Subject: Re: geometry overlaps for PANDA subdetectors
Posted by StefanoSpataro on Thu, 01 Aug 2013 13:44:24 GMT

View Forum Message <> Reply to Message

I have committed the last geometry and deleted the previous one. Now I can see no internal pipe overlaps, but I can see the overlaps with the other detectors. This is another issue...
I update the default macros, to use such geometry (macro/run/sim_complete.C).

As a trace, I copy here the list of overlaps I have w/ all the detectors BUT w/o MVD (MVD takes too long).

root [3] gGeoManager.PrintOverlaps()
=== Overlaps for FAIRGeom ===
 = Overlap ov00000: rich01gas extruded by: rich01gas/rich01mirror_0 ovlp=0.1084
 = Overlap ov00001: FscModuleVolume extruded by: FscModuleVolume/FscFibHoleVolume_0 ovlp=0.025
 = Overlap ov00002: FscModuleVolume/FscTyvekVolume_0 overlapping FscModuleVolume/FscFibHoleVolume_14 ovlp=2.36489
 = Overlap ov00003: FscModuleVolume/FscTyvekVolume_0 overlapping FscModuleVolume/FscFibHoleVolume_15 ovlp=2.36489
 = Overlap ov00004: FscModuleVolume/FscTyvekVolume_0 overlapping FscModuleVolume/FscFibHoleVolume_20 ovlp=2.36226
 = Overlap ov00005: FscModuleVolume/FscTyvekVolume_0 overlapping FscModuleVolume/FscFibHoleVolume_21 ovlp=2.30958
 = Overlap ov00006: FscModuleVolume/FscTyvekVolume_0 overlapping FscModuleVolume/FscFibHoleVolume_8 ovlp=1.47
 = Overlap ov00007: FscModuleVolume/FscTyvekVolume_0 overlapping FscModuleVolume/FscFibHoleVolume_9 ovlp=1.47
 = Overlap ov00008: FscModuleVolume/FscTyvekVolume_0 overlapping FscModuleVolume/FscFibHoleVolume_19 ovlp=1.46991
 = Overlap ov00009: FscModuleVolume/FscTyvekVolume_0 overlapping FscModuleVolume/FscFibHoleVolume_13 ovlp=1.46991
 = Overlap ov00010: FscModuleVolume/FscTyvekVolume_0 overlapping FscModuleVolume/FscFibHoleVolume_26 ovlp=1.46964
 = Overlap ov00011: FscModuleVolume/FscTyvekVolume_0 overlapping FscModuleVolume/FscFibHoleVolume_27 ovlp=1.46964
 = Overlap ov00012: FscModuleVolume/FscTyvekVolume_0 overlapping FscModuleVolume/FscFibHoleVolume_16 ovlp=1.46919
 = Overlap ov00013: FscModuleVolume/FscTyvekVolume_0 overlapping FscModuleVolume/FscFibHoleVolume_22 ovlp=1.46919
 = Overlap ov00014: FscModuleVolume/FscTyvekVolume_0 overlapping FscModuleVolume/FscFibHoleVolume_7 ovlp=1.44823
 = Overlap ov00015: FscModuleVolume/FscTyvekVolume_0 overlapping FscModuleVolume/FscFibHoleVolume_10 ovlp=1.44823
 = Overlap ov00016: FscModuleVolume/FscTyvekVolume_0 overlapping FscModuleVolume/FscFibHoleVolume_25 ovlp=1.4456
 = Overlap ov00017: FscModuleVolume/FscTyvekVolume_0 overlapping FscModuleVolume/FscFibHoleVolume_28 ovlp=1.39292
 = Overlap ov00018: FscModuleVolume/FscTyvekVolume_0 overlapping FscModuleVolume/FscFibHoleVolume_2 ovlp=0.553333
 = Overlap ov00019: FscModuleVolume/FscTyvekVolume_0 overlapping FscModuleVolume/FscFibHoleVolume_1 ovlp=0.553333

