

Feynman Diagrams via TikZ

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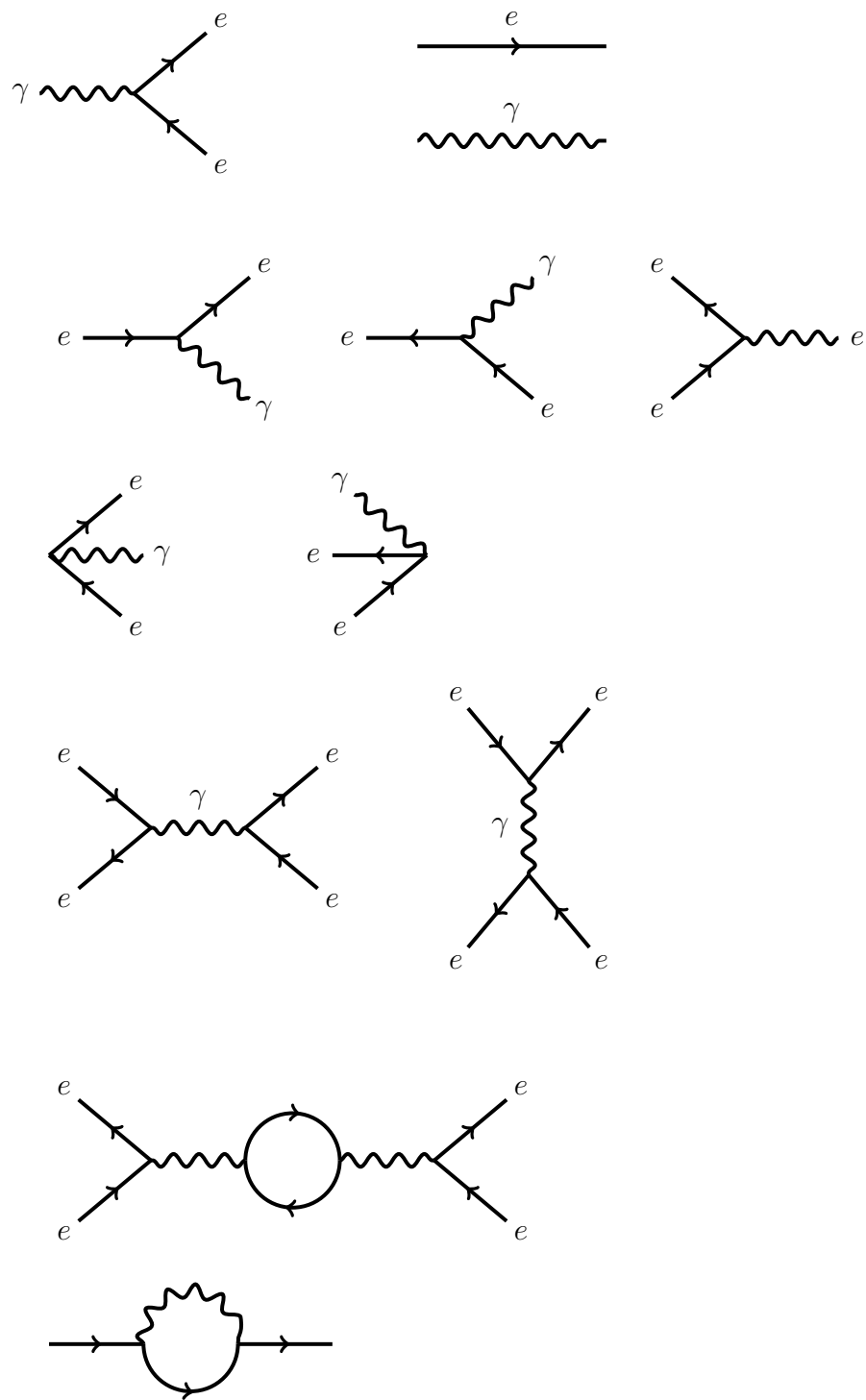
This version: October 27, 2014

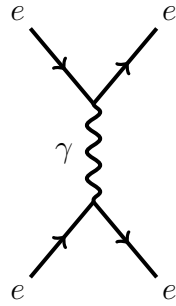
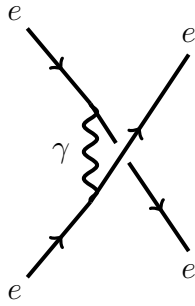
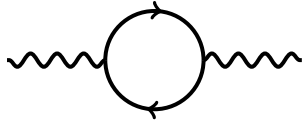
Abstract

These are sample Feynman diagrams.

