

Gravitational Waves Observables From Scattering Amplitudes

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The extraordinary detection of gravitational waves (GWs) emitted by binary coalescing systems gave us a new instrument to probe our Universe and to test General Relativity (GR). The increasing precision of current and future GWs interferometers requires very accurate predictions of GWs observables. Scattering amplitudes techniques, which for decades have been developed for collider experiments, are now being used to study classical two body problems in GR. I will show how GWs observables can be expressed in terms of scattering amplitudes within the KMOC approach and will highlight how they can efficiently be computed within a heavy mass framework (HEFT).

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