

Status of the Water Tank

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(on behalf of E.Bellotti, A.Bettini, M.Junker, P.Martella)

GERDA INFN Approval and Funding

31 May 2005: - INFN funding of GERDA Phase I (2005-2008)

Total funding:

Funded items:

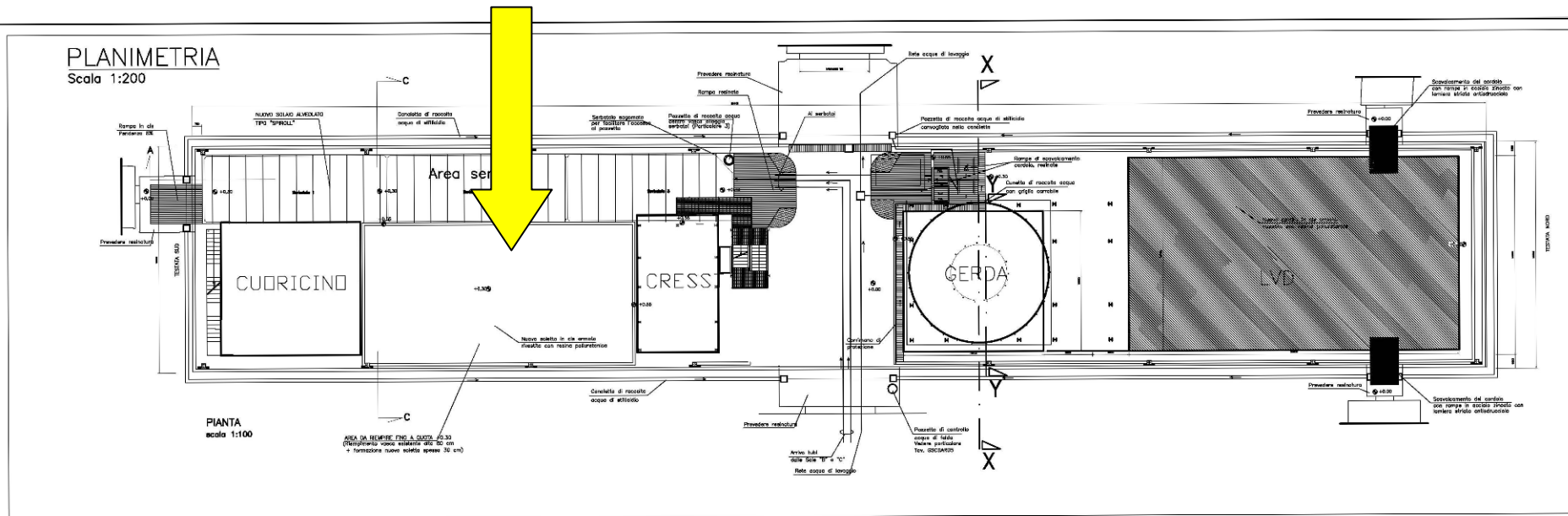


Tendering Procedures: - tender can start as soon as cryostat definitely outlined

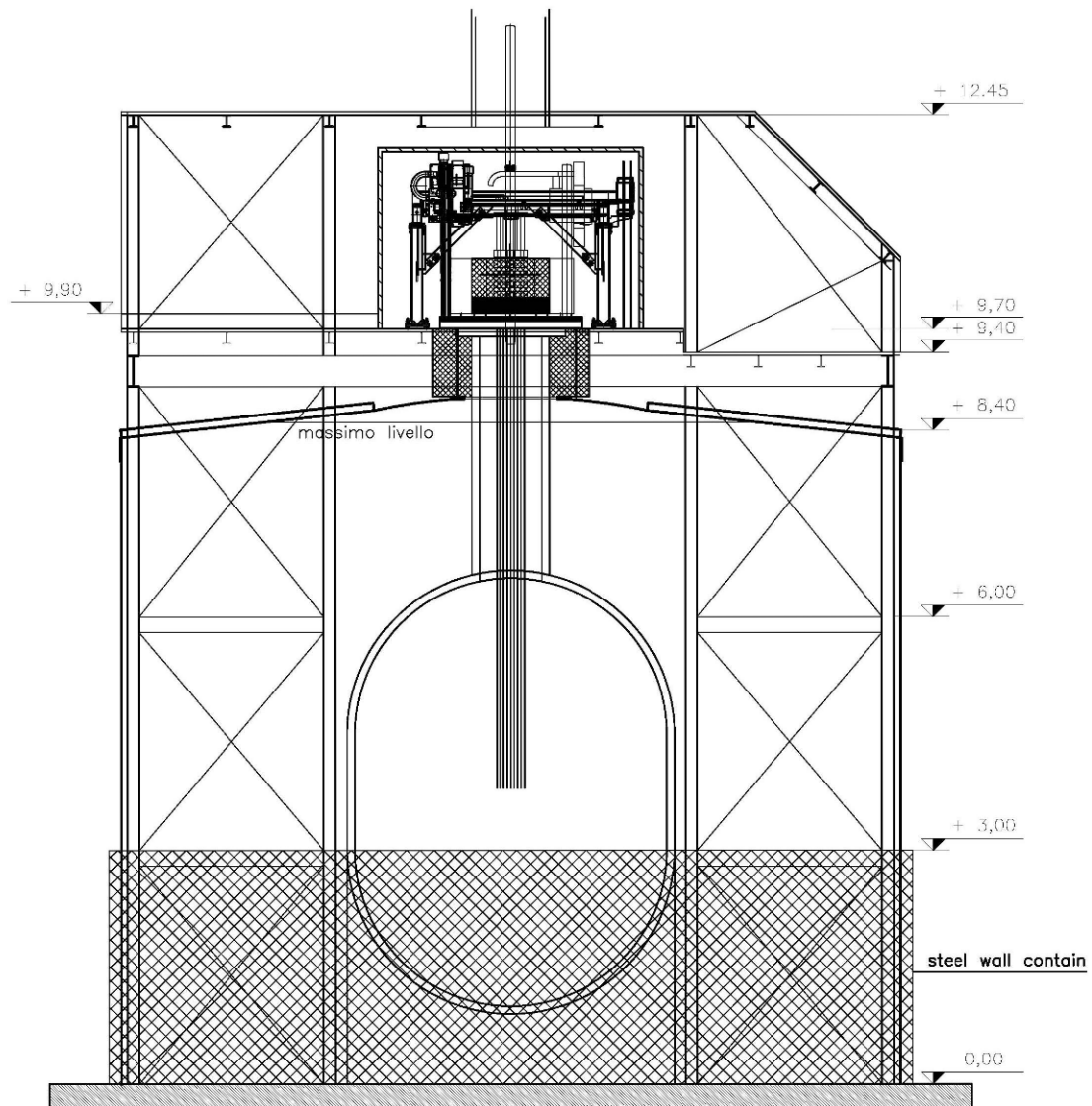
- public tendering (Time scale shown in last slide)
- technical and administrative paper are almost completed.
need the finalization of the cryostat project → final
integration of WT + Approval of the collaboration
- needed integrated safety review (ongoing).

GERDA Location in Hall A

Service space for assembly. Interference with CUORE assembly possible in case of severe delay of GERDA. Cost and building time of Wt and GERDA superstructure+ building strongly depends on the availability of this space

