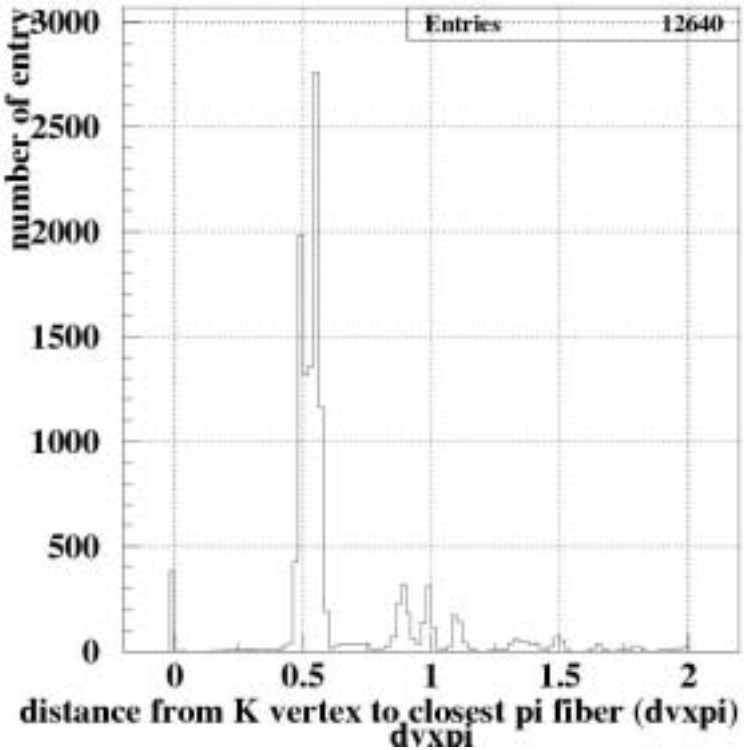
Kp2 energy resolution

Modification :

(1) Target timing is fixed.
(2) Etg scaling : Etg is multiplied by 1.05 .
(3) Hidden Energy correction by using “dvxpi”
(3’) ‘buried’ pion energy in the Kaon fiber. (not yet.)

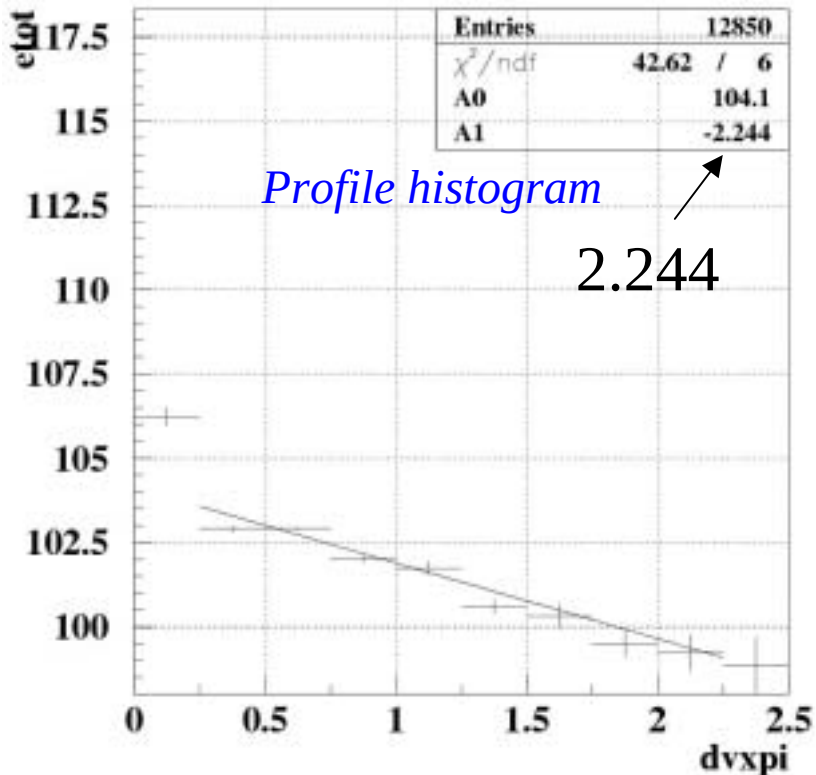
Ntuples : /e949dsk/towa14/benjil/ntuples/kp21/rsnew/

