

Straw tracker description

using GeoModel

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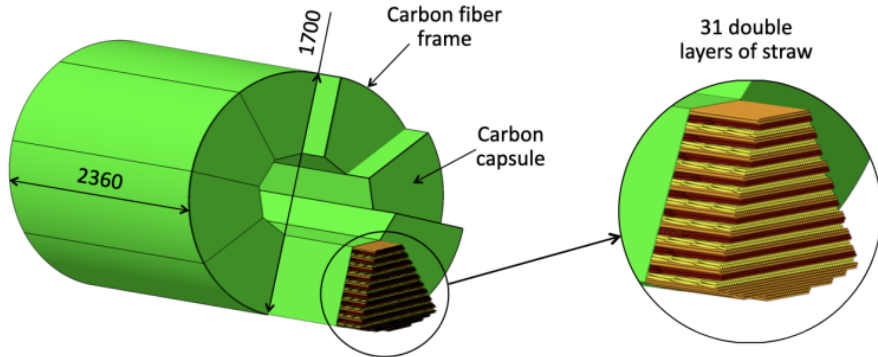


Figure: General layout of the barrel part of ST, which shows 8 modules (octants). Each module contains 31 double layers of straw tubes encased in a composite-polymer capsule.

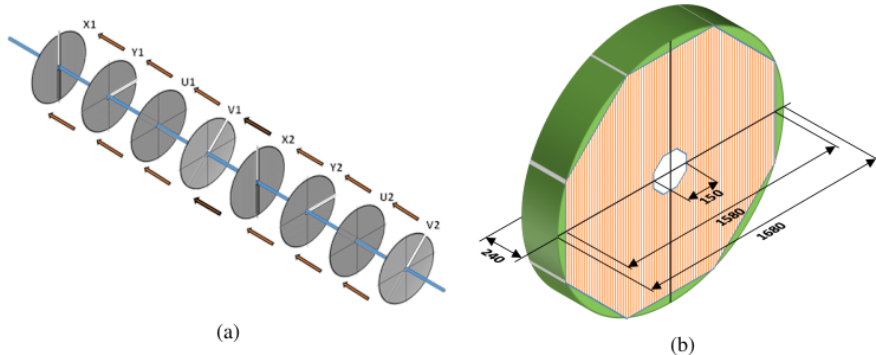


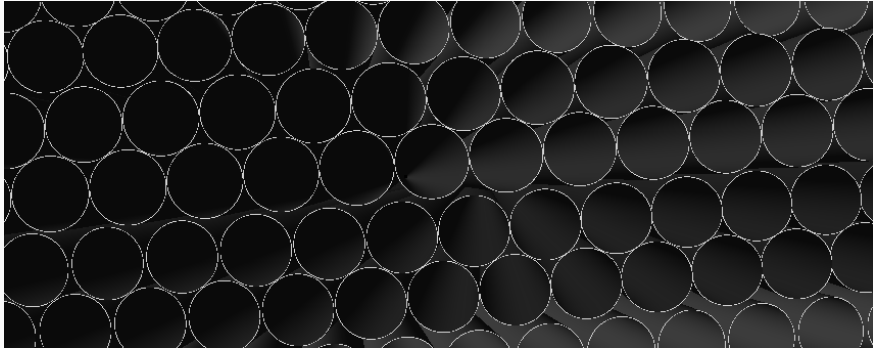
Figure: (a) ST end-cap consisting of 8 coordinate planes assembled together. (b) Common view and main dimensions.

`GeoTrf::TranslateX3D((0.5+I)*pitch), pitch = stdiam/cos(alpha*deg)`

`GeoTrf::TranslateY3D(stdiam*((ln-
fabs(sin(90*ln*deg)))+(ln+fabs(sin(90*ln*deg)))*sin(60*deg)))`

`GeoTrf::RotateY3D(alpha*deg)`

`GeoTrf::TranslateZ3D(stlength-stlengthv)`



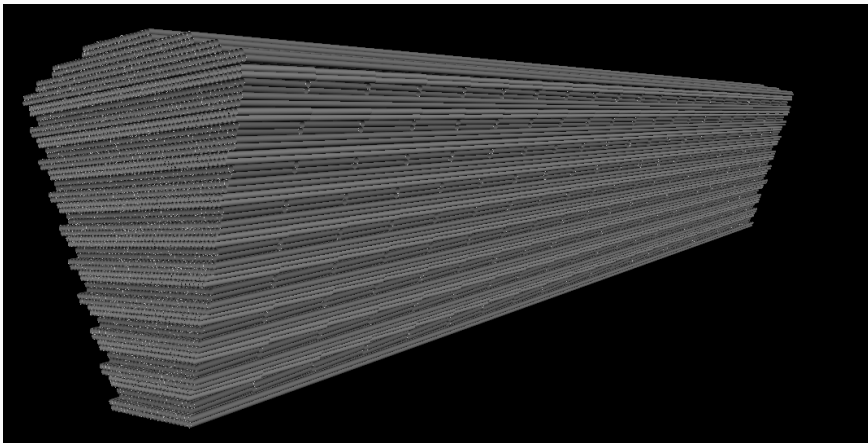


Figure: One module (octant) of the barrel part of the straw tracker.

