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*One-Loop Amplitudes of Gluons in  $N = 4$  super Yang–Mills*

Very recently several new techniques in perturbative gauge theory have been introduced. At one-loop, any amplitude of gluons in  $N = 4$  super Yang–Mills can be written as a linear combination of known scalar box integrals with coefficients that are rational functions. Using a generalization of unitarity cuts, in particular quadruple cuts, any coefficient can be easily written as the product of four tree-level amplitudes. Therefore, this new technique solves the problem of computing one-loop amplitudes in  $N = 4$  super-Yang–Mills.