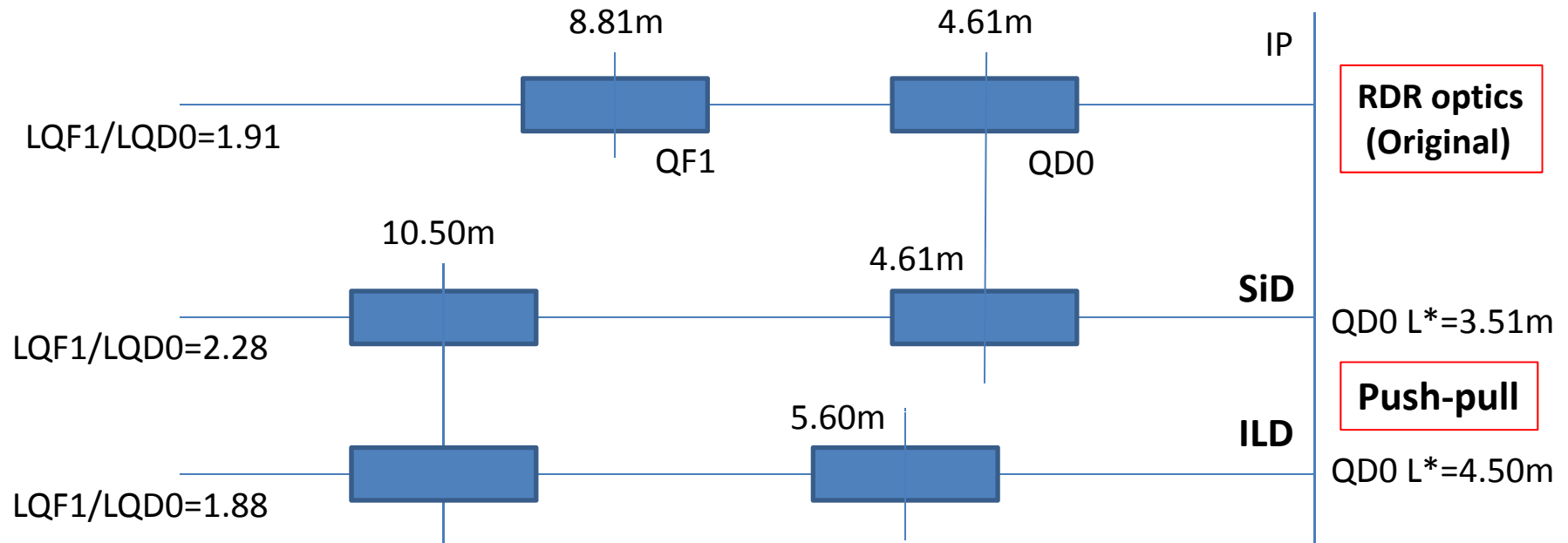
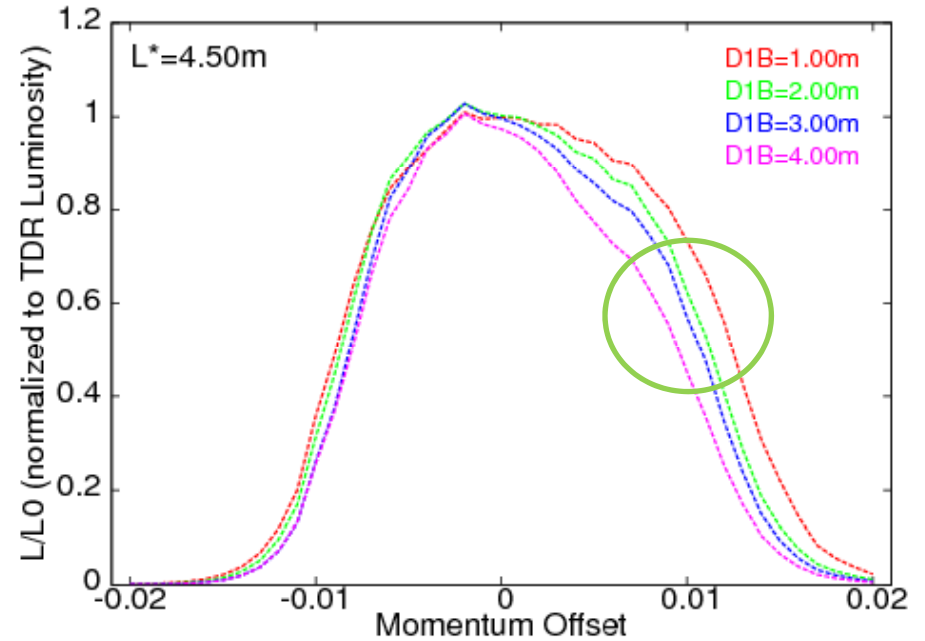
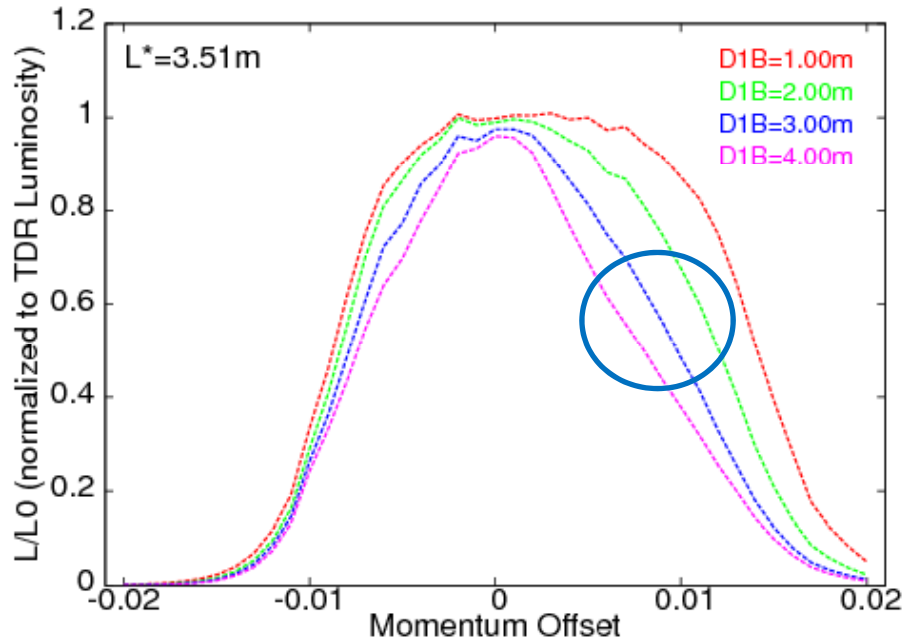


