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New slow-roll approximations for inflation in Einstein-Gauss-Bonnet gravity

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We propose new slow-roll approximations for inflationary models with the Gauss-Bonnet term. We find more accurate expressions of the standard slow-roll parameters as functions of the scalar field. To check the accuracy of approximations considered we construct inflationary models with quadratic and quartic monomial potentials and the Gauss-Bonnet term. Numerical analysis of these models indicates that the proposed inflationary scenarios do not contradict to the observation data. New slow-roll approximations show that the constructed inflationary models are in agreement with the observation data, whereas one does not get allowed observational parameters at the same values of parameters of the constructed models in the standard slow-roll approximation.

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