

Updates

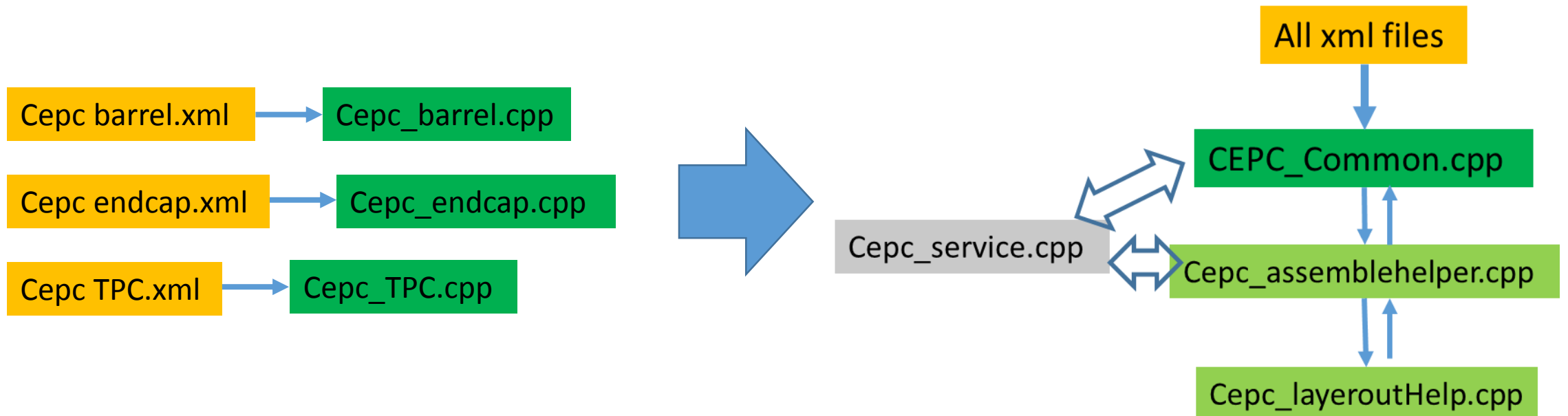
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Outline

- Status of adding detailed CEPC geometry description
 - Update of the source file -finished
 - Construct the xml files (Validation and debugging of the source files) on-going
 - Detailed CEPC geometry xml files -to be done

