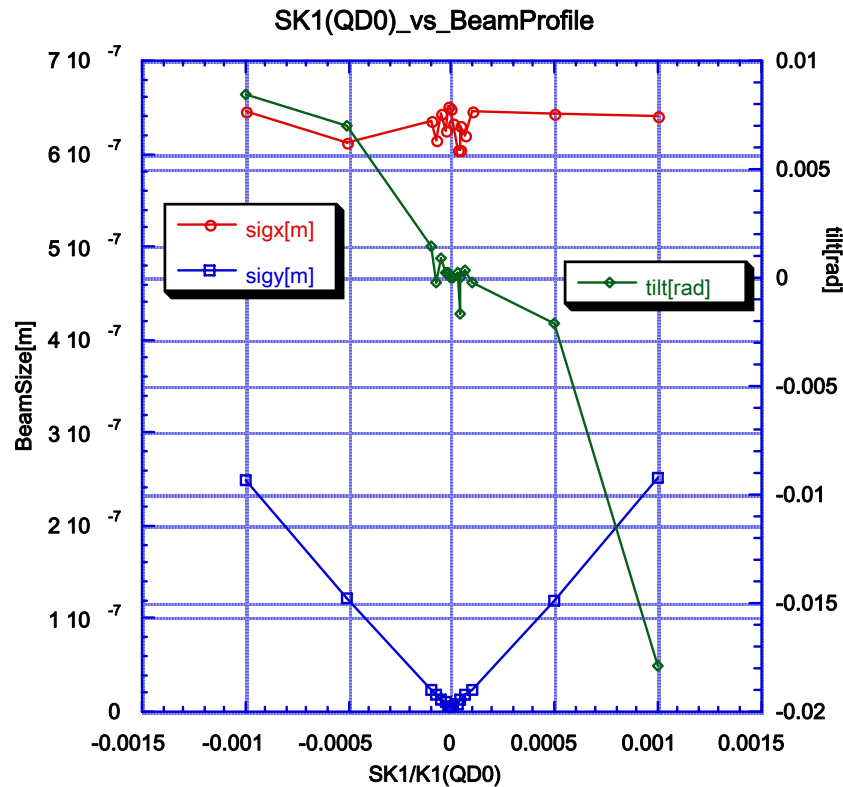


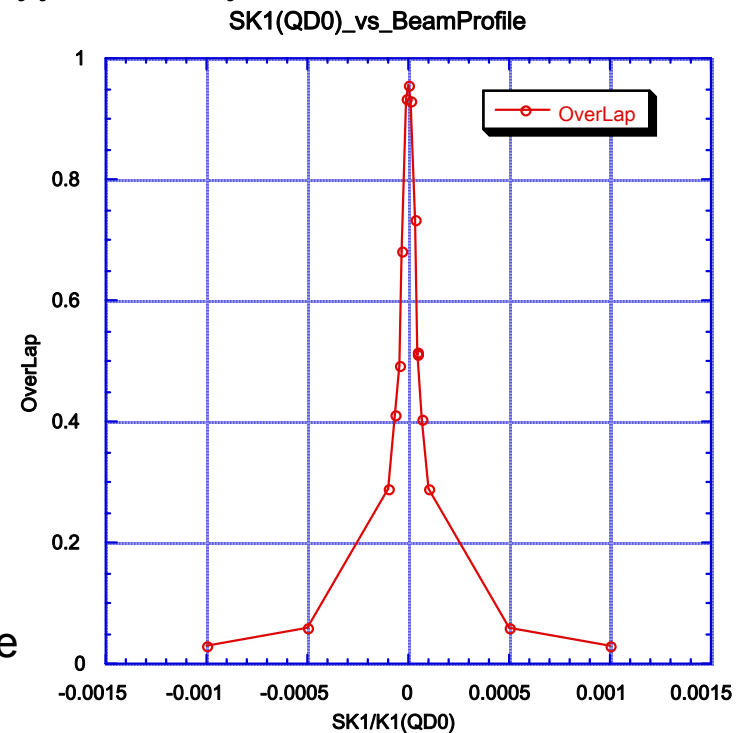
Effect of Skew Component of QD0



Deck used: ilc2006b.ebds1

OverLap is defined by the integration of the product of two Gaussian distribution; w/wo skew error. (Center is assumed to be the same.)

The distribution is constructed with $\langle xx \rangle$, $\langle yy \rangle$ and $\langle xy \rangle$.



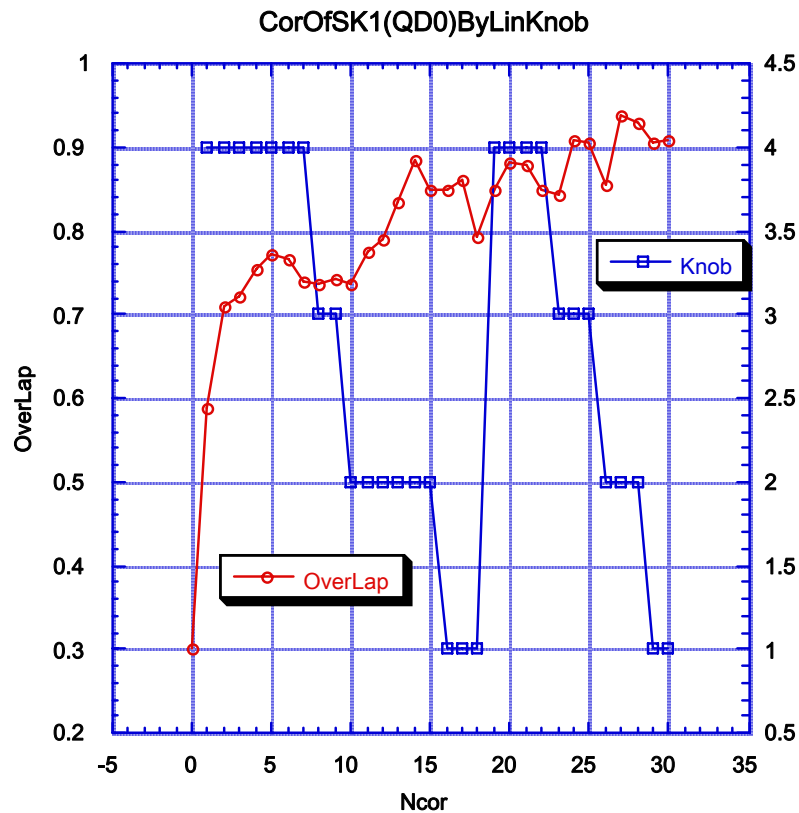
Beam profile is defined by tracking with 1000 particles. Accuracy can be seen in the fig.

When luminosity is assumed to be proportional to the OverLap, $SK1/K1 \approx 1e-5$ is required for $L/L0 \approx 0.93$

Correction with Linear Knob

Since the OverLap seems to be affected more by σ_y , correction with WaistY, PEY, R1 and R2 knobs were tried.

Case with SK1/K1=1e-4



Knob:
 1(WaistY)
 2(PEY)
 3(R1)
 4(R2)

Final Position of SX Mover

SX name	DX[m]	DY[m]
SD4	4.73748e-12	-7.96327795 e-7
SF1	1.00814e-7	3.975626e-5
SD0	1.65113e-7	1.862614e-5

Max. movement is about 40um for SF1 DY.

Luminosity can be recovered upto $\approx 93\%$.