= Overlap ov00020: FscModuleVolume/FscTyvekVolume_0 overlapping FscModuleVolume/FscFibHoleVolume_3 ovlp=0.553333
 = Overlap ov00021: FscModuleVolume/FscTyvekVolume_0 overlapping FscModuleVolume/FscFibHoleVolume_4 ovlp=0.553333
 = Overlap ov00022: FscModuleVolume/FscTyvekVolume_0 overlapping FscModuleVolume/FscFibHoleVolume_6 ovlp=0.553243
 = Overlap ov00023: FscModuleVolume/FscTyvekVolume_0 overlapping FscModuleVolume/FscFibHoleVolume_12 ovlp=0.553243
 = Overlap ov00024: FscModuleVolume/FscTyvekVolume_0 overlapping FscModuleVolume/FscFibHoleVolume_18 ovlp=0.553243
 = Overlap ov00025: FscModuleVolume/FscTyvekVolume_0 overlapping FscModuleVolume/FscFibHoleVolume_24 ovlp=0.553243
 = Overlap ov00026: FscModuleVolume/FscTyvekVolume_0 overlapping FscModuleVolume/FscFibHoleVolume_33 ovlp=0.552974
 = Overlap ov00027: FscModuleVolume/FscTyvekVolume_0 overlapping FscModuleVolume/FscFibHoleVolume_34 ovlp=0.552974
 = Overlap ov00028: FscModuleVolume/FscTyvekVolume_0 overlapping FscModuleVolume/FscFibHoleVolume_31 ovlp=0.552974
 = Overlap ov00029: FscModuleVolume/FscTyvekVolume_0 overlapping FscModuleVolume/FscFibHoleVolume_32 ovlp=0.552974
 = Overlap ov00030: FscModuleVolume/FscTyvekVolume_0 overlapping FscModuleVolume/FscFibHoleVolume_29 ovlp=0.552526
 = Overlap ov00031: FscModuleVolume/FscTyvekVolume_0 overlapping FscModuleVolume/FscFibHoleVolume_11 ovlp=0.552526
 = Overlap ov00032: FscModuleVolume/FscTyvekVolume_0 overlapping FscModuleVolume/FscFibHoleVolume_23 ovlp=0.552526
 = Overlap ov00033: FscModuleVolume/FscTyvekVolume_0 overlapping FscModuleVolume/FscFibHoleVolume_17 ovlp=0.552526
 = Overlap ov00034: FscModuleVolume/FscTyvekVolume_0 overlapping FscModuleVolume/FscFibHoleVolume_0 ovlp=0.531561
 = Overlap ov00035: FscModuleVolume/FscTyvekVolume_0 overlapping FscModuleVolume/FscFibHoleVolume_5 ovlp=0.531561
 = Overlap ov00036: FscModuleVolume/FscTyvekVolume_0 overlapping FscModuleVolume/FscFibHoleVolume_30 ovlp=0.528929
 = Overlap ov00037: FscModuleVolume/FscTyvekVolume_0 overlapping FscModuleVolume/FscFibHoleVolume_35 ovlp=0.476252
 = Overlap ov00038: stt01assembly/stt01tube_1873 overlapping stt01assembly/stt01tube1924_0 ovlp=0.273734
 = Overlap ov00039: stt01assembly/stt01tube_2099 overlapping stt01assembly/stt01tube2151_0 ovlp=0.27352
 = Overlap ov00040: stt01assembly/stt01tube_1985 overlapping stt01assembly/stt01tube2036_0 ovlp=0.266989
 = Overlap ov00041: stt01assembly/stt01tube_2214 overlapping stt01assembly/stt01tube2266_0 ovlp=0.266984
 = Overlap ov00042: cave/BeamPipe_0/DipolePip_0 overlapping cave/fts03assembly_1/fts37tube_90 ovlp=0.249504
 = Overlap ov00043: cave/BeamPipe_0/DipolePip_0 overlapping cave/Ftof_strips_0/Ftof_Beam_Strip09_9 ovlp=0.14715
 = Overlap ov00044: cave/BeamPipe_0/DipolePip_0 overlapping cave/Ftof_strips_0/Ftof_Beam_Strip11_11 ovlp=0.14715
 = Overlap ov00045: cave/BeamPipe_0/DipolePip_0 overlapping cave/Ftof_strips_0/Ftof_Beam_Strip10_10 ovlp=0.14715

= Overlap ov00046: cave/BeamPipe_0/DipolePip_0 overlapping cave/Ftof_strips_0/Ftof_Central_Strip8_8 ovlp=0.138157

 = Overlap ov00047: Emc3/SubunitVolFwEndCap_434/BoxVol_4 overlapping Emc3/HalfSubunitVolFwEndCap_28/AlveoleVol_halfsubunit_0 ovlp=0.073979

 = Overlap ov00048: Emc3/SubunitVolFwEndCap_134/BoxVol_1 overlapping Emc3/HalfSubunitVolFwEndCap_39/AlveoleVol_halfsubunit_0 ovlp=0.073979

 = Overlap ov00049: Emc3/SubunitVolFwEndCap_234/BoxVol_3 overlapping Emc3/HalfSubunitVolFwEndCap_45/AlveoleVol_halfsubunit_0 ovlp=0.073979

 = Overlap ov00050: Emc3/SubunitVolFwEndCap_240/BoxVol_3 overlapping Emc3/HalfSubunitVolFwEndCap_46/AlveoleVol_halfsubunit_0 ovlp=0.0724145

 = Overlap ov00051: Emc3/SubunitVolFwEndCap_440/BoxVol_4 overlapping Emc3/HalfSubunitVolFwEndCap_29/AlveoleVol_halfsubunit_0 ovlp=0.0724145

 = Overlap ov00052: Emc3/SubunitVolFwEndCap_140/BoxVol_1 overlapping Emc3/HalfSubunitVolFwEndCap_38/AlveoleVol_halfsubunit_0 ovlp=0.0724145

 = Overlap ov00053: Emc3/HalfSubunitVolFwEndCap_5/BoxVol_2 overlapping Emc3/HalfSubunitVolFwEndCap_25/AlveoleVol_halfsubunit_0 ovlp=0.072254

 = Overlap ov00054: Emc3/HalfSubunitVolFwEndCap_10/BoxVol_1 overlapping Emc3/HalfSubunitVolFwEndCap_42/AlveoleVol_halfsubunit_0 ovlp=0.072254

 = Overlap ov00055: Emc3/SubunitVolFwEndCap_405/BoxVol_4 overlapping Emc3/HalfSubunitVolFwEndCap_26/AlveoleVol_halfsubunit_0 ovlp=0.0702632

 = Overlap ov00056: Emc3/SubunitVolFwEndCap_205/BoxVol_3 overlapping Emc3/HalfSubunitVolFwEndCap_43/AlveoleVol_halfsubunit_0 ovlp=0.0702632

 = Overlap ov00057: Emc3/SubunitVolFwEndCap_105/BoxVol_1 overlapping Emc3/HalfSubunitVolFwEndCap_41/AlveoleVol_halfsubunit_0 ovlp=0.0702632

 = Overlap ov00058: Emc3/SubunitVolFwEndCap_305/BoxVol_2 overlapping Emc3/HalfSubunitVolFwEndCap_58/AlveoleVol_halfsubunit_0 ovlp=0.0702264

 = Overlap ov00059: Emc3/SubunitVolFwEndCap_111/BoxVol_1 overlapping Emc3/HalfSubunitVolFwEndCap_40/AlveoleVol_halfsubunit_0 ovlp=0.0695844

