Cryogeny at LNGS
NEWSdm
Status and Timeline

N. D’Ambrosio – Anacapri – 29 May 2018

New Cryostat available at LNGS

LAUDA RP 890c

Temperature range -90 -> 200

Refrigerant capacity (at -50) 0,58 KW

Refrigerant capacity (at -70) 0,24 KW

Refrigerant capacity (at -90) 0,05 KW

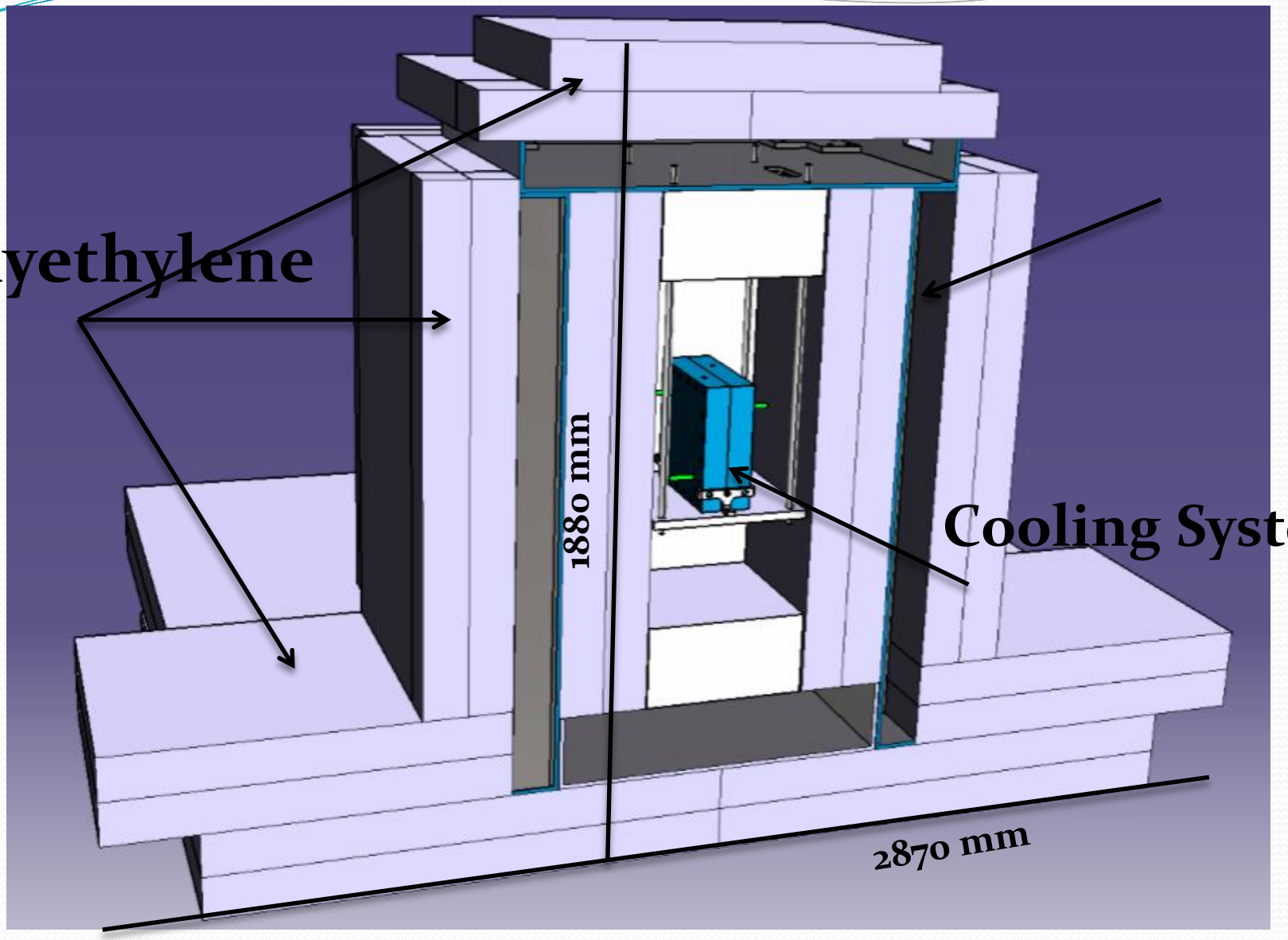
Preliminary basic tests on cryostat DONE

new connection with our cooling system needed to fit everything inside the shield

Better insulation needed (polystyrene box around cooling box)

