

# Muon Collider Calorimeter Simulation Geometry

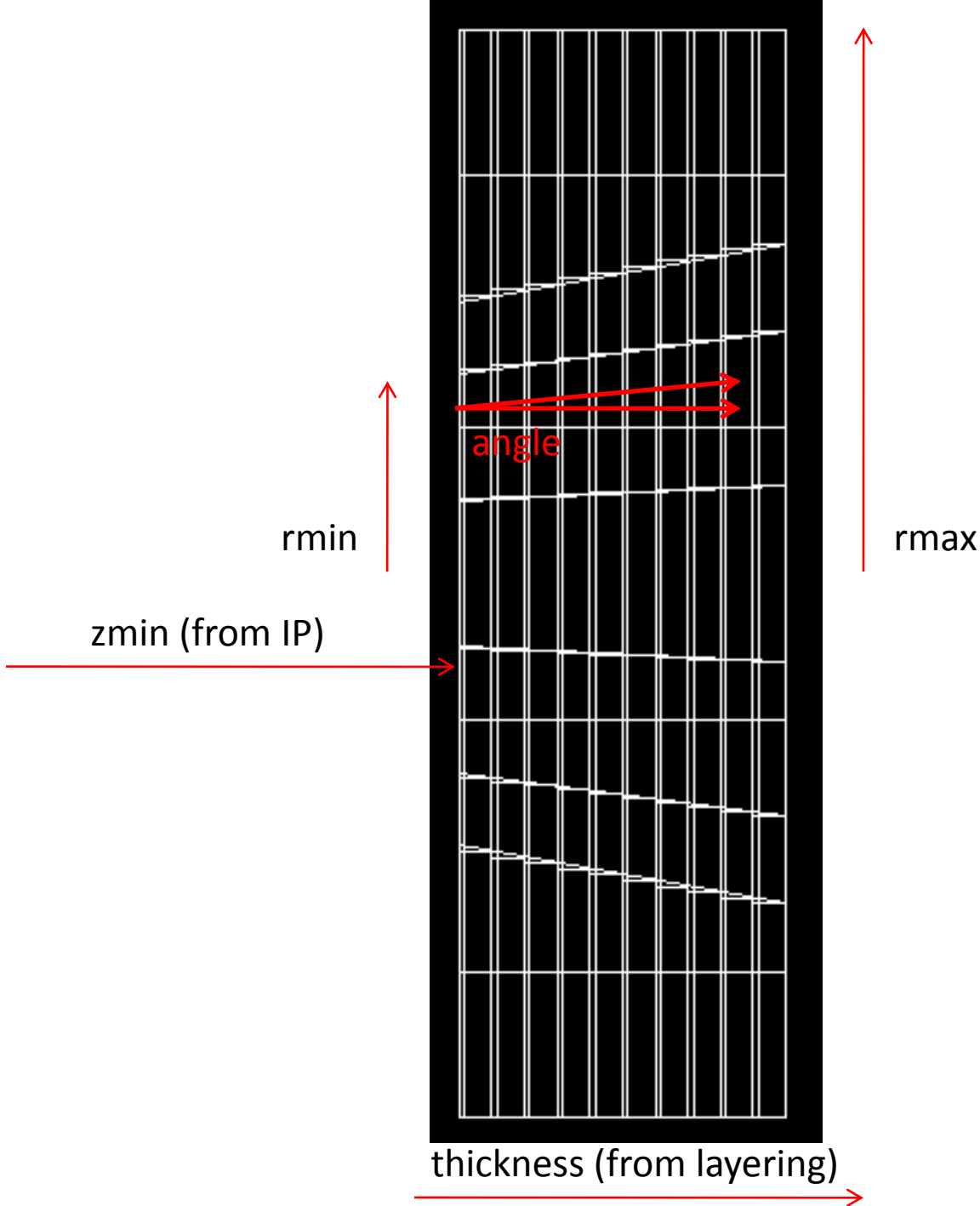
Jeremy McCormick, SLAC

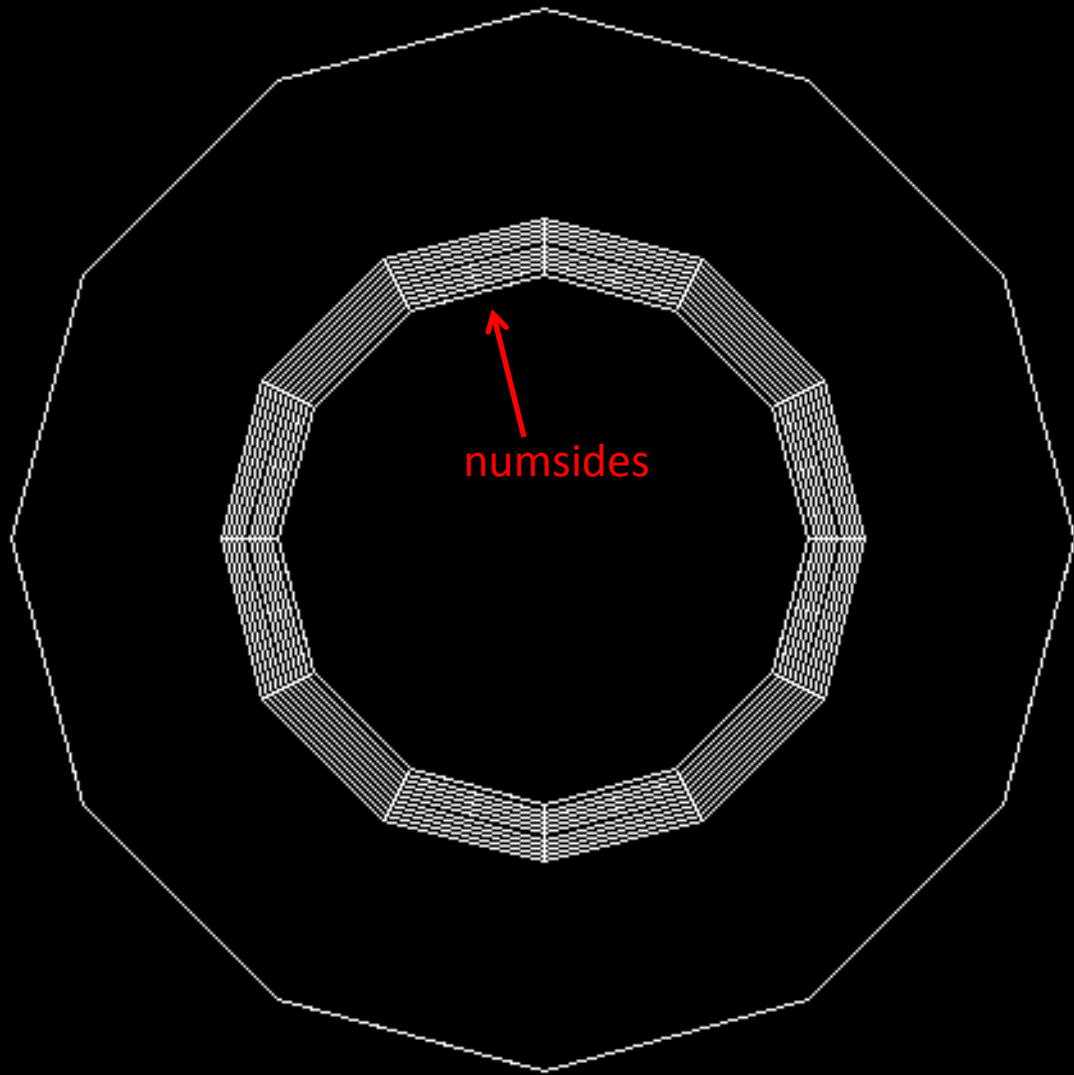
# Summary

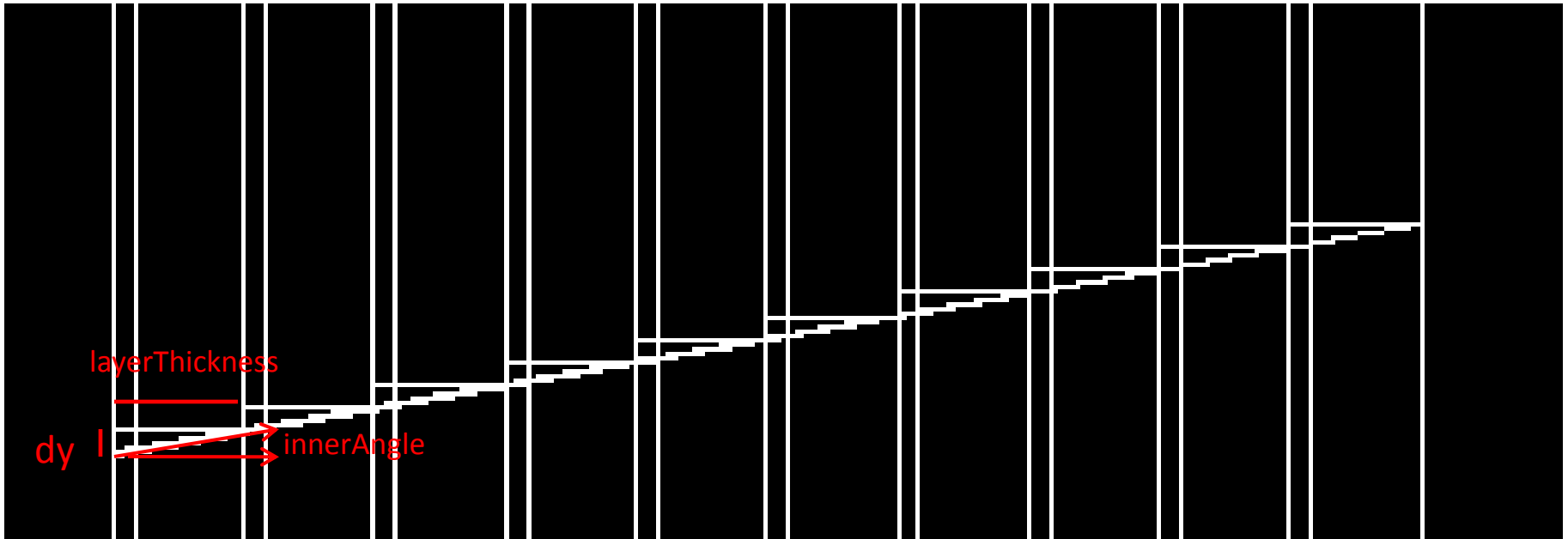
- Muon Collider studies require calorimeters with cutout for conical mask.
- PolyhedraEndcapCalorimeter3
- CylindricalEndcapCalorimeter2
- Readout same as before (GridXYZ and friends).