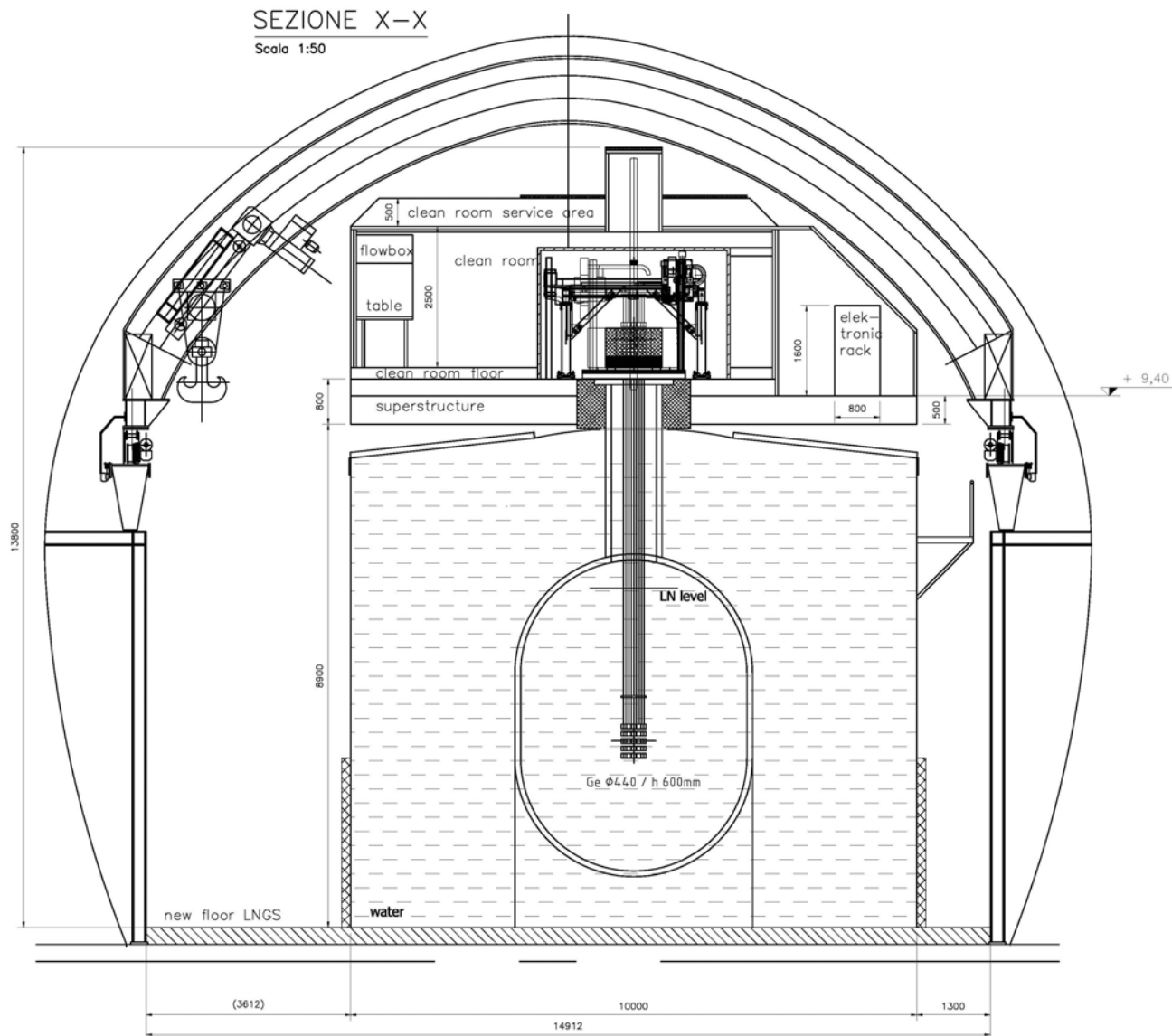


Tank and service structures



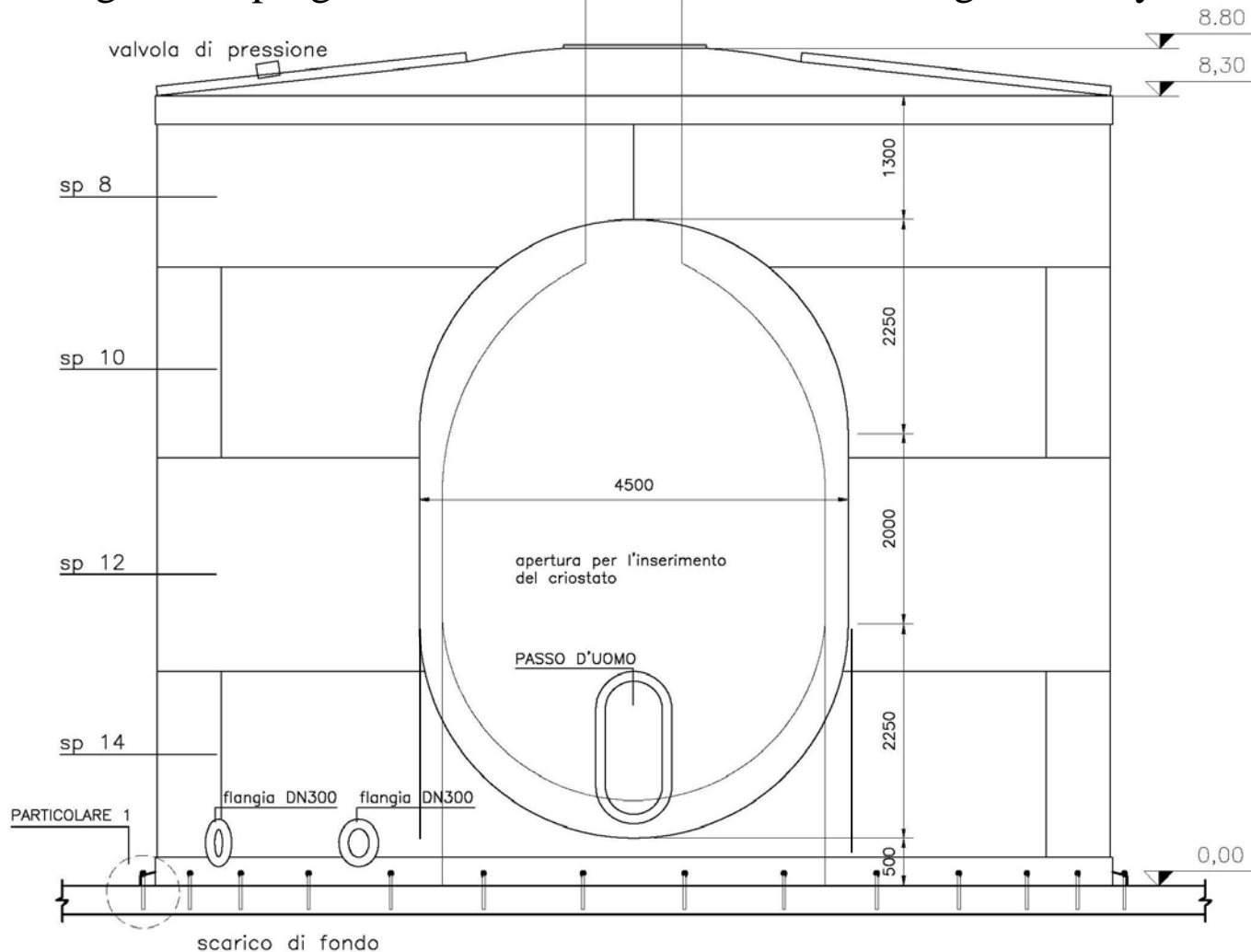
Tank and service structures

3D model of Hall A to merge it with GERDA 3D modelling (ing. Fanin in PD) have been committed and is ongoing at LNGS.

