status

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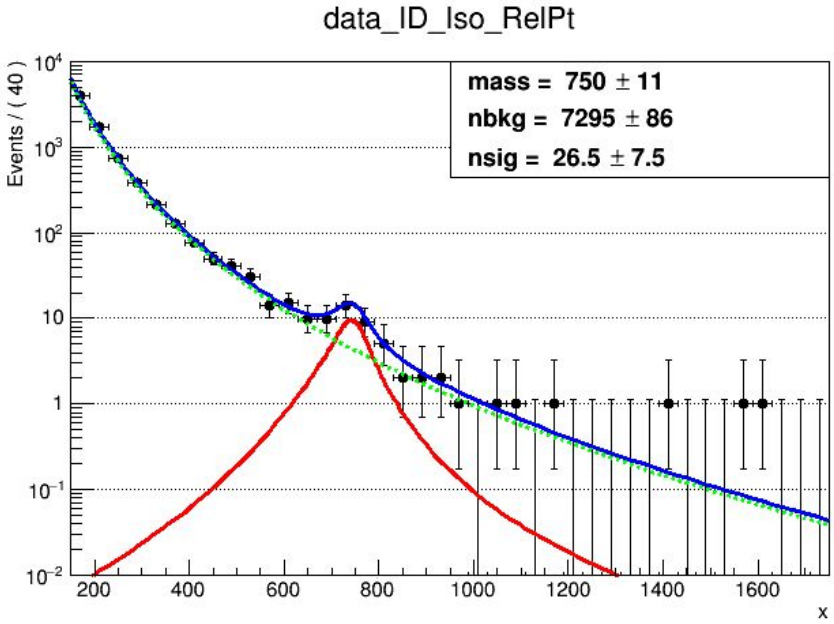
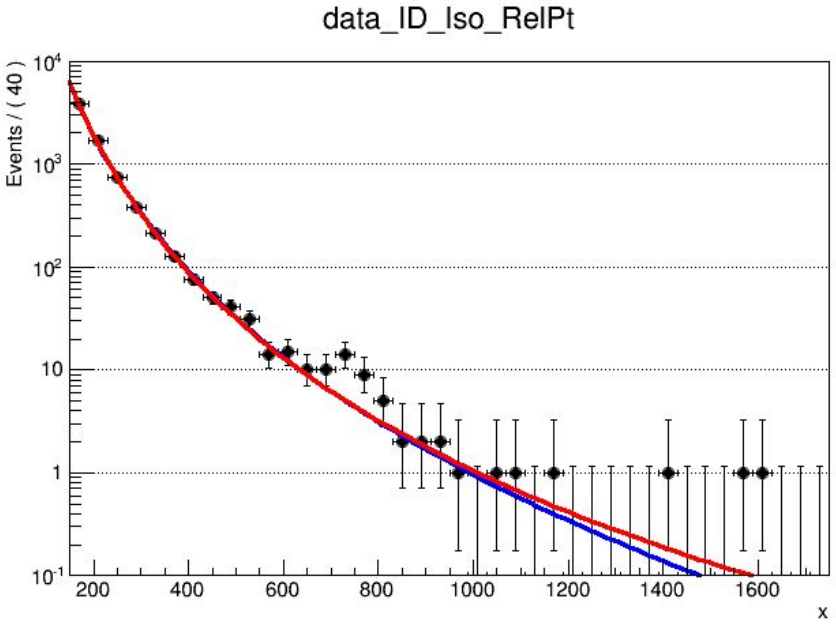
02.01

background modelling

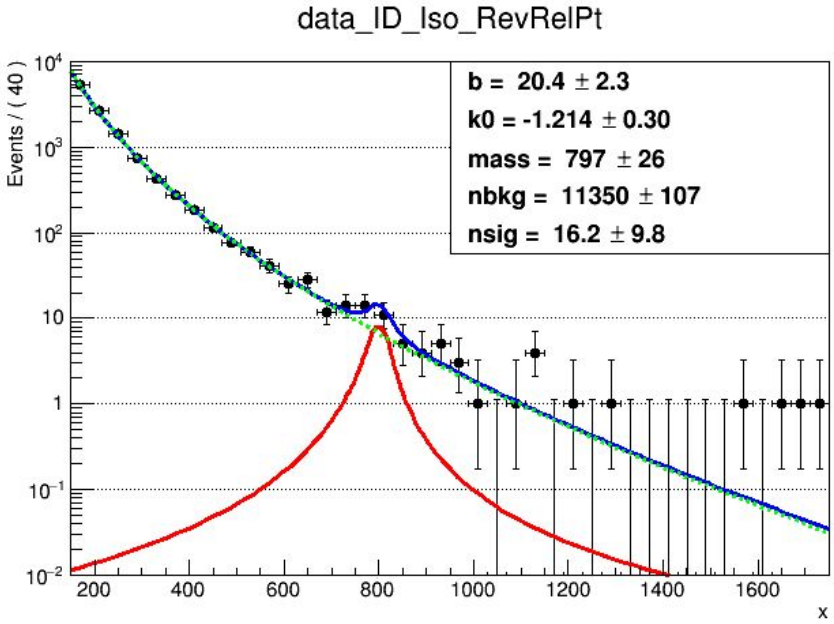
- different control should use different background function
- candidate function
  - $f_{k;d}(x;b,\{a_k\}) = (1-x^d)^b x^{\sum_{j=0}^{k} a_j \log(x)^j}$, k=0,1,2 , d=1/3
  - $f_0(x) = (1 - x^d)^b\, x^{a_0}$ (blue)
  - $f_1(x) = (1 - x^d)^b\, x^{a_0 + a_1 \log(x)}$ (red)
  - $f_2(x) = (1 - x^d)^b\, x^{a_0 + a_1 \log(x) + a_2 \log(x)^2}$ (green)
- not succeed in fit all the three function
- fit region
  - [150,1750]GeV, excluding [650,850]

