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# Classical gravitational scattering from a worldline quantum field theory

*Thursday, 8 July 2021 18:00 (30 minutes)*

The quest of the perturbative post-Minkowskian study of the gravitational two body problem
has recently seen advances upon employing perturbative quantum field theory techniques. I report on a
novel approach based on a worldline quantum field theory that provides an efficient way to
study the classical scattering of two massive objects (BHs, neutron stars or stars) in GR. We are able to
efficiently compute the emitted Bremsstrahlung and other observables of such an invent.
Finally, I address the question of adding spin degrees of freedom to the scattered massive bodies and
point out a curious relation of the scattering of Kerr BHs to an N=2 supersymmetric worldline theory.

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