

1.- Run HGeant simulation with .dat files modified to account for the target position and magnetic field strength. No more modifications are needed. Ideal geometry can be used.

“ hgeant -b -f reft0\_el(pos).dat -q kicktrack.el(pos).C ” --> momenta distribution 1/p .

“ hgeant -c -f reft0\_el(pos)\_uni.dat ” --> uniform momenta distribution.

The output of this step can be files reft0\_el1.root, reft0\_el\_uni1.root, reft0\_pos1.root and reft0\_pos\_uni1.root .

2.- Take the files in step 1 and process them through macro *kickResol.C*, which is in the kickplane module of HYDRA (I use it inside the *analyze* function: “ root[] analyze(“kickResol.C”) ”), separately for electrons/positrons and for meta/mdc. Steps are:

2.1.- Run *kickResol.C* on reft0\_el1.root and reft0\_el\_uni1.root with mode = *meta*. Output is out.el.meta.root .

2.2.- Run *kickResol.C* on reft0\_el1.root and reft0\_el\_uni1.root with mode = *mdc2\_kickpos*. Output is out.el.m3pos.root .

2.3.- Run *kickResol.C* on reft0\_pos1.root and reft0\_pos\_uni1.root with mode = *meta*. Output is out.pos.meta.root .

2.4.- Run *kickResol.C* on reft0\_pos1.root and reft0\_pos\_uni1.root with mode = *mdc2\_kickpos*. Output is out.pos.m3pos.root .

3.- Obtain the parameters in Ascii files from previous out.\*.root files:

3.1.- For electrons and Meta detector:

3.1.1.- Run *gridpt3.C* with mode = *meta* and input out.el.meta.root (“ root -q gridpt3.root ”). Output is gridpt.el.meta.txt .

3.1.2.- Run *matchpar3.C* with mode = *meta* and same input. Output is matchpar.el.meta.txt .

3.2.- Positrons and Meta detector:

3.2.1.- Run *gridpt3.C* with mode = *meta* and input out.pos.meta.root. Output is gridpt.pos.meta.txt .

3.2.2.- Run *matchpar3.C* with mode = *meta* and same input. Output is matchpar.pos.meta.txt .

3.3.- Electrons and MDC3:

3.3.1.- Run *gridpt3.C* with mode = *mdc3* and input out.el.m3pos.root. Output is gridpt.el.m3pos.txt .

3.3.2.- Run *matchpar3.C* with mode = *mdc3* and same input. Output is matchpar.el.m3pos.txt .

3.4.- Positrons and MDC3:

3.4.1.- Run *gridpt3.C* with mode = *mdc3* and input out.pos.m3pos.root. Output is gridpt.pos.m3pos.txt .

3.4.2.- Run *matchpar3.C* with mode = *mdc3* and same input. Output is matchpar.pos.m3pos.txt .

4.- Merging kickplane parameters. Final output is `kick2.meta.m3pos.txt` .

4.1.- Use `compose_mdc3.sh` with the appropriate `.txt` files from previous steps. Output is `kick2.m3pos.txt` .

4.2.- Use `compose_meta.sh` with the appropriate `.txt` files from previous steps. Output is `kick2.meta.txt` .

4.3.- Merge the files from 4.1 and 4.2 :

4.3.1.- “ `cp kick2.meta.txt kick2.meta.m3pos.txt` ”

4.3.2.- “ `cat kick2.m3pos.txt >> kick2.meta.m3pos.txt` ”

5.- Obtaining parameters in a root file: run macro `makeParamFile.C` (“ `root -q makeParamFile.C` ”) with the appropriate containers and the `.txt` file from the previous step.