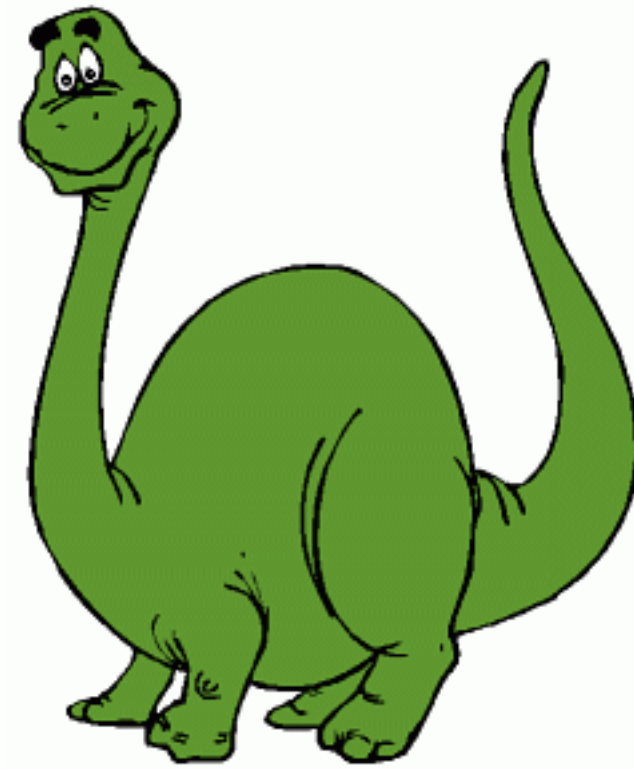


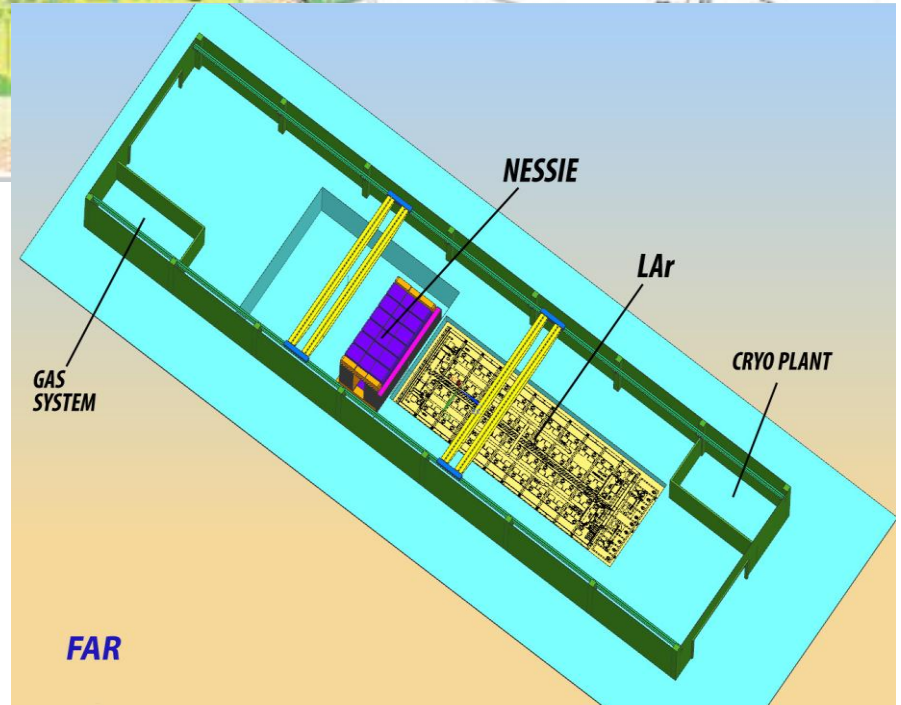
NESSIE

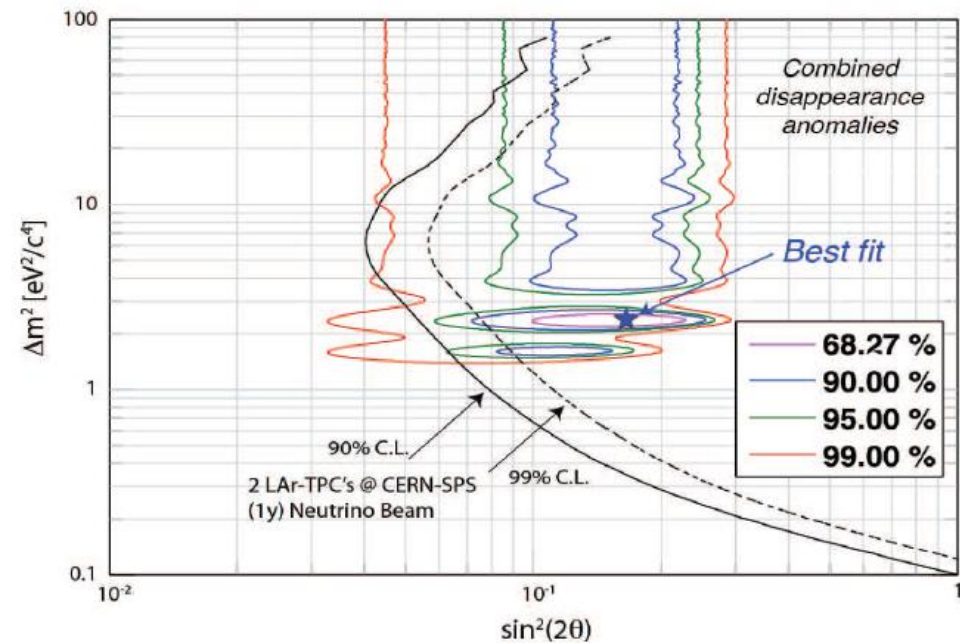


Neutrino Experiment with SpectrometerS in Europe

P. Bernardini
Consiglio di Sezione
June 27, 2013

Search for “anomalies” from neutrino and anti-neutrino oscillations at $\Delta m^2 \approx 1 \text{eV}^2$ with muon spectrometers and large LAr-TPC imaging detectors.



