

# Sample Feynman Diagrams in TikZ

## VOL. II: LOOPY DIAGRAMS

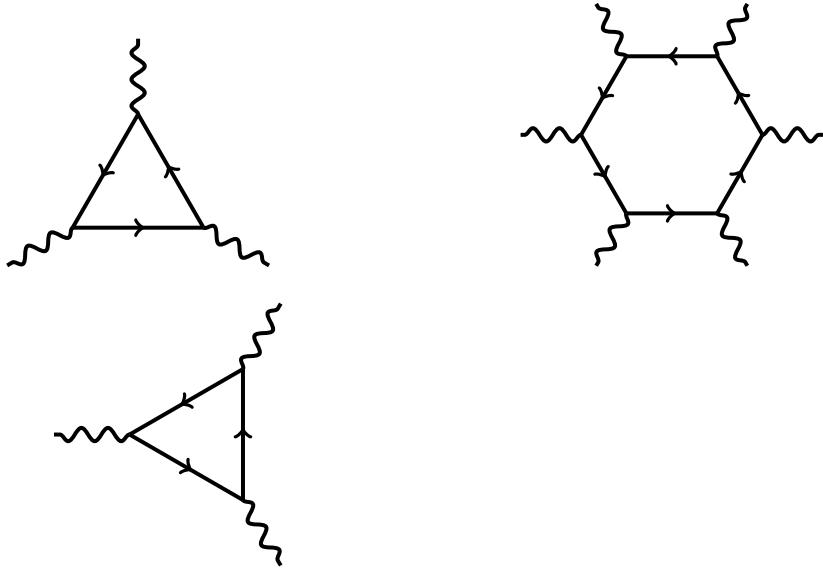
Flip Tanedo  
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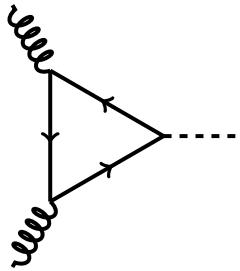
### Abstract

This is collection of useful sample Feynman diagrams and pieces typeset in TikZ. See Volume I for background information.

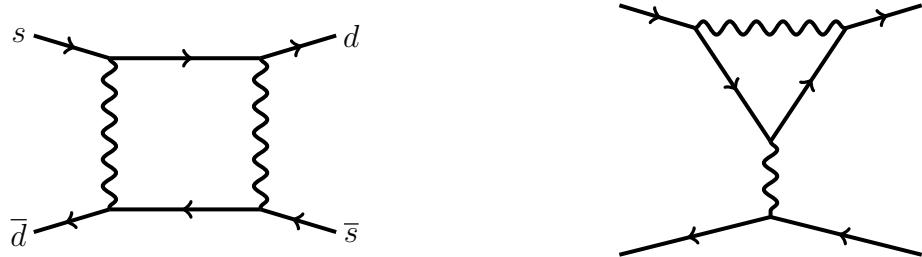
## 1 Anomaly



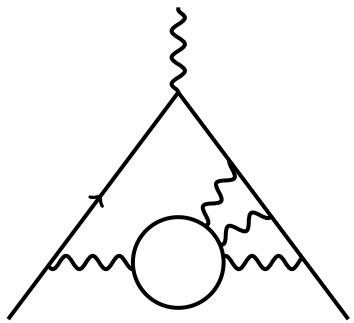
## 2 Gluon fusion



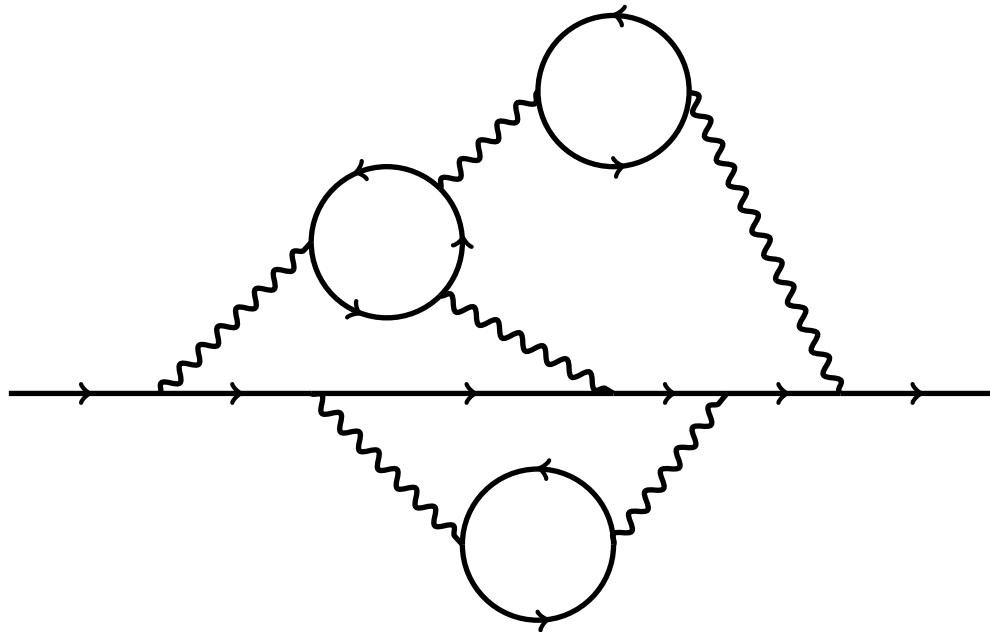
### 3 Flavor (box and penguins)



