frac{2(x-1)}{t} = (x-1)\sqrt{\frac{2g}{x}} = \text{terminal velocity}$$

This is the quantum-dimensional formula for the mean acceleration of a captured object through a gravitational field.

Terminal velocity is equal to mean acceleration rate *times* time of acceleration which calculates to above formula.

The Equation for an Escaping Object Decelerating in a Gravitational System (Applied to J1550-564 Black Hole)

$$\text{(Velocity at "x")} = \text{(Initial velocity)} - t \int_1^x \frac{g}{x^2} dx = \text{(Init. veloc.)} - (x-1)\sqrt{\frac{2g}{x}}$$

$$\text{(Velocity at "x" for black hole)} = c - (x-1)\sqrt{\frac{2g}{x}}$$

¹ http://www.paradigmphysics.com/gravity_open_energy.pdf