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.

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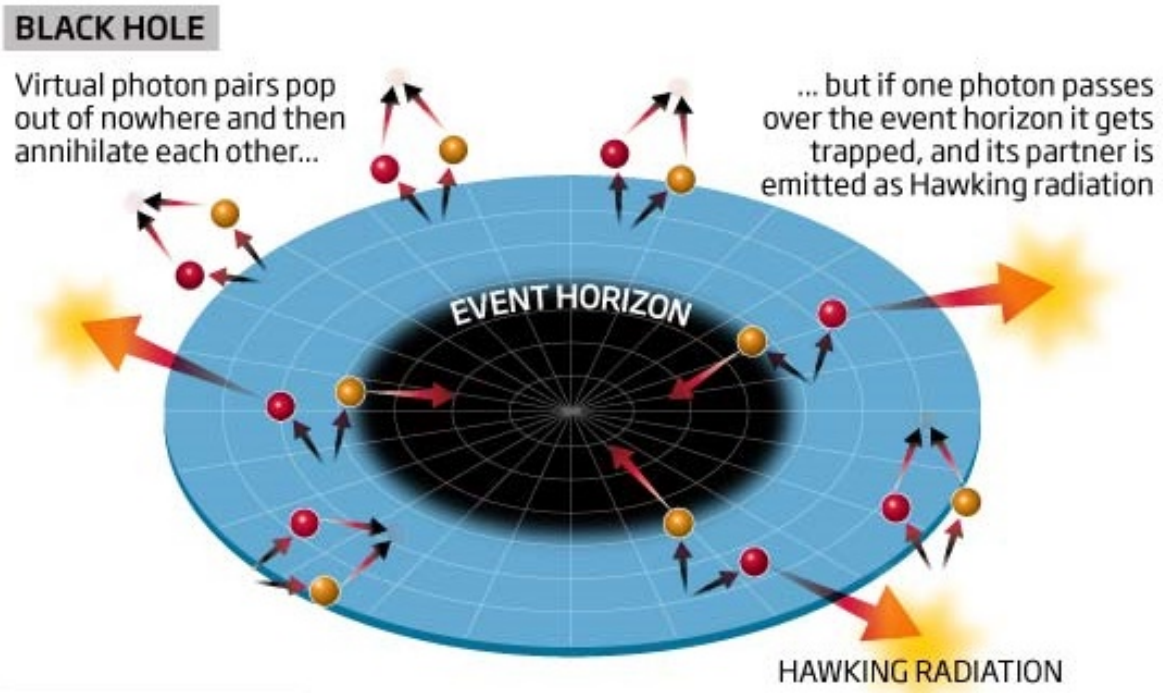

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