Geometry of QD0/QF1



The QF1/QD0 ratio for $L^=4.50\text{m}$ is comparable to the original optics, but the ration for $L^*=3.51\text{m}$ is larger than original.*

Momentum Acceptance



D1B=1.00m ; (LQF1)/(LQD0)=1.84

D1B=2.00m ; (LQF1)/(LQD0)=2.05

D1B=3.00m ; (LQF1)/(LQD0)=2.27

D1B=4.00m ; (LQF1)/(LQD0)=2.49

D1B=1.00m ; (LQF1)/(LQD0)=1.69

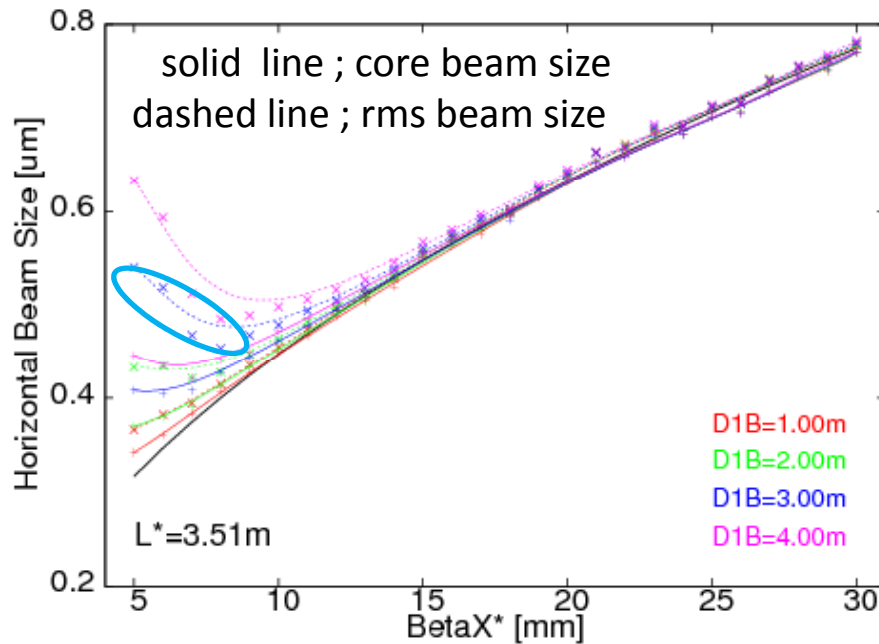
D1B=2.00m ; (LQF1)/(LQD0)=1.87

D1B=3.00m ; (LQF1)/(LQD0)=2.04

D1B=4.00m ; (LQF1)/(LQD0)=2.22

Momentum acceptance of $L^=3.51\text{m}$ is larger than that of $L^*=4.50\text{m}$ for small $D1B$, but the momentum acceptance of $L^*=4.50\text{m}$ is larger than that of $L^*=3.51\text{m}$ for L^* of QF1 is 9.5m.*

