

Massive Scattering Amplitudes for Standard Model: On-shell Massless-Massive Correspondence

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We organize massive tree-level amplitudes in Standard Model by power counting and helicity category, and match them with their high energy origins. The construction of massive amplitudes is based on the massive bootstrap method, decomposing internal and external structures, and the existing leading orders of massless-massive correspondence. For the matching of higher order components, we introduce the on-shell Higgsing mechanism first proposed by (R. Balkin et al., 2022) and further the discussion to propagators.

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