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Noether symmetry for Gauss-Bonnet dilatonic gravity

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Noether symmetry for Gauss-Bonnet-Dilatonic interaction exists for a constant dilatonic scalar potential and a linear functional dependence of the coupling parameter on the scalar field. The symmetry with the same form of the potential and coupling parameter exists all in the vacuum, radiation and matter dominated era. The late time acceleration is driven by the effective cosmological constant rather than the Gauss-Bonnet term, while the later compensates for the large value of the effective cosmological constant giving a plausible answer to the well-known coincidence problem.

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