

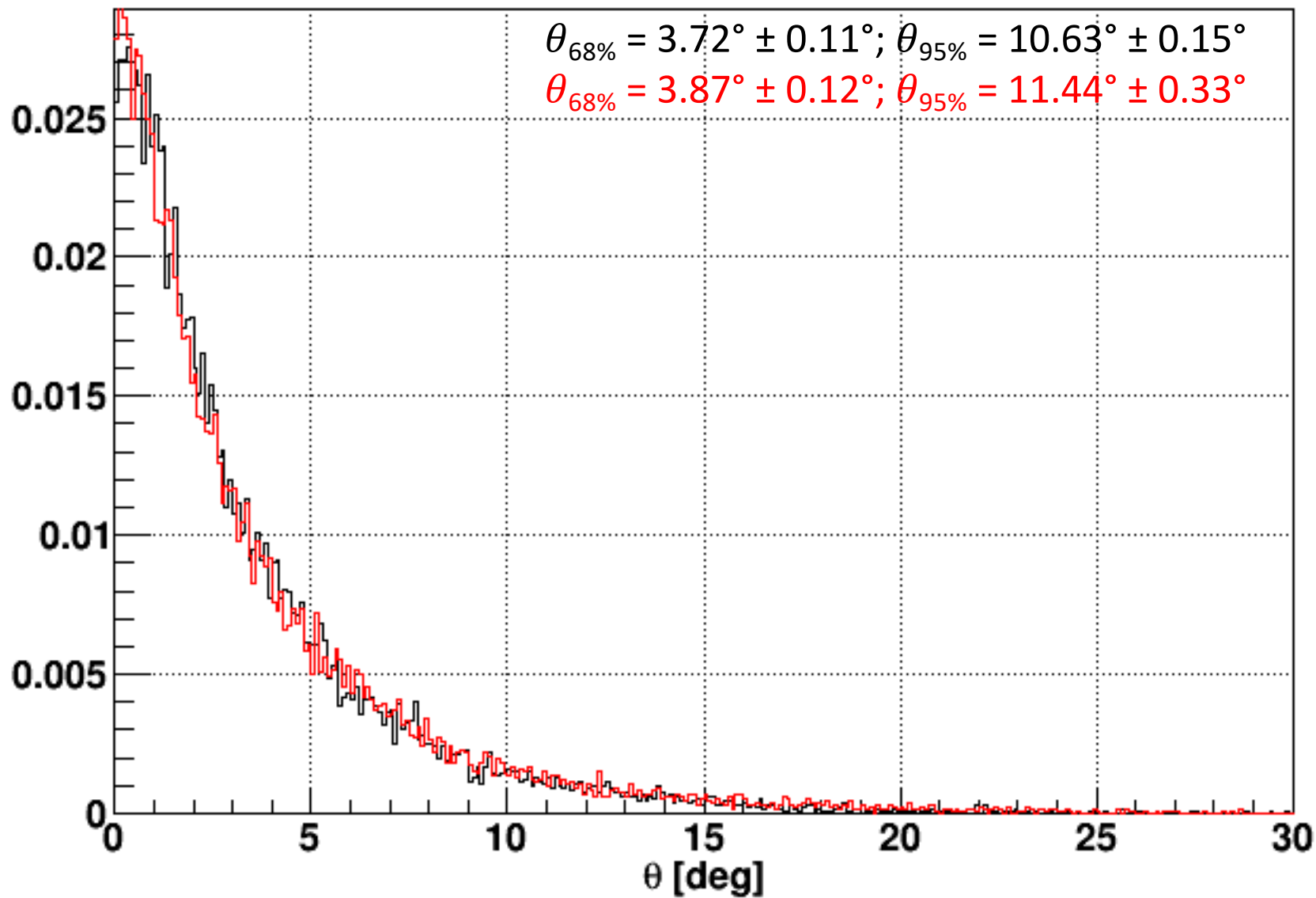
Risultati finali test beam TIC

Electroni 1 GeV

PS

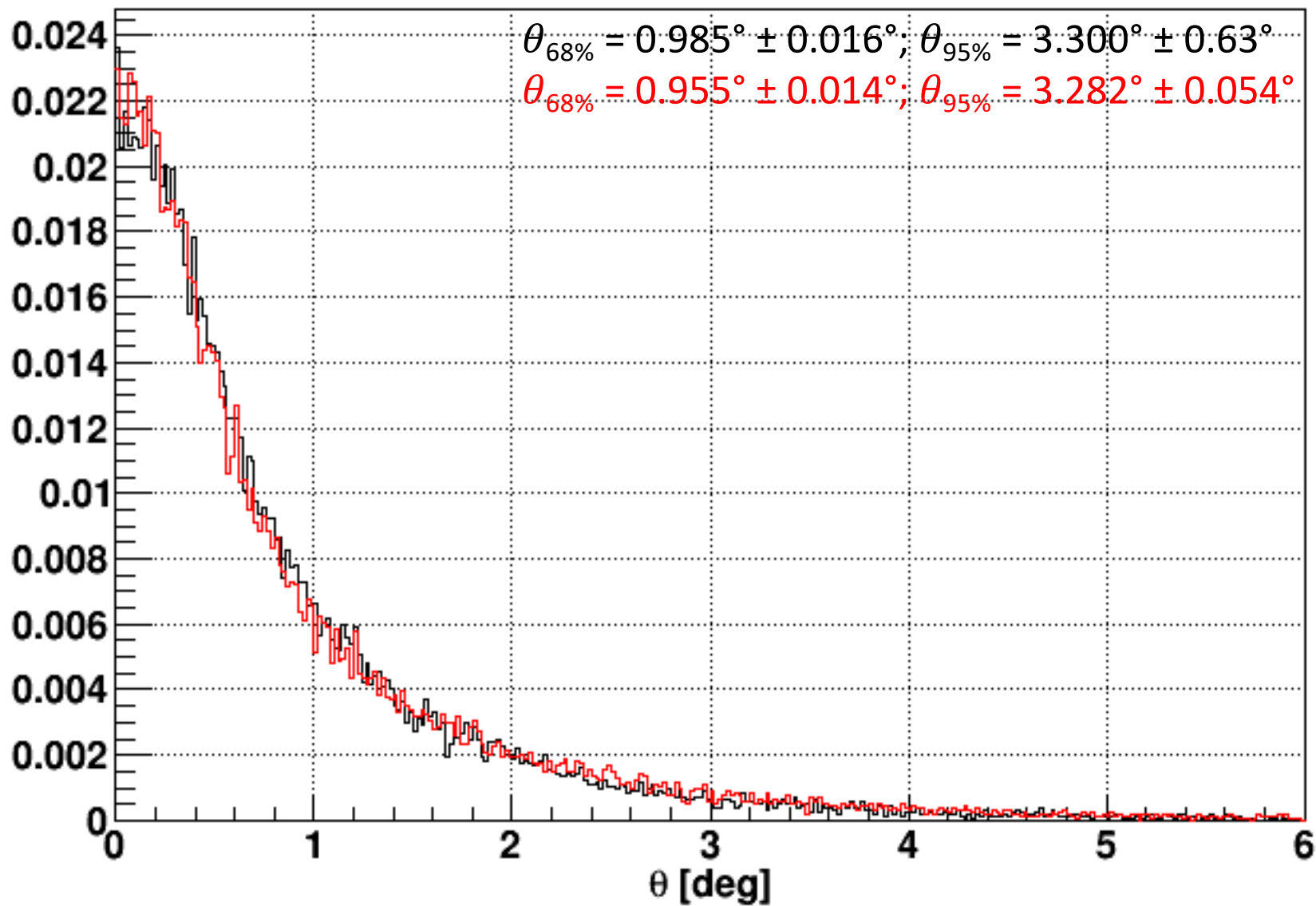
$$\theta_{68\%} = 3.72^\circ \pm 0.11^\circ; \theta_{95\%} = 10.63^\circ \pm 0.15^\circ$$

$$\theta_{68\%} = 3.87^\circ \pm 0.12^\circ; \theta_{95\%} = 11.44^\circ \pm 0.33^\circ$$



