

Status on SDT simulation

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Procedure

Try to copy and merge the drift chamber configuration for the IDEA

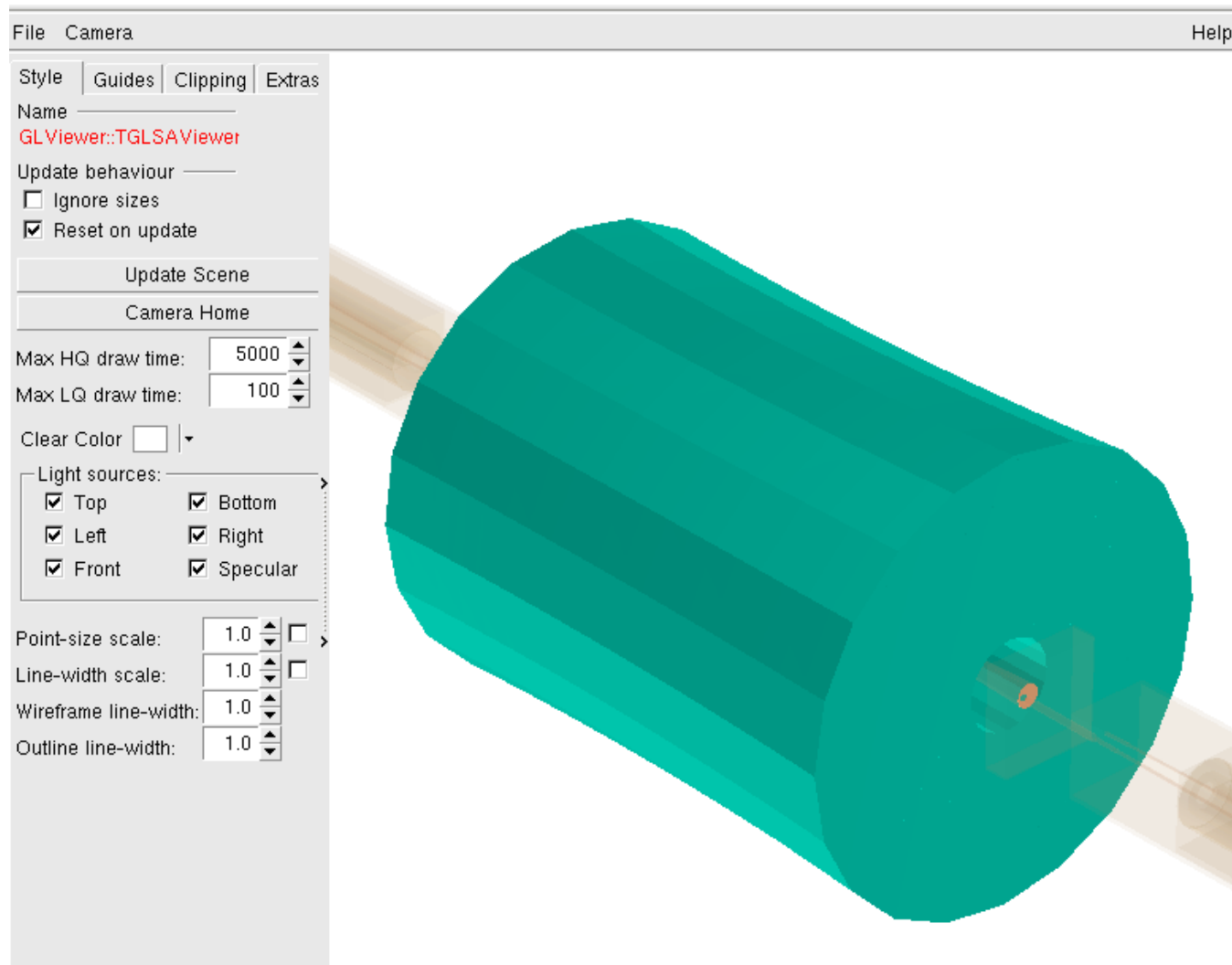
- Main components

- ./FCCSW/Detector/DetFCCeeIDEA/compact/DriftChamber.xml
 - ./FCCSW/Detector/DetSegmentation/src/GridDriftChamber.cpp
 - ./FCCSW/Detector/DetSegmentation/DetSegmentation/GridDriftChamber.h
 - ./FCCSW/Detector/DetFCCeeIDEA/src/parametrised_DriftChamber.cpp
 - ./FCCSW/Detector/DetSensitive/DetSensitive/SimpleDriftChamber.h
 - ./FCCSW/Detector/DetSensitive/src/SimpleDriftChamber.cpp
 - ./FCCSW/Detector/DetCommon/src/Geant4PreDigiTrackHit.cpp
 - ./FCCSW/Detector/DetCommon/DetCommon/Geant4PreDigiTrackHit.h