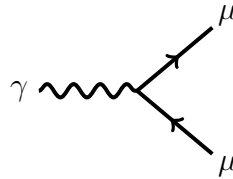
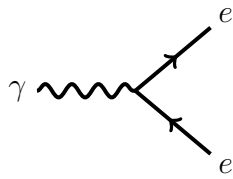
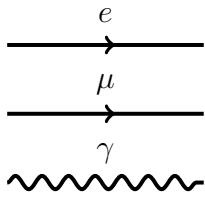
Contents

1 QED

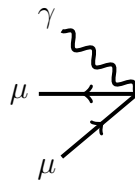
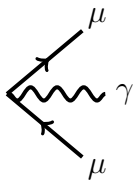
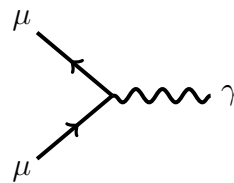
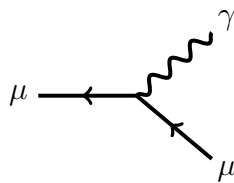
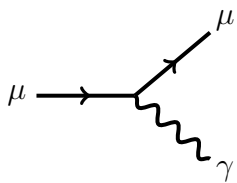
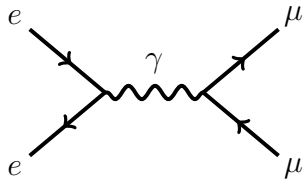




