

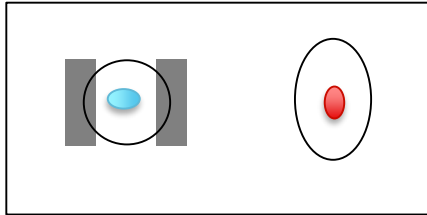


# **Beam Aperture for TCT– TCL between TAXN and D2**

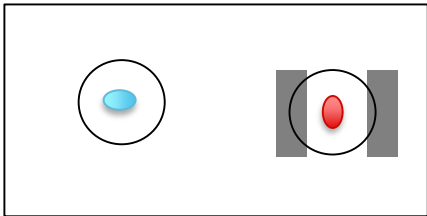
R. De Maria

# Aperture HLLHCV1.5

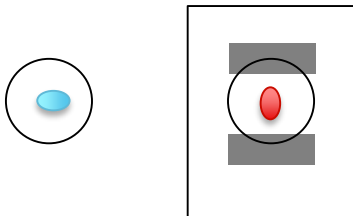
TCLPX VTCLPX



VTCTPXH TCTPXH



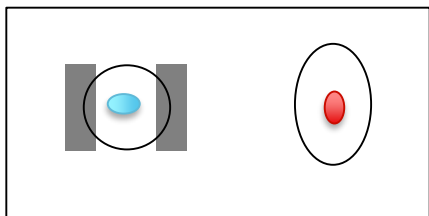
VTCTPVX TCTPVX



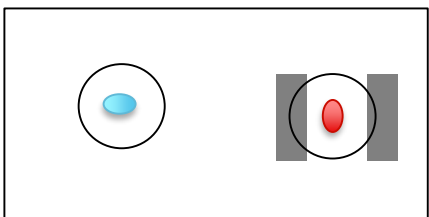
Element	Stroke Pipe (H V)		Tol	Transit ion	Ap.
TCLPX	80	-	0	80	14.6
VTCLPX	67	80	3	80	14.5
TCTPXH	70	-	0	80	14.5
VCTPXH	80	80	3	80	14.3
TCTPXV	-	84	0	80	14.2
VCTPXV	80	80	3	80	14.1
TAXN	88	88	4.9		14.3
MBRD	82.7	82.7	4.9		14.8

# Aperture HLLHCV1.5 (update)

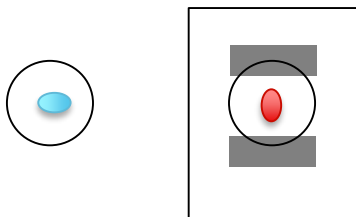
TCLPX VTCLPX



VTCTPXH TCTPXH



VTCTPVX TCTPVX

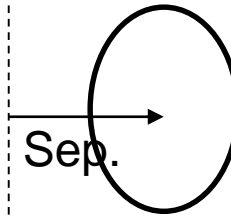
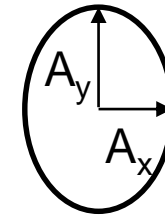


Element	Stroke Pipe (H V)		Tol	Transition	Ap.
TCLPX	80	-	0	85	14.6
VTCLPX	67	85	3	85	14.9
TCTPXH	70	-	0	85	15.3
VCTPXH	80	80	3	85	15.5
TCTPXV	-	84	0	85	15.1
VCTPXV	85	85	3	85	15.2
TAXN	88	88	4.9		14.3
MBRD	82.7	82.7	4.9		14.8

# Back-up

# Beam Aperture specifications

Offset (X,Y)	Baseline	Remote alignment
Ground Motion + Fiduc.	~2 mm	~0.5 mm
Orbit Error + crab adj.	2.5 mm	2.5 mm
Collimator stroke	15 $\sigma$ + 10 % ( $\beta$ -beat)	15 $\sigma$ + 10 % ( $\beta$ -beat)
Protected aperture	12 $\sigma$ + 10 % ( $\beta$ -beat)	12 $\sigma$ + 10 % ( $\beta$ -beat)
2 mm IP shift	With orbit correctors	With re-alignment



Round 15 cm	$A_x$ [mm]	$A_y$ [mm]	$A_x$ [mm]	$A_y$ [mm]	Sep. [mm]
TCLX	36.4	27.9	31.9	26.1	86.0-87.5
VTCLX	28.0	36.4	26.1	31.9	86.0-87.5
TCTPH	28.5	37.1	26.5	32.7	83.4-84.9
VTCTPH	37.0	28.1	32.5	26.4	83.4-84.9
TCTPV	28.9	38.0	26.9	33.7	80.4-81.9
VTCTPV	38.1	28.7	33.7	26.9	80.4-81.9

Flat 7.5/18 cm	$A_x$ [mm]	$A_y$ [mm]	$A_x$ [mm]	$A_y$ [mm]	Sep. [mm]
TCLX	42.8	33.8	38.3	32.0	86.0-87.5
VTCLX	33.9	42.9	32.1	38.4	86.0-87.5
TCTPH	34.2	43.5	32.3	39.1	83.4-84.9
VTCPTH	43.3	34.0	38.8	32.2	83.4-84.9
TCTPV	34.5	44.3	32.6	39.9	80.4-81.9
VTCTPV	44.2	34.5	39.8	32.5	80.4-81.9