



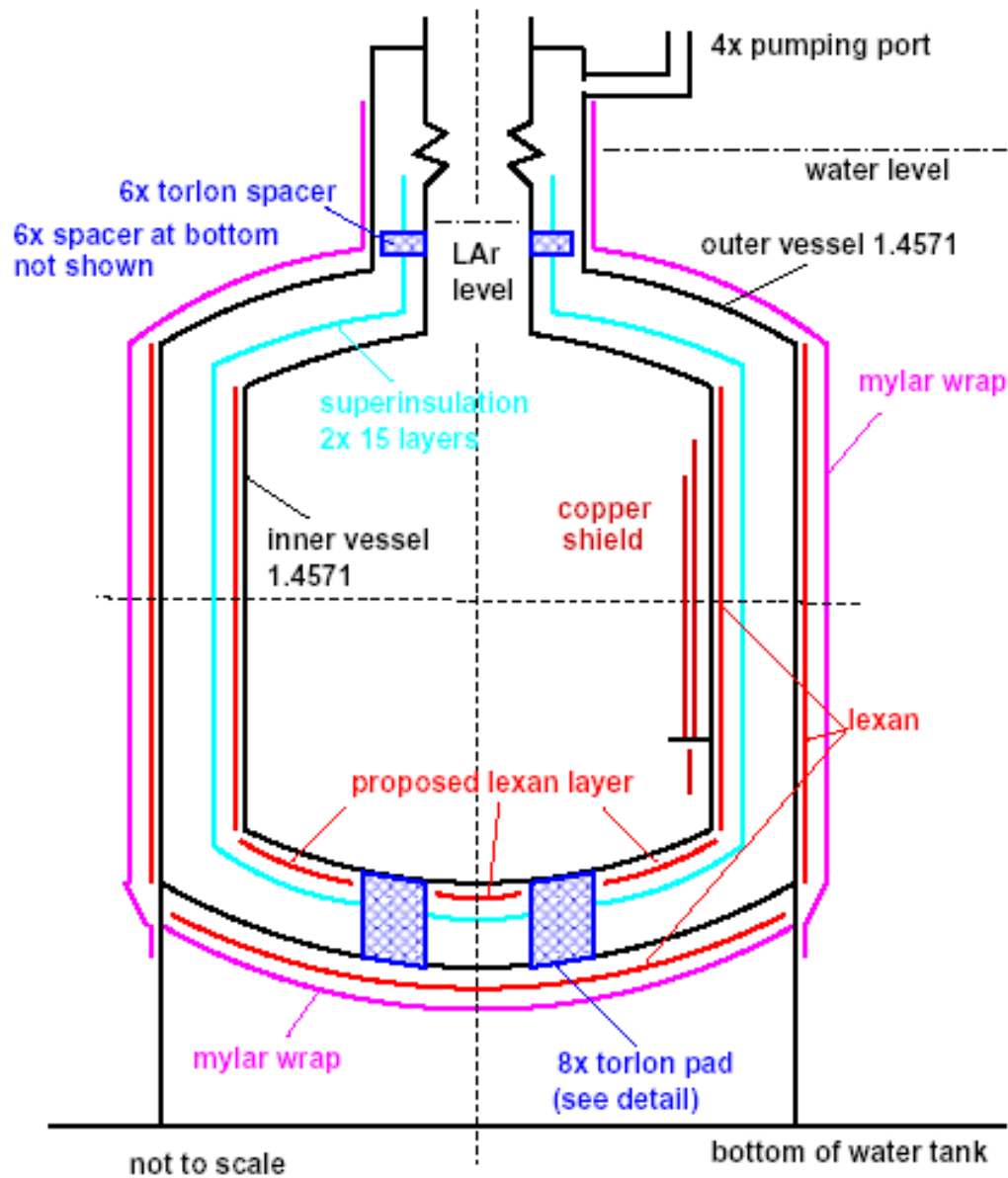
Installation of Cryostat's Thermal Insulation

