



Black Holes and Standard Model: defining a new regime for theoretical approaches.

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There is much agreement on the need for ideas to unite theories for black holes with elementary particle physics. Quantum mechanics is likely to form a bridge between these regimes. However, how to proceed from there, is a topic of much debate.

Black holes are characterised by their horizons, both for future events as for states in the past. Applying known laws of physics appears to be almost straightforward and this leads to elegant pieces of insights. But one of the difficulties is that particles that have not yet reached a horizon are well described by the equations for the Standard Model, whereas a totally different language appears to be required for what happens next.

