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A pathology in semiclassical gravity

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We point out a pathology with a canonical approach to the semiclassical Einstein equation. To be precise, it is shown that such a theory, subjected to the Dirac constraint analysis, renders itself empty, that is, devoid of any nontrivial degrees of freedom. The reason is identified to be the diffeomorphism invariance.

Keyword-1

Semiclassical gravity

Keyword-2

Constraint algebra

Keyword-3

Diffeomorphism invariance

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