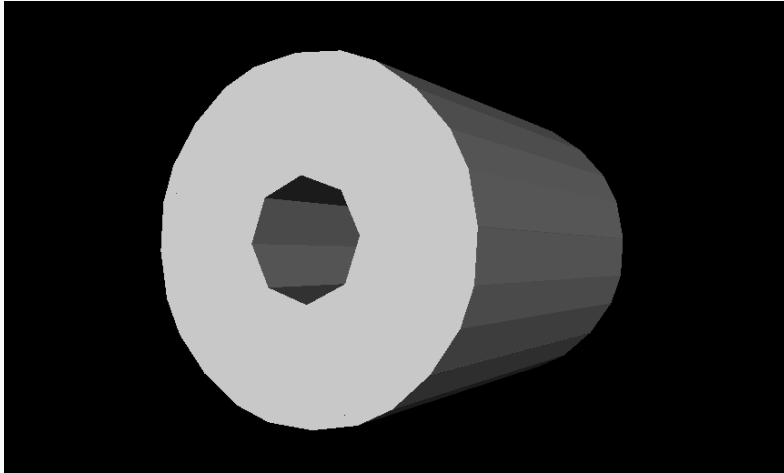


Figure: The barrel part of the straw tracker.

GeoTrf::RotateZ3D(theta*deg)

GeoTrf::TranslateZ3D(disOZ)

GeoTrf::TranslateX3D(octoffset+stecextrad+stecdiam*j)

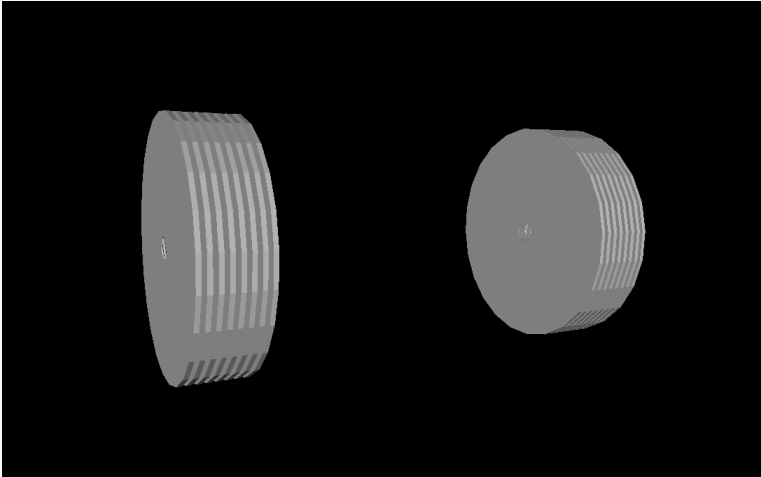


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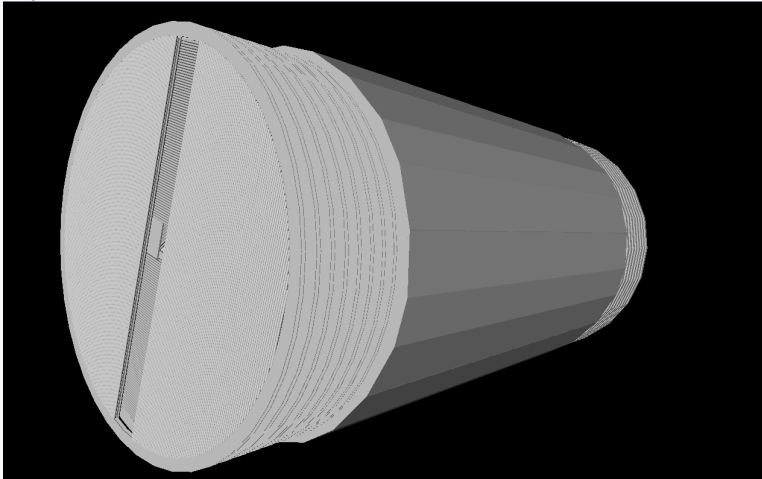


Figure: Straw tracker with inner structure of end-caps.

- Access and navigation among geometry objects in reconstruction;
- Association with sensitive volumes of Geant4.