Geometrical aberration

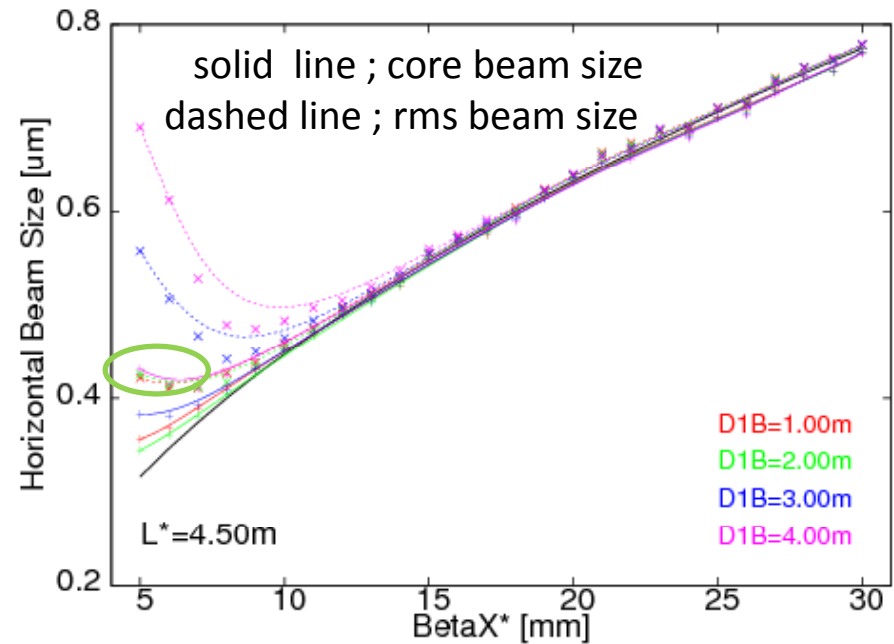


D1B=1.00m ; $(LQF1)/(LQD0)=1.84$

D1B=2.00m ; $(LQF1)/(LQD0)=2.05$

D1B=3.00m ; $(LQF1)/(LQD0)=2.27$

D1B=4.00m ; $(LQF1)/(LQD0)=2.49$



D1B=1.00m ; $(LQF1)/(LQD0)=1.69$

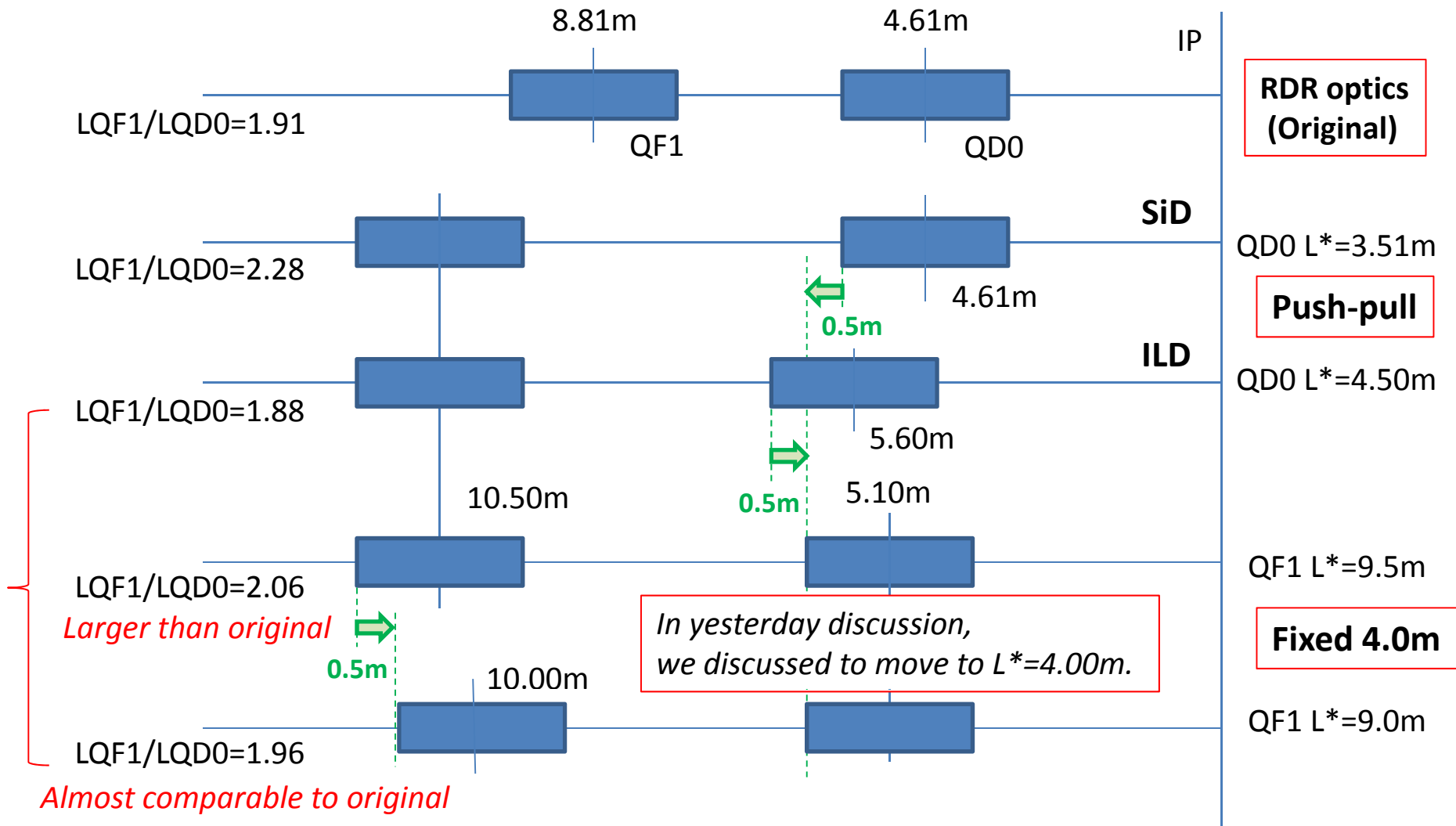
D1B=2.00m ; $(LQF1)/(LQD0)=1.87$

D1B=3.00m ; $(LQF1)/(LQD0)=2.04$

D1B=4.00m ; $(LQF1)/(LQD0)=2.22$

Effect of geometrical aberration of $L^=4.50\text{m}$ was smaller than that of $L^*=3.51\text{m}$ for L^* of QF1 is 9.5m.*

(maybe alignment tolerance also small)



When we can move QF1 upstream by 0.5m for L*=4.00m,
I think L*=4.0m is better than L*=4.5m (we need check whether this assumption is correct or not).

