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# Constraining scalar-Gauss-Bonnet gravity with binary pulsars

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The orbital decay of binary pulsars is a very precise tool for testing general relativity and modified theories of gravity and for constraining the existence of additional neutron star charges. The orbital decay has been used for constraining scalar-tensor theories (STT) decades ago. In the present talk we demonstrate that the same simple methodology used for constraining STT can be applied to scalar-Gauss-Bonnet (sGB) gravity as well. At first, we demonstrate the applicability of the method used for STT by comparing it against results obtained by statistical methods. Following that we proceed towards driving constraints on Einstein-dilaton Gauss-Bonnet gravity.
In addition, we make use of the fact that in sGB gravity the maximal allowed neutron star mass, as well as the minimal allowed black hole mass, are parameter-dependent and, by imposing the contemporary observational limits on the neutron star and black hole masses, we set additional constraints on the parameter space of the theory.

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