 = Overlap ov00060: Emc3/SubunitVolFwEndCap_411/BoxVol_4 overlapping Emc3/HalfSubunitVolFwEndCap_27/AlveoleVol_halfsubunit_0 ovlp=0.0695844

 = Overlap ov00061: Emc3/SubunitVolFwEndCap_211/BoxVol_3 overlapping Emc3/HalfSubunitVolFwEndCap_44/AlveoleVol_halfsubunit_0 ovlp=0.0695844

 = Overlap ov00062: Emc3/SubunitVolFwEndCap_311/BoxVol_2 overlapping Emc3/HalfSubunitVolFwEndCap_57/AlveoleVol_halfsubunit_0 ovlp=0.0695084

 = Overlap ov00063: Emc3/SubunitVolFwEndCap_105/BoxVol_3 overlapping Emc3/HalfSubunitVolFwEndCap_42/AlveoleVol_halfsubunit_0 ovlp=0.0677316

 = Overlap ov00064: Emc3/SubunitVolFwEndCap_405/BoxVol_2 overlapping Emc3/HalfSubunitVolFwEndCap_25/AlveoleVol_halfsubunit_0 ovlp=0.0677316

 = Overlap ov00065: Emc3/SubunitVolFwEndCap_205/BoxVol_1 overlapping Emc3/HalfSubunitVolFwEndCap_42/AlveoleVol_halfsubunit_0 ovlp=0.0677316

 = Overlap ov00066: Emc3/SubunitVolFwEndCap_305/BoxVol_4 overlapping Emc3/HalfSubunitVolFwEndCap_58/AlveoleVol_halfsubunit_0 ovlp=0.0654664

 = Overlap ov00067: Emc3/SubunitVolFwEndCap_205/BoxVol_1 overlapping Emc3/HalfSubunitVolFwEndCap_43/AlveoleVol_halfsubunit_0 ovlp=0.0654664

 = Overlap ov00068: Emc3/SubunitVolFwEndCap_105/BoxVol_3 overlapping Emc3/HalfSubunitVolFwEndCap_41/AlveoleVol_halfsubunit_0 ovlp=0.0654664

 = Overlap ov00069: Emc3/SubunitVolFwEndCap_333/BoxVol_2 overlapping Emc3/HalfSubunitVolFwEndCap_55/AlveoleVol_halfsubunit_0 ovlp=0.0638692

 = Overlap ov00070: Emc3/SubunitVolFwEndCap_233/BoxVol_3 overlapping Emc3/HalfSubunitVolFwEndCap_46/AlveoleVol_halfsubunit_0 ovlp=0.0638692

 = Overlap ov00071: Emc3/SubunitVolFwEndCap_133/BoxVol_1 overlapping Emc3/HalfSubunitVolFwEndCap_38/AlveoleVol_halfsubunit_0 ovlp=0.0638692

= Overlap ov00072: Emc3/SubunitVolFwEndCap_411/BoxVol_2 overlapping Emc3/HalfSubunitVolFwEndCap_26/AlveoleVol_halfsubunit_0 ovlp=0.0605936

= Overlap ov00073: Emc3/SubunitVolFwEndCap_211/BoxVol_1 overlapping Emc3/HalfSubunitVolFwEndCap_43/AlveoleVol_halfsubunit_0 ovlp=0.0605936

= Overlap ov00074: Emc3/SubunitVolFwEndCap_111/BoxVol_3 overlapping Emc3/HalfSubunitVolFwEndCap_41/AlveoleVol_halfsubunit_0 ovlp=0.0605936

= Overlap ov00075: Emc3/SubunitVolFwEndCap_211/BoxVol_1 overlapping Emc3/HalfSubunitVolFwEndCap_44/AlveoleVol_halfsubunit_0 ovlp=0.0593387

= Overlap ov00076: Emc3/SubunitVolFwEndCap_111/BoxVol_3 overlapping Emc3/HalfSubunitVolFwEndCap_40/AlveoleVol_halfsubunit_0 ovlp=0.0593387

= Overlap ov00077: Emc3/SubunitVolFwEndCap_311/BoxVol_4 overlapping Emc3/HalfSubunitVolFwEndCap_57/AlveoleVol_halfsubunit_0 ovlp=0.0593387

= Overlap ov00078: Emc3/SubunitVolFwEndCap_219/BoxVol_1 overlapping Emc3/HalfSubunitVolFwEndCap_44/AlveoleVol_halfsubunit_0 ovlp=0.0549224

= Overlap ov00079: Emc3/SubunitVolFwEndCap_419/BoxVol_2 overlapping Emc3/HalfSubunitVolFwEndCap_27/AlveoleVol_halfsubunit_0 ovlp=0.0549224

= Overlap ov00080: Emc3/SubunitVolFwEndCap_119/BoxVol_3 overlapping Emc3/HalfSubunitVolFwEndCap_40/AlveoleVol_halfsubunit_0 ovlp=0.0549224

= Overlap ov00081: Emc3/SubunitVolFwEndCap_111/BoxVol_1 overlapping Emc3/HalfSubunitVolFwEndCap_40/BoxVol_1 ovlp=0.0509067

= Overlap ov00082: Emc3/SubunitVolFwEndCap_411/BoxVol_4 overlapping Emc3/HalfSubunitVolFwEndCap_27/BoxVol_1 ovlp=0.0509067

= Overlap ov00083: Emc3/SubunitVolFwEndCap_134/BoxVol_1 overlapping Emc3/HalfSubunitVolFwEndCap_39/BoxVol_1 ovlp=0.0501728

= Overlap ov00084: Emc3/SubunitVolFwEndCap_434/BoxVol_4 overlapping Emc3/HalfSubunitVolFwEndCap_28/BoxVol_1 ovlp=0.0501728