K.T.Knöpfle

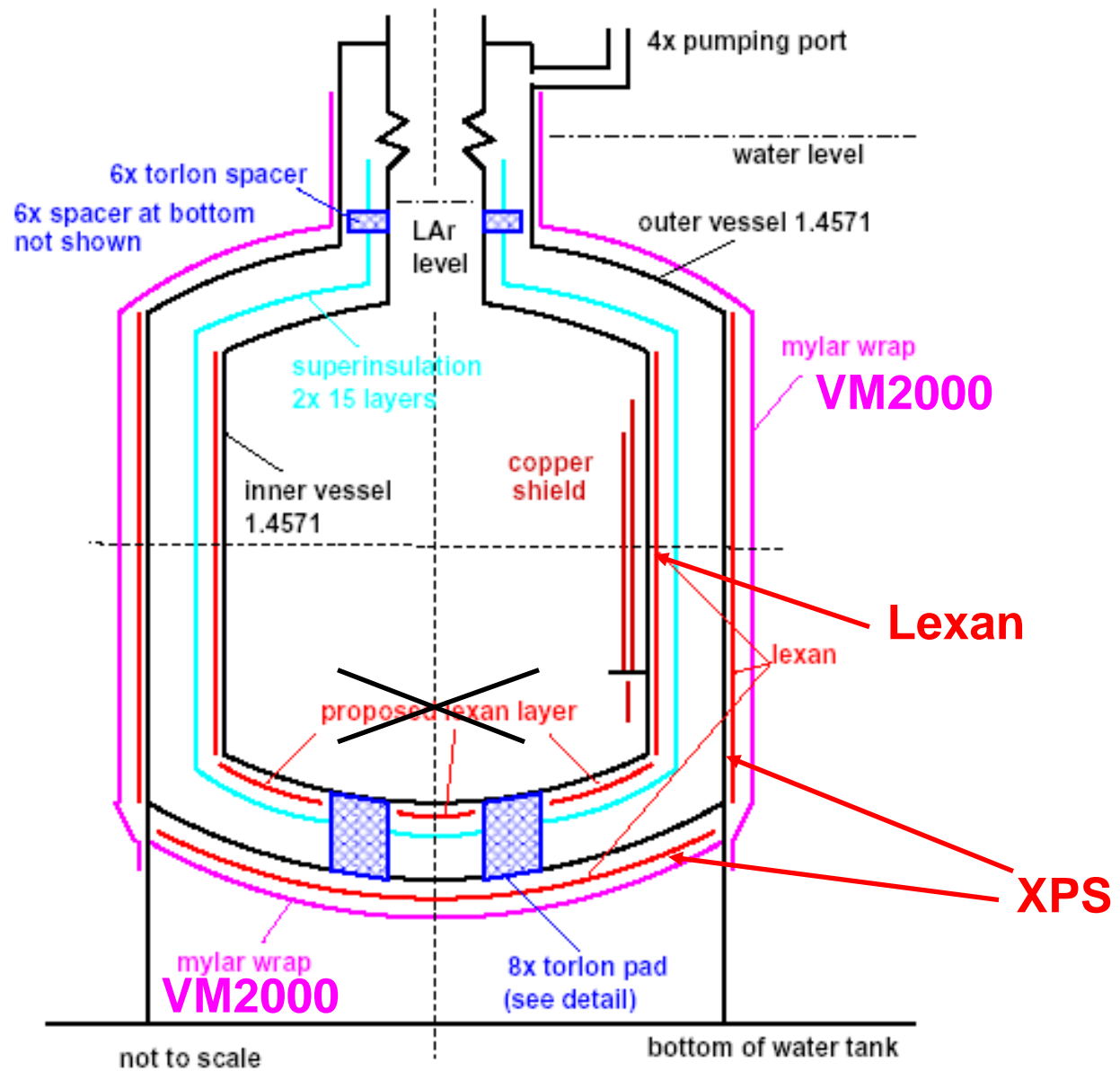
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GERDA Collaboration Meeting at Isola / LNGS
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conceptual design 22jan07



actual realization

Extruded polystyrene foam (XPS):
Jackodur 300 FTD 2630x600x6 mm
(~0.035-0.04 W/(mK) : factor ~8 better thermal isolation than Lexan)
(long term water absorption <1 vol%)

