

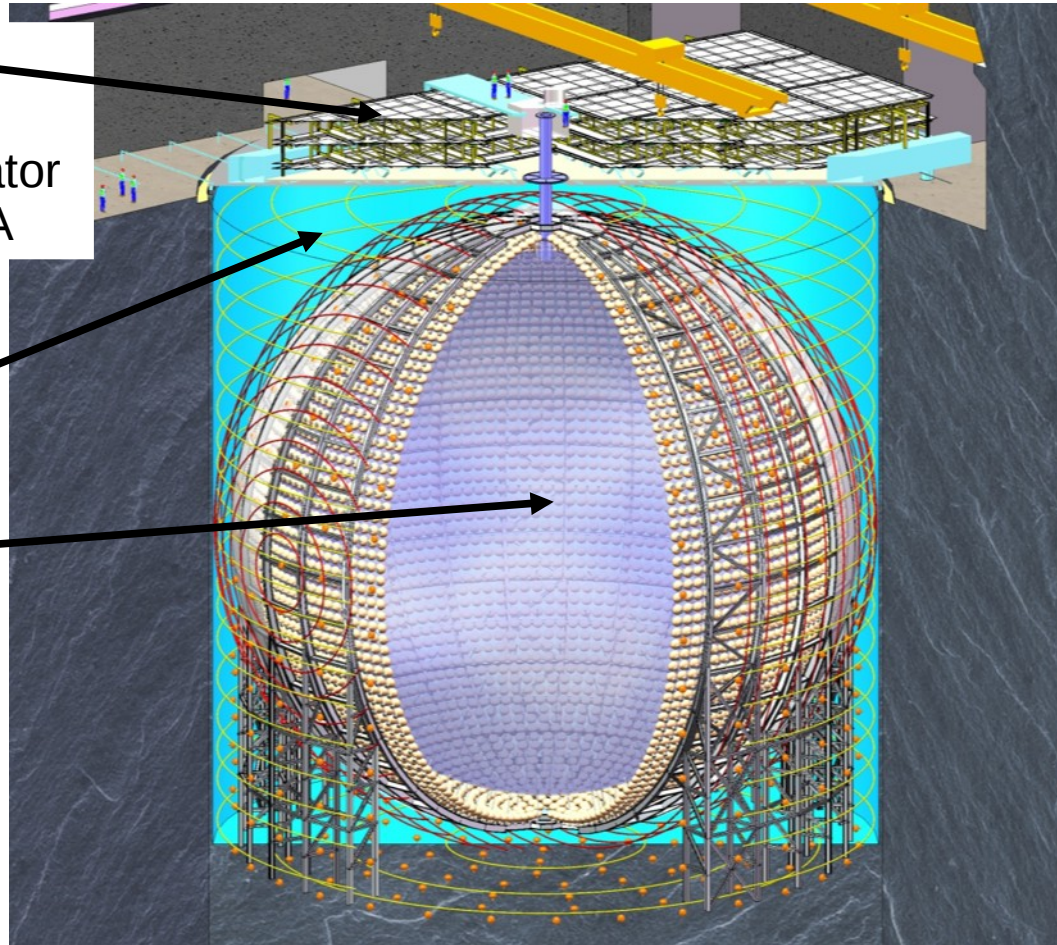
JUNO experiment

Oscillation experiment: anti- ν_e disappearance for mass hierarchy measurement.
50 km baseline from 2 nuclear power plants (power=26-36 Gw).

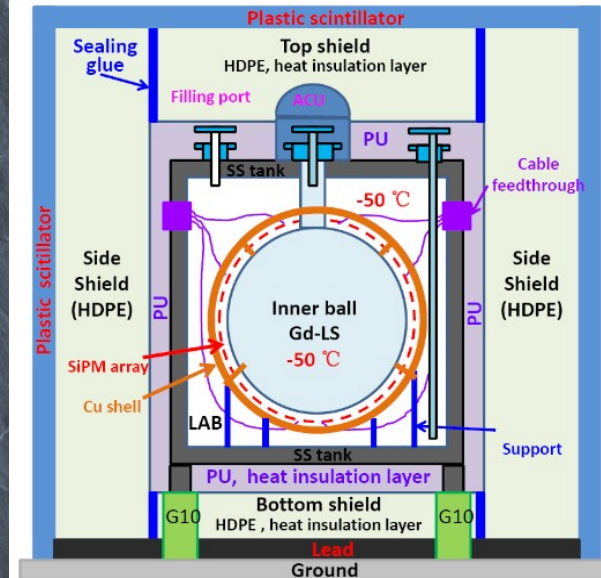
Top Tracker
3 layers made by
63 walls of scintillator
strips from OPERA

Water Cherenkov
2000 20" PMTs

Central detector
Acrylic sphere+
20 kt Liquid
scintillator+
17000 20" PMTs+
25000 3" PMTs



Juno-Tao
reference detector
@40 m from reactor
approved in 2018.



International collaboration: China, Pakistan, Thailand, France, Germany, Italy, Belgium, Cech republic, Slovakia, Finland, Russia, Brazil, Chile.
INFN groups: Milano, Milano Bicocca, Padova, LNF, Roma3, Perugia, Ferrara, Catania
(72 persone, 32 FTE).

JUNO LNF group activity

Anagrafica gruppo LNF: A. Paoloni (100%), A. Martini (40%), M. Cordelli, G. Felici (10%), L. Votano.

Main activity: Electronics of the Top Tracker (A. Paoloni responsible, L3 level), in collaboration with Strasbourg and Dubna groups. In total about 64000 channels.

Development of the Read-out Board with CAEN. Other boards developed by Strasbourg.

Final prototypes of FE-Card and Read-Out Boards ready within 2019.

1000 ROBs ordered to CAEN (600 kEuro in 2018-2019); production in 2020.

Installation foreseen in 2021-2022.

Also contribution to software architecture.

Richieste alla CSN2:

Missioni: 25 kEuro (t.b.c.) per meetings, turni PMTs, test elettronica a Strasburgo e a Viareggio.

Apparati: 250 kEuro (concentrator+cables)

Consumi: 5 kEuro test ROB a campione.

Richieste ai LNF:

Supporto tecnici in linea con anni passati.

Servizio elettronica: 1 mu per supporto test elettronica.