= Overlap ov00085: Emc3/SubunitVolFwEndCap_234/BoxVol_3 overlapping Emc3/HalfSubunitVolFwEndCap_45/BoxVol_2 ovlp=0.0501728

= Overlap ov00086: cave/BeamPipe_0/Tcross_0 overlapping cave/Emc12Hole_9/EmcLayer2Hole_0/emc02r4c5_0 ovlp=0.049205

= Overlap ov00087: cave/BeamPipe_0/Tcross_0 overlapping cave/Emc12Hole_1/EmcLayer2Hole_0/emc02r4c5_0 ovlp=0.049205

= Overlap ov00088: cave/BeamPipe_0/Tcross_0 overlapping cave/Emc12Hole_9/EmcLayer2Hole_0/emc02r1c7_0 ovlp=0.0491724

= Overlap ov00089: cave/BeamPipe_0/Tcross_0 overlapping cave/Emc12Hole_1/EmcLayer2Hole_0/emc02r1c7_0 ovlp=0.0491724

= Overlap ov00090: Emc3/SubunitVolFwEndCap_134/BoxVol_3 overlapping Emc3/HalfSubunitVolFwEndCap_39/AlveoleVol_halfsubunit_0 ovlp=0.0487848

= Overlap ov00091: Emc3/SubunitVolFwEndCap_234/BoxVol_1 overlapping Emc3/HalfSubunitVolFwEndCap_45/AlveoleVol_halfsubunit_0 ovlp=0.0487848

= Overlap ov00092: Emc3/SubunitVolFwEndCap_434/BoxVol_2 overlapping Emc3/HalfSubunitVolFwEndCap_28/AlveoleVol_halfsubunit_0 ovlp=0.0487848

= Overlap ov00093: Emc3/SubunitVolFwEndCap_105/BoxVol_1 overlapping Emc3/HalfSubunitVolFwEndCap_41/BoxVol_1 ovlp=0.0487751

= Overlap ov00094: Emc3/SubunitVolFwEndCap_334/BoxVol_4 overlapping Emc3/HalfSubunitVolFwEndCap_56/AlveoleVol_halfsubunit_0 ovlp=0.0486073

= Overlap ov00095: Emc3/SubunitVolFwEndCap_240/BoxVol_3 overlapping Emc3/HalfSubunitVolFwEndCap_46/BoxVol_2 ovlp=0.0485797

= Overlap ov00096: Emc3/SubunitVolFwEndCap_140/BoxVol_1 overlapping Emc3/HalfSubunitVolFwEndCap_38/BoxVol_1 ovlp=0.0485797

= Overlap ov00097: Emc3/SubunitVolFwEndCap_440/BoxVol_4 overlapping Emc3/HalfSubunitVolFwEndCap_29/BoxVol_1 ovlp=0.0485797

= Overlap ov00098: Emc3/HalfSubunitVolFwEndCap_10/BoxVol_1 overlapping Emc3/HalfSubunitVolFwEndCap_42/BoxVol_1 ovlp=0.04824

= Overlap ov00099: Emc3/HalfSubunitVolFwEndCap_5/BoxVol_2 overlapping Emc3/HalfSubunitVolFwEndCap_25/BoxVol_2 ovlp=0.0479261

= Overlap ov00100: Emc3/HalfSubunitVolFwEndCap_10/BoxVol_1 overlapping Emc3/HalfSubunitVolFwEndCap_42/BoxVol_2 ovlp=0.0479261

= Overlap ov00101: cave/BeamPipe_0/Tcross_0 overlapping cave/stt01assembly_0/stt01box_2 ovlp=0.047887

= Overlap ov00102: cave/BeamPipe_0/Tcross_0 overlapping cave/stt01assembly_0/stt01box_3 ovlp=0.047887

= Overlap ov00103: cave/BeamPipe_0/Tcross_0 overlapping cave/Emc12Hole_1/EmcLayer2Hole_0/emc02r2c7_0 ovlp=0.0464446

= Overlap ov00104: cave/BeamPipe_0/Tcross_0 overlapping cave/Emc12Hole_9/EmcLayer2Hole_0/emc02r2c7_0 ovlp=0.0464446

= Overlap ov00105: Emc3/SubunitVolFwEndCap_305/BoxVol_2 overlapping Emc3/HalfSubunitVolFwEndCap_58/BoxVol_2 ovlp=0.0459602

= Overlap ov00106: Emc3/SubunitVolFwEndCap_205/BoxVol_3 overlapping Emc3/HalfSubunitVolFwEndCap_43/BoxVol_2 ovlp=0.0459602

= Overlap ov00107: Emc3/SubunitVolFwEndCap_105/BoxVol_1 overlapping Emc3/HalfSubunitVolFwEndCap_41/BoxVol_2 ovlp=0.0458743

= Overlap ov00108: Emc3/SubunitVolFwEndCap_405/BoxVol_4 overlapping Emc3/HalfSubunitVolFwEndCap_26/BoxVol_2 ovlp=0.0458743

= Overlap ov00109: Emc3/SubunitVolFwEndCap_205/BoxVol_3 overlapping Emc3/HalfSubunitVolFwEndCap_43/BoxVol_1 ovlp=0.0458743

= Overlap ov00110: stt01assembly/stt01outerCylinder_1 overlapping stt01assembly/stt01box_1 ovlp=0.0456831

= Overlap ov00111: Emc3/SubunitVolFwEndCap_311/BoxVol_2 overlapping Emc3/HalfSubunitVolFwEndCap_57/BoxVol_2 ovlp=0.0453087

= Overlap ov00112: Emc3/SubunitVolFwEndCap_211/BoxVol_3 overlapping Emc3/HalfSubunitVolFwEndCap_44/BoxVol_2 ovlp=0.0453087

