

bLCGT RECYCLING CAVITY LENGTHS  
4/13/2012

LCGT/cavity-length-bLCGT-asym-itm-wedge.xls

	WEDGE, deg	orientation
	horizontal	
ITMX	0.025	thick side -Y
ITMY	0.025	thick side +X
BS	0.050	thick side toward arms
PRM3/SRM3		
PRM2/SRM2		
PRM/SRM		
Schnupp Assymetry	3329.8	
Schnupp correction	0.0	

OPTIC	COORDINATES, mm					
	ZEMAX			GLOBAL		
	X	Y	Z	X	Y	Z
bITMX-RADIUS	0.0	28.3	26309.1	26309.1	28.3	0.0
BSAR	0.0	-8.6	95.7	95.7	-8.6	0.0
BSHR	0.0	16.5	7.5	7.5	16.5	0.0
PR3_RADIUS	0.0	22.1	-15792.5	-15792.5	22.1	0.0
PR2_RADIUS	0.0	308.1	-4729.2	-4729.2	308.1	0.0
PRM	0.0	168.4	-19656.0	-19656.0	168.4	0.0
bITMY-RADIUS	0.0	23032.9	-28.3	-28.3	23032.9	0.0
BS ARS	0.0	-71.6	32.5	32.5	-71.6	0.0
SR3_RADIUS	0.0	-15710.0	48.4	48.4	-15710.0	0.0
SR2_RADIUS	0.0	-4552.9	320.2	320.2	-4552.9	0.0
SRM_RADIUS	0.0	-19415.8	325.7	325.7	-19415.8	0.0
ETMX	0.0	0.0	3026309.1	3026309.1	0.0	0.0
ETMY	0.0	3023032.9	0.0	0.0	3023032.9	0.0

Note: The following recycling cavity lengths are based upon an arm cavity length = 3994500 mm, Ref:T0900043-10

	CAVITY LENGTH							
	ACTUAL	DESIGN	DIFF					
AC length	3000000.0	3000000.0	0.0					
PRC length	66591.04	66591.00	0.0					
SRC length	66591.03	66591.00	0.0					
Arm Cavity X length	3000000.0	3000000.0	0.0					
Arm Cavity Y length	3000000.0	3000000.0	0.0					
Schnupp Assymetry	3330	3330	0.1					
n	1.768234							
		ZEMAX			GLOBAL			





z	x	y	Comment	distance	index	optical path	average length	Schnupp	design length
<b>ACTUAL SPACING</b>									
<b>SIGNAL RECYCLING CAVITY</b>									
				<b>Y-ARM</b>					
0.0	-28.3	23032.9	ITMY-RADIUS			0.0			
0.0	-28.3	22882.9	ITMY-RADIUS	150.0	1.768234	265.2			
0.0	7.5	16.5	BHR	22866.5	1.000	22866.5			
0.0	32.5	-71.6	BS ARS	91.6	1.44963	132.8	15771.1		
0.0	48.4	-15710.0	SR3	15638.4	1.000	15638.4			
0.0	320.2	-4552.9	SR2	11160.4	1.000	11160.4			
0.0	325.7	-19415.8	SRM	14862.9	1.000	14862.9			
						64926.1			
				<b>X-ARM</b>					
0.0	26309.1	28.3	ITMX-RADIUS			0.0			
0.0	26159.1	28.3	ITMX-RADIUS	150.0	1.768234	265.2			
0.0	95.7	-8.6	BS AR	26063.4	1.000	26063.4			
0.0	7.5	16.5	BHR	91.6	1.44963	132.8	15904.0		
0.0	32.5	-71.6	BSARS	91.6	1.44963	132.8			
0.0	48.4	-15710.0	SR3	15638.4	1.000	15638.4			
0.0	320.2	-4552.9	SR2	11160.4	1.000	11160.4			
0.0	325.7	-19415.8	SRM	14862.9	1.000	14862.9			
						68255.9	<b>66591.0</b>	<b>3330</b>	