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Two-Loop Unitarity

Thursday 29 August 2013 17:00 (1 hour)

The unitarity method is a key part of the set of on-shell methods for calculating gauge-theory amplitudes both analytically and numerically.
These methods have been used successfully to obtain the one-loop amplitudes needed for a variety of cutting-edge high-multiplicity next-to-leading order calculations for LHC physics. In this talk, I present the first steps in extending maximal unitarity to a computation of two-loop amplitudes, needed for precision LHC calculations. I present the formalism for double-box integrals with various external masses, and aspects of the extension to slashed-box integrals.

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