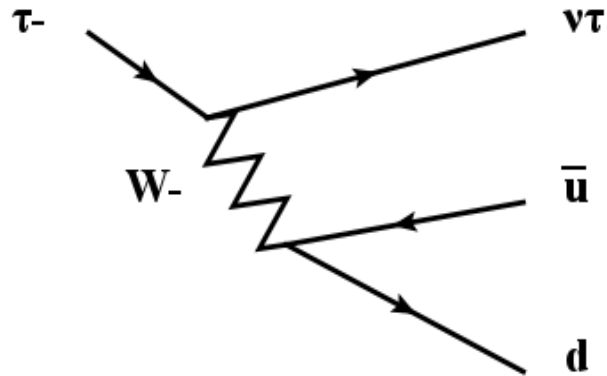


Thomson 1.2

Todd Hirtler

10Jan20

1.2



Since we have a flavor change for the decay of τ^- to the ν_τ , we know this will be a weak charged current interaction. The W boson can decay into a quark and an antiquark, in this case a down quark and an anti-up quark, which happens to be the π^- . Due to charge conservation, the W boson must be negatively charged.