Vacuum energy in asymptotically flat spacetimes in 3 dimensions.[1] DEBRAJ ROY, OLIVERA MISKOVIC, Pontificia Universidad Catlica de Valparaso, RODRIGO OLEA, Universidad Andres Bello — The vacuum energy limit of asymptotically flat spacetimes is calculated, based on the evaluation of the Noether charges. The action formulation used is three-dimensional asymptotically flat gravity based on a ChernSimons formulation in the Poincar group, corresponding to an EinsteinHilbert term in the bulk, plus half of the Gibbons-Hawking term at the boundary. This is required for a well-defined and finite action principle under the conditions adopted. We obtain that the vacuum energy of this space has the same value as the one of the asymptotically flat limit of three-dimensional anti-de Sitter space. We also comment on an approach based on holonomies of the Chern-Simons connection used to model the solutions being considered.

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Date submitted: 14 Jan 2018   Electronic form version 1.4