

LBSC4 - D0900471 - Coordinates Definition

DRAWING #	COORDINATES DEFINITION
	Systems defines the location of the BSC4-L1 0,0,0 Local CS at the origin of the Assy.
D0900473 AdvLIGO VE BSC4-L1, Vacuum Equipment Assembly	<p>The position of the Vacuum Equipment is defined by:</p> <ol style="list-style-type: none"> 1. Positioning the CS in the VE Assy at the intersection of the 2 Nozzles Centerlines of the BSC Lower Shell. (Ref. Point is the origin of the Assy) 2. The orientation of the Chamber with respect to the IFO Global CS is defined by DCC Doc G1000125-v8 3. Systems insert the assembly mating the AdvLIGO 0,0,0 Local CS from the VE Assy, to the BSC4-L1 0,0,0 Local CS at the origin of the Assy
D0900477 AdvLIGO SEI BSC4-L1, XYZ Local CS for ISO Table Assembly	<p>The position of the ISO TABLE is defined by:</p> <ol style="list-style-type: none"> 1. Positioning the CS in the ISO Table Assy at 1661.7 mm below the Table Optical Surface as per DCC DocT010076-v1 Page 29 2. The orientation of the ISO Table with respect to the IFO Global CS is defined by DCC Doc G1000125-v8 3. Systems insert the assembly mating the AdvLIGO 0,0,0 Local CS from the ISO Table Assembly, to the BSC4-L1 0,0,0 Local CS at the origin of the Assy
D0900478 AdvLIGO SUS BSC4-L1, XYZ Local CS for ETMX Assembly	<p>The position of the ETMX is defined by:</p> <ol style="list-style-type: none"> 1. The Coordinates from DCC P/N D0902216-v8. X = -502.0 mm; Y = -200.0 mm; Z = -80.0 mm; Yaw Angle = 0.0° 2. With these coordinates systems creates the 3D Sketch to position ETMX on the BSC Table 3. Systems insert the assembly mating the AdvLIGO 0,0,0 Local CS from the ETMX Suspension, to the BSC4-L1 0,0,0 Local CS at the origin of the Assy
D0900435 AdvLIGO SUS BSC4-L1, XYZ Local ETM Tel Assembly	<p>The position of the ETM Tel is defined by:</p> <ol style="list-style-type: none"> 1. Following the "X" & "Y" coordinates from the ETMX 2. Then matching the Local "Z" coordinate value from the ETMX (Quad Structure). 3. From the SW Model, Systems find out the Local Coordinates of the ETM Tel Assy: X = 137.3 mm; Y = -200.0 mm; Z = -80.0 mm; Yaw Angle = 0.0° 4. With these coordinates systems creates the 3D Sketch to position ETM Tel Assy on the BSC Table 5. Systems insert the assembly mating the AdvLIGO 0,0,0 Local CS from the ETM Tel Assembly, to the BSC4-L1 0,0,0 Local CS at the origin of the Assy
D1100476 AdvLIGO SUS BSC4-L1, XYZ Local SLC Arm Cavity Baffle Assembly	<p>The position of the SLC Arm Cavity Baffle is defined by:</p> <ol style="list-style-type: none"> 1. Following the "X" & "Y" coordinates from the ETMX 2. Then matching the Local "Z" coordinate value from the ETMY (Quad Structure). 3. From the SW Model, Systems find out the Local Coordinates of the SLC Arm Cavity Baffle X = -1045.4 mm; Y = 0.0 mm; Z = 1292.1 mm; Yaw Angle = 0.0° 4. With these coordinates systems creates the 3D Sketch to position SLC Arm Cavity Baffle on the BSC Table 5. Systems insert the assembly mating the AdvLIGO 0,0,0 Local CS from the SLC Arm Cavity Baffle Assembly, to the BSC4-L1 0,0,0 Local CS at the origin of the Assy
D1000513 HEPI, BSC, Chamber Level Assembly, aLIGO SEI	<p>The position of the HEPI is defined by:</p> <ol style="list-style-type: none"> 1. Positioning the CS in the HEPI Assy at 1850.0 mm above the concrete floor as per DCC Doc E1000659-v2 2. The orientation of the HEPI with respect to the IFO Global CS is defined by DCC Doc G1000125-v8 3. Systems insert the assy mating the AdvLIGO 0,0,0 Local CS from the HEPI, to the BSC4-L1 0,0,0 Local CS at the origin of the Assy
D1201035 AdvLIGO BSC4-L1 ISI Table, XYZ Local CS for Balance Masses Assembly	<p>The position of the Balance Masses Assembly is defined by:</p> <ol style="list-style-type: none"> 1. Positioning the CS in the Balance Masses Assy at 1661.7 mm below the Table Optical Surface as per DCC DocT010076-v1 Page 29 2. Systems creates the 3D Sketch to position the Assy D1003064 on the BSC Table 3. Systems insert the assembly mating the AdvLIGO 0,0,0 Local CS from the Balance Masses Assy, to the BSC4-L1 0,0,0 Local CS at the origin of the Assy

D1300007 ALIGO, CABLE HARNESS ROUTING - BSC4_BSC9

The position of the Cable Harness is defined by

1. Positioning the CS in the Cable Harness Assy at **1661.7 mm** below the Table Optical Surface as per DCC DocT010076-v1 Page 29
2. Systems creates the 3D Sketch to position the Assy D1200112 on the BSC Table
3. Systems insert the assembly mating the AdvLIGO 0,0,0 Local CS from the Cable Harness Assy, to the BSC4-L1 0,0,0 Local CS at the origin of the Assy