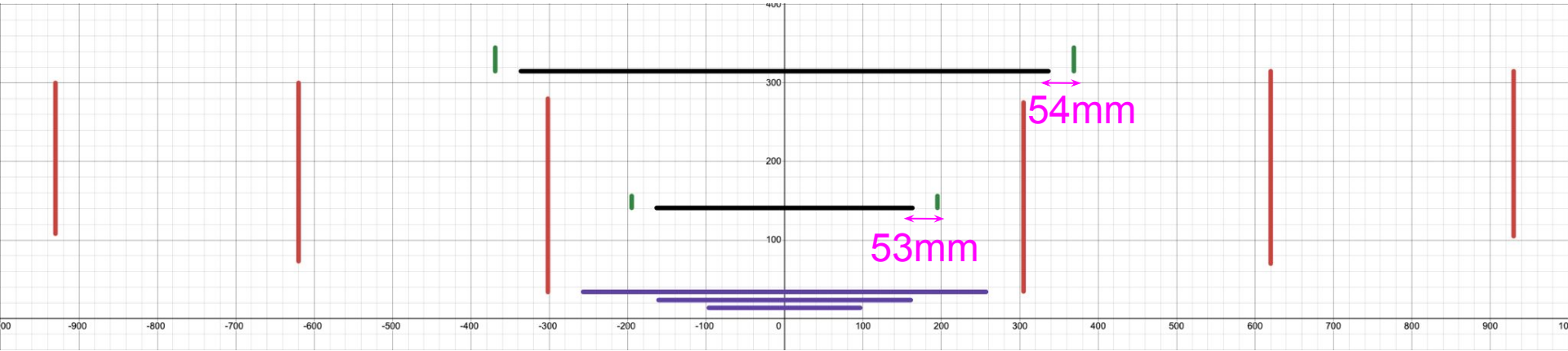


Weeks from 18/07-01/08

Estrella Cayuelas Solano

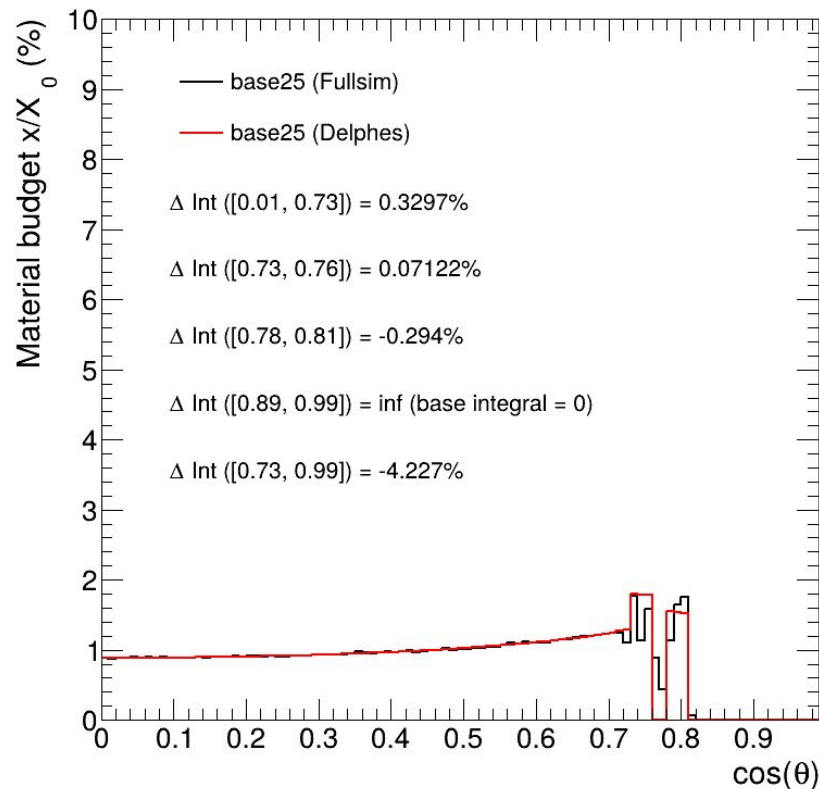
IDEA_base25

IDEA_base25: Filler visualization

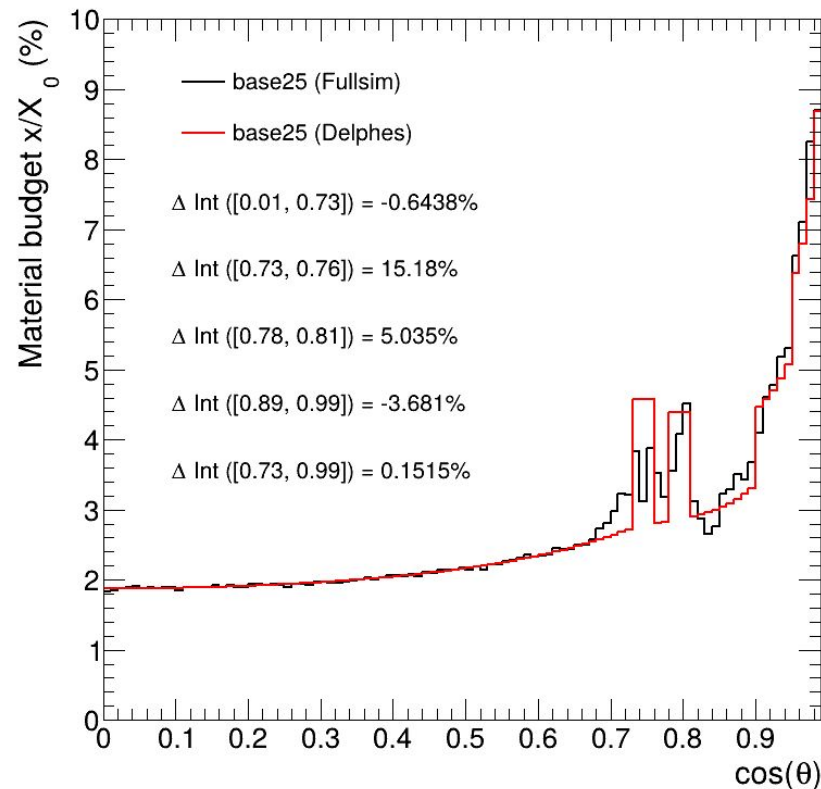


BASE 25 (FILLERS)						
Layer	rmin (mm)	rmax(mm)	zmin(mm)	zmax(mm)	cosTheta 1	cosTheta 2
Inner Barrel L1	13.7		0	96.5	0	0.990072236
Inner Barrel L2	23.7		0	160.9	0	0.989325267
Inner Barrel L3	34		0	257	0	0.991362143
