

Abstract Submitted
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Dark Energy must be measurable as Entropy. The main source of this Entropy causing the accelerated expansion of our universe is Hawking radiation. PAUL OBRIEN¹, None — Dark Energy must be measurable as Entropy, it must have a temperature. The main source of this Entropy is Hawking radiation from BH's. BH's radiate Entropy their whole life into the vacuum of space. Hawking incorrectly assumed because they are radiating they must be evaporating. This is incorrect. The growth of a black hole is a thermodynamic process. The temperature of the incoming energy doing the work must be higher than the temperature of the outgoing energy. The conservation of quantum information requires this. The increase in Entropy of this process increases the space-time volume by known rules. The symmetry between mass and energy as represented by quantum information having a dual basis guarantees the separation of mass and energy at the horizon. The mass falls in, the energy is radiated at Hawking temperature and quantum information is conserved as a duality.

¹Symmetry and the conservation of quantum information

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Retired

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