# Compact Description

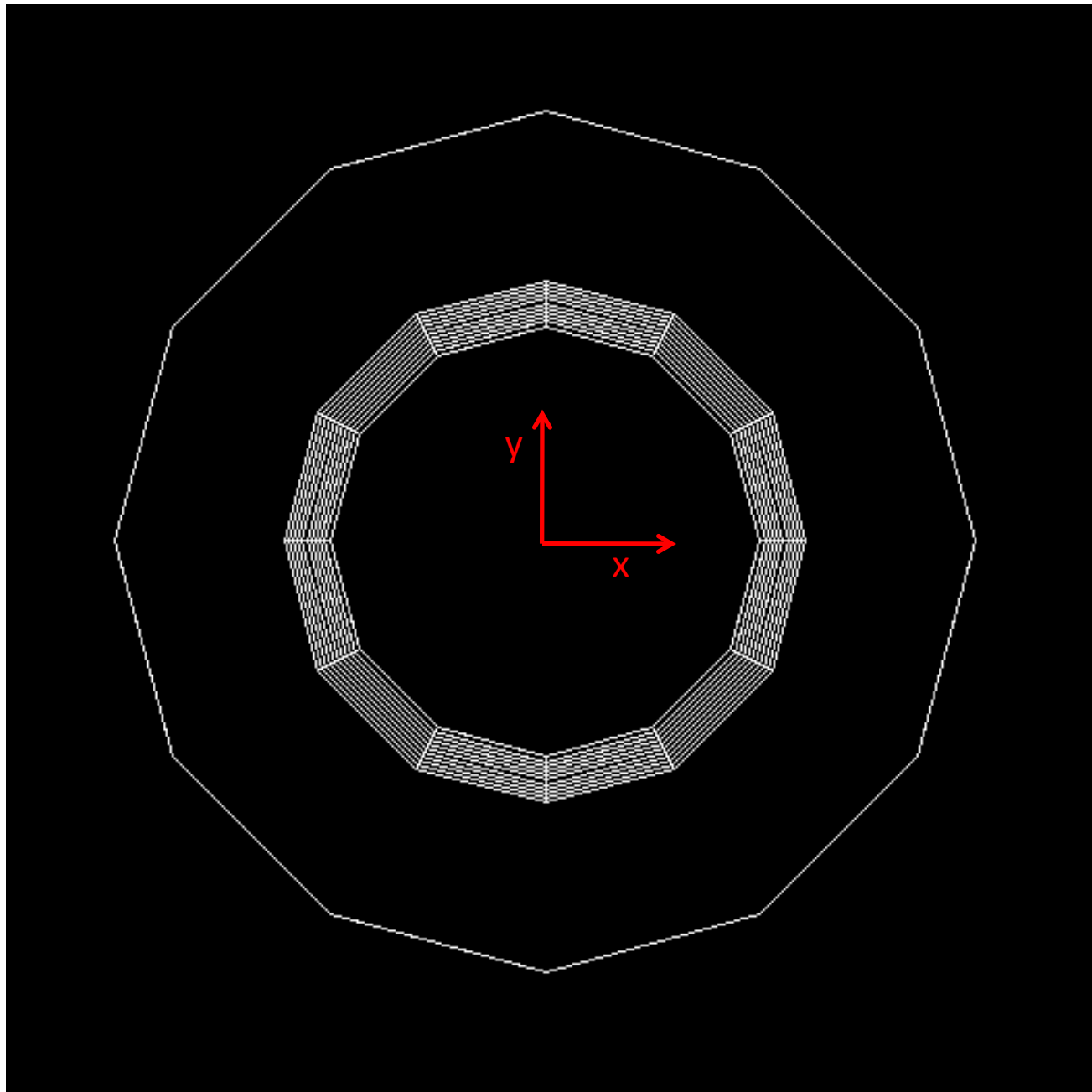
```
<detectors>
  <detector id="1"
    name="PolyhedraEndcapCalorimeterTest"
    type="PolyhedraEndcapCalorimeter3"
    readout="CalHits"
    reflect="true">
    <dimensions numsides="12"
      zmin="50.0"
      rmin="500.0"
      rmax="1000.0"
      angle="10.*deg" />
    <layer repeat="10" vis="LayerVis">
      <slice material="Silicon" thickness="10.0" sensitive="yes" />
      <slice material="Tungsten" thickness="50.0" sensitive="no" />
    </layer>
  </detector>
</detectors>
```

