

# Modern amplitude methods for simple processes in QED.

*Friday 19 July 2024 20:45 (15 minutes)*

We use the toolbox of modern amplitude methods to examine a theory that has been mostly neglected Quantum electrodynamics. In this work we have focused on maximum helicity violating (MHV) amplitudes in massless electrodynamics. Formulas for arbitrary number of external photons for some processes are presented. There we recursively show that the defining property of these amplitudes is just the soft photon theorem. We present this derivation for spinor, scalar and vector electrodynamics through recursion relations. All results are derived fully from symmetry and analytical structure of the underlying theory without the need to look at action or the standard Feynman rules.

## Alternate track

## I read the instructions above

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**Session Classification:** Poster Session 2

**Track Classification:** 10. Formal Theory