dw- wien filter length, v0-initial velocity, d\_tot- end position, B- B-field for turns, E0 – E field for the Wien filter.

This is how I determined the E field for my EvsPos test. As I changed the percent variable (from 95% to 105%) the position of the focus changed. My initial thought was that I was choosing a to unbalance the relationship between E0 and the B field. But I realized that the percent could easily be applied to any other variable in the expression.

It actually makes more sense to look at the expression as:

Given the PERCENT variable can be absorbed by any of the other variables resulting in a change in d\_tot.

Basically, modulating the relationship between E0, dw, B, or v\_0 results in a change in the final pulse location of the focus.

These graphs are made with these parameters:

v\_0 = 3.23e7 m/s, dw=5 centimeters, d\_tot=10 cm, dE/E=5e-5, dθ = 2e-4