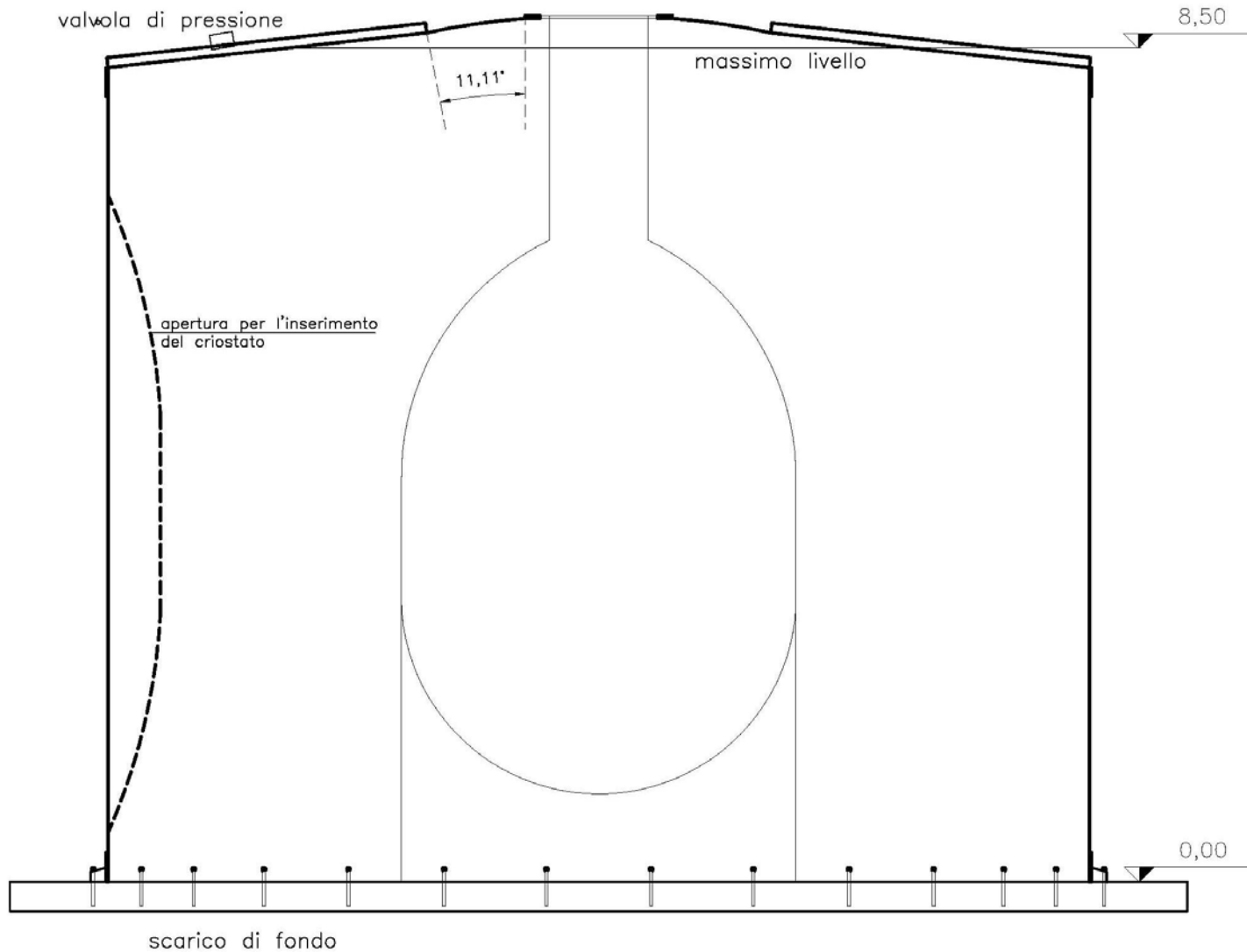


The provisional opening

WT construction plan foresees to leave a part open (the shape may be that shown or simply rectangular) for insertion of the Cryostat. The construction of the tank will then be completed by final soldering. Work programme will need to know the timing of the cryostat