- ▶ to be attached with (double-sided) adhesive tape
DUPLOCOLL 268

Jackodur / VM2000 test report by I. Luca & N. Stefano

ICP-MS measurements (Ca/K/Na 14/5/4ppb)

suspended particle counting

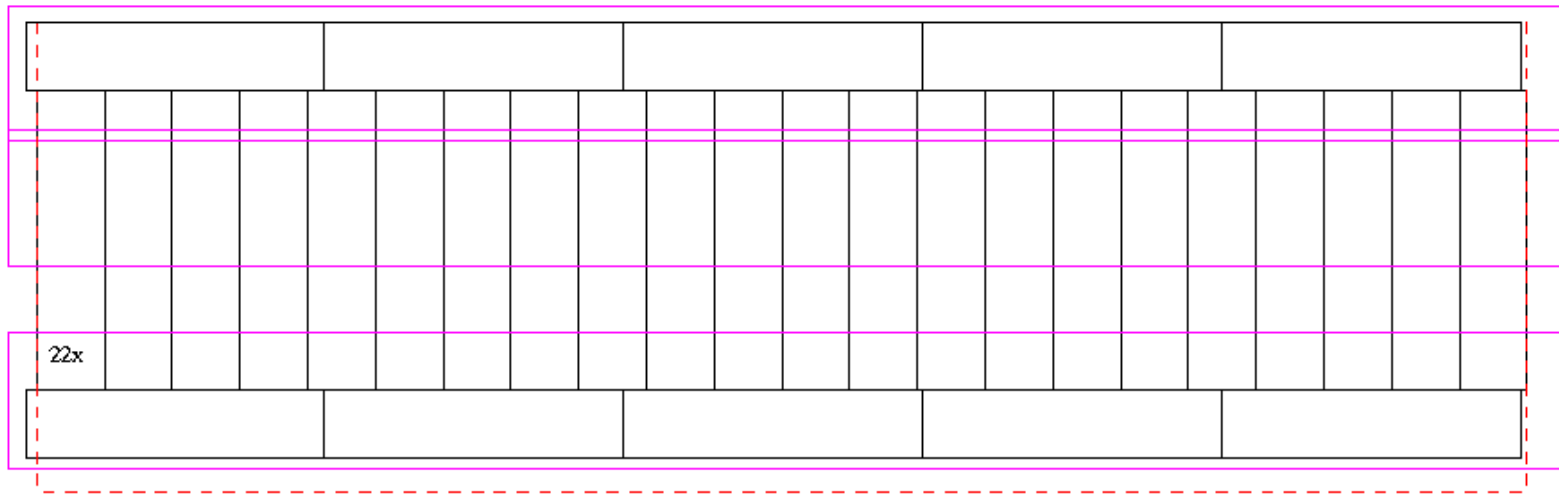
water absorption (<5vol%), pH (~5.8-5.9), conductivity

▶ all results acceptable



vertical wall - two options for VM2000 cover:

1)