Middle Barrel	141		0	163.1	0	0.75649961
Outer Barrel	315		0	340	0	0.733561461
Filler 1	141	156	195		0.780868809	0.810350358
Filler 2	315	345	369		0.730462531	0.760564502
Outer Disk 1	34	280	302		0.733312179	0.993722174
Outer Disk 2	73	300	620		0.900159251	0.993139666
Outer disk 3	108	300	930		0.951708618	0.993324468

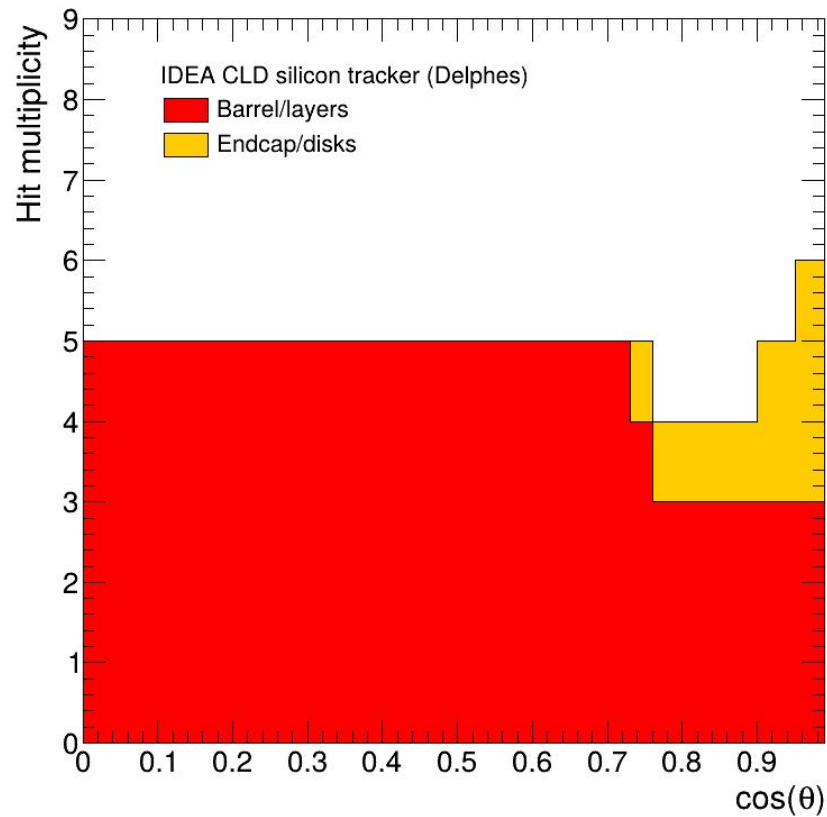
IDEA_base25: material budget



[VTXHIGH (left) and full (right)]