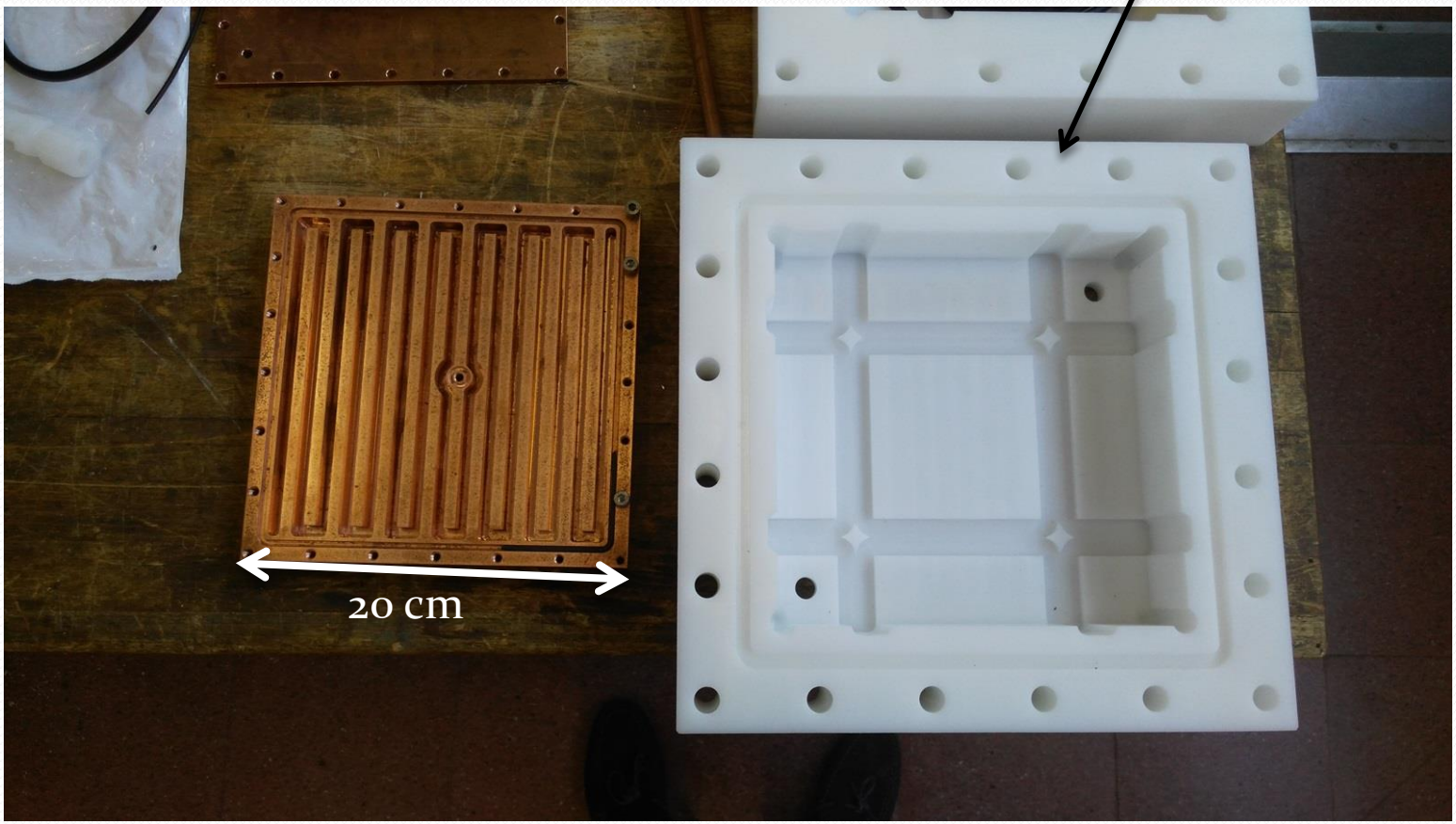
We need to better handle the connections and satisfy all the safety rules (use of the cryo-liquid underground)
Due to some works in progress in hall B
I succeeded to open our shield and check everything last week

SHIELD 3D view – Section 1



Cooling system

Made with low radiation copper (CUORE collaboration)
External box made with polypropylene
Nitrogen fluxed
Temperature sensor
Available space for emulsion 18x18x5 cm
Space between dissipators can range from 0 up to 5 cm



Timelime

additional connectors and tubes ordered :

- **splitters**
- **short flexible tubes**
- **connectors**

All the material should be available within June

In the mean time I am working on the insulation and nitrogen system (try to use evaporated nitrogen -> more clean)

Preliminary test around beginning of July