Wall Thickness and RF Penetrations

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ML simulation model

Plan view

Cross section

B-B' cross section

A-A' cross section

RTML beam tube

Separation wall

Cryo-module

Service tunnel

Beam line tunnel

Soil

Sump pit
Dose rate for dark current (Access)

Normal loss: $6.875 \times 10^{10}$ eps (50nA eq.) due to dark current
Dose rate for Dark current (Waveguide)

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Conclusion

• Thickness of Shield wall to protect personnel from dark current, including access between tunnels and cable and RF penetrations
  - Access between tunnels, Plan A
  - RF penetration. No cable penetration
  - Evaluated under ML shield wall of 1.5 m in thickness

• Things to do
  - Make a list of penetrations, interval, diameter and filled material, design access between two areas
  - Find a place to confirm simulation results