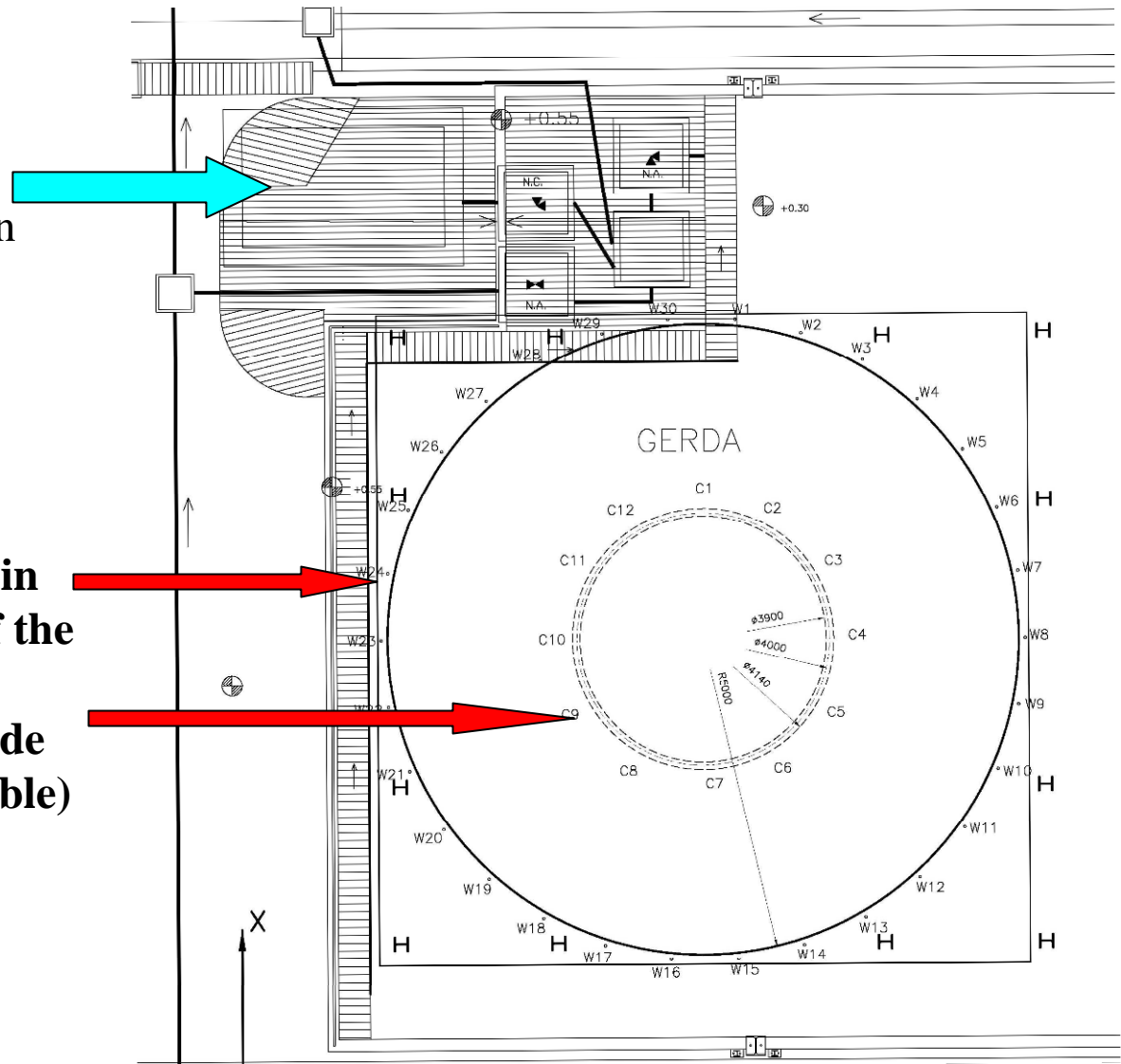
Provisional opening (Section)



Footprint on the floor

The interference with the Commissary civil works shown in the drawing will be solved changing the civil works design

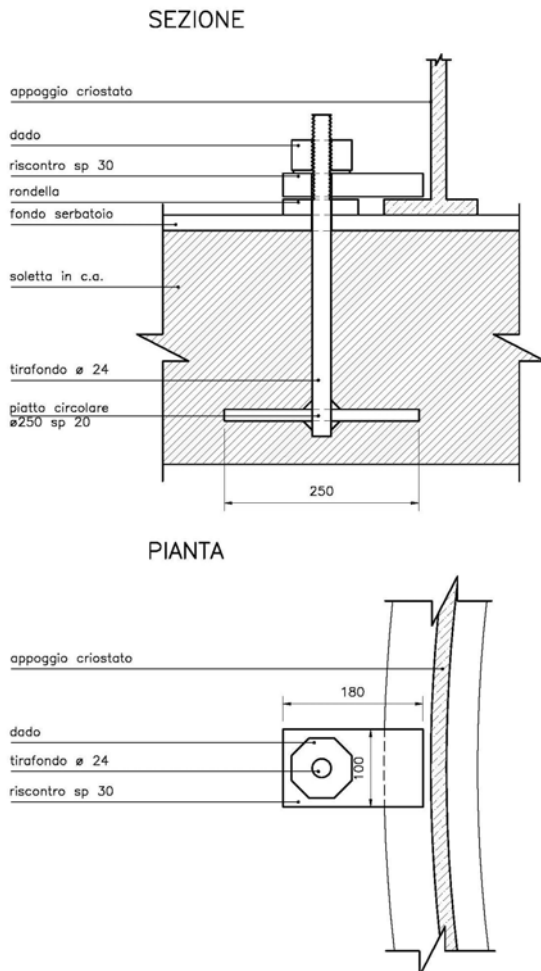
The positions of the fixing pins in the floor both of the WT and of the cryostat must be frozen before summer break (they will be made leaving 20 cm adjustment possible)



