

Note:

- 1 The recycling cavity lengths are specified in Ref:T0900043-10; the ITM and ETM were moved per E1200345
- 2 using as-built wedge angles
- 3 using IO's x-coord for PR3; new y-coord and z-coord determined by wedge angles
- 4 using IO's x & y-coords for PR2 and PRM; new z-coord determined by wedge angles
- 5 using v7 y-coord for SR3; new x-coord and z-coord determined by wedge angles
- 6 using v7 x & y-coords for SR2 and SRM; new z-coord determined by wedge angles

WEDGE			
	horizontal	vertical	thick side
ITMX 04		0.0725	down
ITMY 08		0.0740	down
ETMX ?			
ETMY ?			
CP-x 06	0.0730		-Y
CP-y 08	0.0660		-X
BS 02	0.0700		+X, +Y
PRM3/SRM3		0.100	down
PRM2/SRM2		1.000	down
PRM/SRM		1.000	down
Schnupp Assymetry	80.0		
Schnupp correction	0		

OPTIC	RAY COORDINATES, mm									CHAMBER
	ZEMAX			GLOBAL			LOCAL			
	X	Y	Z	X	Y	Z	X	Y	Z	
ITMX-RADIUS	80.00	-200.00	5013.00	5013.0	-200.0	-80.0	433.0	-200.0	-80.0	LBSC3
ITMX-CP	80.01	-200.00	4793.00	4793.0	-200.0	-80.0	213.0	-200.0	-80.0	LBSC3
ITMX ELLIPTICAL BAF	82.26	-202.26	752.38	752.4	-202.3	-82.3	752.4	-202.3	-82.3	LBSC2
BSAR ELLIPTICAL BAF	82.74	-202.74	-92.20	-92.2	-202.7	-82.7	-92.2	-202.7	-82.7	LBSC2
BS AR	82.76	-202.77	-136.51	-136.5	-202.8	-82.8	-136.5	-202.8	-82.8	LBSC2
PR3	93.92	-176.34735	-19740.5	-19740.5	-176.3	-93.9	381.5	-176.3	-93.9	LHAM2
PR2	93.26	-530.40	-3579.59	-3579.6	-530.4	-93.3	251.4	-530.4	-93.3	LHAM3
PRM	102.79	-628.00	-20190.01	-20190.0	-628.0	-102.8	-68.0	-628.0	-102.8	LHAM2
ITMY-RADIUS	80.00	4983.10	-200.00	-200.0	4983.1	-80.0	-200.0	403.1	-80.0	LBSC1
ITMY-CP	80.01	4763.10	-200.00	-200.0	4763.1	-80.0	-200.0	183.1	-80.0	LBSC1
ITMY ELLIPTICAL BAF	82.28	751.94	-202.03	-202.0	751.9	-82.3	-202.0	751.9	-82.3	LBSC1
BSHR ELLIPTICAL BAF	82.80	-141.60	-202.49	-202.5	-141.6	-82.8	-202.5	-141.6	-82.8	LBSC2
BS HR	82.83	-184.03	-202.51	-202.5	-184.0	-82.8	-202.5	-184.0	-82.8	LBSC2
BS ARS	82.86	-249.97	-183.87	-183.9	-250.0	-82.9	-183.9	-250.0	-82.9	LBSC2
SR3	94.11	-19615.90	-175.24	-175.2	-19615.9	-94.1	-175.2	506.1	-94.1	LHAM5
SR2	84.36	-4178.07	-594.10	-594.1	-4178.1	-84.4	-594.1	-347.1	-84.4	LHAM4
SRM	93.23	-19908.58	305.00	305.0	-19908.6	-93.2	305.0	213.4	-93.2	LHAM5
OUTPUT FARADAY IN	97.20	-20474.11	337.55	337.6	-20474.1	-97.2	337.6	-352.1	-97.2	LHAM5
OUTPUT FARADAY OUT	97.45	-20965.02	361.41	361.4	-20965.0	-97.5	361.4	-843.0	-97.5	LHAM5
ISC STEERING MIRROR	98.76	-23317.00	507.57	507.6	-23317.0	-98.8	507.6	-590.3	-98.8	LHAM6
ETMX	80.0	-200.0	3999498.0	3999498.0	-200.0	-80.0	-502.0	-200.0	-80.0	LBSC4
ETMY	80.0	3999468.1	-200.0	-200.0	3999468.1	-80.0	-200.0	-531.9	-80.0	LBSC5