IDEA_base25: hit multiplicity



Short barrel

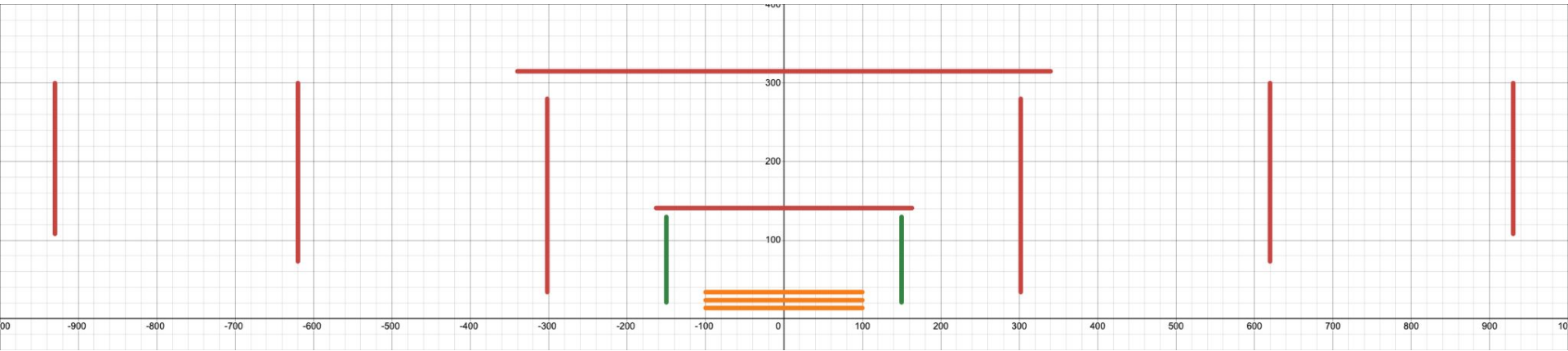
Short barrel: specifications

Inner barrel	
Parameter	Value (mm)
VTXIB_z1	100
VTXIB_z2	100
VTXIB_z3	100
VTXIB_r1	13.7
VTXIB_r2	23.7
VTXIB_r3	34.0

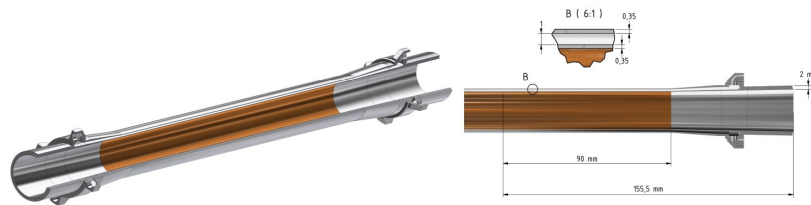
Outer barrel	
Parameter	Value (mm)
VTXOB_z1	163.1
VTXOB_z2	336.4 → 340
VTXOB_r1	141.0
VTXOB_r2	315.0

Disks	
Parameter	Value (mm)
VTXD_z1	150mm
VTXD_z2	302.3
VTXD_z3	620.0
VTXD_z4	930.0
VTXD_rmax1	129.7
VTXD_rmax2	280.0
VTXD_rmax3	300.0
VTXD_rmax4	300.0
VTXD_rmin1	21
VTXD_rmin2	34.0
VTXD_rmin3	73.0
VTXD_rmin4	108.0