Anchorage pins

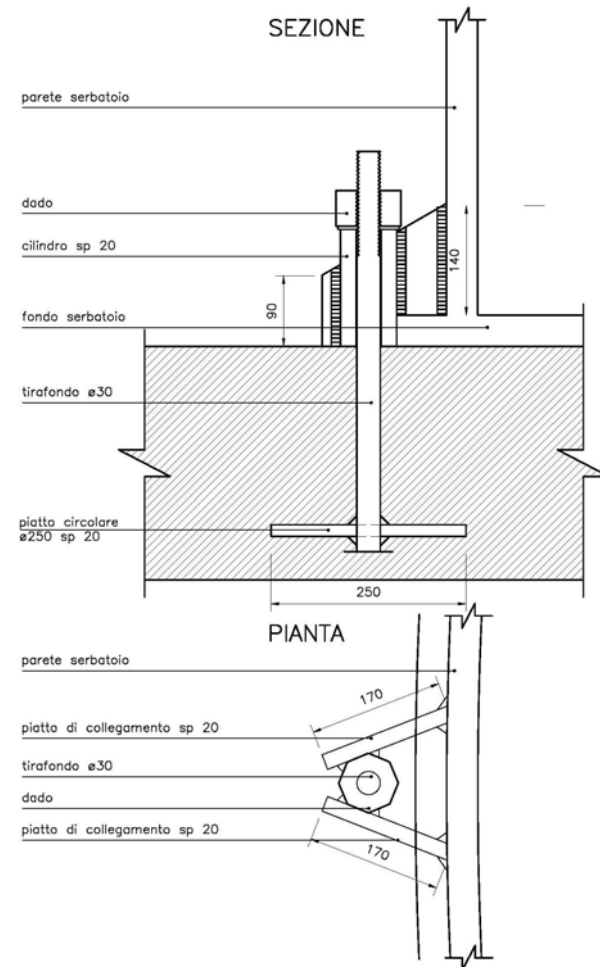
For the Cryostat

PARTICOLARE 2
ANCORAGGIO CRIOSTATO
Scala 1:5



For the Water Tank

PARTICOLARE 1
ANCORAGGIO WATER TANK
Scala 1:5

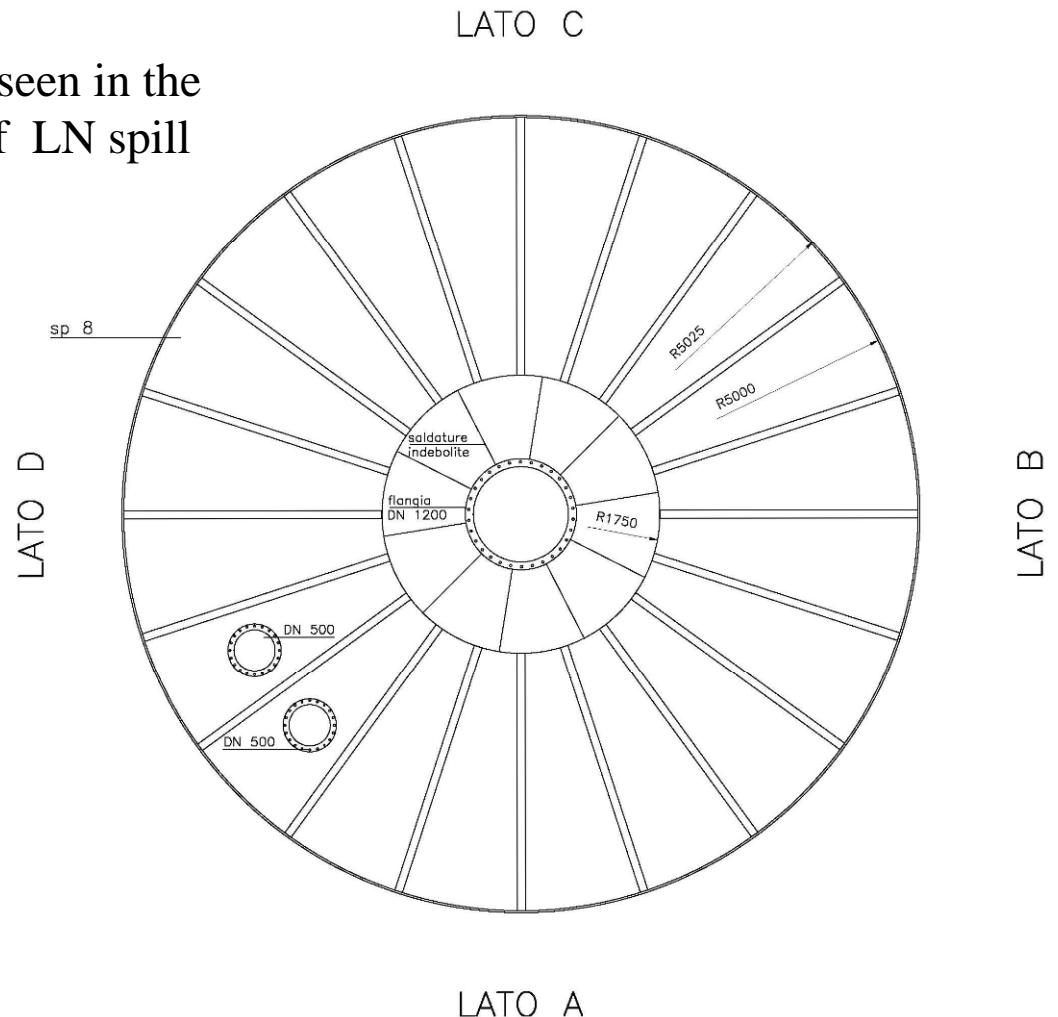


The Roof

PIANTA LIVELLO COPERTURA (a quota + 9,70)

In this version weak soldering are foreseen in the central sectors. Should break in case of LN spill in water and consequent explosion

