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Weak gravity, de Sitter space and light charged gravitini

The magnetic Weak Gravity Conjecture constrains effective theories with de Sitter critical points by requiring that the Hubble scale is parametrically lower than the WGC cutoff. We argue that in extended supergravity, all dS critical points with light charged gravitini violate this constraint and present a proof of this statement in N=2 supergravity. This excludes all previously known de Sitter vacua in N=2 supergravity. We demonstrate the result and some caveats to its assumptions in several new illustrative examples, and relate our result to the Festina-Lente bound and other conjectures regarding light gravitini in de Sitter space.

Type of contribution

Contributed Talk or Poster

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