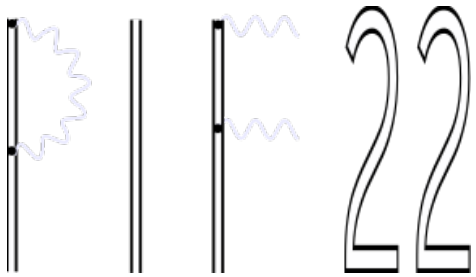

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The On-Shell Highway to Classical Physics

Wednesday 31 August 2022 13:50 (25 minutes)

The KMOC approach is a formalism that expresses classical observables on flat backgrounds in terms of quantum scattering amplitudes. After a first review, I will show two generalizations of the original framework by extending its range of application to classical wave physics and observables on a curved background. Using these, I will prove how to compute the bending of light and waveforms using on-shell amplitudes from coherent states. The talk will conclude with the derivation of non-trivial classical phenomena such as memory effects using only amplitudes on a curved background.

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Session Classification: Gravity and curved space