= Overlap ov00113: Emc3/SubunitVolFwEndCap_411/BoxVol_4 overlapping Emc3/HalfSubunitVolFwEndCap_27/BoxVol_2 ovlp=0.0451314

= Overlap ov00114: Emc3/SubunitVolFwEndCap_111/BoxVol_1 overlapping Emc3/HalfSubunitVolFwEndCap_40/BoxVol_2 ovlp=0.0451314

= Overlap ov00115: Emc3/SubunitVolFwEndCap_211/BoxVol_3 overlapping Emc3/HalfSubunitVolFwEndCap_44/BoxVol_1 ovlp=0.0451314

= Overlap ov00116: cave/BeamPipe_0/Tcross_0 overlapping cave/Emc12Hole_1/EmcLayer2Hole_0/emc02r3c7_0 ovlp=0.0450102

= Overlap ov00117: cave/BeamPipe_0/Tcross_0 overlapping cave/Emc12Hole_9/EmcLayer2Hole_0/emc02r3c7_0 ovlp=0.0450102

= Overlap ov00118: Emc3/SubunitVolFwEndCap_126/BoxVol_1 overlapping Emc3/HalfSubunitVolFwEndCap_39/AlveoleVol_halfsubunit_0 ovlp=0.0449412

= Overlap ov00119: Emc3/SubunitVolFwEndCap_226/BoxVol_3 overlapping Emc3/HalfSubunitVolFwEndCap_45/AlveoleVol_halfsubunit_0 ovlp=0.0449412

= Overlap ov00120: Emc3/SubunitVolFwEndCap_326/BoxVol_2 overlapping Emc3/HalfSubunitVolFwEndCap_56/AlveoleVol_halfsubunit_0 ovlp=0.0449412

= Overlap ov00121: cave/BeamPipe_0/Tcross_0 overlapping cave/stt01assembly_0/stt01box_1 ovlp=0.0447398

= Overlap ov00122: Emc3/SubunitVolFwEndCap_105/BoxVol_3 overlapping Emc3/HalfSubunitVolFwEndCap_42/BoxVol_1 ovlp=0.0440472

= Overlap ov00123: Emc3/SubunitVolFwEndCap_205/BoxVol_1 overlapping Emc3/HalfSubunitVolFwEndCap_42/BoxVol_2 ovlp=0.0440472

= Overlap ov00124: Emc3/SubunitVolFwEndCap_405/BoxVol_2 overlapping Emc3/HalfSubunitVolFwEndCap_25/BoxVol_1 ovlp=0.0440472

= Overlap ov00125: Emc3/SubunitVolFwEndCap_205/BoxVol_1 overlapping Emc3/HalfSubunitVolFwEndCap_43/BoxVol_1 ovlp=0.0436612

= Overlap ov00126: Emc3/SubunitVolFwEndCap_305/BoxVol_4 overlapping Emc3/HalfSubunitVolFwEndCap_58/BoxVol_1 ovlp=0.0436612

= Overlap ov00127: Emc3/SubunitVolFwEndCap_140/BoxVol_3 overlapping Emc3/HalfSubunitVolFwEndCap_38/AlveoleVol_halfsubunit_0 ovlp=0.0420361

= Overlap ov00128: Emc3/SubunitVolFwEndCap_440/BoxVol_2 overlapping Emc3/HalfSubunitVolFwEndCap_29/AlveoleVol_halfsubunit_0 ovlp=0.0420361

= Overlap ov00129: Emc3/SubunitVolFwEndCap_240/BoxVol_1 overlapping Emc3/HalfSubunitVolFwEndCap_46/AlveoleVol_halfsubunit_0 ovlp=0.0420361

= Overlap ov00130: Emc3/SubunitVolFwEndCap_340/BoxVol_4 overlapping Emc3/HalfSubunitVolFwEndCap_55/AlveoleVol_halfsubunit_0 ovlp=0.0418211

= Overlap ov00131: Emc3/SubunitVolFwEndCap_105/BoxVol_3 overlapping Emc3/HalfSubunitVolFwEndCap_41/BoxVol_2 ovlp=0.0418111

= Overlap ov00132: Emc3/SubunitVolFwEndCap_211/BoxVol_1 overlapping Emc3/HalfSubunitVolFwEndCap_44/BoxVol_1 ovlp=0.0403207

= Overlap ov00133: Emc3/SubunitVolFwEndCap_133/BoxVol_1 overlapping Emc3/HalfSubunitVolFwEndCap_38/BoxVol_2 ovlp=0.0403166

= Overlap ov00134: Emc3/SubunitVolFwEndCap_233/BoxVol_3 overlapping Emc3/HalfSubunitVolFwEndCap_46/BoxVol_1 ovlp=0.0403166

= Overlap ov00135: Emc3/SubunitVolFwEndCap_333/BoxVol_2 overlapping Emc3/HalfSubunitVolFwEndCap_55/BoxVol_1 ovlp=0.0403166

= Overlap ov00136: Emc3/SubunitVolFwEndCap_311/BoxVol_4 overlapping Emc3/HalfSubunitVolFwEndCap_57/BoxVol_1 ovlp=0.0402109

= Overlap ov00137: cave/BeamPipe_0/DipolePip_0 overlapping cave/fts03assembly_1/fts31tube_295 ovlp=0.0390577

= Overlap ov00138: Emc3/SubunitVolFwEndCap_211/BoxVol_1 overlapping Emc3/HalfSubunitVolFwEndCap_43/BoxVol_2 ovlp=0.0368826

= Overlap ov00139: Emc3/SubunitVolFwEndCap_411/BoxVol_2 overlapping Emc3/HalfSubunitVolFwEndCap_26/BoxVol_1 ovlp=0.0368826