Updates of the source files

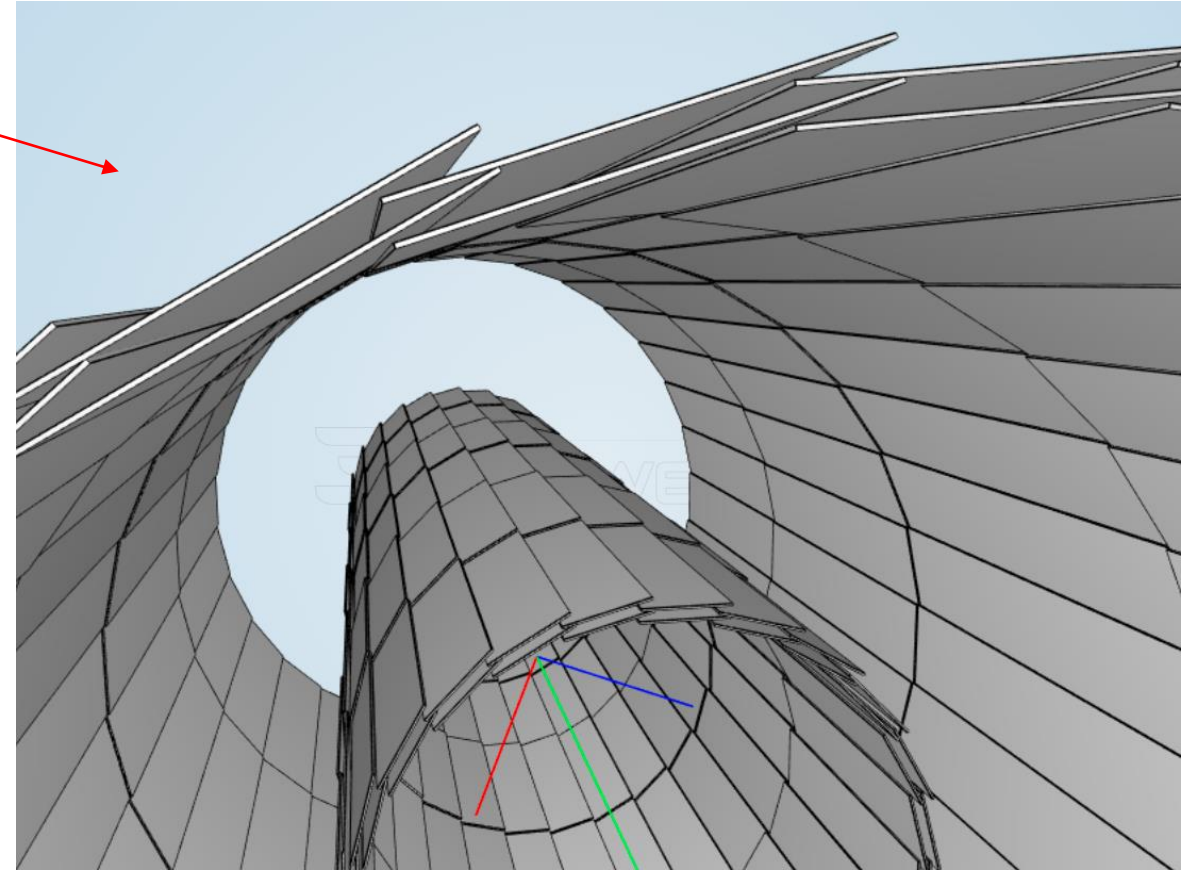
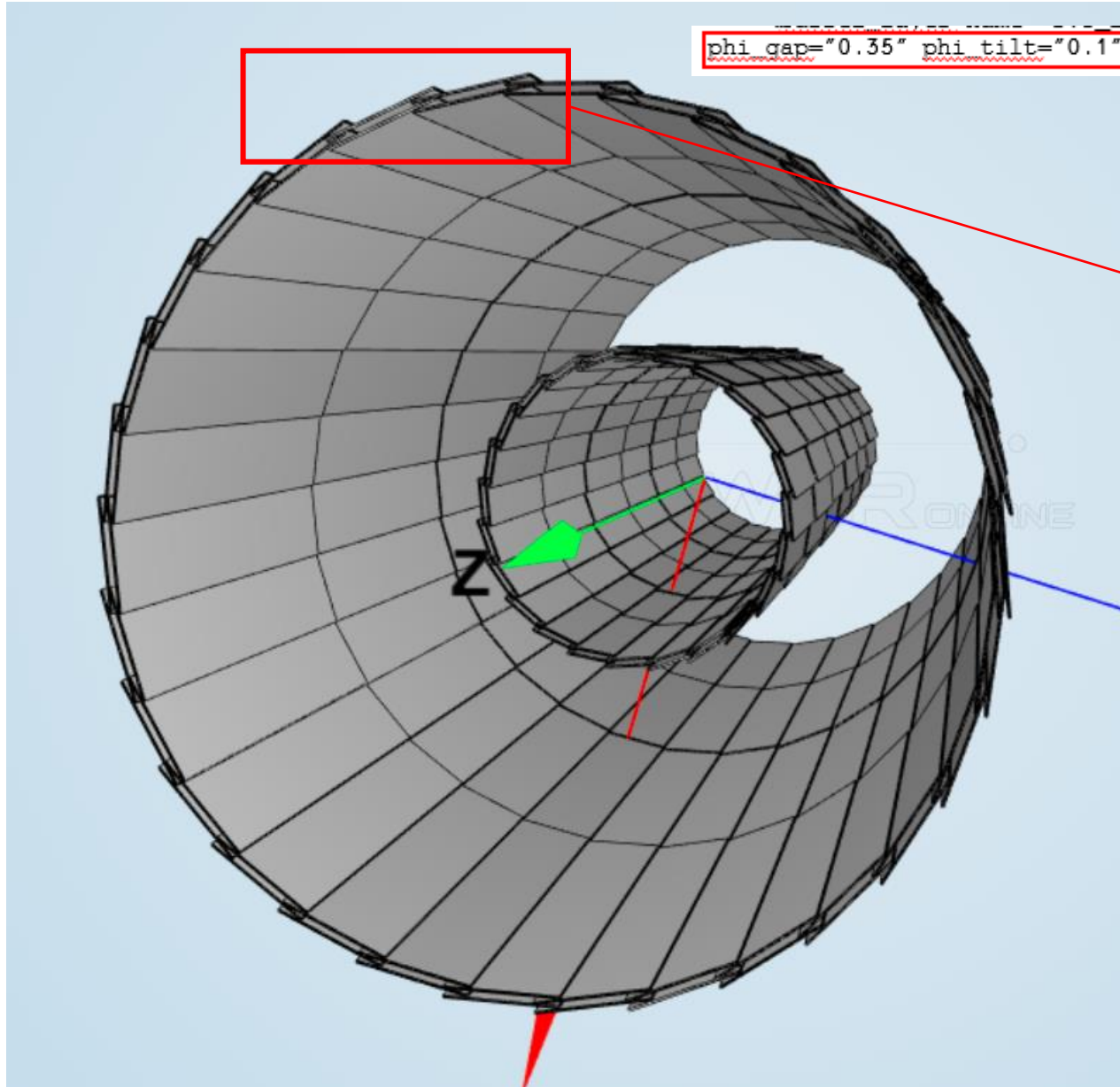
- why we update the source files?
 - The way to use the actsExtension changed
 - Possibilities to add more material at varies places
 - Methods of assembling a detector changed