Later on, it turns out that it is related to more files, (not more than 10) ...
After a first (partial) compilation, I switch to copy their directories under DetSDT and modify files there.

```
File Edit View Search Terminal Help
-bash-4.1$ ls Detector/
DetCEPCv4 DetEcalMatrix DetInterface DetSDT GeoSvc
-bash-4.1$ ls Detector/DetSDT/
DetCommon DetFCCeeIDEA DetSegmentation DetSensitive
-bash-4.1$
```



After fixing the compilation,
we can see the geometry
settings

VXD (original Cepc VXD)
+
Drift Chamber (IDEA)

With a merged geometry file : CepC_v4-onlyVXD_DCH.xml

Status

- Have met errors during a run, related to geometry settings

→ After sometime, it is (seems to be) fixed.

- The hit information can be confirmed from the outputs on the terminal

→ **under trying to save those hits (not finished)**

```
ToolSvc.Example... INFO cast to G4THitsCollection<dd4hep::sim::Geant4Hit>.
ToolSvc.Example... INFO 11 hits cast to dd4hep::sim::Geant4TrackerHit.
ToolSvc.Example... INFO 0 hits cast to dd4hep::sim::Geant4CalorimeterHit.
ToolSvc.Example... INFO Collection DriftChamberCollection #1 has 1005 hits.
ToolSvc.Example... WARNING Failed to convert to collection DriftChamberCollection
DetSimAlg.G4Pri... INFO Start a new event:
DetSimAlg.G4Pri... INFO 0 : [ 5 ];
DetSimAlg.G4Pri... INFO 1 : [ 6 ];
DetSimAlg.G4Pri... INFO 2 : [ 7 ];
DetSimAlg.G4Pri... INFO 3 : [ 8 ];
DetSimAlg.G4Pri... INFO 4 : [ 9 ];
DetSimAlg.G4Pri... INFO 5 : [ ];
DetSimAlg.G4Pri... INFO 6 : [ ];
DetSimAlg.G4Pri... INFO 7 : [ 10 ];
DetSimAlg.G4Pri... INFO 8 : [ 10 ];
DetSimAlg.G4Pri... INFO 9 : [ ];
DetSimAlg.G4Pri... INFO 10 : [ 11 12 ];
DetSimAlg.G4Pri... INFO 11 : [ 13 14 ];
DetSimAlg.G4Pri... INFO 12 : [ 15 16 ];
DetSimAlg.G4Pri... INFO 13 : [ 17 18 ];
DetSimAlg.G4Pri... INFO 14 : [ ];
DetSimAlg.G4Pri... INFO 15 : [ ];
DetSimAlg.G4Pri... INFO 16 : [ ];
DetSimAlg.G4Pri... INFO 17 : [ ];
DetSimAlg.G4Pri... INFO 18 : [ ];
ToolSvc.Example... INFO Event 1
ToolSvc.Example... INFO mcCol size: 19
ToolSvc.Example... INFO Readout DriftChamberCollection
ToolSvc.Example... INFO Readout VXDCollection
ToolSvc.Example... INFO Collection VXDCollection #0 has 19 hits.
ToolSvc.Example... INFO cast to G4THitsCollection<dd4hep::sim::Geant4Hit>.
ToolSvc.Example... INFO 19 hits cast to dd4hep::sim::Geant4TrackerHit.
ToolSvc.Example... INFO 0 hits cast to dd4hep::sim::Geant4CalorimeterHit.
ToolSvc.Example... INFO Collection DriftChamberCollection #1 has 345 hits.
ToolSvc.Example... WARNING Failed to convert to collection DriftChamberCollection
ApplicationMgr INFO Application Manager Stopped successfully
End Run of detector simulation...
outputalg INFO Data written to: 'filename':test-detsim10.root
EventLoopMgr INFO Histograms converted successfully according to request.
ToolSvc INFO Removing all tools created by ToolSvc
ApplicationMgr INFO Application Manager Finalized successfully
ApplicationMgr INFO Application Manager Terminated successfully
-bash-4.1$
```