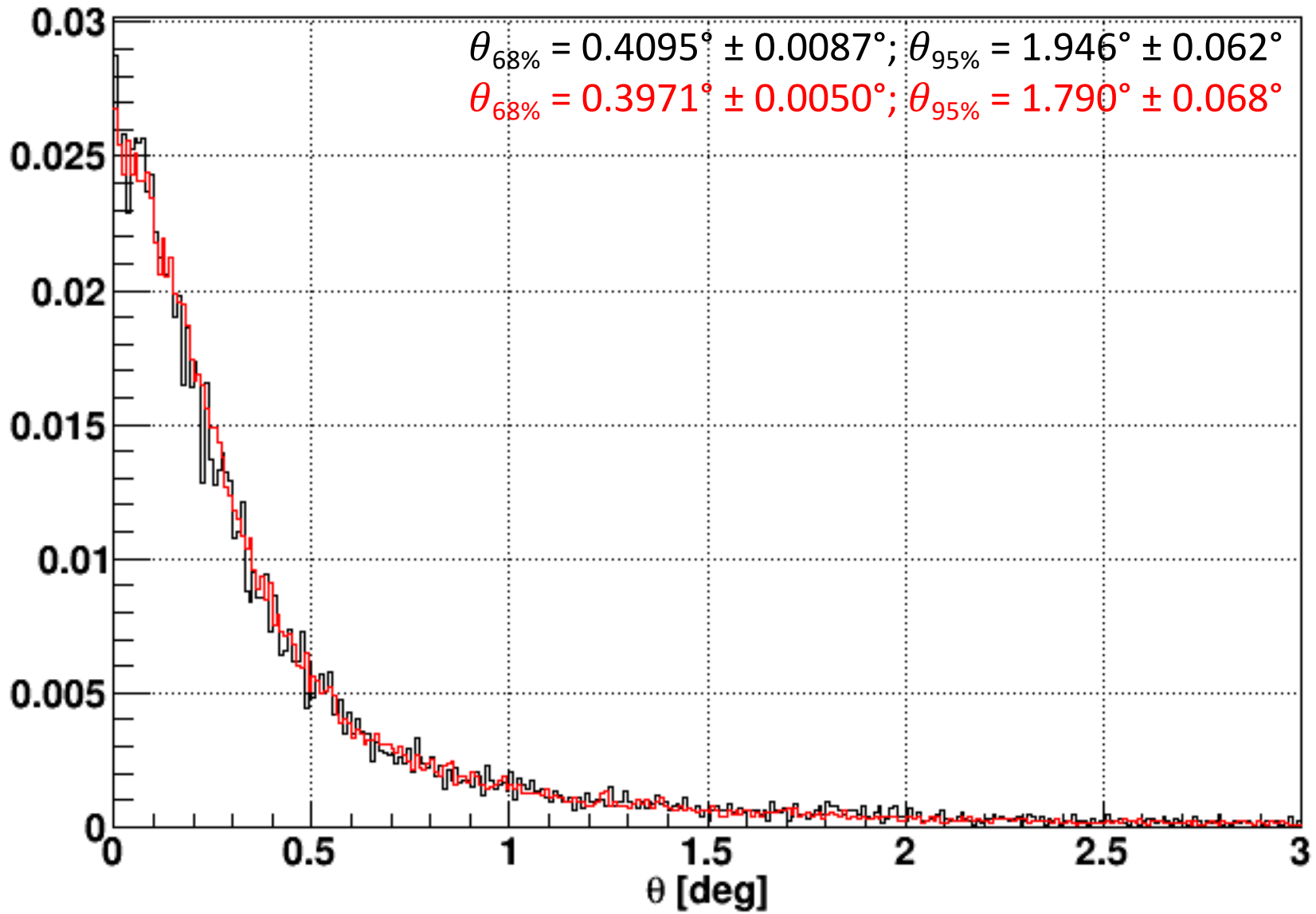
Electroni 5 GeV

PS



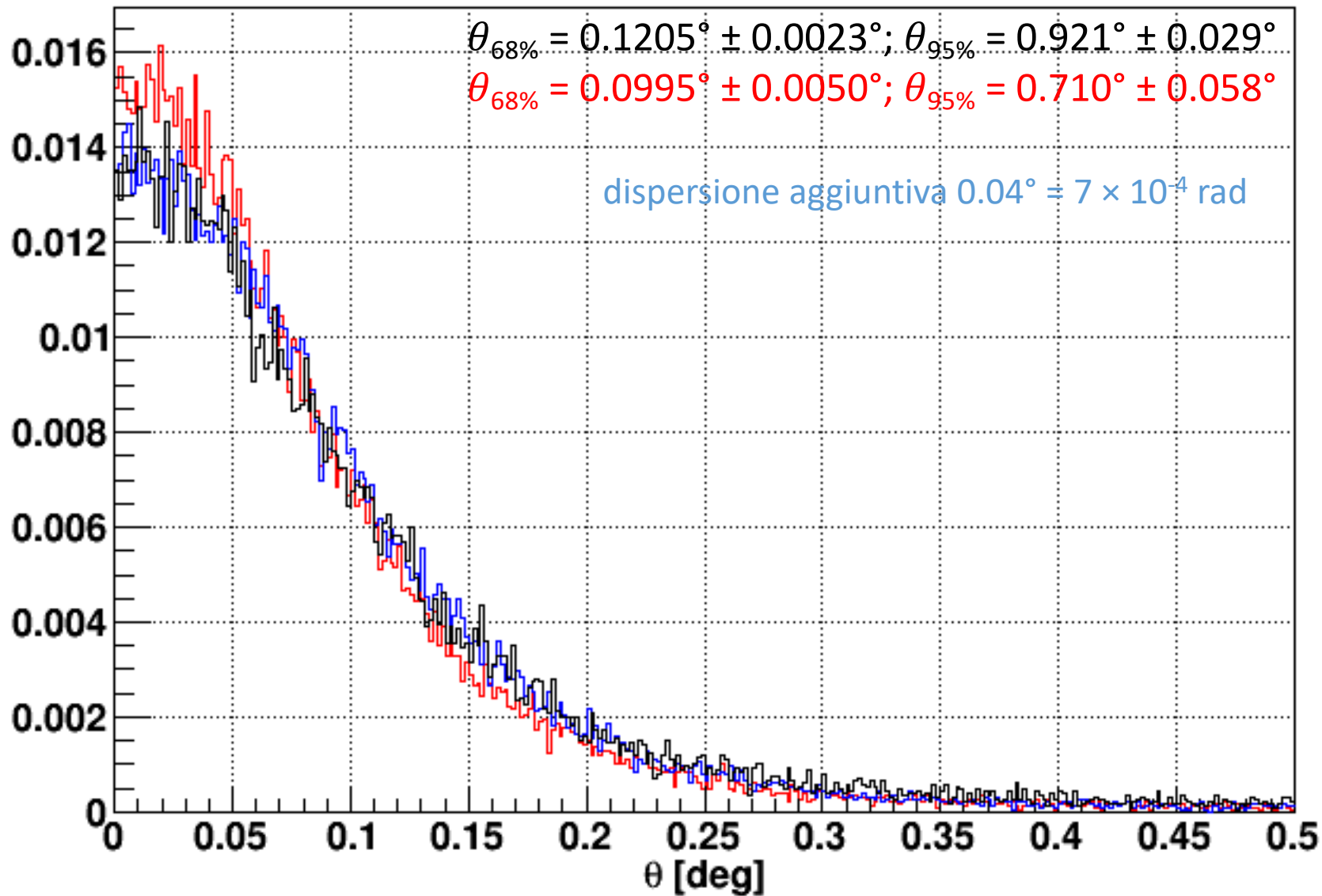
Electroni 10 GeV

SPS



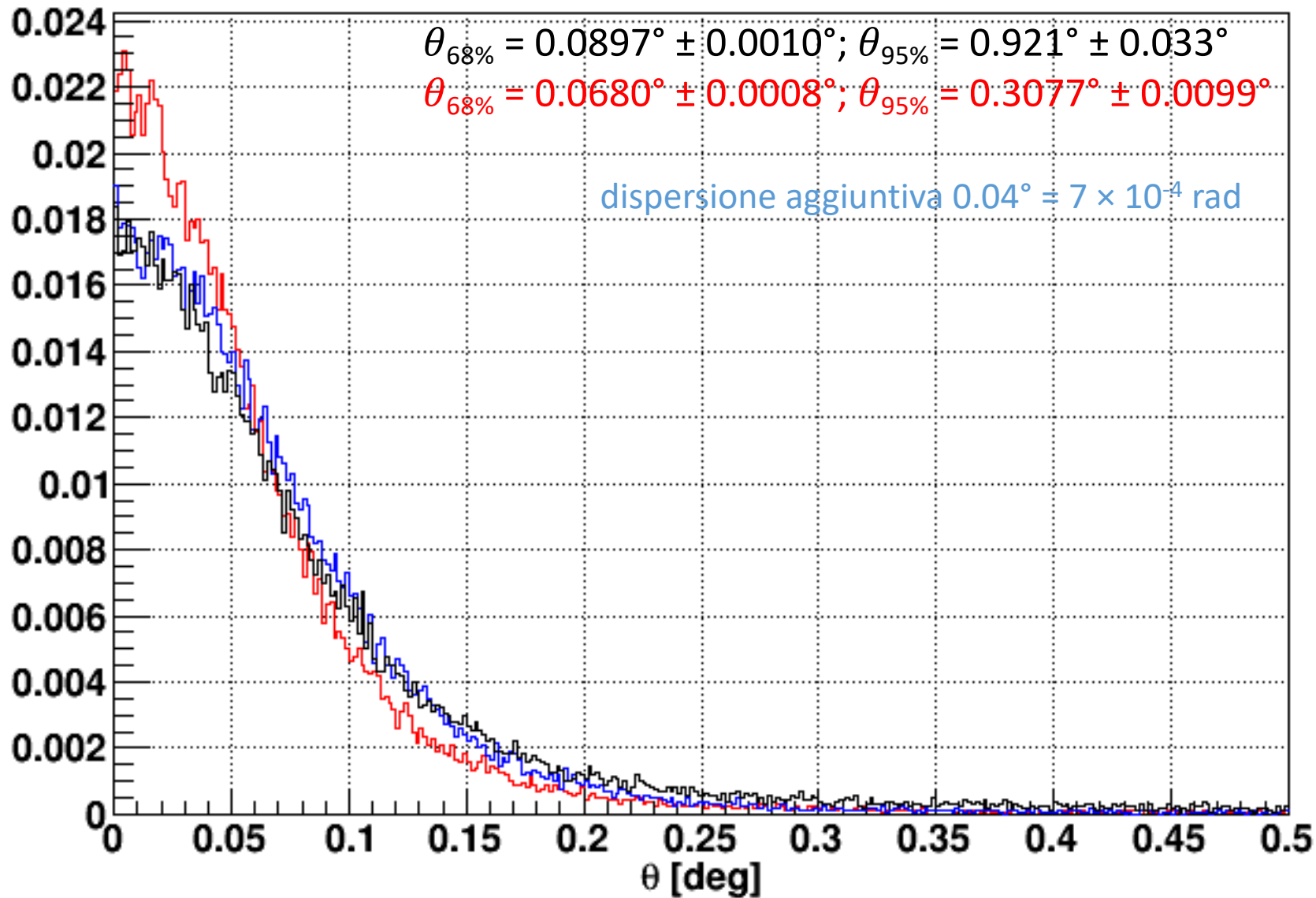
Electroni 50 GeV

SPS



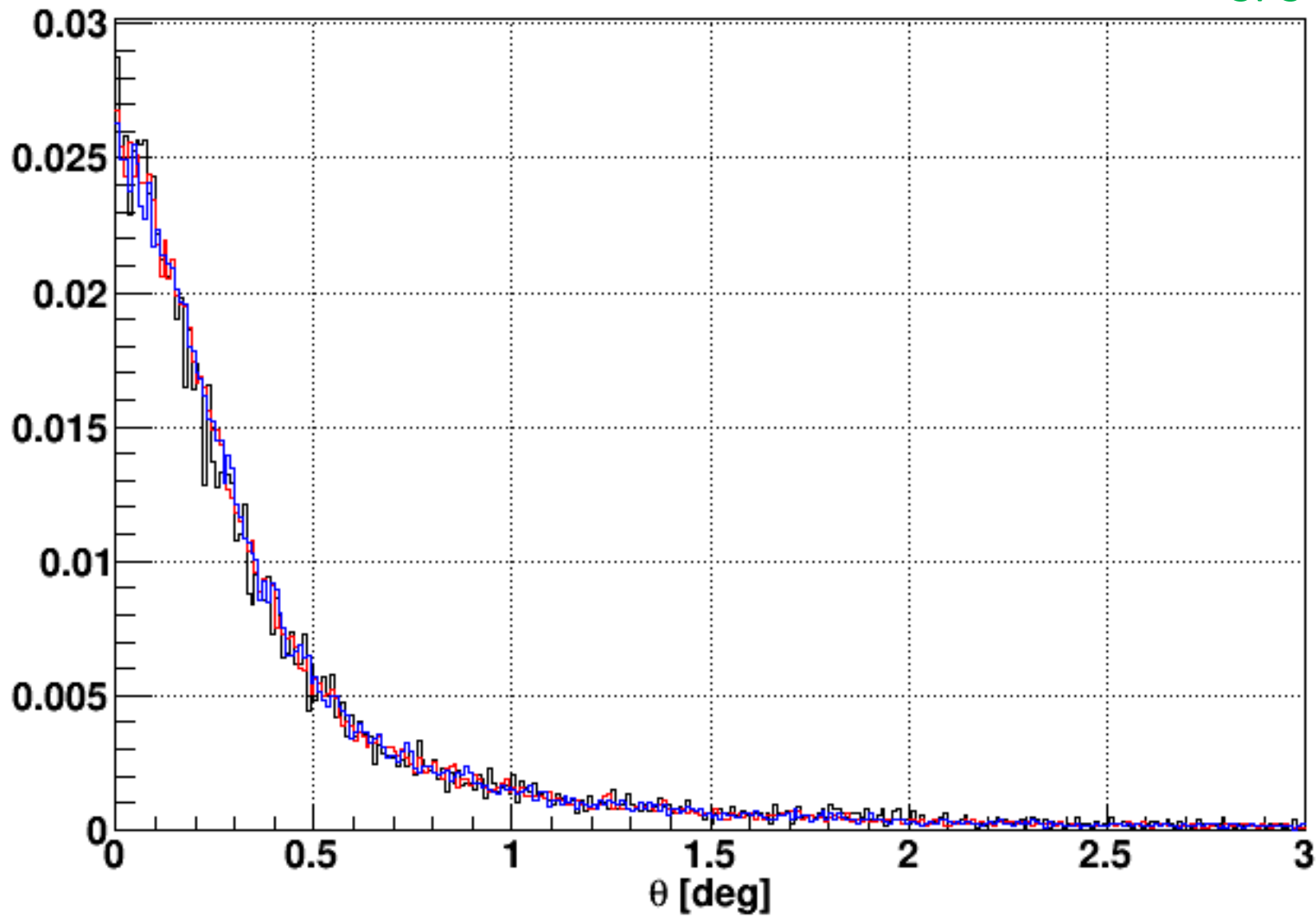
Electroni 100 GeV

