

# T1300401 Wide Angle Scatter BS L1

Detector Viewer Summary

File : H:\ADLIGO\IFO\full\_ifo\_layout\D0902216 L1 Zemax layout.zmx

Title: D0901920-v4, Advanced LIGO, H1 Layout

Date : SAT FEB 5 2011

transmissivity of ITM

0.014

Incoherent Data

Surface	Power	fractional scatter	ZEMAX coordinate			surface normal			ray vector components		
			x	y	z	nx	ny	nz	Rx	Ry	Rz
<b>BS HR surface scatter</b>	1.00E+02		82.9	-185	-203	0	0.707	0.707			
Polygon Object 203: HAM_3D_optics_table.POB HAM3											
subtotal Object 203	8.30E-01	8.30E-03	650	-185	-2875	0	0	1	567.1	0	-2672.4
Annular Volume 387: Offset Spool D961162 HAM3 flange											
subtotal Object 387	1.04E+00	1.04E-02	-712	-185	-1832	0	0	1	-795	0	-1628.9
<b>BS AR surface scatter</b>	1.00E+02		82.9	-225	-162	0	-0.71	0.707			
Polygon Object 239: HAM_3D_optics_table.POB HAM4											
subtotal Object 239	6.63E-01	6.63E-03	650	-2875	-162	0	1	0	567.1	-2649.8	0
Annular Volume 390: Offset Spool D961162 HAM4 flange											
subtotal Object 390	8.62E-01	8.62E-03	-712	-1832	-162	0	1	0	-795	-1606.3	0
<b>ITM HR surface scatter</b>	1.00E+02		80	4998	-200	0	-1	0			
Annular Volume 390: Offset Spool D961162 HAM4 flange	0.00E+00	0.00E+00									
Net power hitting Object 390	0.00E+00	0.00E+00	-712	-1832	0	0	1	0	-792	-6829.6	200

<b>ITMx HR surface scatter</b>	1.00E+02		80	-200	4998	0	-1	0			
GV2-48inch ITMX	4.33E-01	4.33E-03	-620	0	7157	1	0	0	-700	200	2158.9

ray vector magnitude	unit ray vector						
	cosrx	cosry	cosrz	scattering length	incident angle on scatter surface, deg	incident angle on BS/ITM, deg	incident angle, rad
2731.9	0.208	0	-0.98	2732	12	46	0.81
1812.5	-0.44	0	-0.9	1813	26	51	0.88
2709.8	0.209	-0.98	0	2710	12	-44	-0.76
1792.2	-0.44	-0.9	0	1792	26	-39	-0.69
6878.3	-0.12	-0.99	0.029	6878	7	7	0.12

2278.3	-0.31	0.088	0.948	2278	72	85	1.48
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