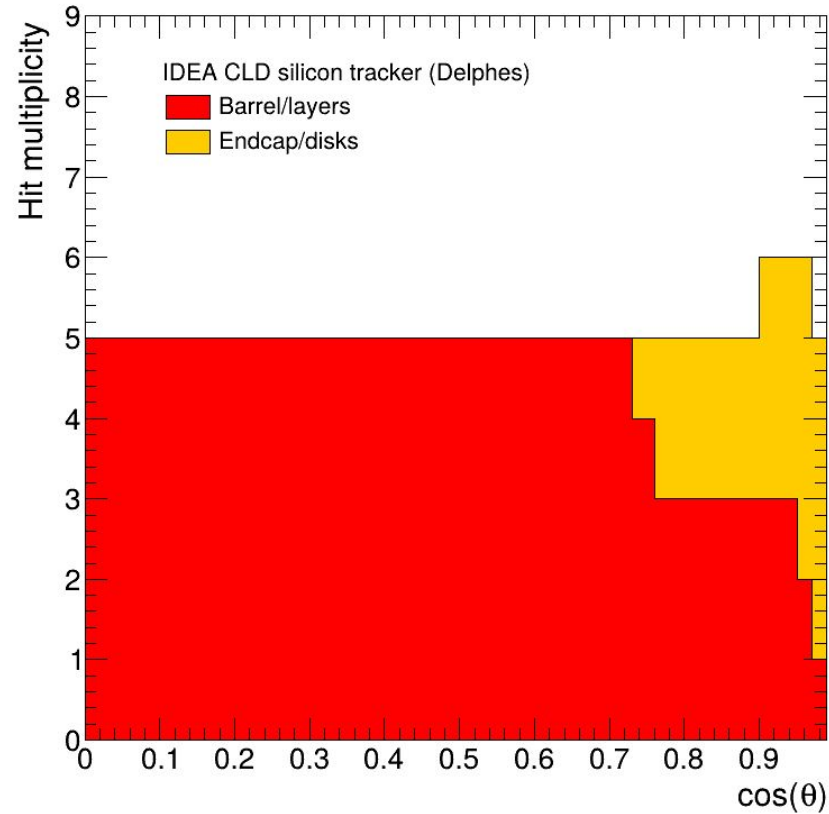
Short barrel: visualization



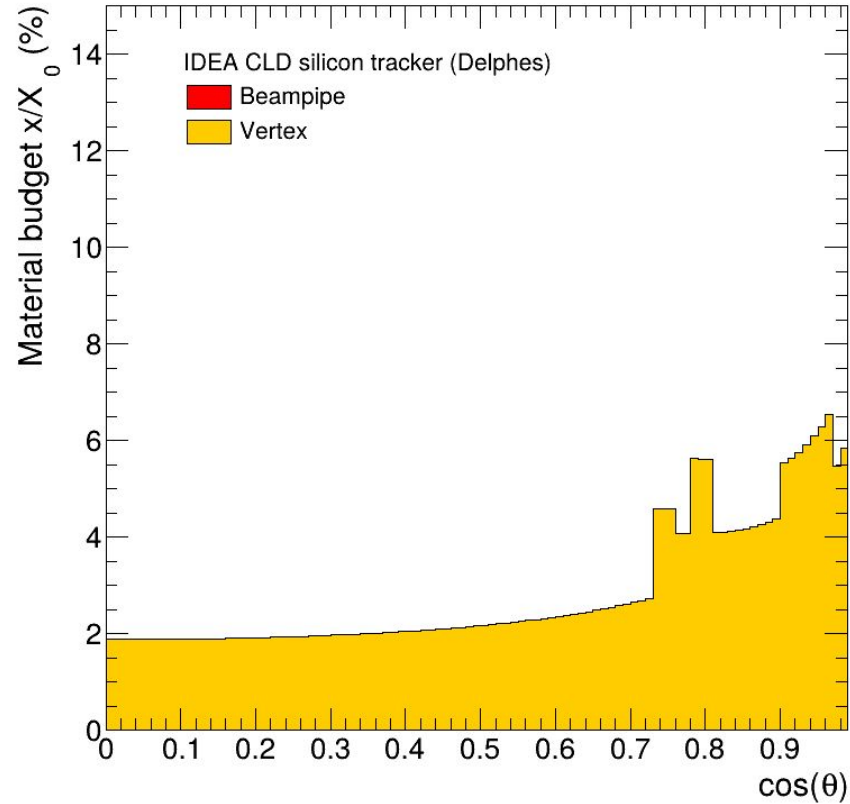
Inner barrel z restriction
due to beampipe