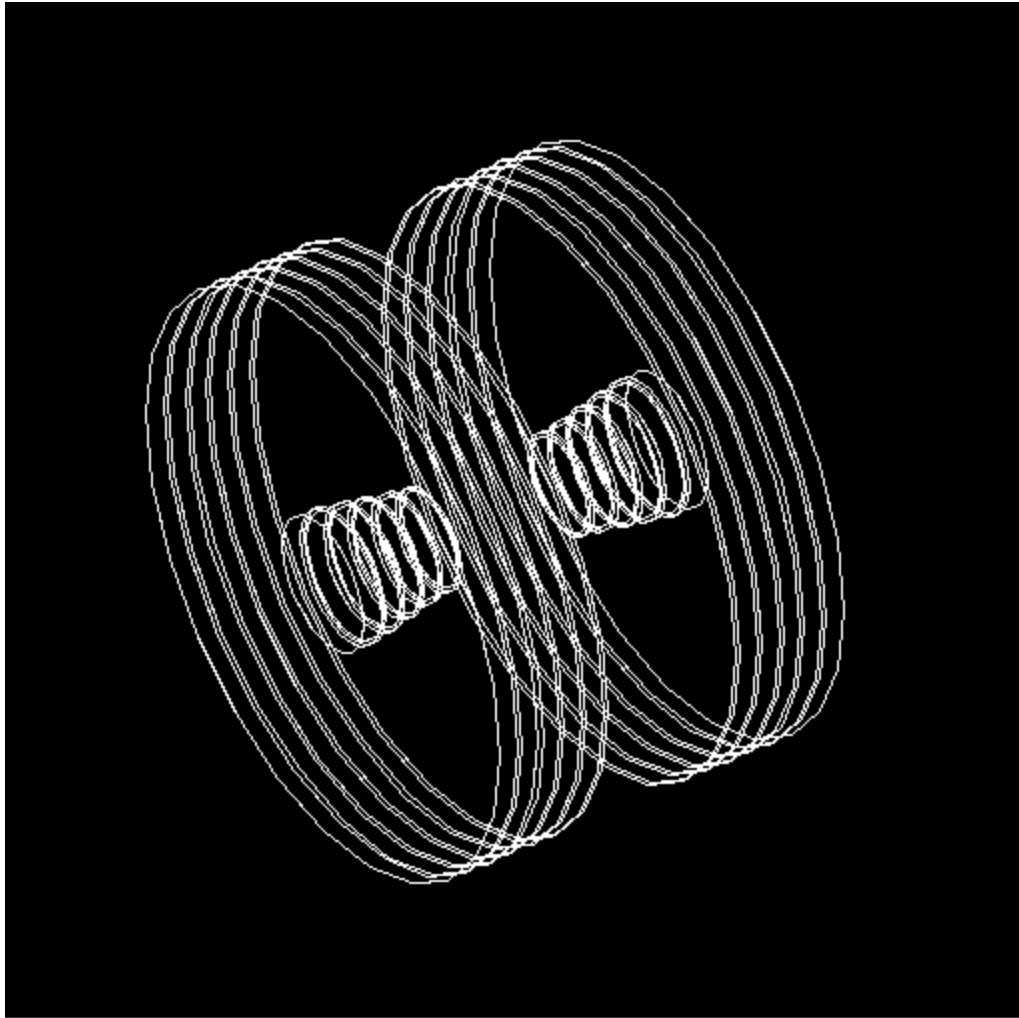






$$dy = \text{Math.tan}(\text{innerAngle}) * \text{layerThickness};$$







# Identifier Fields

- system
  - subdetector id
- barrel
  - positive (1) or negative (2) endcap
- layer
- slice

NOTE: There are no modules in this geometry.