CAVITY LENGTH				GLOBAL		
	ACTUAL	DESIGN	DIFF	X	Y	Z
AC length	3994485.0	3994485.0	0.0			
PRC length	57656.43	57656.00	-0.4			
SRC length	56007.91	56008.00	0.1			
Arm Cavity X length	3994485.0	3994485.0	0.0			
Arm Cavity Y length	3994485.0	3994485.0	0.0			
Schnupp Assymetry	80	80	0.0			
n (1064nm)	1.44963					
CHAMBER				X	Y	Z
LBSC1				0.0	4580.0	0.0
LBSC2				0.0	0.0	0.0
LBSC3				4580.0	0.0	0.0
LBSC4				4000000.0	0.0	0.0
LBSC5				0.0	4000000.0	0.0
LHAM1				-22726.7	0.0	0.0
LHAM2				-20122.0	0.0	0.0
LHAM3				-3831.0	0.0	0.0
LHAM4				0.0	-3831.0	0.0
LHAM5				0.0	-20122.0	0.0
LHAM6				0.0	-22726.7	0.0

z	x	y	Comment	distance	index	optical path	average length	Schnupp	design length
ACTUAL SPACING									
POWER RECYCLING CAVITY									
				Y-ARM					
-80.0	-200.0	3999468.1	ETMY						
-80.0	-200.0	4983.1	ITMY-RADIUS			0.0			
-80.0	-200.0	4883.1	ITMY-RADIUS	100.0	1.44963	145.0			
-80.0	-200.0	4783.1	ITMY-RADIUS	100.0	1.44963	145.0			
-80.0	-200.0	4763.1	ITMY-CP	20.0	1.000	20.0			
-80.0	-200.0	4663.1	ITMY-CP	100.0	1.44963	145.0			
-82.8	-202.5	-184.0	B SHR	4847.1	1.000	4847.1			
-93.9	-19740.5	-176.3	PRM3	19538.0	1.000	19538.0			
-93.3	-3579.6	-530.4	PRM2	16164.8	1.000	16164.8			
-102.8	-20190.0	-628.0	PRM	16610.7	1.000	16610.7			
						57615.5			
				X-ARM					
-80.0	3999498.0	-200.0	ETMX						
-80.0	5013.0	-200.0	ITMX-RADIUS			0.0			
-80.0	4913.0	-200.0	ITMX-RADIUS	100.0	1.44963	145.0			
-80.0	4813.0	-200.0	ITMX-RADIUS	100.0	1.44963	145.0			
-80.0	4793.0	-200.0	ITMX-CP	20.0	1.000	20.0			
-80.0	4693.0	-200.0	ITMX-CP	100.0	1.44963	145.0			
-82.8	-136.5	-202.8	BS AR	4829.5	1.000	4829.5			
-82.8	-202.5	-184.0	B SHR	68.6	1.44963	99.5			
-93.9	-19740.5	-176.3	PRM3	19538.0	1.000	19538.0			
-93.3	-3579.6	-530.4	PRM2	16164.8	1.000	16164.8			
-102.8	-20190.0	-628.0	PRM	16610.7	1.000	16610.7			
						57697.3	57656.4	81.8	

z	x	y	Comment	distance	index	optical path	average length	Schnupp	design length
z	x	y	Comment	distance	index	optical path	average length	Schnupp	design length
ACTUAL SPACING									
SIGNAL RECYCLING CAVITY									
				Y-ARM					
-80.0	-200.0	4983.1	ITMY-RADIUS			0.0			
-80.0	-200.0	4883.1	ITMY-RADIUS	100.0	1.44963	145.0			
-80.0	-200.0	4783.1	ITMY-RADIUS	100.0	1.44963	145.0			
-80.0	-200.0	4763.1	ITMY-CP	20.0	1.000	20.0			
-80.0	-200.0	4663.1	ITMY-CP	100.0	1.44963	145.0			
-82.8	-202.5	-184.0	BSHR	4847.1	1.000	4847.1			
-82.9	-183.9	-250.0	BS ARS	68.5	1.44963	99.3			
-94.1	-175.2	-19615.9	SRM3	19365.9	1.000	19365.9			
-84.4	-594.1	-4178.1	SRM2	15443.5	1.000	15443.5			
-93.2	305.0	-19908.6	SRM	15756.2	1.000	15756.2			
						55967.0			
				X-ARM					
-80.0	5013.0	-200.0	ITMX-RADIUS	0.0	1.44963	0.0			
-80.0	4913.0	-200.0	ITMX-RADIUS	100.0	1.44963	145.0			
-80.0	4813.0	-200.0	ITMX-RADIUS	100.0	1.44963	145.0			
-80.0	4793.0	-200.0	ITMX-CP	20.0	1.000	20.0			
-80.0	4693.0	-200.0	ITMX-CP	100.0	1.44963	145.0			
-82.8	-136.5	-202.8	BS AR	4829.5	1.000	4829.5			
-82.8	-202.5	-184.0	BSHR	68.6	1.44963	99.5			
-82.9	-183.9	-250.0	BSARS	68.5	1.44963	99.3			
-94.1	-175.2	-19615.9	SRM3	19365.9	1.000	19365.9			
-84.4	-594.1	-4178.1	SRM2	15443.5	1.000	15443.5			
-93.2	305.0	-19908.6	SRM	15756.2	1.000	15756.2			
						56048.8	56007.9	82	