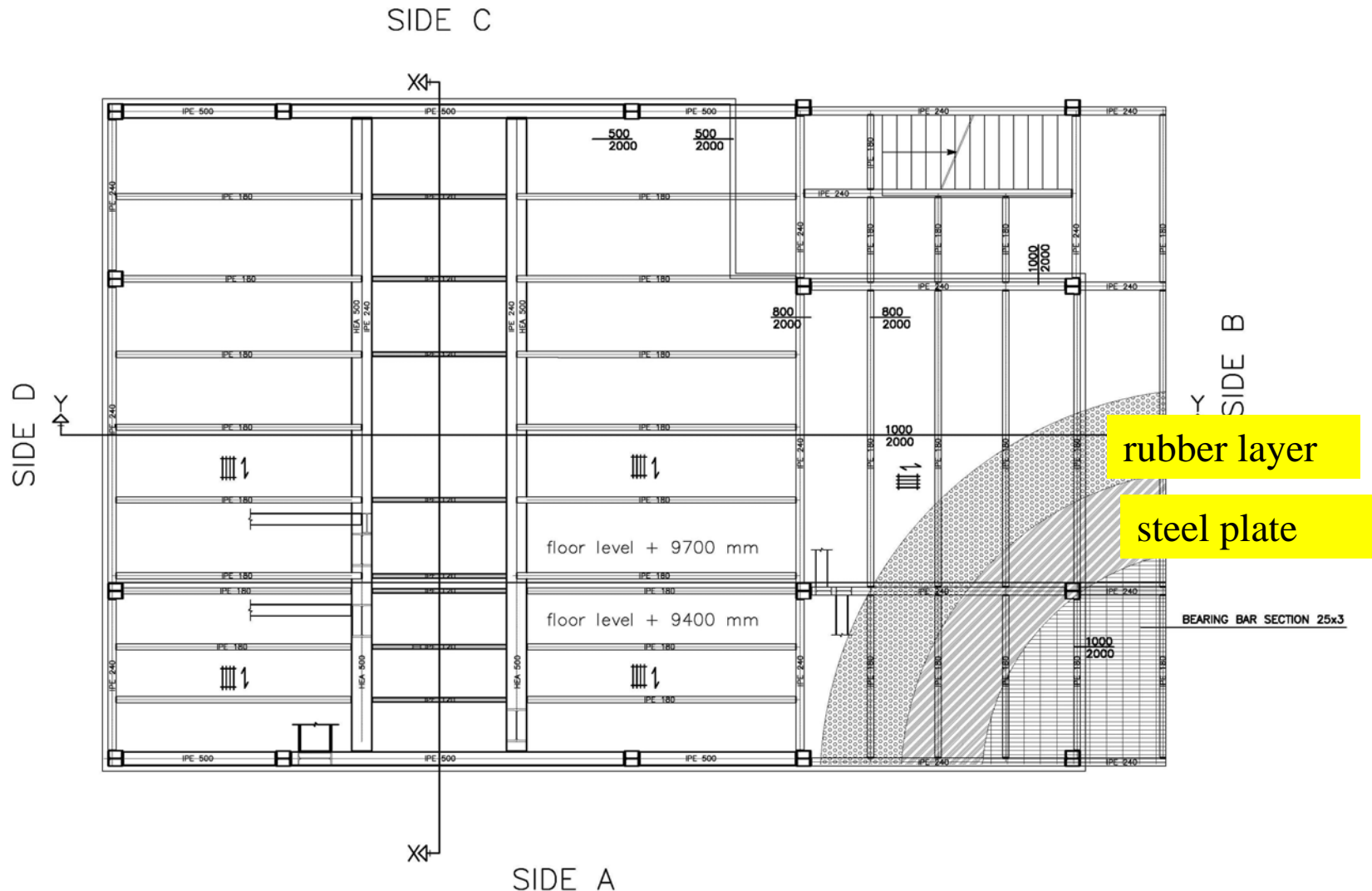
The LNGS request to consider of triple containment of LN may involve a change of this detail Presumably N₂ in gas phase escaping from the WT or from the cryostat will be guided to a specially built heat exchanger and then to the exhaust duct foreseen in the Commissary works



