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(G*) Gravitational scattering on quantum superposed states

Thursday 10 June 2021 16:04 (3 minutes)

This talk aim to discuss the scattering of particles on quantum superposed states. The fact that one of the initial states is in a superposition implies that the plane wave approximation is not valid anymore which is what we usually do. This will lead to the introduction of Wigner function and a formalism to describe this situation.
We will apply this new formalism to the question of gravitational scattering. The idea will be to put in evidence a quantum effect of gravity due to the superposition. We will compute the cross section and discuss the possibility to observe such a small effect.

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