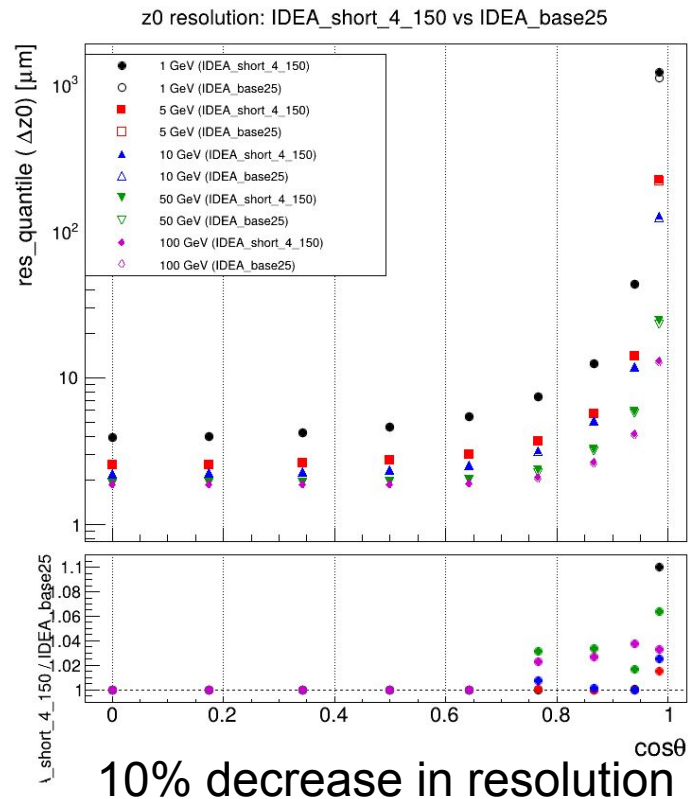
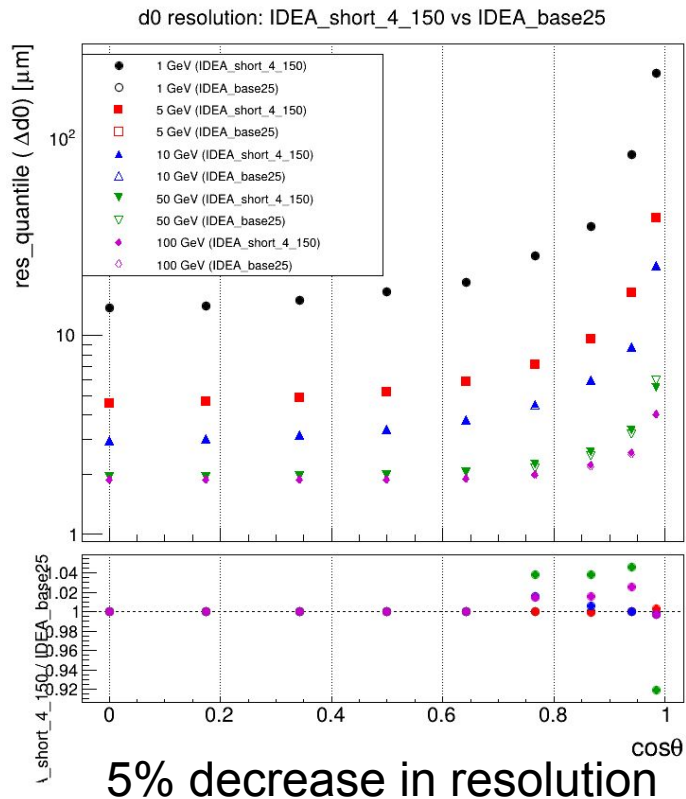
Short barrel: hit multiplicity



Short barrel: Material budget (only vertex)