Plant of the 3rd floor

INFN-LNGS will fund and realise the construction of the service building. This will not include the clean-room construction

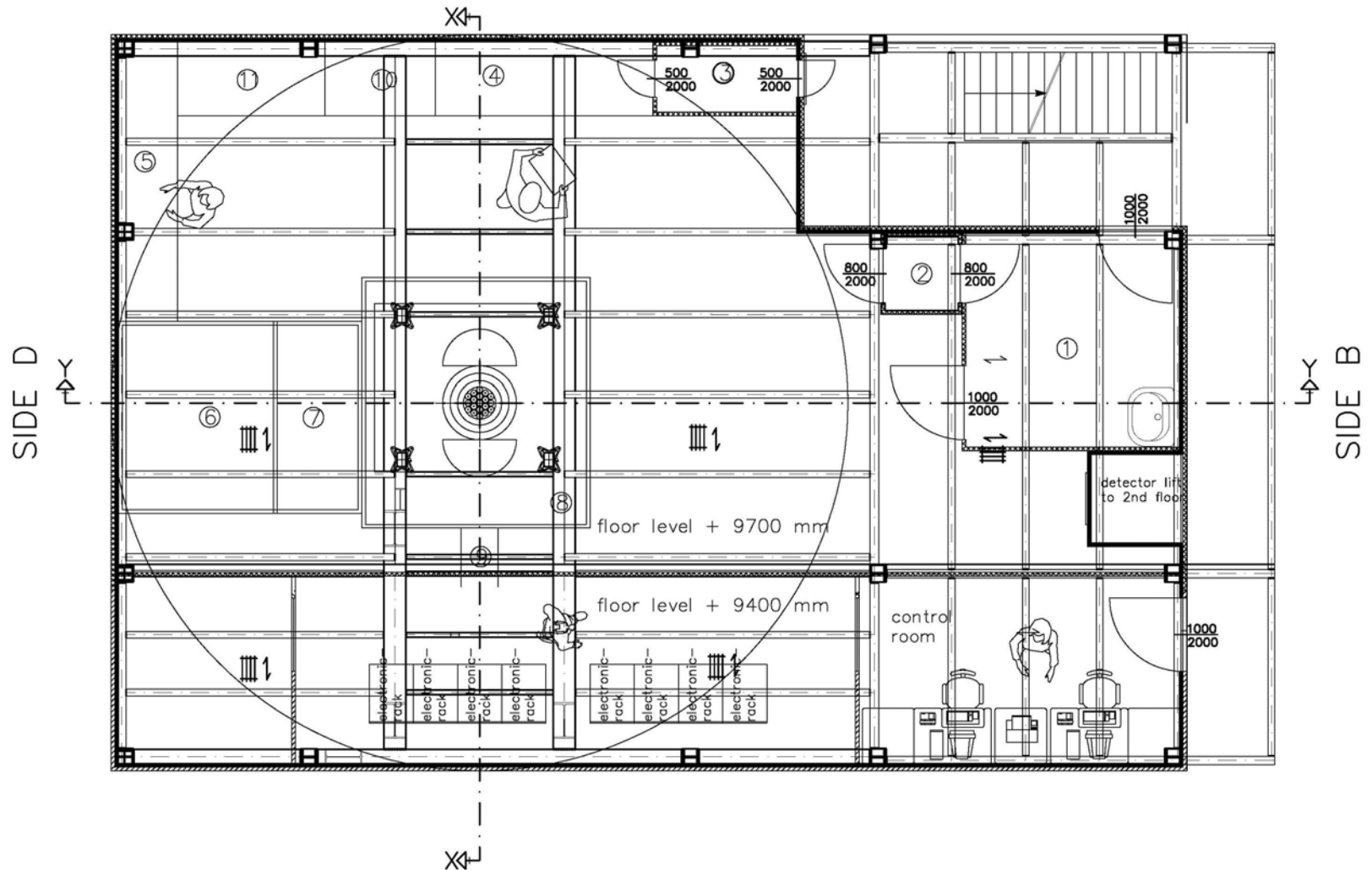
PLAN FLOOR 3 (level +9400/9700 mm)



Plant of the 3rd floor

PLAN FLOOR 3 (level +9400/9700 mm)

SIDE C



SIDE A
C.Cattadori, INFN-MI

Timing of WT and Structure

Month		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Tank	Tendering	█	█	█	█	█	█	█									
Tank	Engineering							█	█								
Tank	Material Shipping								█	█							
Tank	Work Shop Fab.								█	█	█						
Tank	Site Fab.										█	█	█				
Structure	Tendering							█	█	█	█	█					
Structure	Workshop Fab. and Shipm.											█	█				
Structure	Construction (on site)												█	█			
Cryost.	Crystat Insertion														█	█	
Structure	Construction (on site)															█	
Tank	Construction (on site)															█	
Tank	Test and Approval																█

WT&Structure Construction Programme

**End construction of the
structure**

End construction of the tank

**Construction of the
structure**

Insertion of Cryostat

**Construction of the WT
leaving the opening for
cryostat**

