

Note on the so-called “big G puzzle”

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The problem, sometimes known as a “big G puzzle”, is manifested by very low achieved accuracy of otherwise precise measurements of Newton’s gravitation constant G and by very strange scatter of its values and error bars measured in different laboratories. It evokes an idea that such anomalous behaviour should be due to some undiscovered bias operating universally. A working hypothesis has been established, according to which a candidate for such a source of systematic errors is *the cosmological acceleration* related to the Hubble constant H_0 or to the cosmological constant Λ [1]. The hypothesis has been tested using various results of G measurements taken from the literature.

- [1] J.J. Mareš, V. Špička, P. Hubík: On the nature of fundamental physical constants. Eur. Phys. J. Spec. Top. (2026). <https://doi.org/10.1140/epjs/s11734-026-02191-4>