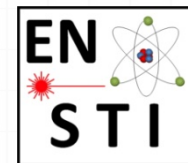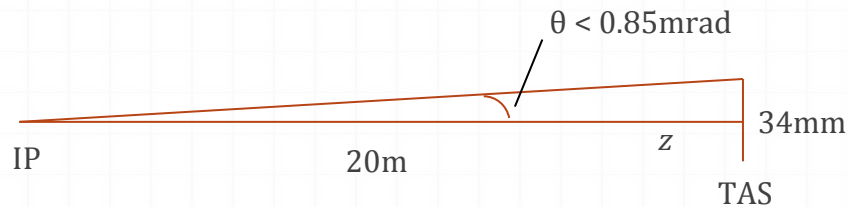# FLUKA distributions
# of IP products

## Francesco Cerutti

# Selected products

Aim: Provide the long range particles <u>from the collision debris</u>
for (combined FLUKA-) tracking calculations



θ < 0.85mrad

34mm

IP   20m   $z$   TAS

**Inelastic** head-on collisions at the IP

(beams aligned along the TAS axis ($z$), no divergence)

by the **DPMJET3** event generator
integrated in FLUKA

$\delta(p/Z)/(p/Z)$ and θ can already be given,

in principle no problem for further quantities, nor for embedding
crossing angle, divergence, and spatial distribution

x' = tan(θ) cos(φ)
y' = tan(θ) sin(φ)
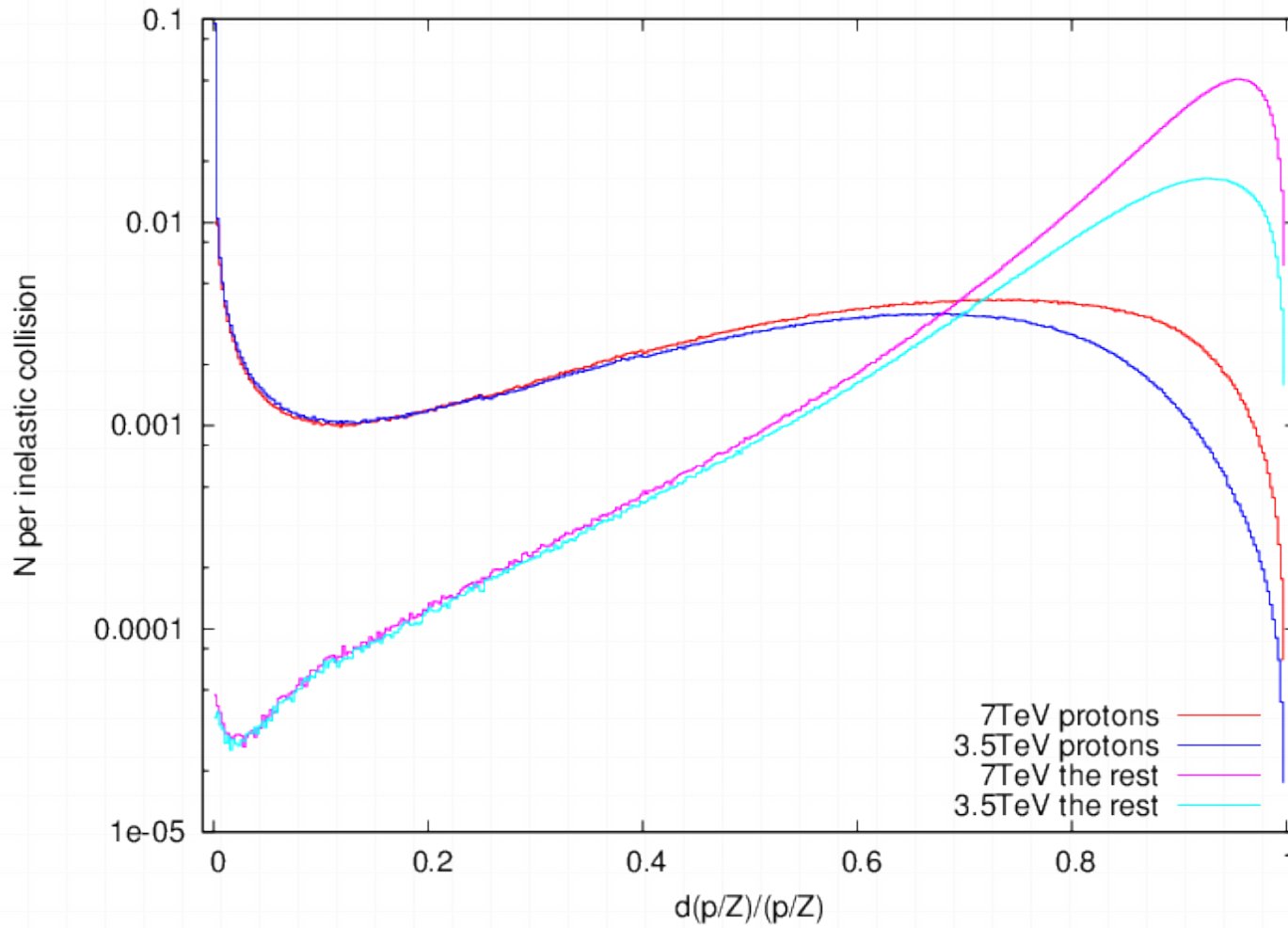
φ = 2πξ    ξ uniformly sampled over (0,1]
[this does not apply in case of multiple particles
from the same collision event (it happens for Pb+Pb)]

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NB: Let's look also at the elastic contribution, not considered here

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# Pb-Pb

WARNING: ridiculously low statistics (10k events vs 10M for p-p)

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