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The Case against Ghosts in Fundamental Theory

Friday 22 June 2018 09:00 (25 minutes)

I review the theorem of Ostrogradsky and discuss some of the common misconceptions concerning kinetic energy instabilities. Alternate quantizations that attempt to avoid the problem all sacrifice the classical correspondence limit which is a disaster for theories of gravitation. I also argue that efforts to legitimize local higher derivative models with ghosts are misguided because stronger infrared effects occur in nonlocal effective actions, without the ghosts.

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