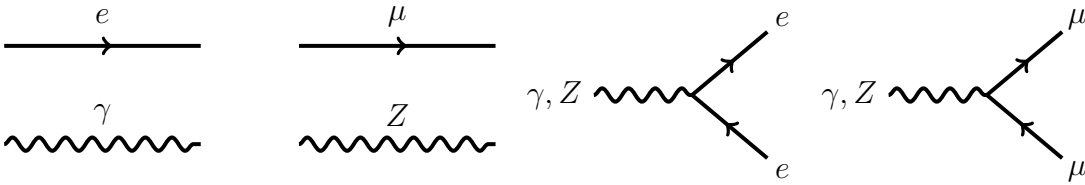
2 QED+ μ



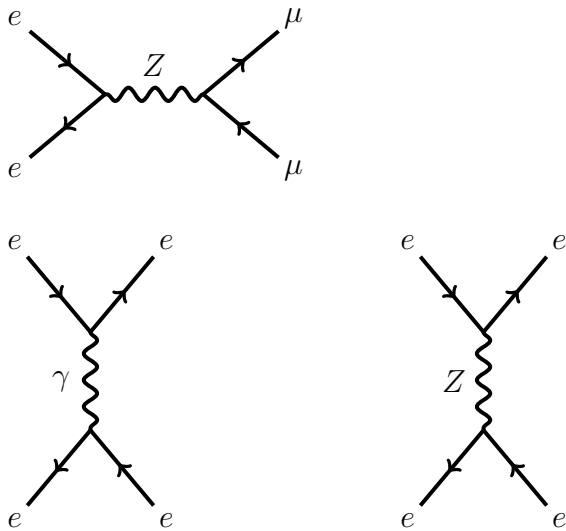
Electrons to muons



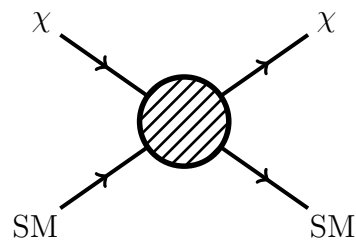
3 QED+Z+ μ



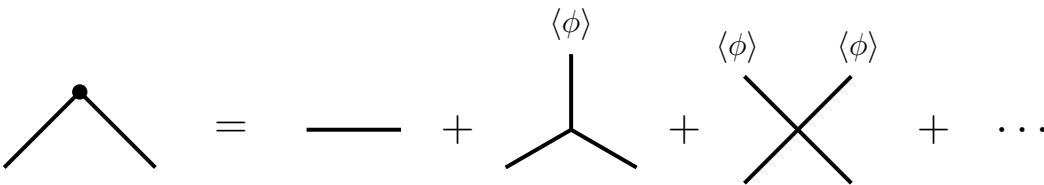
Electrons to muons via Z



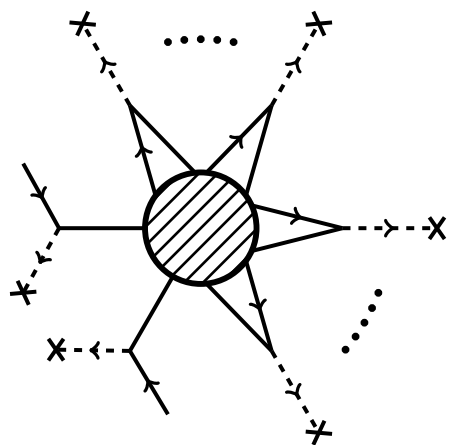
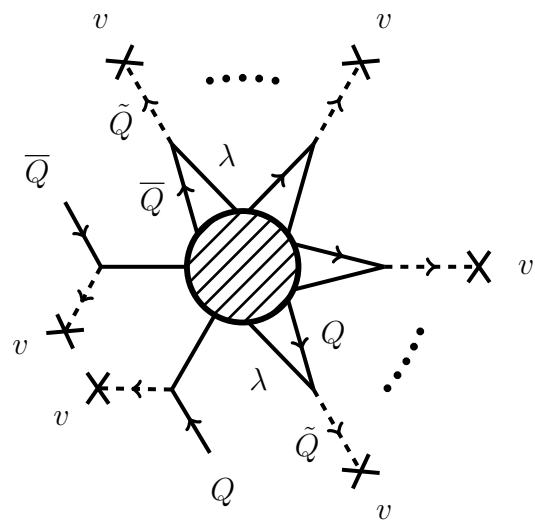
4 Blob diagrams



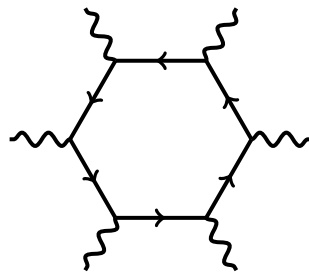
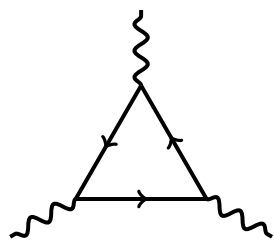
5 Coleman Weinberg



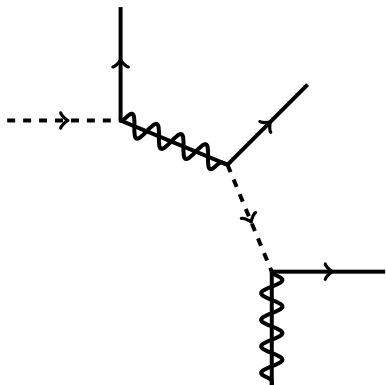
6 't Hooft operator



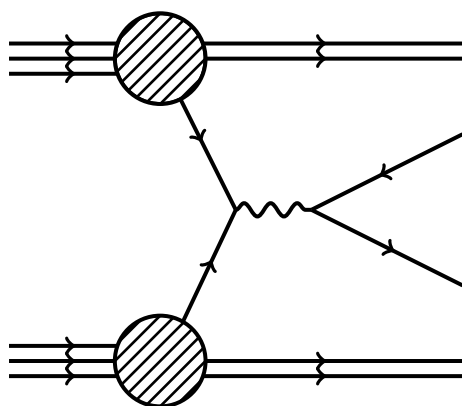
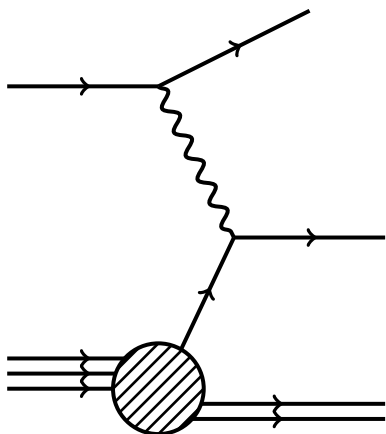
7 Anomaly



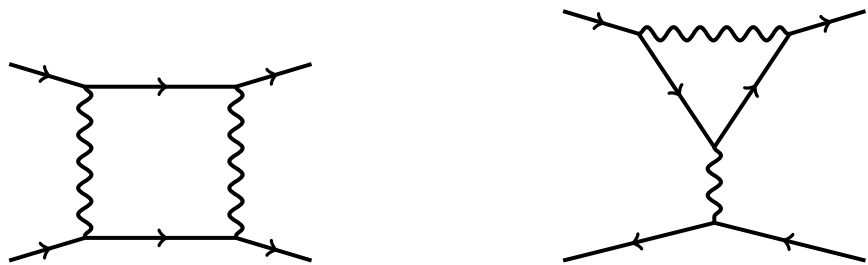
8 SUSY Cascade



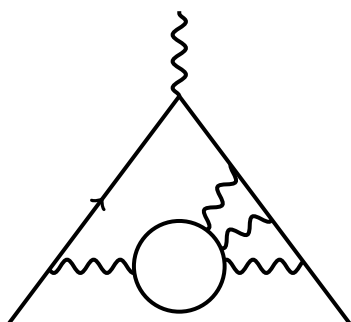
9 Hadronic interactions



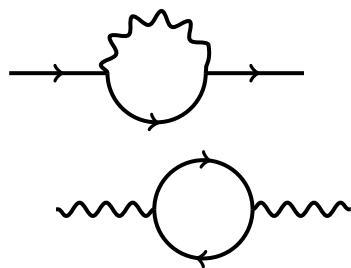
10 Flavor (box and penguins)