= Overlap ov00140: Emc3/SubunitVolFwEndCap_111/BoxVol_3 overlapping Emc3/HalfSubunitVolFwEndCap_41/BoxVol_1 ovlp=0.0368826

= Overlap ov00141: Emc3/SubunitVolFwEndCap_111/BoxVol_3 overlapping Emc3/HalfSubunitVolFwEndCap_40/BoxVol_2 ovlp=0.0357086

= Overlap ov00142: stt01assembly/stt01tube_2542 overlapping stt01assembly/stt01tube2570_0 ovlp=0.0334194

= Overlap ov00143: stt01assembly/stt01tube_2663 overlapping stt01assembly/stt01tube2691_0 ovlp=0.0334194

= Overlap ov00144: stt01assembly/stt01tube_2305 overlapping stt01assembly/stt01tube2332_0 ovlp=0.0320374

= Overlap ov00145: stt01assembly/stt01tube_2423 overlapping stt01assembly/stt01tube2450_0 ovlp=0.0320374

= Overlap ov00146: stt01assembly/stt01tube_2706 overlapping stt01assembly/stt01tube2732_0 ovlp=0.0318431

= Overlap ov00147: stt01assembly/stt01tube_2585 overlapping stt01assembly/stt01tube2611_0 ovlp=0.0318412

= Overlap ov00148: Emc3/SubunitVolFwEndCap_419/BoxVol_2 overlapping Emc3/HalfSubunitVolFwEndCap_27/BoxVol_1 ovlp=0.0311839

= Overlap ov00149: Emc3/SubunitVolFwEndCap_219/BoxVol_1 overlapping Emc3/HalfSubunitVolFwEndCap_44/BoxVol_2 ovlp=0.0311839

= Overlap ov00150: Emc3/SubunitVolFwEndCap_119/BoxVol_3 overlapping Emc3/HalfSubunitVolFwEndCap_40/BoxVol_1 ovlp=0.0311839

= Overlap ov00151: stt01assembly/stt01tube_2190 overlapping stt01assembly/stt01tube2216_0 ovlp=0.0306549

= Overlap ov00152: stt01assembly/stt01tube_2075 overlapping stt01assembly/stt01tube2101_0 ovlp=0.0306549

= Overlap ov00153: stt01assembly/stt01tube_2465 overlapping stt01assembly/stt01tube2490_0 ovlp=0.0304593

= Overlap ov00154: stt01assembly/stt01tube_2347 overlapping stt01assembly/stt01tube2372_0 ovlp=0.0304574

= Overlap ov00155: stt01assembly/stt01tube_1962 overlapping stt01assembly/stt01tube1987_0 ovlp=0.0292729

= Overlap ov00156: stt01assembly/stt01tube_1850 overlapping stt01assembly/stt01tube1875_0 ovlp=0.0292729

= Overlap ov00157: stt01assembly/stt01tube_2624 overlapping stt01assembly/stt01tube2650_0 ovlp=0.0282992

= Overlap ov00158: stt01assembly/stt01tube_2503 overlapping stt01assembly/stt01tube2529_0 ovlp=0.0282973

= Overlap ov00159: stt01assembly/stt01tube_2114 overlapping stt01assembly/stt01tube2137_0 ovlp=0.0276908

= Overlap ov00160: stt01assembly/stt01tube_2229 overlapping stt01assembly/stt01tube2252_0 ovlp=0.0276908

= Overlap ov00161: cave/BeamPipe_0/DipolePip_0 overlapping cave/Ftof_strips_0/Ftof_Central_Strip14_14 ovlp=0.0272523

= Overlap ov00162: cave/BeamPipe_0/DipolePip_0 overlapping cave/Ftof_strips_0/Ftof_Central_Strip13_13 ovlp=0.0272523

= Overlap ov00163: stt01assembly/stt01tube_2385 overlapping stt01assembly/stt01tube2410_0 ovlp=0.0269206

= Overlap ov00164: stt01assembly/stt01tube_2267 overlapping stt01assembly/stt01tube2292_0 ovlp=0.0269187

= Overlap ov00165: stt01assembly/stt01tube_1741 overlapping stt01assembly/stt01tube1764_0 ovlp=0.0265086

= Overlap ov00166: stt01assembly/stt01tube_1635 overlapping stt01assembly/stt01tube1658_0 ovlp=0.0265086

= Overlap ov00167: stt01assembly/stt01tube_1888 overlapping stt01assembly/stt01tube1910_0 ovlp=0.0263069

= Overlap ov00168: stt01assembly/stt01tube_2000 overlapping stt01assembly/stt01tube2022_0 ovlp=0.0263069

= Overlap ov00169: Emc3/SubunitVolFwEndCap_134/BoxVol_3 overlapping Emc3/HalfSubunitVolFwEndCap_39/BoxVol_1 ovlp=0.0251848

= Overlap ov00170: stt01assembly/stt01tube_1531 overlapping stt01assembly/stt01tube1553_0 ovlp=0.0251265

= Overlap ov00171: stt01assembly/stt01tube_1428 overlapping stt01assembly/stt01tube1450_0 ovlp=0.0251265

= Overlap ov00172: stt01assembly/stt01tube_1779 overlapping stt01assembly/stt01tube1800_0 ovlp=0.0249233

= Overlap ov00173: stt01assembly/stt01tube_1673 overlapping stt01assembly/stt01tube1694_0 ovlp=0.0249214

= Overlap ov00174: Emc3/SubunitVolFwEndCap_234/BoxVol_1 overlapping Emc3/HalfSubunitVolFwEndCap_45/BoxVol_2 ovlp=0.0245832

= Overlap ov00175: Emc3/SubunitVolFwEndCap_334/BoxVol_4 overlapping Emc3/HalfSubunitVolFwEndCap_56/BoxVol_2 ovlp=0.0245832

