b-tagging Parametrisation

• based on CMSIM116 detector simulation (phase I and phase II tracker layout) and CM_FKF track reconstruction (tracks with at least 6 hits and 2 pixel hits ; $0.9 < p_T < 20\ GeV/c$; all η)

• includes: ◇ track rec. eff. $\epsilon_{tr.}(\eta) \approx 88\%$ to 82%
◇ pixel geometry acceptance (see table)
◇ V_0 smearing ($\sigma_{x,y} = 15\ \mu m$, $\sigma_z = 50\ \mu m$)
◇ transv. and long. impact parameter errors
◇ fluctuated impact parameters with tails

parameters	phase I	phase II
tail fraction (xy) ; (z)	3.0% ; 3.0%	4.0% ; 4.0%
tail width (xy) ; (z)	10.0 ; 5.00	7.00 ; 4.00
pixel acceptance (r) ; (z)	40 mm ; 325 mm	70 mm ; 325 mm

• possible b-tagging preselection: $p_T > 0.9\ GeV/c$; $ip < 2\ mm$