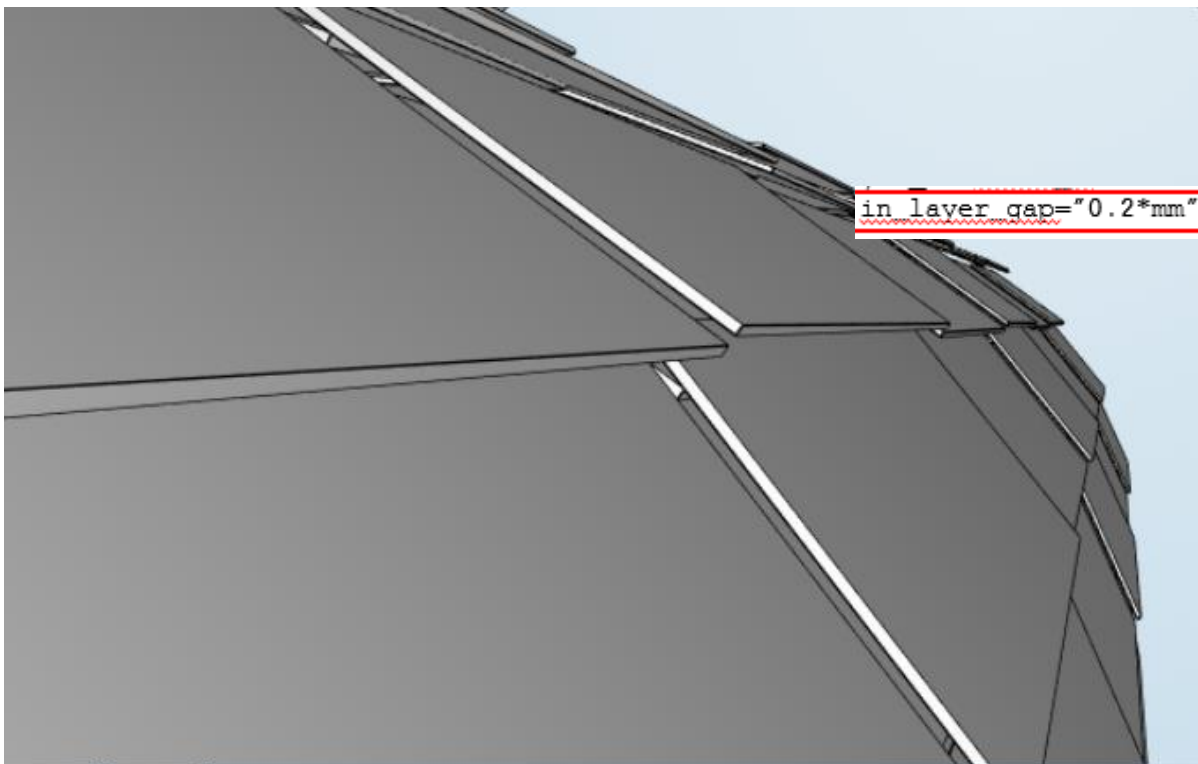
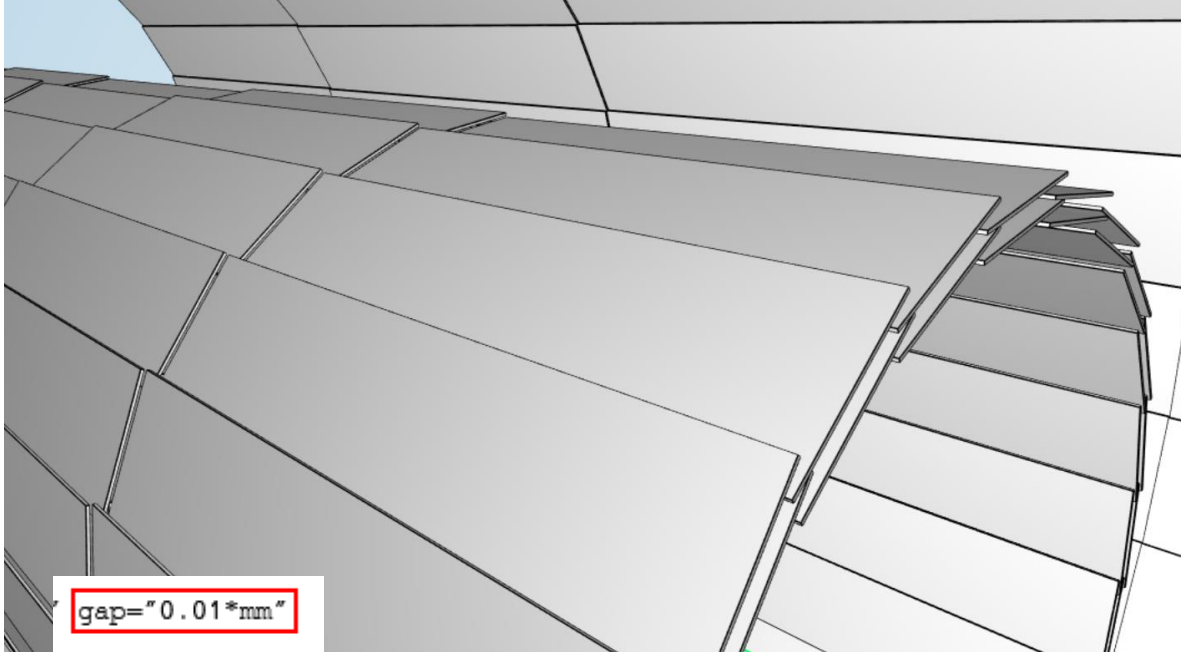