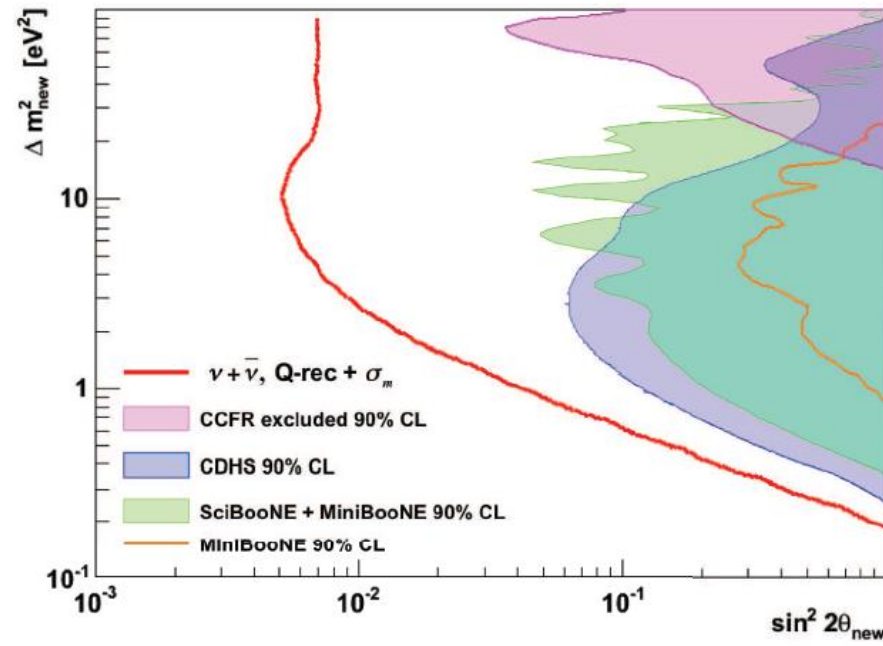


ν_e disappearance anomaly

Searching for disappearance rates depending on distance and energy

anti- ν_e appearance anomaly

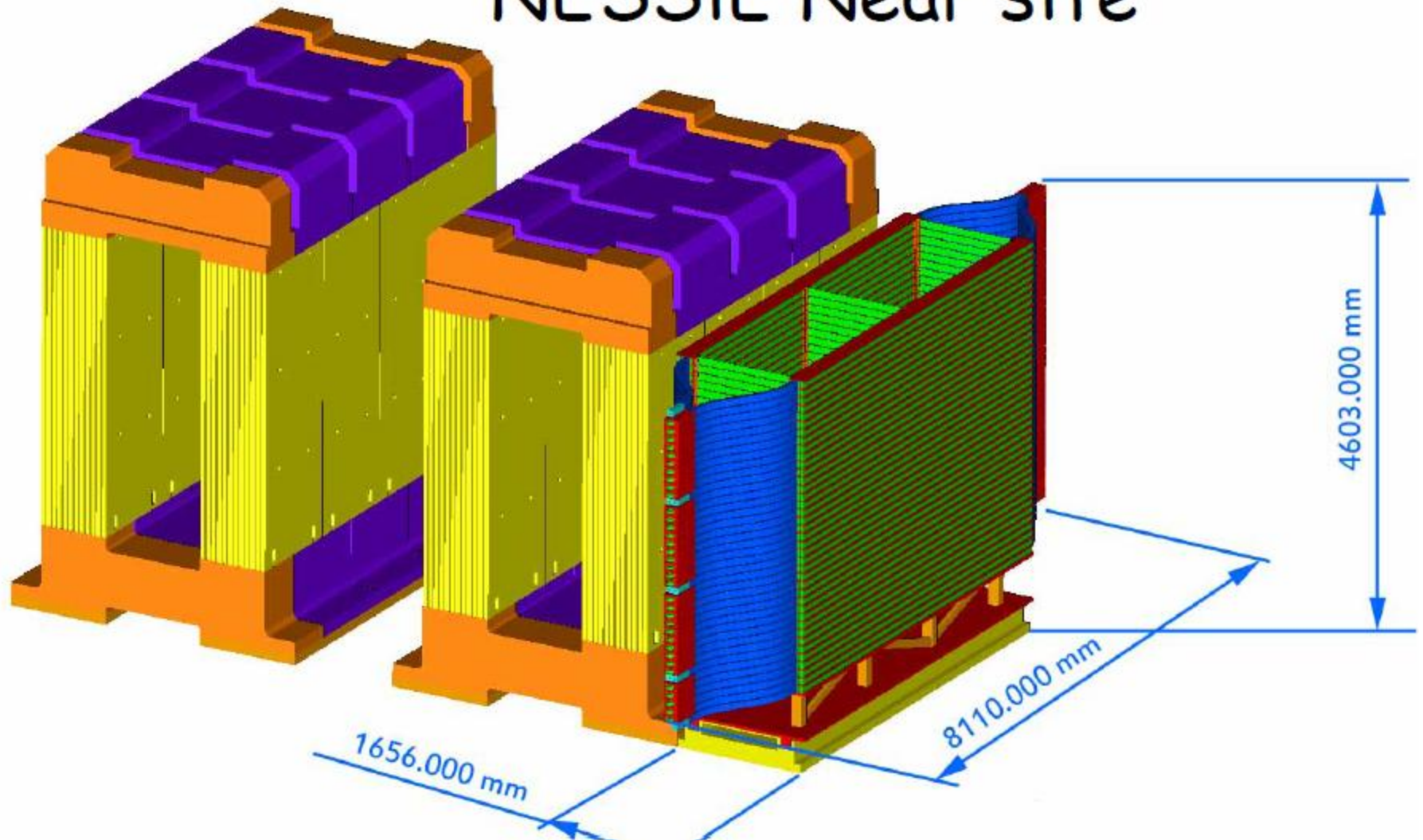
Searching for ν_e excess (especially in antineutrino channel) depending on distance and energy



STATO del PROGETTO

- Finanziamento s.j. in CSN II per il 2013
 - Gruppo di lavoro al CERN (M. Nessi) ogni settimana
 - Definizione hall sperimentali (Icarus, Nessie, Laguna)
 - Avanzamento progetto ACM
 - Utilizzo meccanica e rivelatori di Opera
 - Sottomissione progetto al CTS
 - Gruppi russi, tedeschi e francesi a Bari scorsa settimana
-
- Attesa del pronunciamento CERN
 - MTP al CERN : finanziamenti inadeguati
 - Test interazione Nessie - Icarus e sigla CERN
 - Attesa sviluppi (SBL al CERN o a Fermilab)

NESSiE Near site

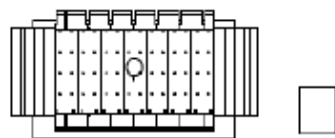


Lecce

P. Bernardini, G. Mancarella, G. Marsella, A. Surdo
M. Calabrese & servizio meccanica

2012-13 Activity

Muon charge ID by the Air Core Magnet
Software & Simulation (detector, event display...)
Prototype design (mechanical stress, thermal effect...)
Iron core magnet design (aluminum coils)

