

Dilatonic (A)dS Black Holes and the Weak Gravity Conjecture

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The Weak Gravity Conjecture (WGC) was proposed as a consistency condition for the low-energy description of U(1) gauge theories in quantum gravity, and can be obtained from the existence conditions of horizons for Reissner-Nordström black holes. I plan to report on the conditions for the existence of horizons for black hole solutions arising in Einstein-Maxwell dilaton theories with non-trivial dilaton potential, and discuss the implications for the definition of the WGC in the corresponding theories. This is based on work with K. Benakli and G. Lafforgue-Marmet.

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