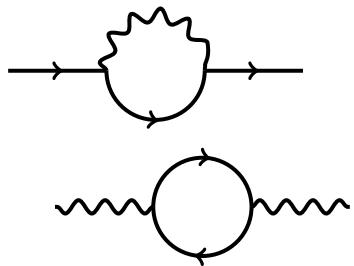
### 4 Multiloop



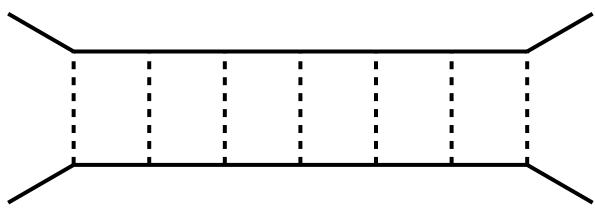
### 5 Vacuum polarization



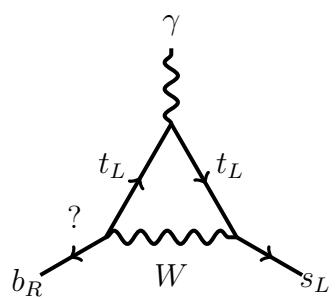
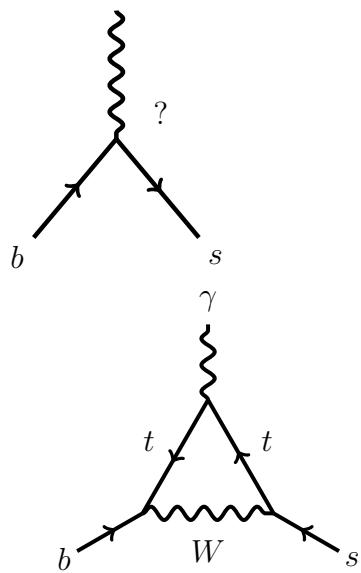
## 6 Renormalization

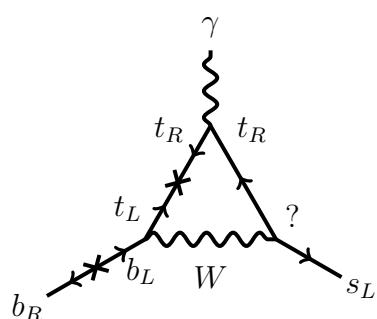
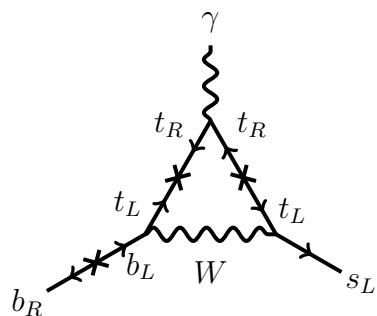
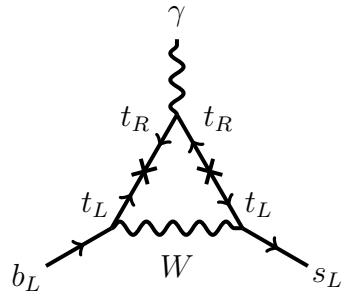
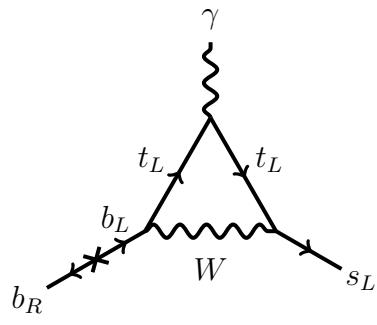


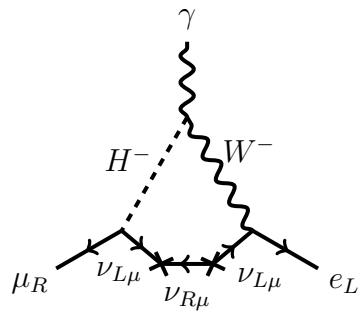
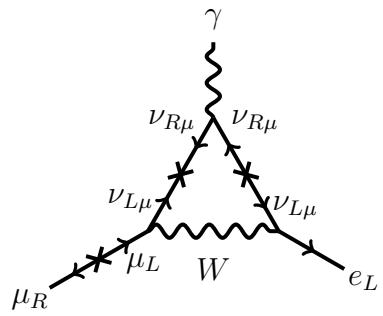
## 7 Ladder



