

PHYS 721 Homework 5

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1. Three Breit-Wigner curves for the decay $\phi \rightarrow K^+K^-$ are fitted to data set 1. The first fit, in green, is the relativistic Breit-Wigner with a mass dependent Γ , $\Gamma = \Gamma_0 \left(\frac{p}{p_0} \right)^3$. The second fit, in blue, is the relativistic Breit-Wigner. The third fit, in red, is the Non-Relativistic Breit-Wigner curve.

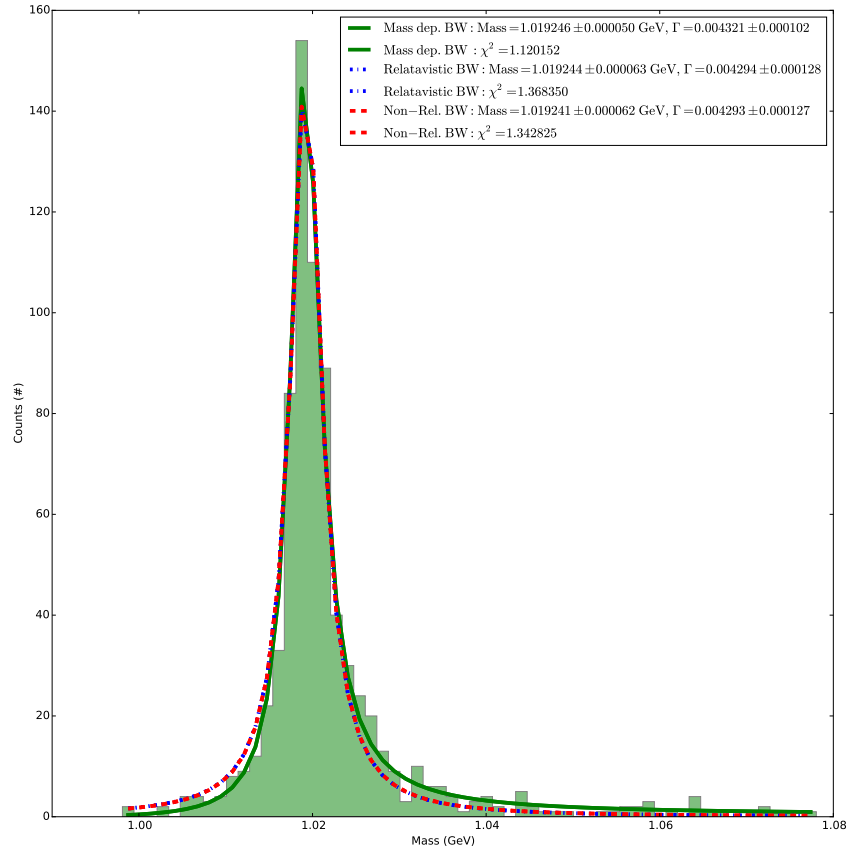


Figure 1: Three Breit-Wigner curves fit to data for, $\phi \rightarrow K^+K^-$

2. By looking at the χ^2 values from figure one the the first fit, the relativistic Breit-Wigner appears to give the best value.
3. Stuff here for problem 3.