Short barrel: d0,z0 resolution vs IDEA_base25



Next steps

- Finish up layer 1 inside beampipe optimization
- Document all progress made

Back-up

4 DISKS: first at 140mm

Too far from middle barrel edge

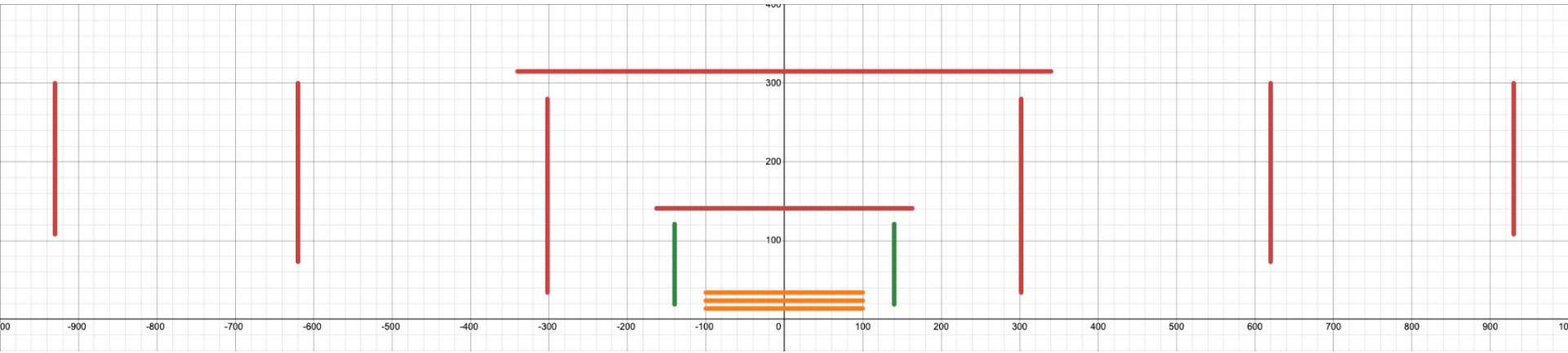
4 disks, first at 140mm: specifications

Inner barrel	
Parameter	Value (mm)
VTXIB_z1	100
VTXIB_z2	100
VTXIB_z3	100
VTXIB_r1	13.7
VTXIB_r2	23.7
VTXIB_r3	34.0

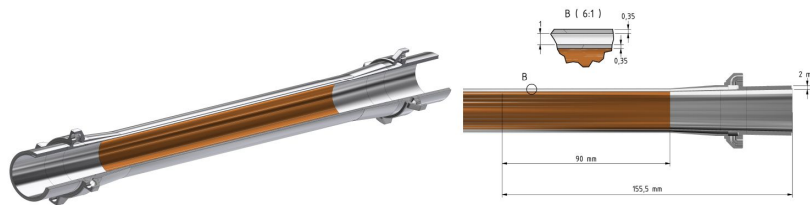
Outer barrel	
Parameter	Value (mm)
VTXOB_z1	163.1
VTXOB_z2	336.4 → 340
VTXOB_r1	141.0
VTXOB_r2	315.0

Disks	
Parameter	Value (mm)
VTXD_z1	140mm
VTXD_z2	302.3
VTXD_z3	620.0
VTXD_z4	930.0
VTXD_rmax1	121
VTXD_rmax2	280.0
VTXD_rmax3	300.0
VTXD_rmax4	300.0
VTXD_rmin1	19
VTXD_rmin2	34.0
VTXD_rmin3	73.0
VTXD_rmin4	108.0