## 8 Penguins

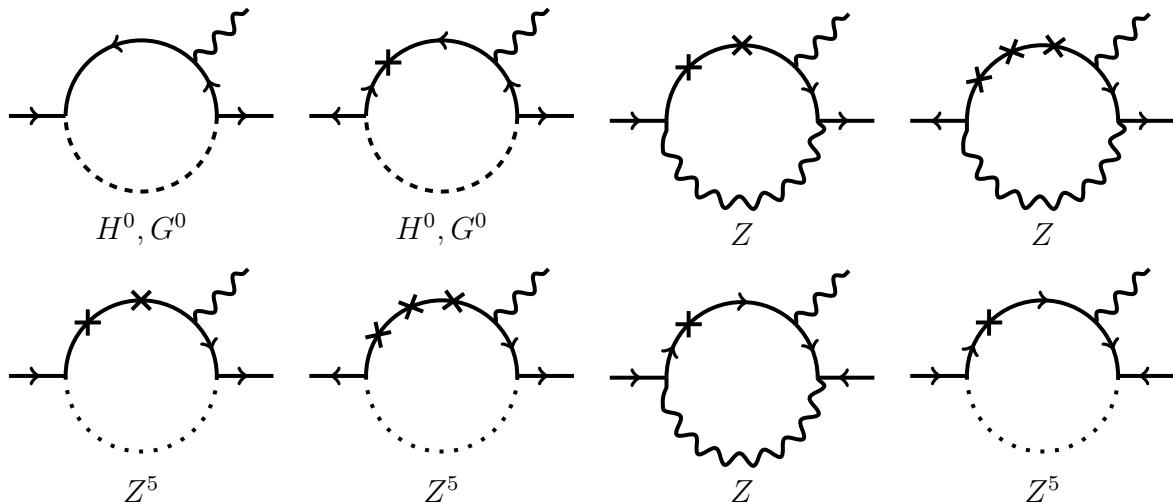






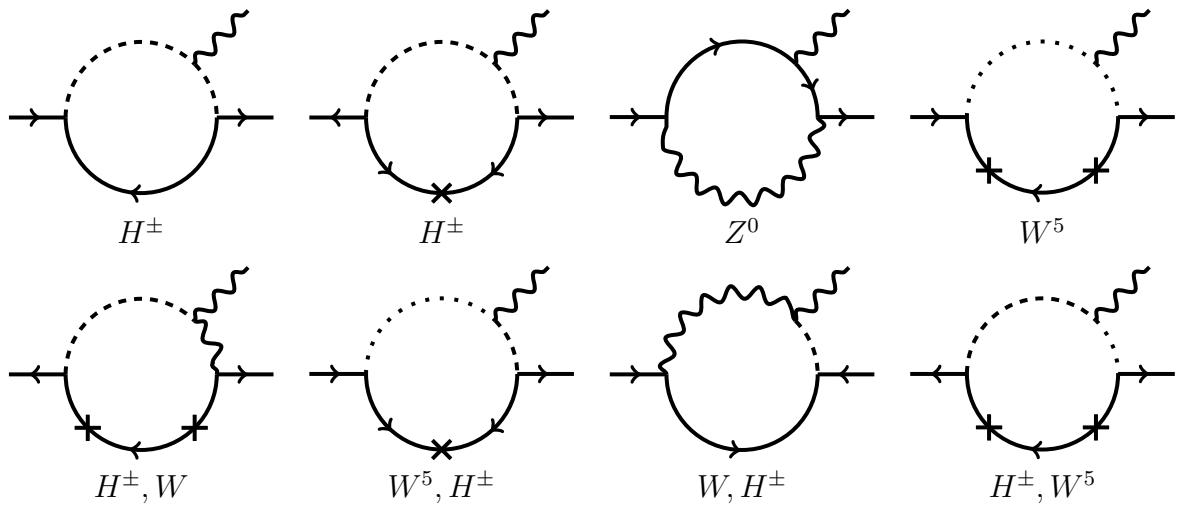
## 8.1 $Y_E^3$ Penguins

Neutral boson penguins with three mass insertions



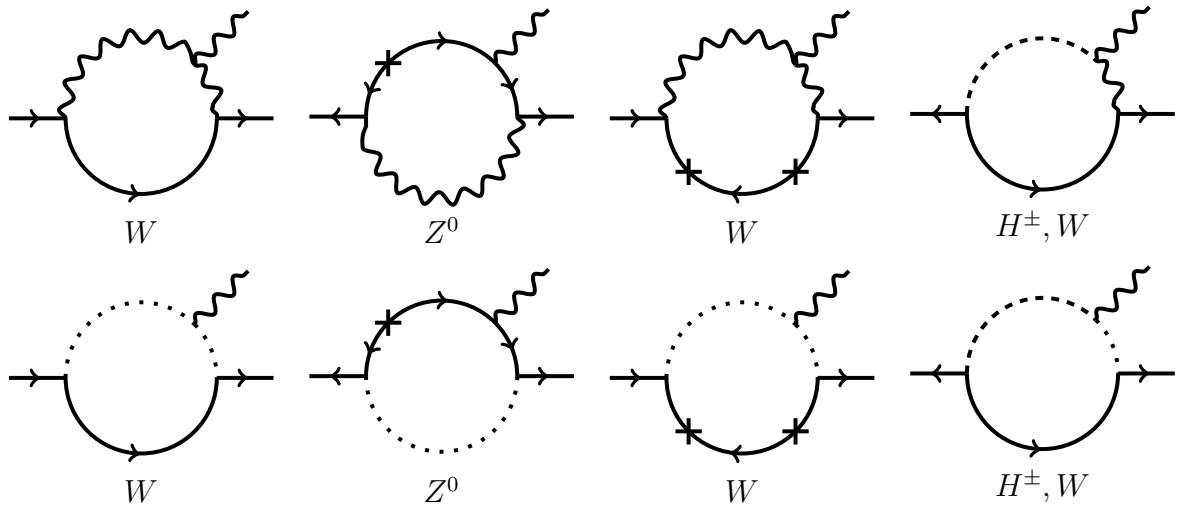
## 8.2 $Y_E Y_N^2$ Penguins

Charged boson penguins with three mass insertions

