

Status of Emulsion facility and Cryogenic System at LNGS

N. D'Ambrosio 25 October 2018

Emulsion Facility status

- Box infrastructure **READY**
- Electrical system **READY**
 - 220 V – 220 V UPS - 100 V 100 V UPS outlets
 - 100 V and 200 V for Gel Production machine
- Development chain **Installed** (ex OPERA)
- Liquid evacuation system **READY**
- Tap Water **connected**
- Boiler **installed**
- Filters installed on both room (ISO 6)

Emulsion Facility status



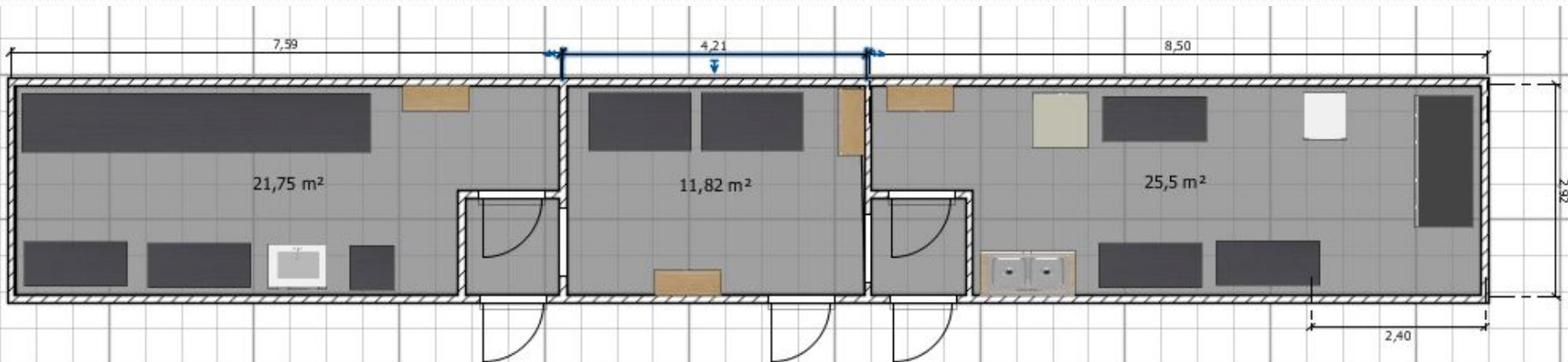
Emulsion Facility status



Emulsion Facility status



Tanks
connected
with both old
and
new facility



Emulsion Facility status

- Final Check of electric and hydraulic systems
-> Next week
- Demineralized water connection within 2 weeks
- Installation of Gel production machine
-> within November
- Final ventilation system (Temperature and Humidity controlled) -> February – March 2019
- The facility can be used in the meantime

Gel production machinearrived at LNGS



Cooling system

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



Cooling system

- All the new components ready at LNGS



Preliminary test postponed to next week

One of the connection tube had a wrong thread...

... the replacement one received on Tuesday





Cooling system

Made with low radiation copper (CUORE collaboration)

External box made with polypropylene

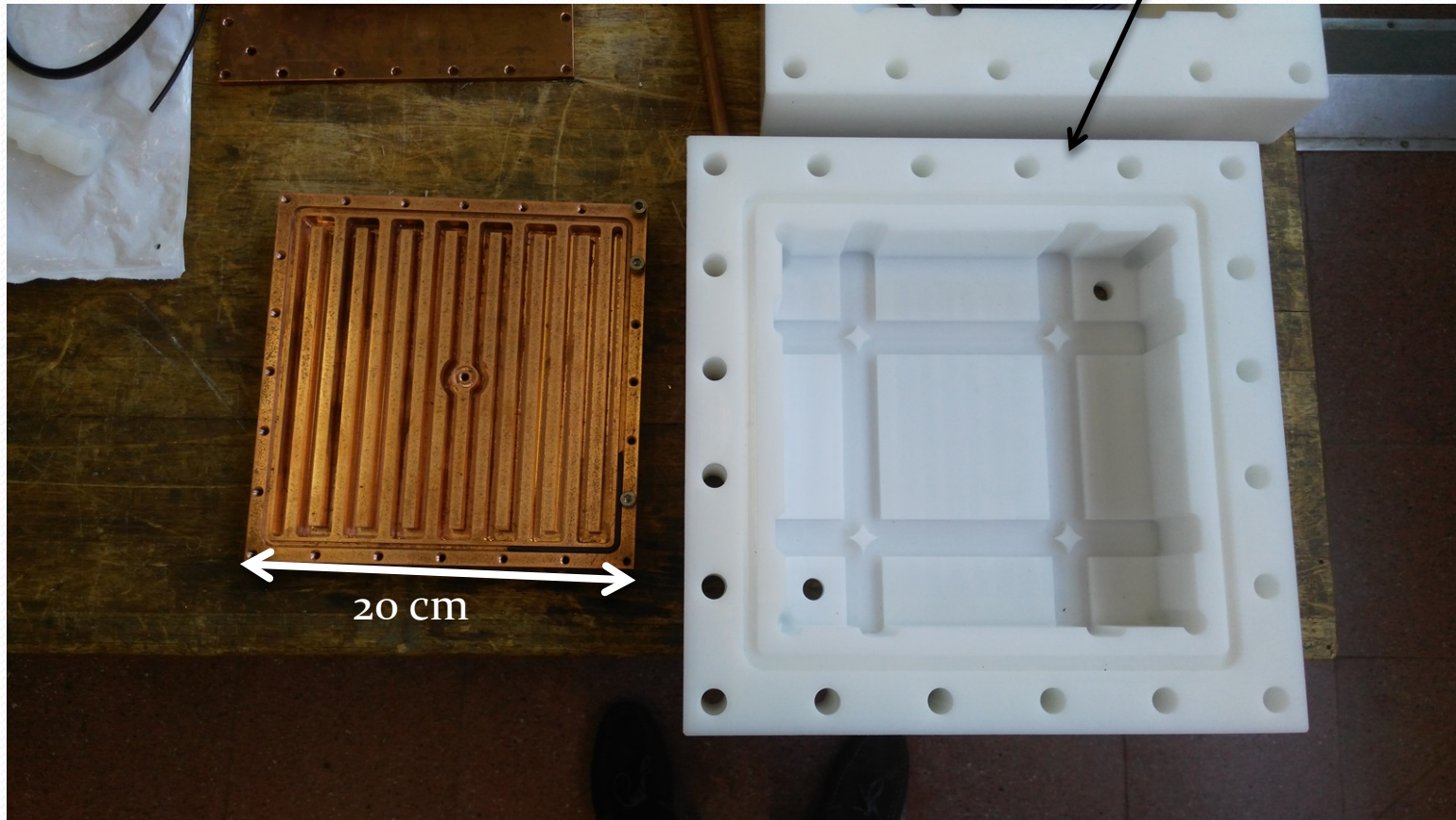
Nitrogen fluxed

Temperature sensor

Available space for emulsion 18x18x5 cm

Space between dissipators can range from 0 up to 5 cm

Polypropylene Box



SHIELD 3D view - Section 1

Polyethylene

Cooling System

1880 mm

2870 mm