But, I'm not sure which are better for (QD0 L*=4.50m, QF1 L*=9.5m) or (QD0 L*=4.0m, QF1=9.5m).

Shall we decide at LCWS ?

If YES, I will investigate the tolerances for above 3 optics by the LCWS.

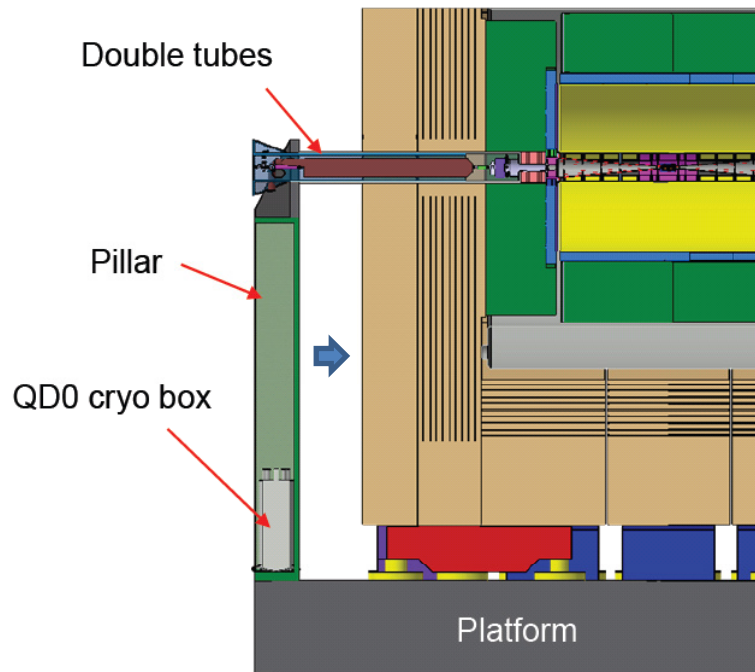
Questions for Detector Group

ILD L^* Issue

presented by Karsten Buesser

Minimum $L^* = 4.5 - 0.3 = 4.2\text{m}$

Can QD0 L^* shorten down to 4.0m ?



Can the pillar move to downstream to move QF1 to downstream, when L^* will shorten ?

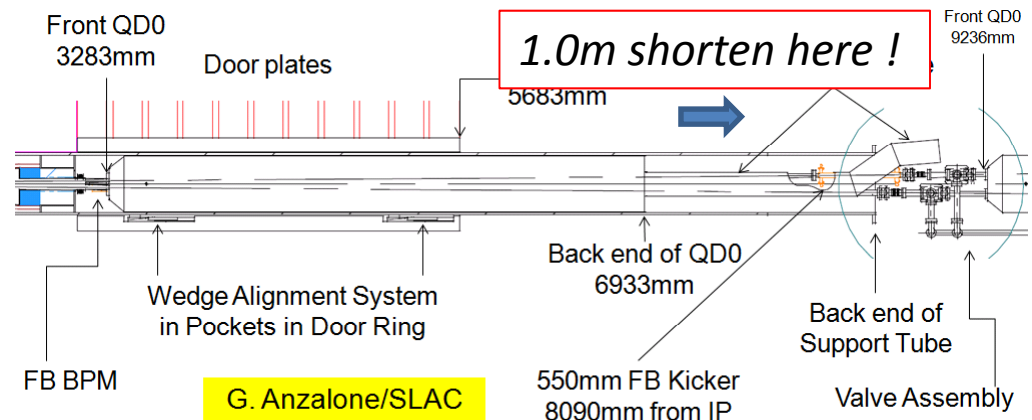
SiD L^* Issue

presented by Tom Markiewicz

Maximum $L^* = 3.5 + 1.0 = 4.5\text{m}$

Can QD0 L^* lengthen up to 4.0m, by keeping QF1 $L^* = 9.0\text{m}$?

(Same difficulty for QD0 $L^* = 4.50\text{m}$
QF1 $L^* = 9.50\text{m}$)



G. Anzalone/SLAC