better geometry
difficult to install

VM2000 1200 x 4500

Jackodur 2630 x 600 x 6

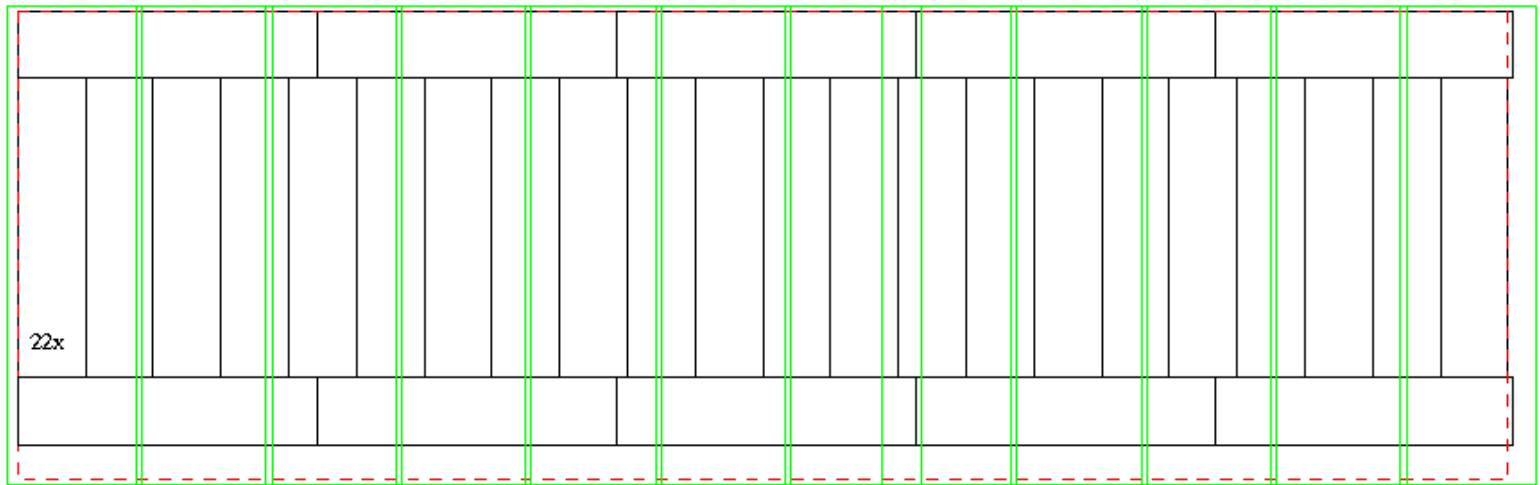
5x 2630 = 13150

22x 600 = 13200

13188 x 4150

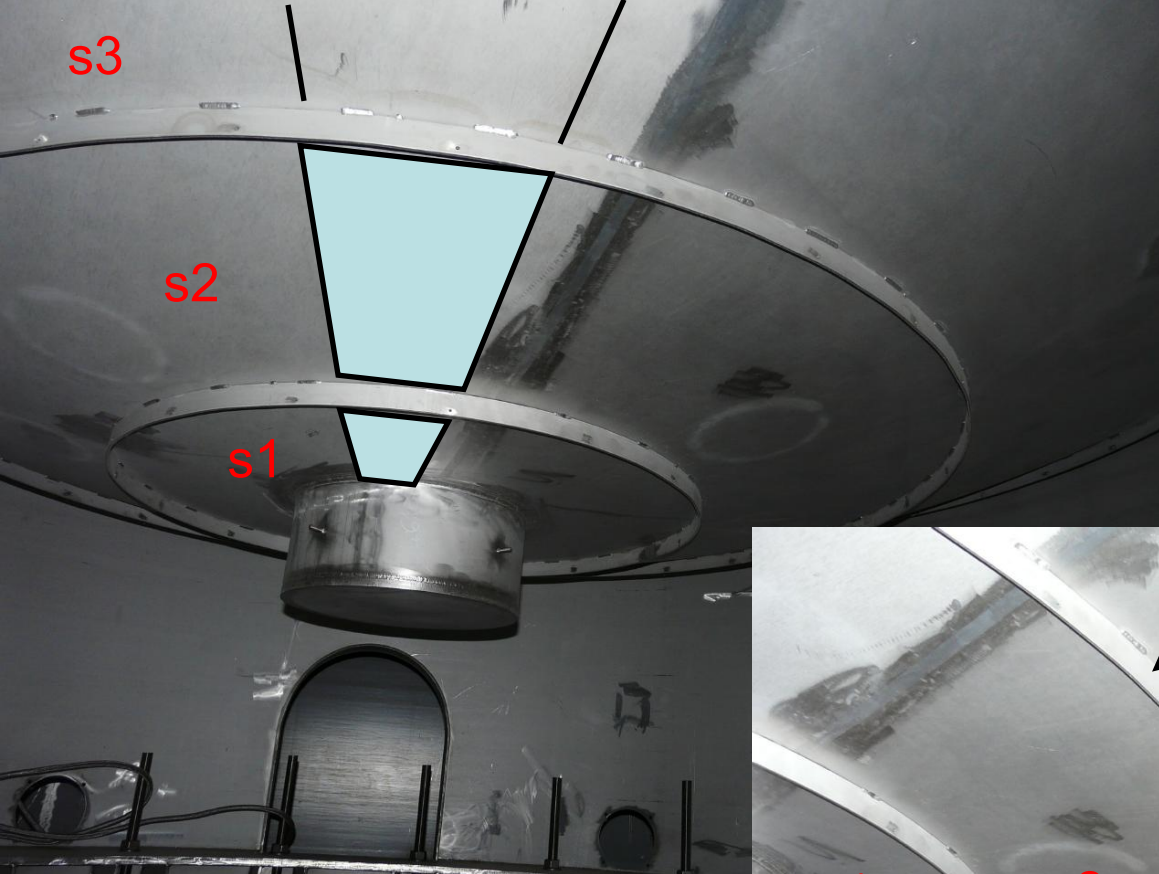
G090213_jackodur-vert

2)