SPS



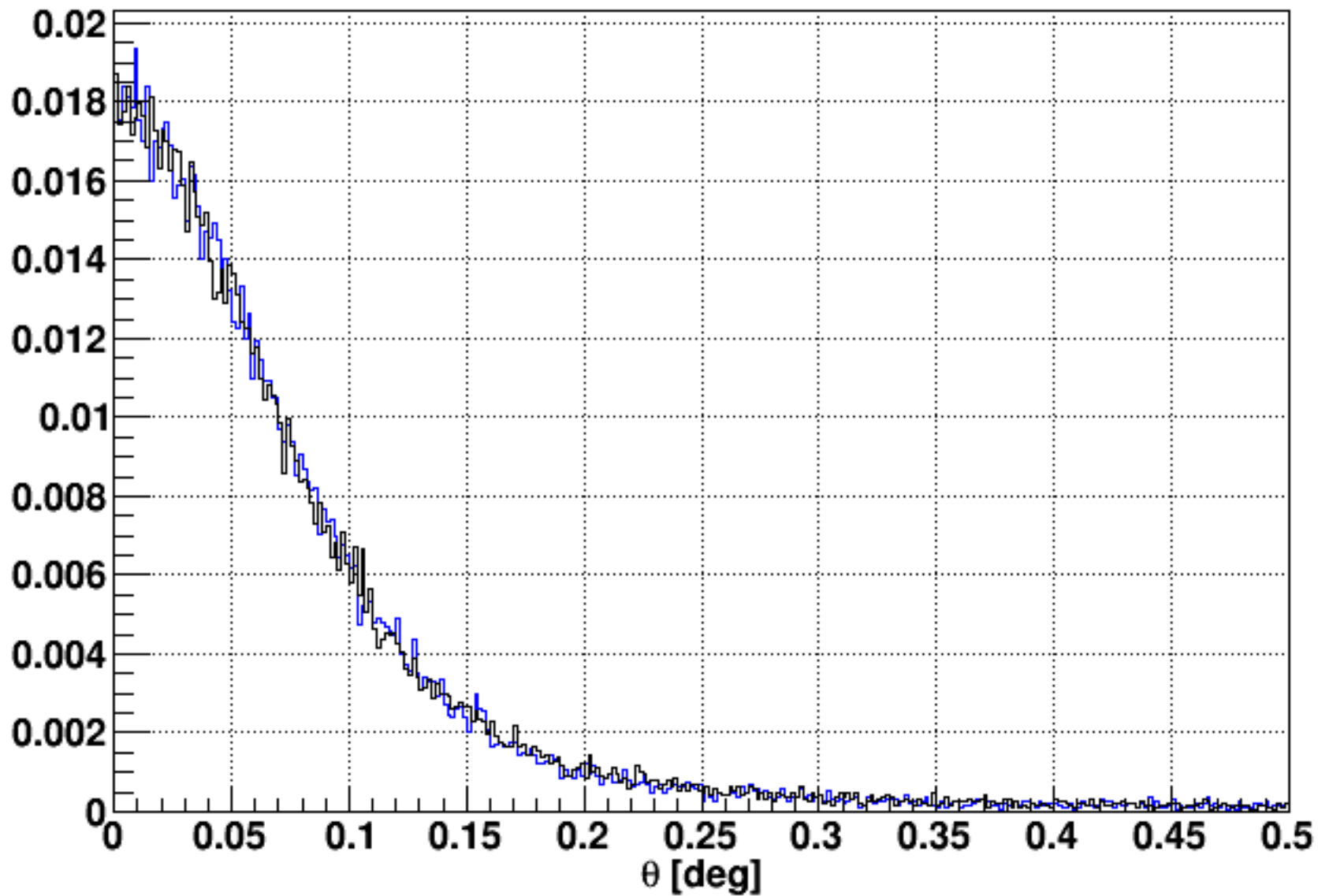
Electroni 10 GeV

SPS

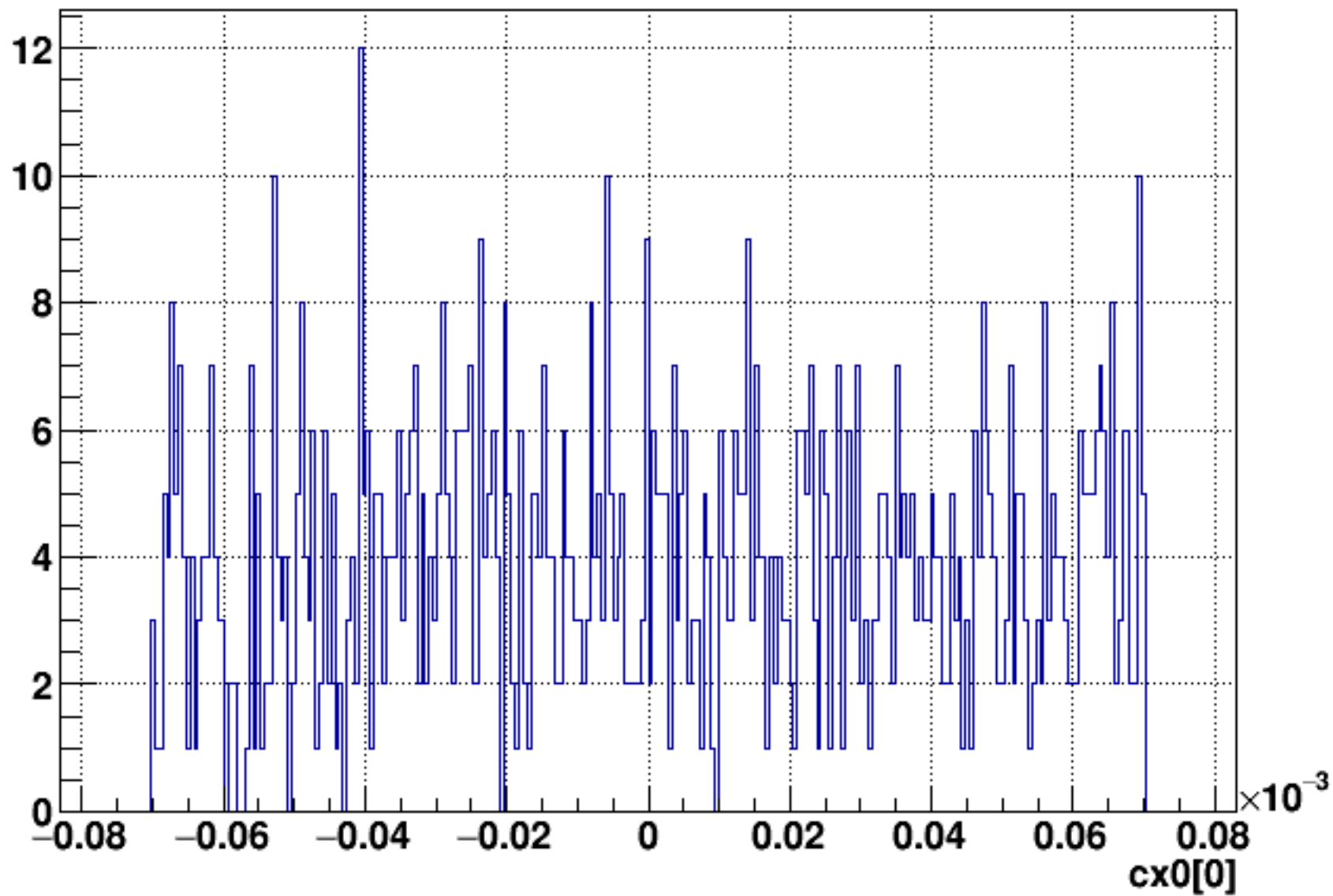


Elettroni 100 GeV a 0° e 10°

SPS







**Da:** Nikolaos Charitonidis <[nikolaos.charitonidis@cern.ch](mailto:nikolaos.charitonidis@cern.ch)>

**Inviato il:** 21 marzo 2019 16:31:58 CET

**A:** Nicola Mori <[mori@fi.infn.it](mailto:mori@fi.infn.it)>

**Oggetto:** Re: Information about beam profile

Hi Nicola,

So I run a very "idealistic" simulation for 60 GeV/c, with all your collimator settings and currents. In the simulation, here is no material, but you can see already that you have a divergence in the x-plane :

with an rms of 40 urad. This in my opinion is not-realistic, given the fact that you have a lot of scintillator materials upstream (at least 22% X0!) and you could calculate the RMS  $\theta$  coming from multiple scattering that should be added to this RMS :

At any case, I would say that the incident particle divergence is less than 1 mrad (mor in the order of 200~ urad).

I will run the same for 100 GeV/c and send it to you, however, I do not expect large differences ;-)

Hope this answers - somehow - your question !

Cheers,

Nikos

Mia dispersione aggiuntiva  $0.04^\circ = 7 \times 10^{-4}$  rad