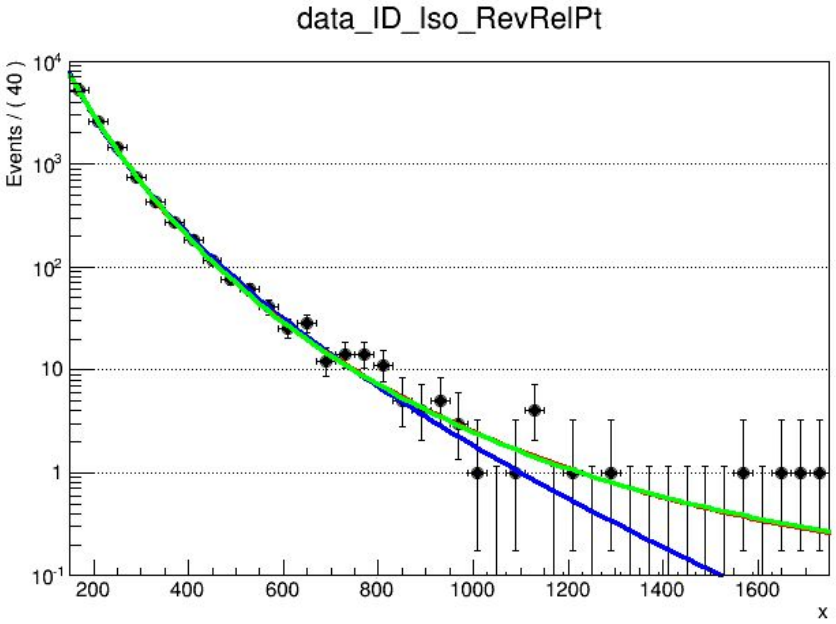
signal region



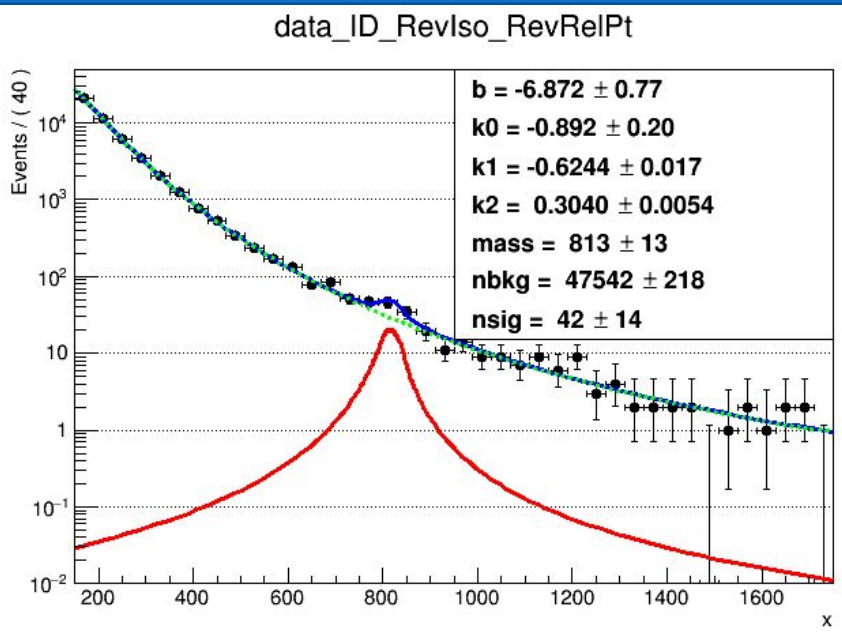


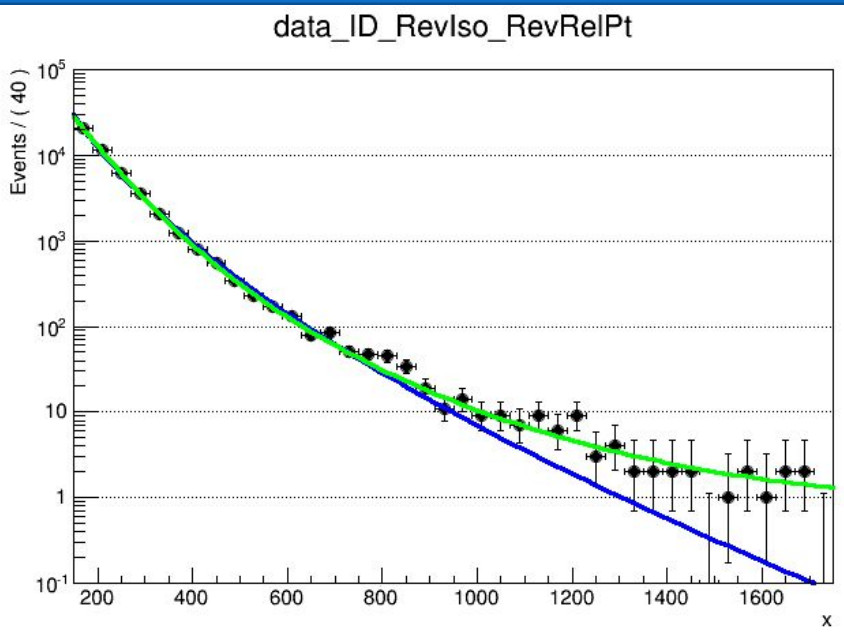
- In signal region, f1 and f0 don't have large difference



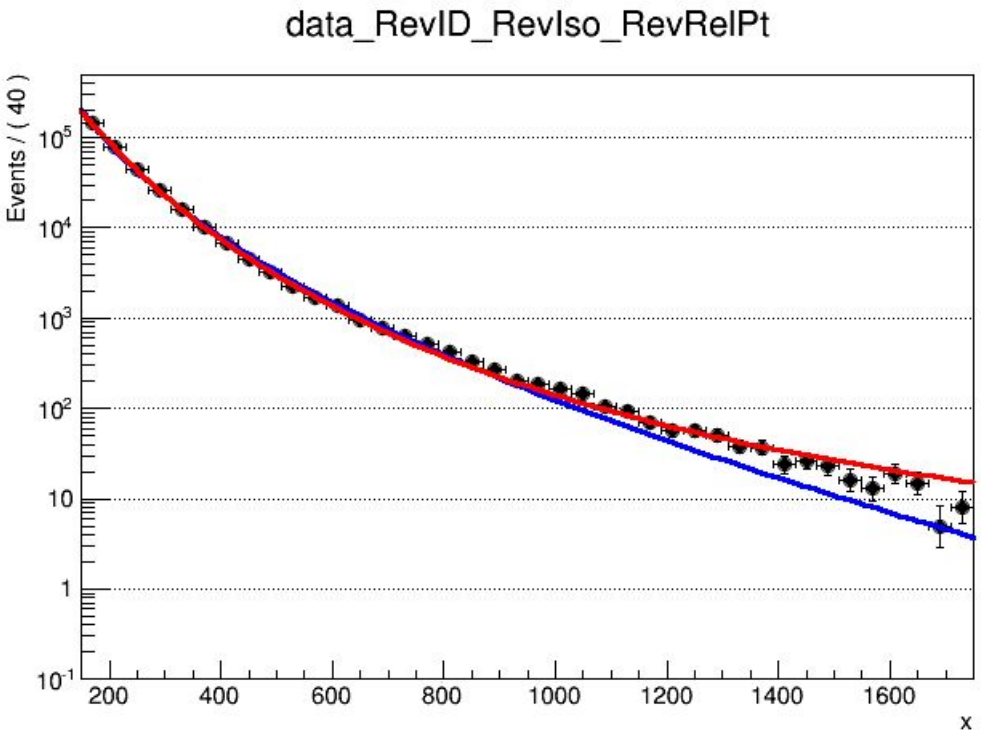


- f0 is used in left plot.
- f2(green) and f1(red, overlapped) seem better in right plot





- f2(green) is used in left plot



- f1(red) is still not very well

scan the isolation

- ptcone20<0.05*pt
  topoetcone40<0.024*pt+2.45
- topoetcone40 is not available in h009, only topoetcone20 is saved
- one point
  topoetcone20<0.035*pt+2.45
  pocone20<0.07*pt