Mass and Aeff:

Martin's Study:

Layout	Si outside [cm]	Si inside [cm](%)	Cal Log [cm]	Area [cm^2]	Mass [kg] (%)	dM/dA
Pre-AO	9.5	9.34	2.1	22,332	2804	
Pre-AO-5%	9.025	8.865(-5.1)	2.1	20,119(-10)	2564(-8.6)	0.86
Pre-AO-3%+0.6	9.215	9.055(-3.1)	1.96	20,990(-6.0)	2557(-8.8)	1.47
AO	9.20	9.005(-3.6)	2.0	20,759(-7.0)	2558(-8.8)	1.26
SRR	9.20	9.005	2.0	20,759	2616	
"SRR"	9.10	8.94(-0.7)	2.0	20,460(-1.4)	2573(-1.6)	0.88
"SRR"	9.00	8.84(-1.8)	2.0	20,005(-3.6)	2530(-3.3)	1.09

For the same amount of mass removed, the change in linear dimension of 5% (footprint alone) changed the effective area by 10%, while the combined reduction of footprint and Cal depth reduced it only by 6%.

Options with constant AO footprint:

Tracker:

Change	Aeff [cm^2]	dAeff [%]	M [kg]	dM [%]	dM/dA	dP [%]	d$ [%]
SRR	12,900		2616				
S.G. 25% →20%	11,875	7.9	2590	1.0	0.13	0	0
S.G. 25% →15%	10,780	16.4	2563	2.0	0.12	0	0
-1 Normal,-1SG tray	11,300	12.4	2546	2.7	0.22	11	11
-2SG trays	10,000	22.4	2511	4.0	0.18	11	11

Calorimeter:

	RL	E_max [GeV]	M kg	dM [%]
AO	8.5	250	2616	
-5% CsI thickness	8.075	125	2549	2.6
-10% CsI thickness	7.65	60	2482	5.1

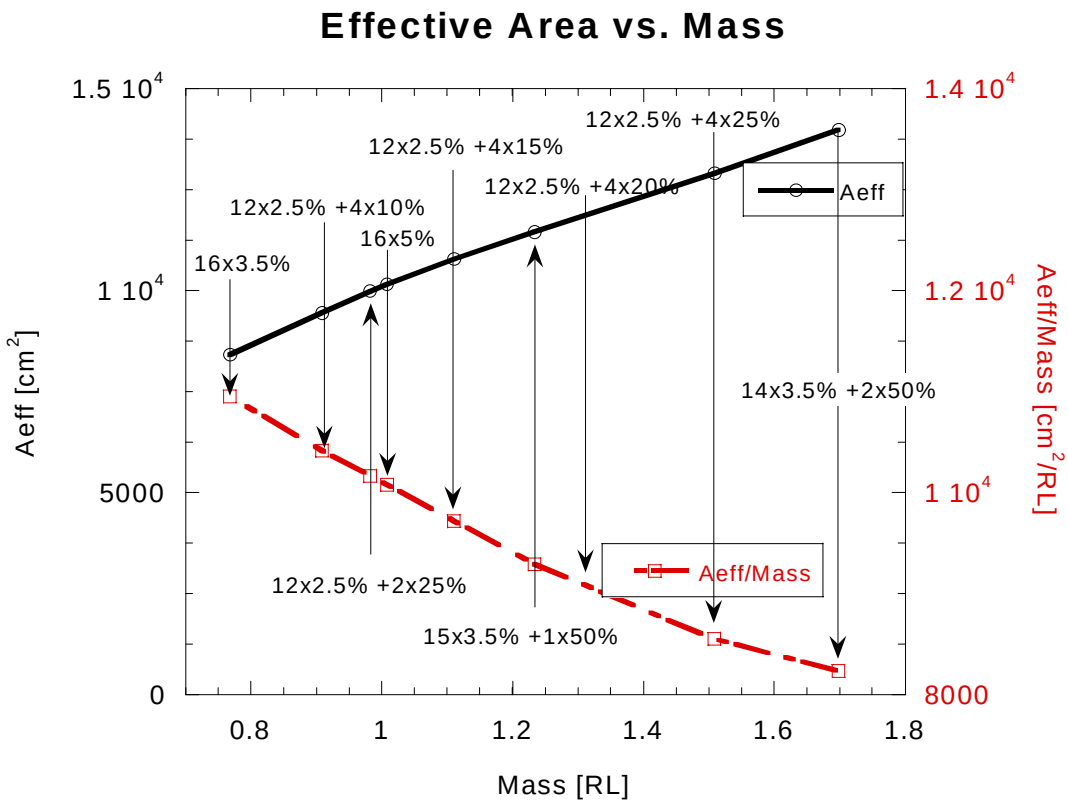

Figure 1 Effective Area A_{eff} in cm^2 vs. tracker mass in radiation length RL.
Also shown is the ratio A_{eff}/Mass in cm^2/RL.