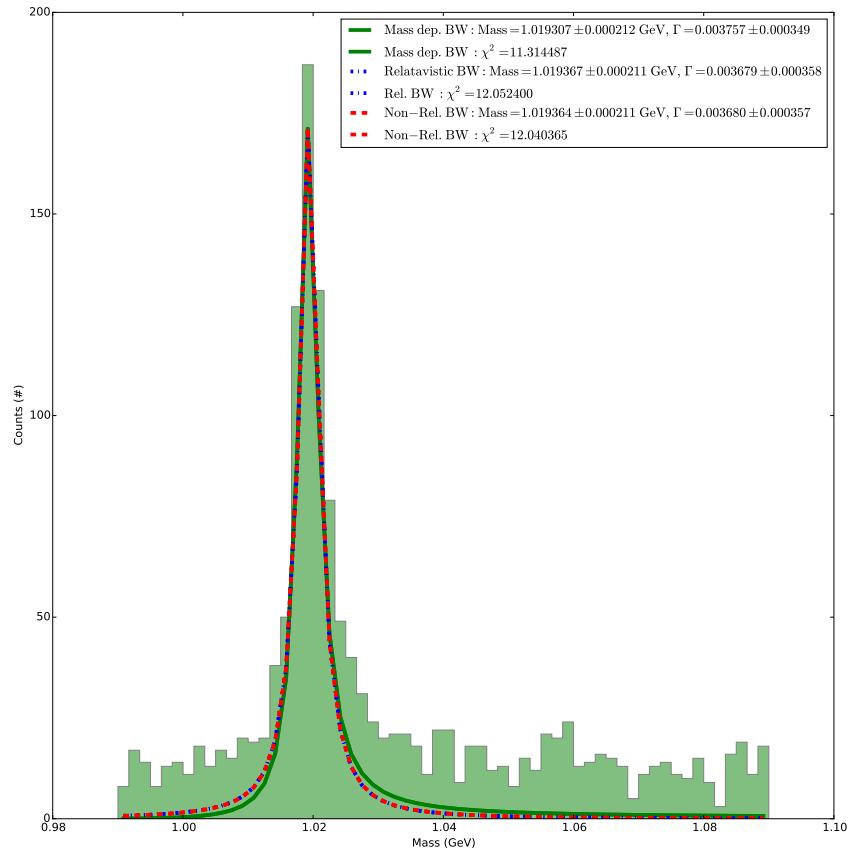


Figure 2: Three Breit-Wigner curves with background fit to data for, $\phi \rightarrow K^+ K^-$

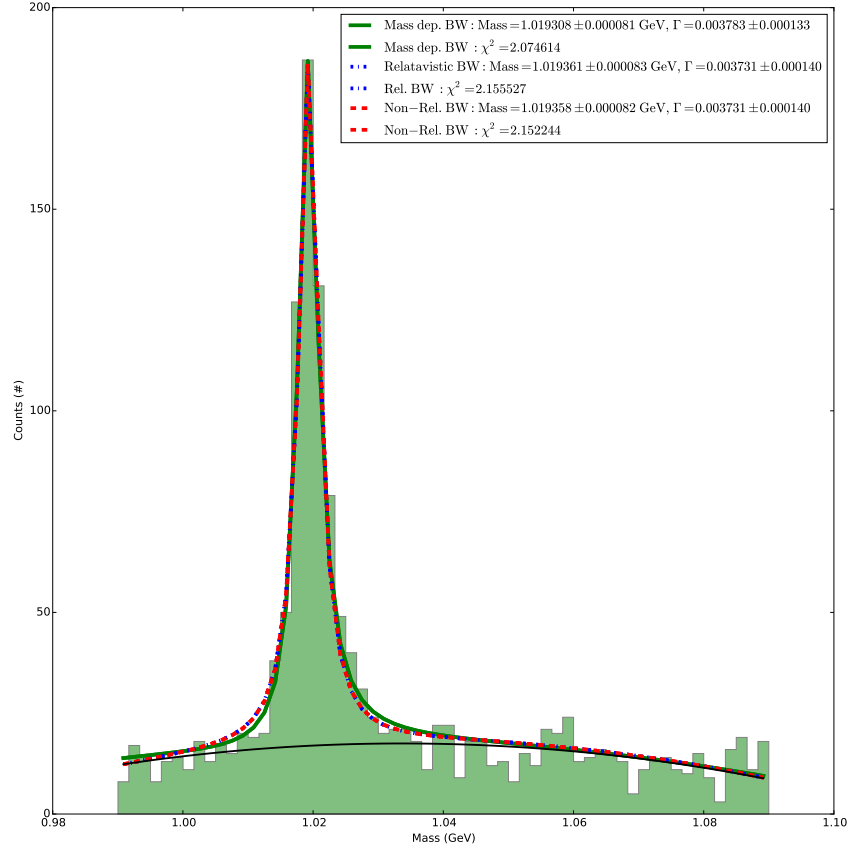


Figure 3: Three Breit-Wigner curves with background fit with background for, $\phi \rightarrow K^+ K^-$