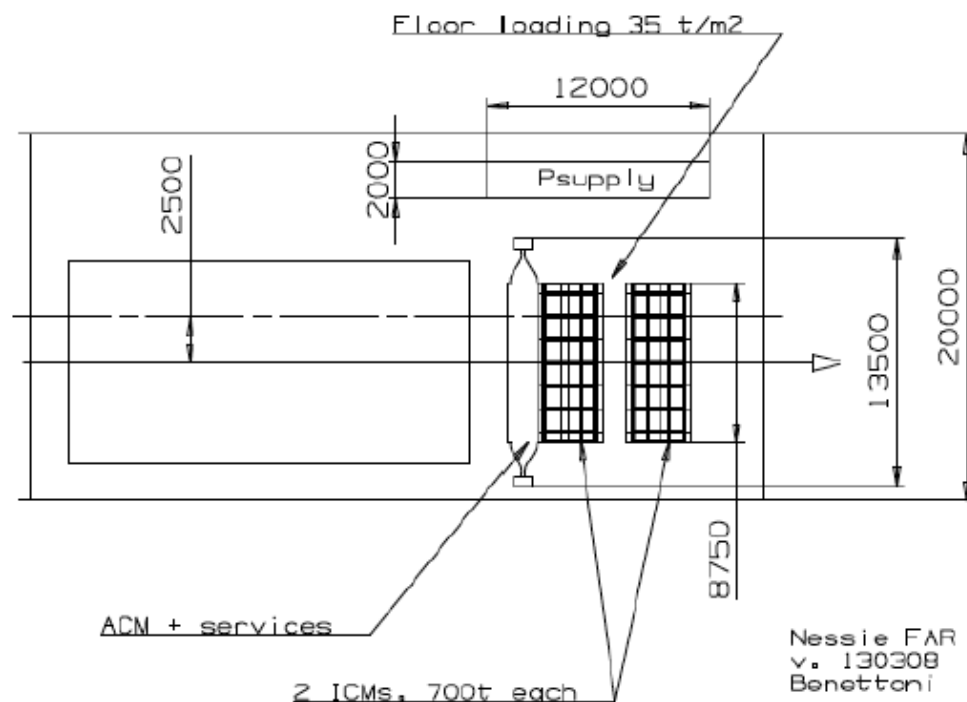
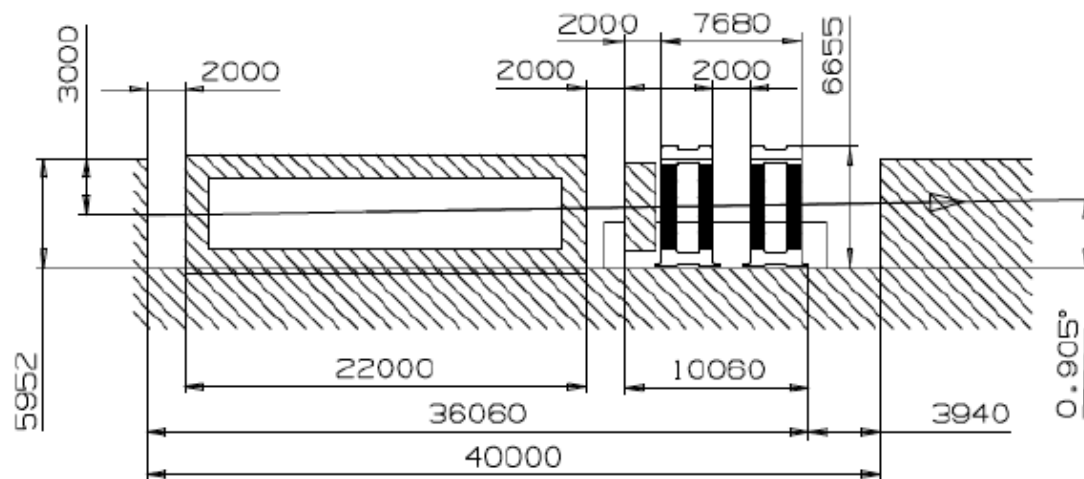
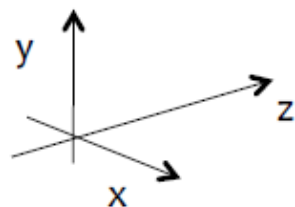
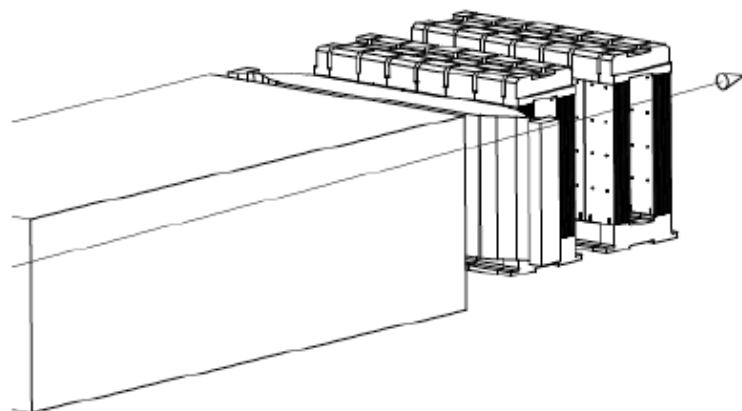


NESSiE FAR site footprints:

height (along y): 6.65 m

length (along z): 10.06 m

transverse (along x): 13.5 m



Nessie FAR
v. 130308
Benettoni