= Overlap ov00176: Emc3/SubunitVolFwEndCap_434/BoxVol_2 overlapping
Emc3/HalfSubunitVolFwEndCap_28/BoxVol_2 ovlp=0.0241691
 = Overlap ov00177: Emc3/SubunitVolFwEndCap_134/BoxVol_3 overlapping
Emc3/HalfSubunitVolFwEndCap_39/BoxVol_2 ovlp=0.0241691
 = Overlap ov00178: Emc3/SubunitVolFwEndCap_234/BoxVol_1 overlapping
Emc3/HalfSubunitVolFwEndCap_45/BoxVol_1 ovlp=0.0241691
 = Overlap ov00179: stt01assembly/stt01tube_2037 overlapping
stt01assembly/stt01tube2060_0 ovlp=0.0241626
 = Overlap ov00180: stt01assembly/stt01tube_2152 overlapping
stt01assembly/stt01tube2175_0 ovlp=0.0241626
 = Overlap ov00181: stt01assembly/stt01tube_1328 overlapping
stt01assembly/stt01tube1349_0 ovlp=0.0237442
 = Overlap ov00182: stt01assembly/stt01tube_1228 overlapping
stt01assembly/stt01tube1249_0 ovlp=0.0237442
 = Overlap ov00183: stt01assembly/stt01tube_1568 overlapping
stt01assembly/stt01tube1588_0 ovlp=0.0235393
 = Overlap ov00184: stt01assembly/stt01tube_1465 overlapping
stt01assembly/stt01tube1485_0 ovlp=0.0235374
 = Overlap ov00185: stt01assembly/stt01tube_1813 overlapping
stt01assembly/stt01tube1835_0 ovlp=0.0227838
 = Overlap ov00186: stt01assembly/stt01tube_1925 overlapping
stt01assembly/stt01tube1947_0 ovlp=0.0227838
 = Overlap ov00187: stt01assembly/stt01tube_1130 overlapping
stt01assembly/stt01tube1150_0 ovlp=0.022362
 = Overlap ov00188: stt01assembly/stt01tube_1033 overlapping
stt01assembly/stt01tube1053_0 ovlp=0.022362
 = Overlap ov00189: stt01assembly/stt01tube_1707 overlapping
stt01assembly/stt01tube1728_0 ovlp=0.0214055
 = Overlap ov00190: stt01assembly/stt01tube_1601 overlapping
stt01assembly/stt01tube1622_0 ovlp=0.0214036
 = Overlap ov00191: Emc3/SubunitVolFwEndCap_326/BoxVol_2 overlapping
Emc3/HalfSubunitVolFwEndCap_56/BoxVol_1 ovlp=0.0209979
 = Overlap ov00192: Emc3/SubunitVolFwEndCap_226/BoxVol_3 overlapping
Emc3/HalfSubunitVolFwEndCap_45/BoxVol_1 ovlp=0.0209979
 = Overlap ov00193: Emc3/SubunitVolFwEndCap_126/BoxVol_1 overlapping
Emc3/HalfSubunitVolFwEndCap_39/BoxVol_2 ovlp=0.0209979
 = Overlap ov00194: stt01assembly/stt01tube_1262 overlapping
stt01assembly/stt01tube1280_0 ovlp=0.0207708
 = Overlap ov00195: stt01assembly/stt01tube_1362 overlapping
stt01assembly/stt01tube1380_0 ovlp=0.0207708
 = Overlap ov00196: stt01assembly/stt01tube_1498 overlapping
stt01assembly/stt01tube1518_0 ovlp=0.0200266
 = Overlap ov00197: stt01assembly/stt01tube_1395 overlapping
stt01assembly/stt01tube1415_0 ovlp=0.0200247
 = Overlap ov00198: stt01assembly/stt01tube_1066 overlapping
stt01assembly/stt01tube1083_0 ovlp=0.0193869
 = Overlap ov00199: stt01assembly/stt01tube_1163 overlapping
stt01assembly/stt01tube1180_0 ovlp=0.0193869
 = Overlap ov00200: Emc3/SubunitVolFwEndCap_140/BoxVol_3 overlapping
Emc3/HalfSubunitVolFwEndCap_38/BoxVol_1 ovlp=0.0185884
 = Overlap ov00201: Emc3/SubunitVolFwEndCap_340/BoxVol_4 overlapping
Emc3/HalfSubunitVolFwEndCap_55/BoxVol_2 ovlp=0.0178632

= Overlap ov00202: Emc3/SubunitVolFwEndCap_240/BoxVol_1 overlapping Emc3/HalfSubunitVolFwEndCap_46/BoxVol_2 ovlp=0.0178632

 = Overlap ov00203: Emc3/SubunitVolFwEndCap_240/BoxVol_1 overlapping Emc3/HalfSubunitVolFwEndCap_46/BoxVol_1 ovlp=0.0173616

 = Overlap ov00204: Emc3/SubunitVolFwEndCap_440/BoxVol_2 overlapping Emc3/HalfSubunitVolFwEndCap_29/BoxVol_2 ovlp=0.0173616

 = Overlap ov00205: Emc3/SubunitVolFwEndCap_140/BoxVol_3 overlapping Emc3/HalfSubunitVolFwEndCap_38/BoxVol_2 ovlp=0.0173616

 = Overlap ov00206: stt01assembly/stt01tube_1195 overlapping stt01assembly/stt01tube1213_0 ovlp=0.0172684

 = Overlap ov00207: stt01assembly/stt01tube_1295 overlapping stt01assembly/stt01tube1313_0 ovlp=0.0172684

 = Overlap ov00208: stt01assembly/stt01tube_1001 overlapping stt01assembly/stt01tube1018_0 ovlp=0.0158895