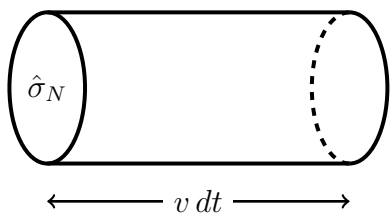
11 Multiloop



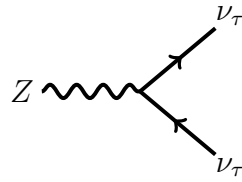
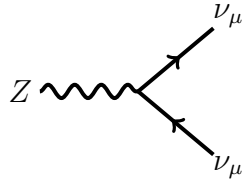
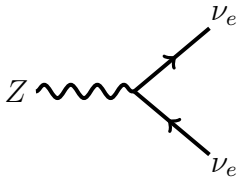
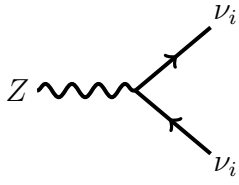
12 Renormalization



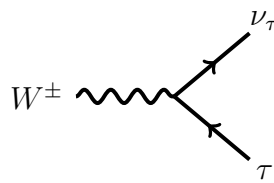
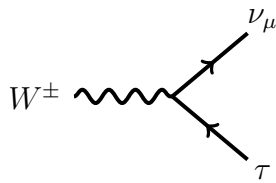
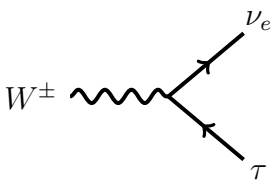
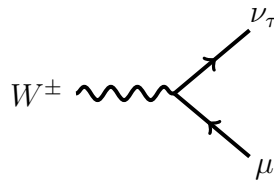
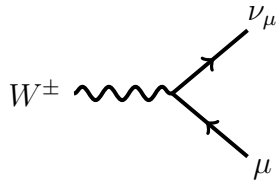
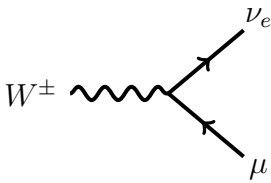
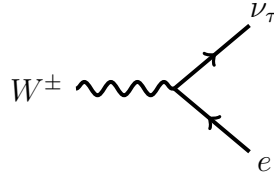
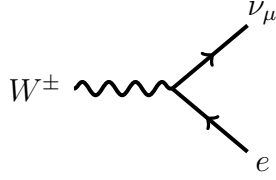
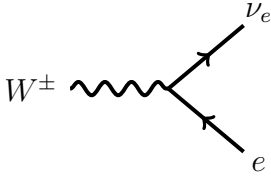
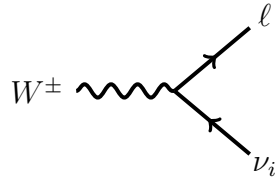
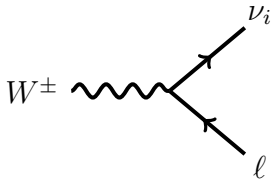
13 Cross section



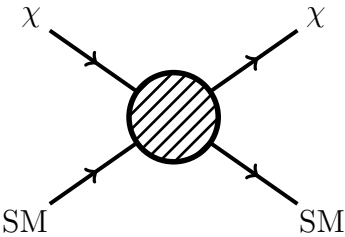
14 Z boson



15 W boson



16 Dark Matter



17 Coleman Weinberg

A diagrammatic equation for the Coleman-Weinberg effective potential. On the left is a triangle loop diagram with a solid dot at its top vertex. This is set equal to a sum of terms: a horizontal line, a plus sign, a tree-level vertex with one external line labeled $\langle\phi\rangle$, a plus sign, a crossed-line diagram with two external lines labeled $\langle\phi\rangle$, a plus sign, and an ellipsis.

Acknowledgements

... This work is supported in part by the NSF grant number PHY-0355005, an NSF graduate research fellowship, and a Paul & Daisy Soros Fellowship For New Americans. The contents of this article do not necessarily represent the views of either institution.