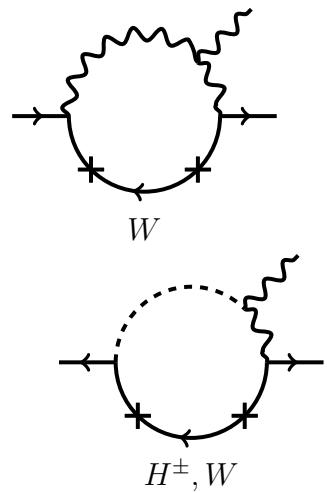


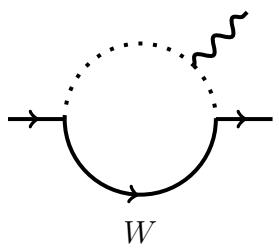
### 8.3 $Y_E$ Penguins

Charged boson penguins with three mass insertions

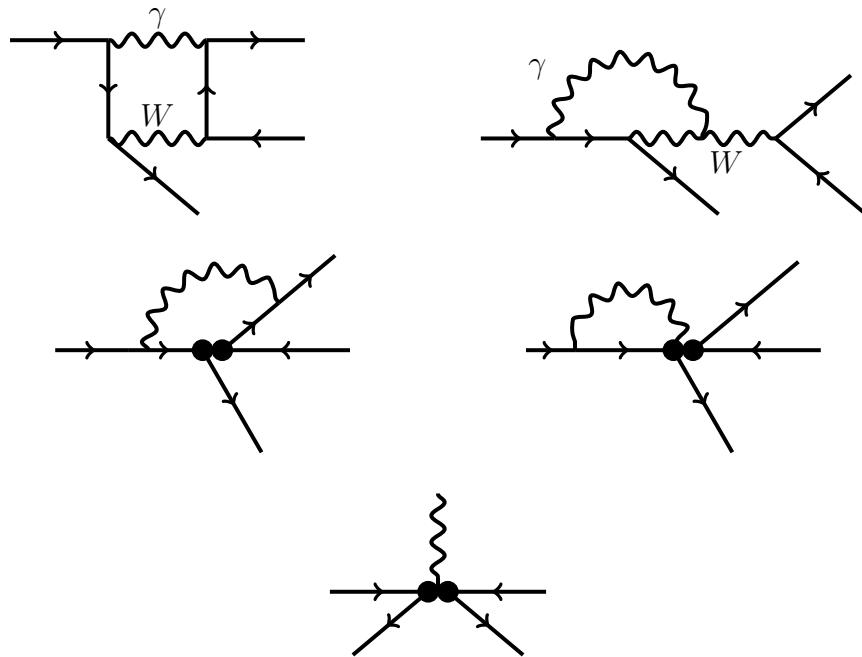


### 8.4 Dominant contributions





## 9 EFT



## Acknowledgements

This work is supported in part by the NSF grant PHY-1316792.