 = Overlap ov00209: stt01assembly/stt01tube_1098 overlapping stt01assembly/stt01tube1115_0 ovlp=0.0158895

 = Overlap ov00210: Emc3/SubunitVolFwEndCap_405/BoxVol_4 overlapping Emc3/HalfSubunitVolFwEndCap_26/BoxVol_1 ovlp=0.0142737

 = Overlap ov00211: Emc3/SubunitVolFwEndCap_334/BoxVol_4 overlapping Emc3/HalfSubunitVolFwEndCap_56/BoxVol_1 ovlp=0.0121789

 = Overlap ov00212: stt01assembly/stt01tube2410_0 overlapping stt01assembly/stt01tube_2624 ovlp=0.0117254

 = Overlap ov00213: stt01assembly/stt01tube2292_0 overlapping stt01assembly/stt01tube_2503 ovlp=0.0117253

 = Overlap ov00214: stt01assembly/stt01tube2332_0 overlapping stt01assembly/stt01tube_2542 ovlp=0.010436

 = Overlap ov00215: stt01assembly/stt01tube2450_0 overlapping stt01assembly/stt01tube_2663 ovlp=0.010436

 = Overlap ov00216: stt01assembly/stt01tube1947_0 overlapping stt01assembly/stt01tube_2152 ovlp=0.00992221

 = Overlap ov00217: stt01assembly/stt01tube1835_0 overlapping stt01assembly/stt01tube_2037 ovlp=0.00992071

 = Overlap ov00218: Emc3/SubunitVolFwEndCap_140/AlveoleVol_subunit_0 overlapping Emc3/HalfSubunitVolFwEndCap_38/BoxVol_1 ovlp=0.00985257

 = Overlap ov00219: stt01assembly/stt01tube2372_0 overlapping stt01assembly/stt01tube_2585 ovlp=0.00953153

 = Overlap ov00220: stt01assembly/stt01tube2490_0 overlapping stt01assembly/stt01tube_2706 ovlp=0.00953153

 = Overlap ov00221: stt01assembly/stt01outerCylinder_2 overlapping stt01assembly/stt01box_2 ovlp=0.00905095

 = Overlap ov00222: stt01assembly/stt01outerCylinder_1 overlapping stt01assembly/stt01box_3 ovlp=0.00905095

 = Overlap ov00223: stt01assembly/stt01outerCylinder_2 overlapping stt01assembly/stt01box_4 ovlp=0.00905095

 = Overlap ov00224: cave/BeamPipe_0/pipeTSdown_0 overlapping cave/Gem_Disks_0/Gem_Disk1_Volume_0 ovlp=0.00901905

 = Overlap ov00225: stt01assembly/stt01tube1875_0 overlapping stt01assembly/stt01tube_2075 ovlp=0.00891698

 = Overlap ov00226: stt01assembly/stt01tube1987_0 overlapping stt01assembly/stt01tube_2190 ovlp=0.00891698

 = Overlap ov00227: stt01assembly/stt01tube1518_0 overlapping stt01assembly/stt01tube_1707 ovlp=0.00870523

= Overlap ov00228: stt01assembly/stt01tube1415_0 overlapping stt01assembly/stt01tube_1601 ovlp=0.00870518
= Overlap ov00229: stt01assembly/stt01tube1910_0 overlapping stt01assembly/stt01tube_2114 ovlp=0.00785795
= Overlap ov00230: stt01assembly/stt01tube2022_0 overlapping stt01assembly/stt01tube_2229 ovlp=0.00785785
= Overlap ov00231: stt01assembly/stt01tube1115_0 overlapping stt01assembly/stt01tube_1295 ovlp=0.00685506
= Overlap ov00232: stt01assembly/stt01tube1018_0 overlapping stt01assembly/stt01tube_1195 ovlp=0.00685353
= Overlap ov00233: stt01assembly/stt01tube1485_0 overlapping stt01assembly/stt01tube_1673 ovlp=0.0067259
= Overlap ov00234: stt01assembly/stt01tube1588_0 overlapping stt01assembly/stt01tube_1779 ovlp=0.0067259
= Overlap ov00235: cave/BeamPipe_0/Tcross_0 overlapping cave/stt01assembly_0/stt01tube2070_0 ovlp=0.00672061
= Overlap ov00236: stt01assembly/stt01tube1450_0 overlapping stt01assembly/stt01tube_1635 ovlp=0.00661876
= Overlap ov00237: stt01assembly/stt01tube1553_0 overlapping stt01assembly/stt01tube_1741 ovlp=0.00661876
= Overlap ov00238: stt01assembly/stt01tube1053_0 overlapping stt01assembly/stt01tube_1228 ovlp=0.00507301
= Overlap ov00239: stt01assembly/stt01tube1150_0 overlapping stt01assembly/stt01tube_1328 ovlp=0.00507301
= Overlap ov00240: cave/BeamPipe_0/Tcross_0 overlapping cave/stt01assembly_0/stt01tube1845_0 ovlp=0.00501348
= Overlap ov00241: stt01assembly/stt01tube1083_0 overlapping stt01assembly/stt01tube_1262 ovlp=0.00500404
= Overlap ov00242: stt01assembly/stt01tube1180_0 overlapping stt01assembly/stt01tube_1362 ovlp=0.00500392
= Overlap ov00243: cave/BeamPipe_0/Tcross_0 overlapping cave/stt01assembly_0/stt01tube2185_0 ovlp=0.003921
= Overlap ov00244: Emc3/SubunitVolFwEndCap_340/BoxVol_4 overlapping Emc3/HalfSubunitVolFwEndCap_55/BoxVol_1 ovlp=0.00276907
= Overlap ov00245: cave/BeamPipe_0/Tcross_0 overlapping cave/stt01assembly_0/stt01tube1957_0 ovlp=0.00220847