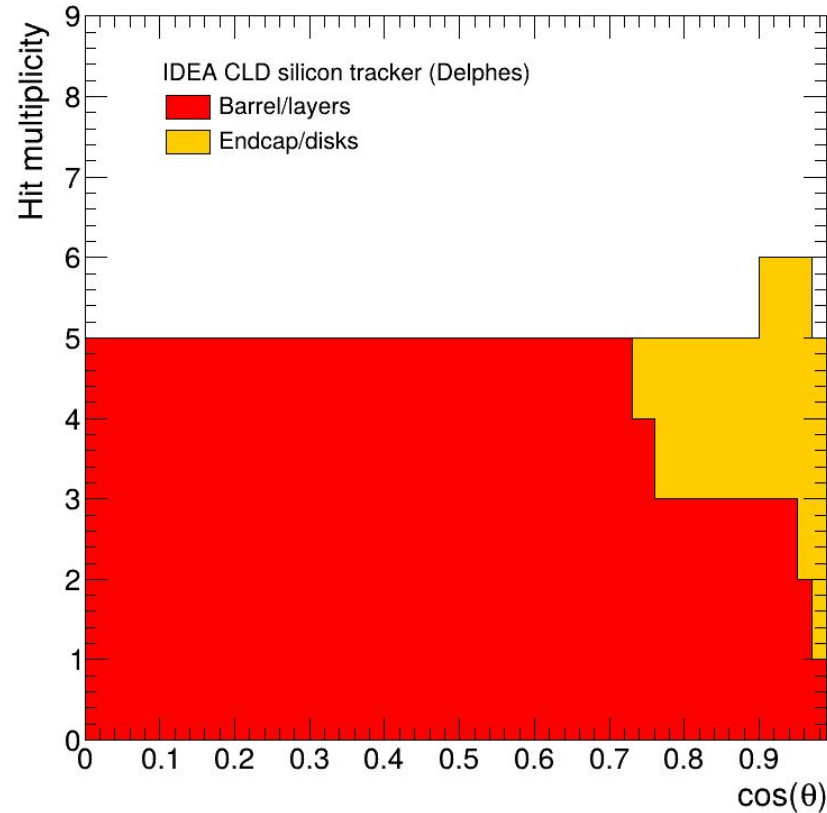
4 disks, first at 140mm: visualization



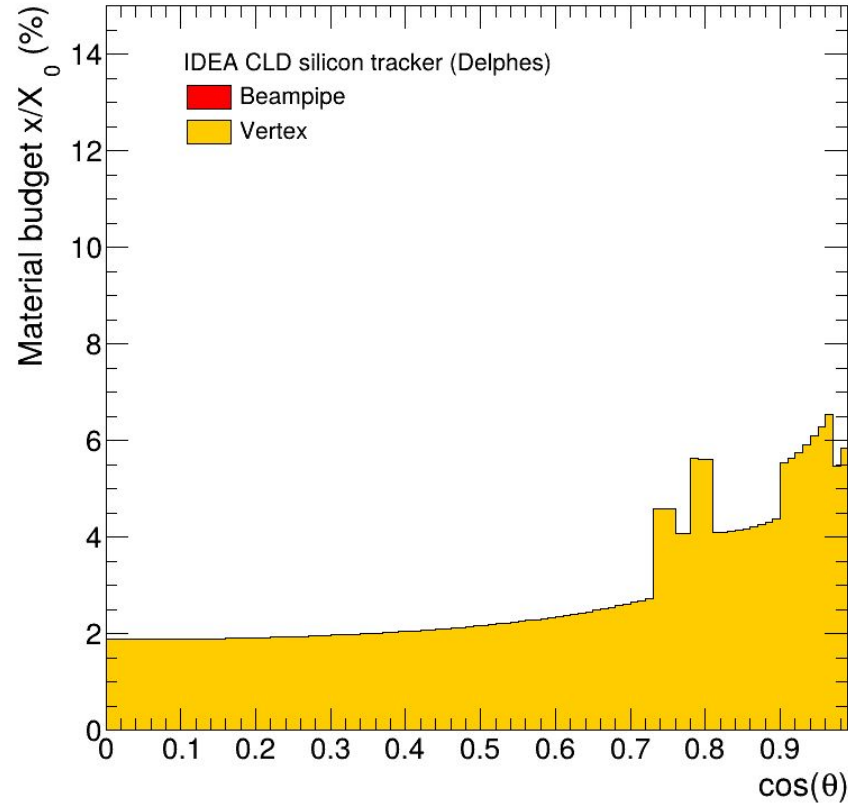
Inner barrel z restriction
due to beampipe



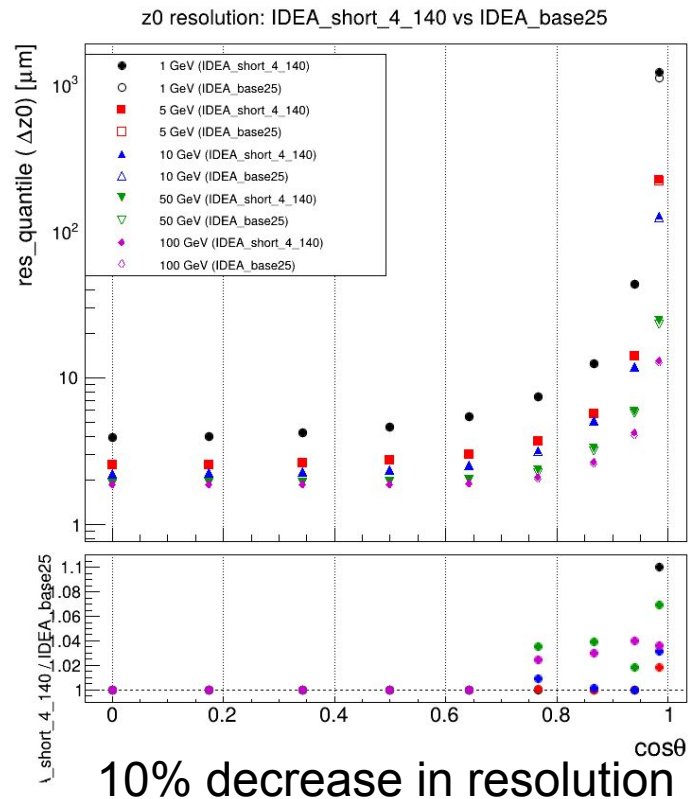
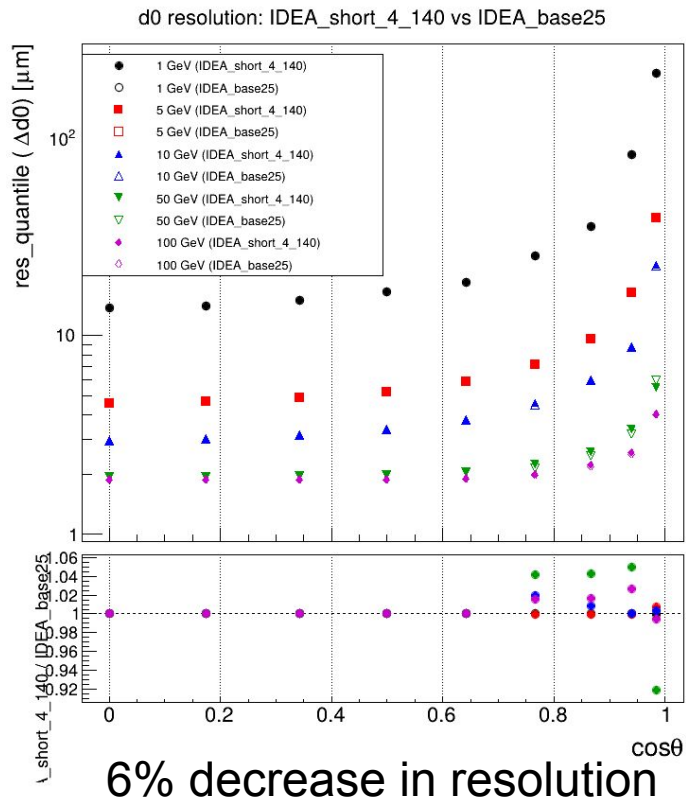
4 disks, first at 140mm: hit multiplicity



