



Hawking Radiation

Recently, scientists proposed that small, hot "morsel" [black holes](#), ejected during larger **black hole mergers**, could emit detectable **high-energy photons**. These morsel black holes would emit **Hawking radiation** (named after Stephen Hawking) at an increasing rate as they lose mass, leading to their **explosive demise**.

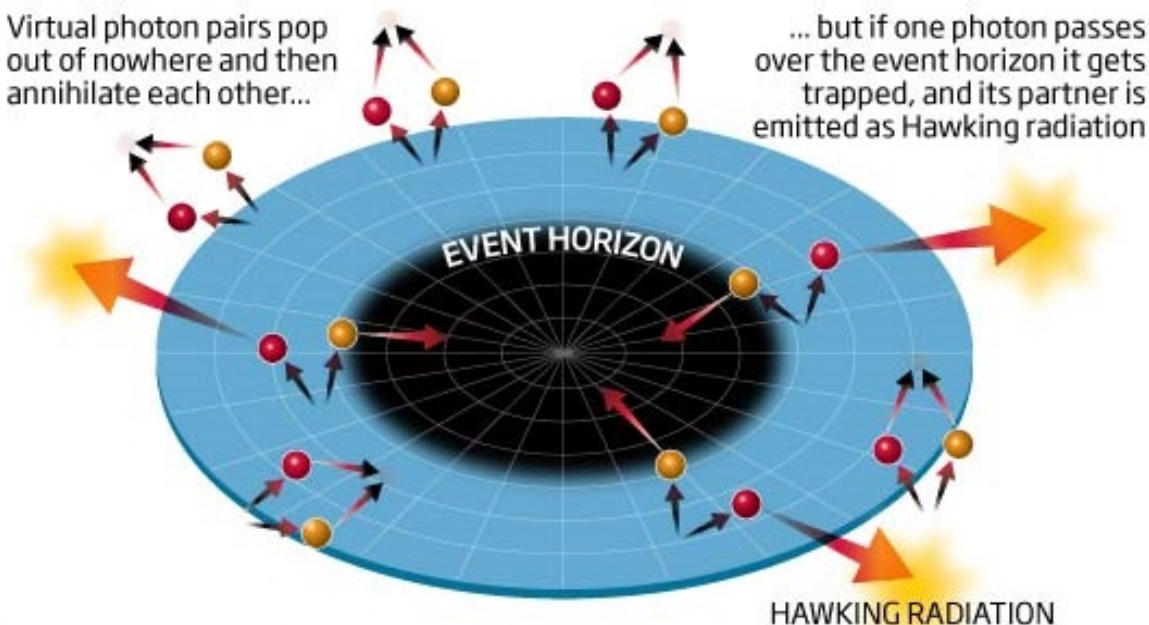
- Smaller black holes are hotter and emit Hawking radiation faster than larger ones.
- [Gravitational waves](#) could detect black hole mergers, followed by [gamma-ray telescopes](#) spotting **high-energy photons** from morsel black holes as they emit Hawking Radiation.
 - It is predicted that the gravitational field of a black hole should **cause the creation of particles**, mostly photons directly from the vacuum of space.
- **Hawking's Radiation:**
 - It is the idea that black holes leak [thermal radiation](#), gradually evaporating and ending their existence with a final explosion.
 - When one particle goes past the [event horizon](#), it can't join back with its partner. The particles outside are known as Hawking radiation.
 - The event horizon is a region of space **beyond the black hole** or "point of no return."

//

BLACK HOLE

Virtual photon pairs pop out of nowhere and then annihilate each other...

... but if one photon passes over the event horizon it gets trapped, and its partner is emitted as Hawking radiation



[Read more...](#)