Energy in target (etg) vs Distance from K vertex to closest pi fiber(dvxpi)



dvxpi distribution

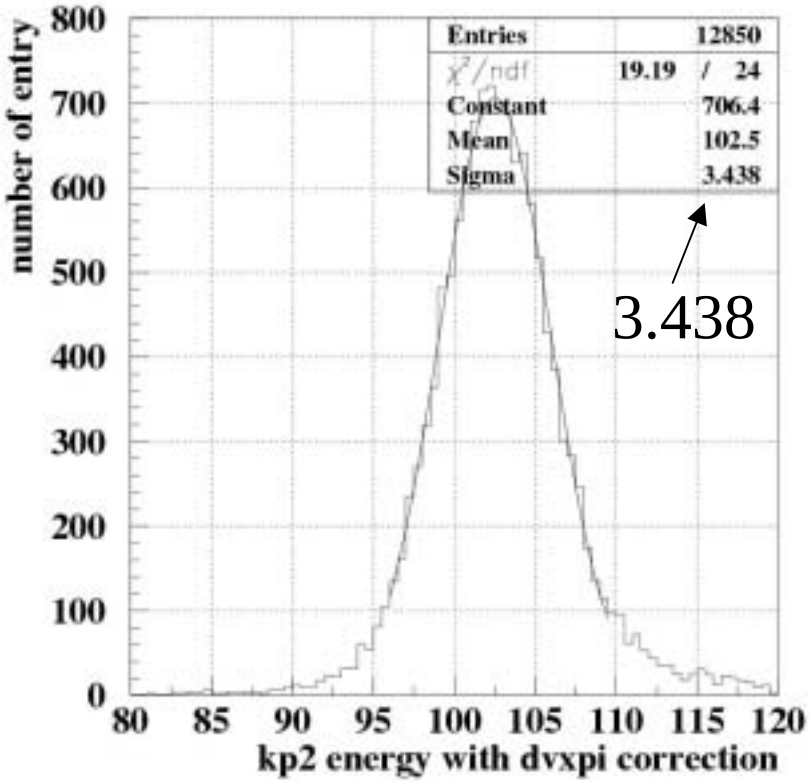
nt/pl 1.dvxpi $2



Etot vs dvxpi

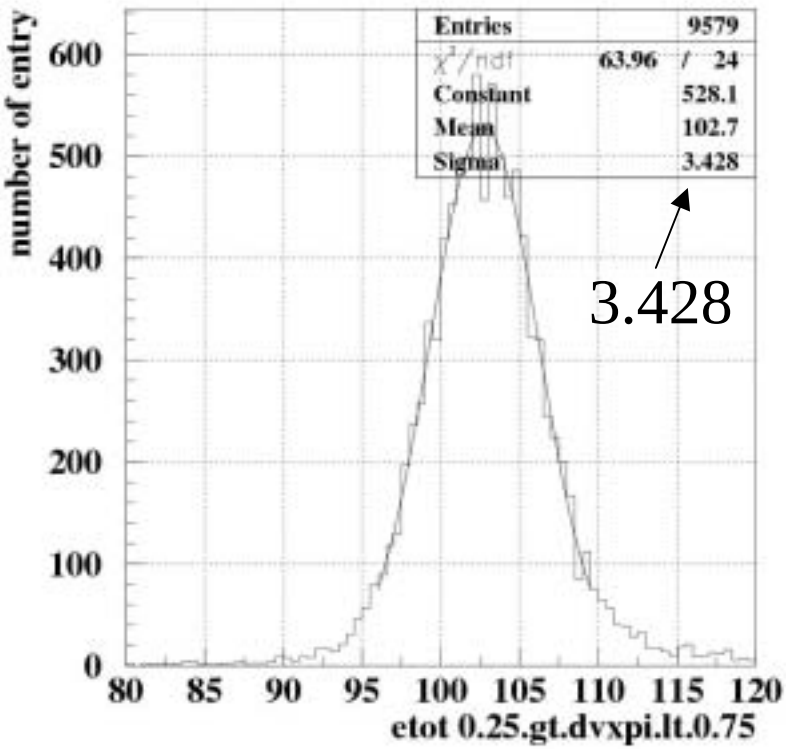
Let's suppose that *missing energy is proportional to* dvxpi. (2.244*dvxpi)

Energy in target (etg) vs Distance from K vertex to closest pi fiber(dvxpi)



Etot with dvxpi correction.

*nt/proj 1.etot-etg+1.05*etg+2.244*dvxpi $2*



Etot with dvxpi cut

*nt/pl 1.etot-etg+1.05*etg $2.and.0.25<dvxpi<0.75*

Summary

In the region where dvxpi is big, (though statistic is less and we can not get good accuracy), missing energy is explained with ~2 *dvxpi.

My assumption is that this corresponds to the dE/dX * dvxpi at MIP particle. (missing track ?)

Because the number of events in big dvxpi region is small, so that, we do not get good improvement on kp2 energy resolution with this missing energy correction.

The correction related to buried pion energy in Kaon fiber is not yet applied . I don’t have good idea how to do this.

Comments and/or suggestions are welcome.