Construct the xml files

```
<detector id="Vt_ID" name="Silicon_vertex_Barrel" type="cepc_common" readout="SVtCollection" vis="invisible">
  <dimensions rmin="16.0*mm" rmax="90*mm" dz="62.5*mm"/>
  <barrel_layer name="SVT_layer_1" inner_r="16.*mm" outer_r="36.*mm" r="16.*mm" z="62.5*mm" gap="0.01*mm"
  phi_gap="0.35" phi_tilt="0.1" in_layer_gap="0.2*mm" layers_gap="0.7*mm" vis="invisible">
    <module vis="invisble">
      <module_component name="Sensor" x1="10.0*mm" x2="10.0*mm" thickness="0.125*mm" length="21.0*mm" alpha="0.0"
      x_offset="0.0*mm" y_offset="0.0*mm" z_offset="0.0*mm" material="SiliconOxide" vis="blue" sensitive="true"/>
      <module_component name="Board" x1="9.0*mm" x2="9.0*mm" thickness="0.25*mm" length="21.0*mm" alpha="0.0"
      x_offset="0.0*mm" y_offset="0.0*mm" z_offset="0.0*mm" material="Kapton" vis="grey" sensitive="flase"/>
      <module_component name="Connector" x1="2.0*mm" x2="2.0*mm" thickness="0.15*mm" length="20.0*mm" alpha="0.0"
      x_offset="-4.5*mm" y_offset="0.0*mm" z_offset="0.0*mm" material="Al" vis="red" sensitive="flase"/>
    </module>
    <layer_material inner="false" representing="false" outer="true" binsPhi="10" binsZ="60"/>
  </barrel_layer>
</detector>
```

*Adding binning information on Inner/outer approaching surface,
representing surface*





Material decorations

CEPC_service.cpp

```
<service>
  <Addition name="cooling", x_offset="", y_offset="", z_offset="" shape="tube", rmin="", rmax="", length=""/>
  <Subtraction x_offset="", y_offset="", z_offset="", x_rotation="", y_rotation="", z_rotation="", shape="Trapezoid",
x1="", x2="", thick1="", thick2="", length=""/>
  <Addition name="supporting", x_offset="", y_offset="", z_offset="" shape="tube", rmin="", rmax="", length=""/>
  <union x_offset="", y_offset="", z_offset="", x_rotation="", y_rotation="", z_rotation="", shape="Trapezoid",
x1="", x2="", thick1="", thick2="", length=""/>
  <Addition name="cable", x_offset="", y_offset="", z_offset="" shape="tube", rmin="", rmax="", length=""/>
  <intersection x_offset="", y_offset="", z_offset="", x_rotation="", y_rotation="", z_rotation="", shape="Trapezoid",
x1="", x2="", thick1="", thick2="", length=""/>
</service>
```

- Validation and checking of the details on-going
- Detailed CEPC geometry xml files -to be done