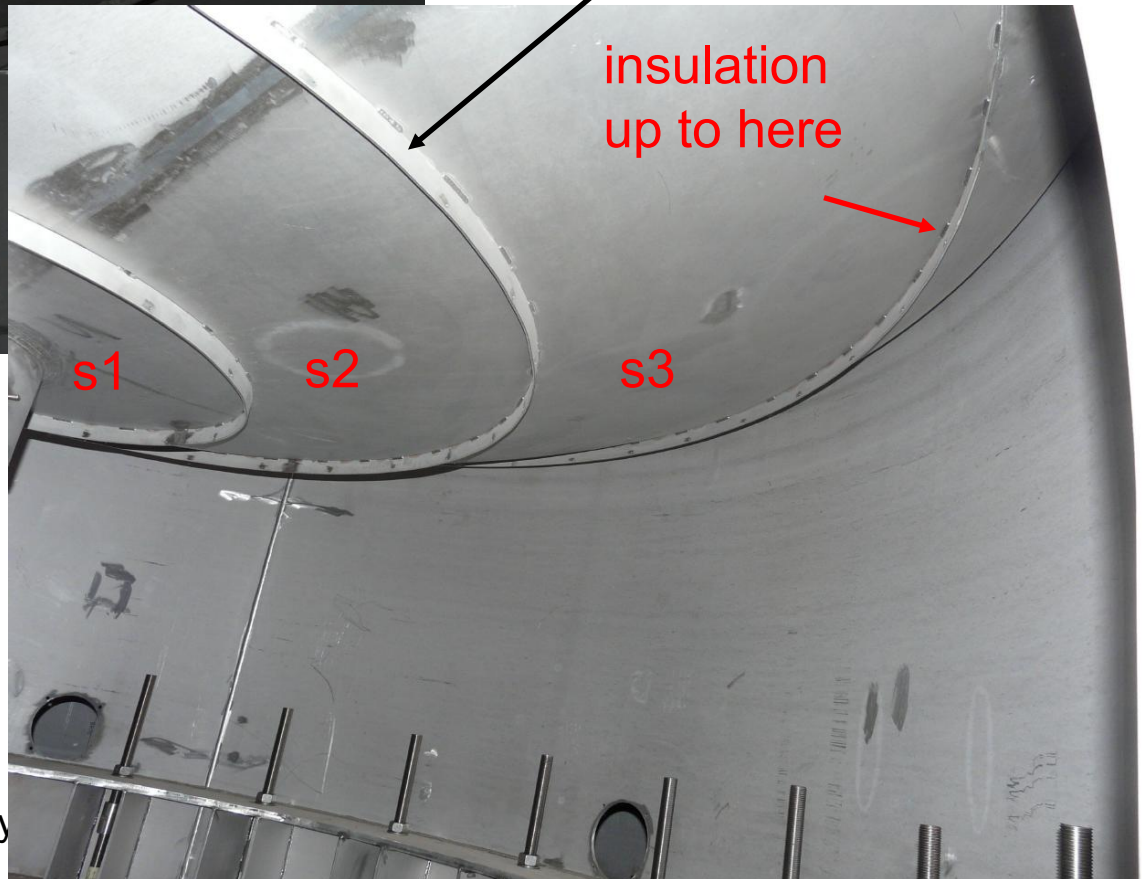


worse geometry
easy to install

edges of VM2000 to be sealed with Scotch-Weld DP100 epoxy

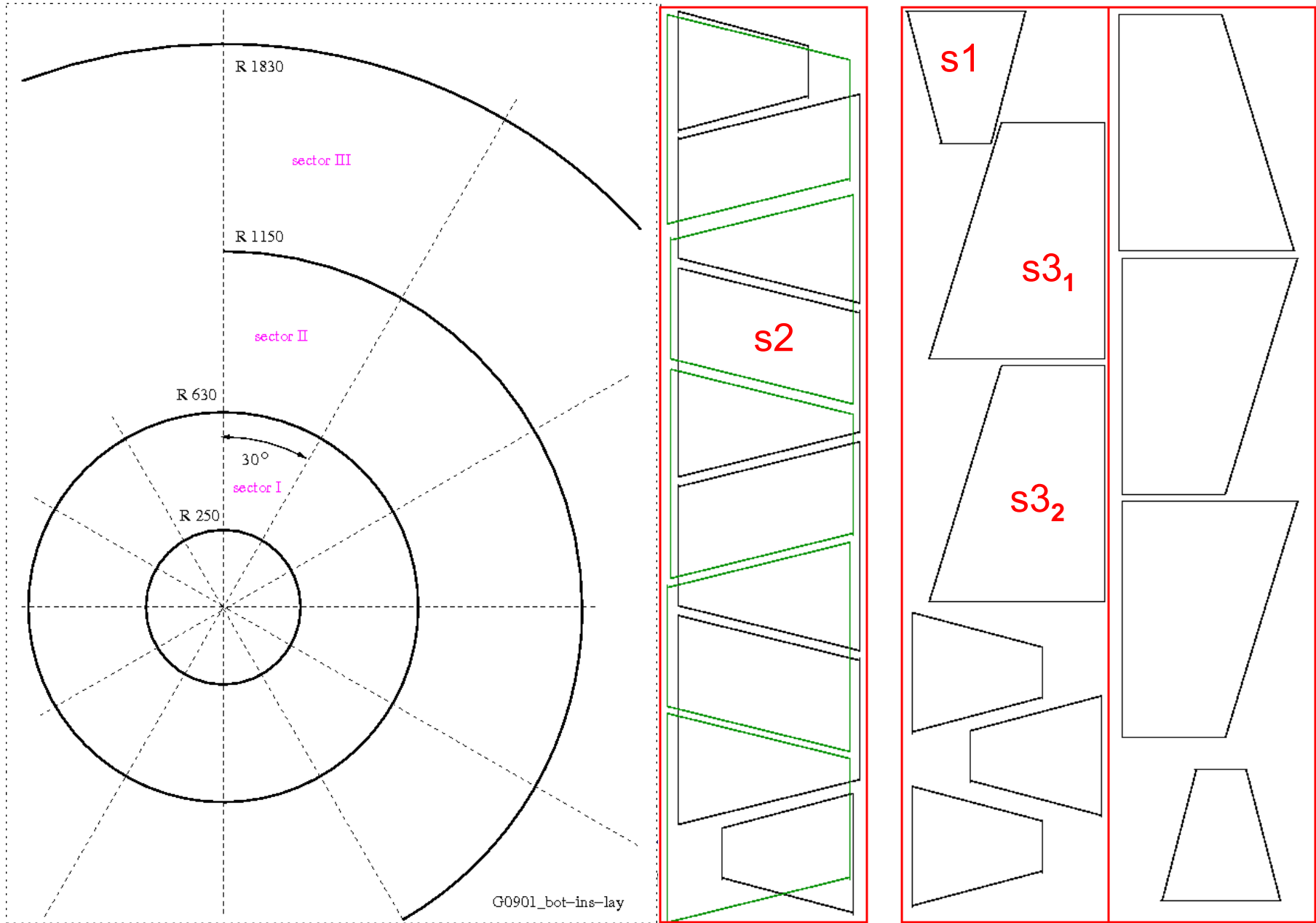


segments to be attached with adhesive tape and eccentrics; latter screwed to metal rings.



bottom to be planked with 30 degree segments, i.e. 12 pcs in sector s1 - s3 .

The three segment types to be cut out of the Jackodur panels – templates avail.



Conclusions:

Jackodur available

Templates, tape, epoxy, eccentrics available

VM2000 foil available (Tübingen)

Tasks and schedule (not time critical):

test installation Jackodur at vertical wall

this week

test installation of J. at bottom

this week

install Jackodur at bottom

week 27 ?

cover complete cryostat surface
with VM2000

together with muon
final works