4 disks, first at 140mm: Material budget (only vertex)

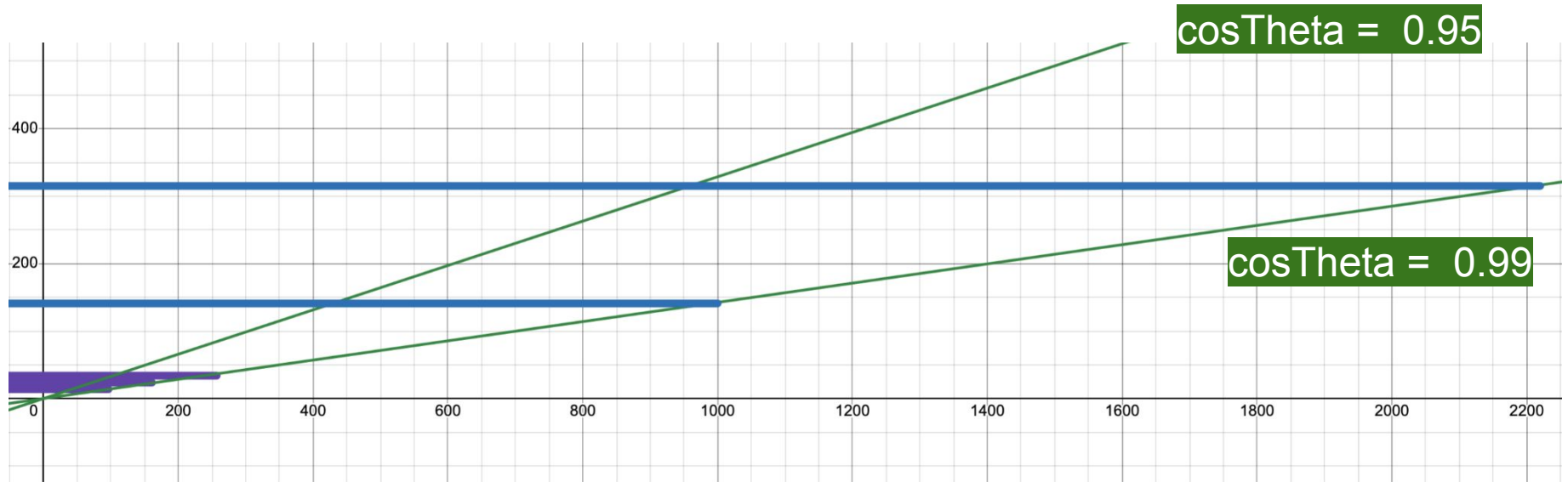


4 disks, first at 140mm: d0,z0 resolution vs IDEA_base25



Long barrel: **TOO LONG!**

Long barrel: visualization



Long barrel: hit multiplicity

