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Electroweak double-box integrals for Møller scattering with three Z bosons

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In this work, we have computed the planar and non-planar contributions to the Møller scattering with three massive Z bosons exchanged between the fermion lines. These cases involve complicated geometries like curves of genus 2 and $K3$ surfaces, which until recently remained inaccessible. We demonstrate how these can be tamed with a newly developed technique for ε -factorization of Feynman Integrals.

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