

Status of the Solenoid

- Status of procurement
- Plans for transport
- Storage and tests on arrival at CERN
- Installation in the ISOLDE Hall
 - Location
 - Footprint
 - Shielding
- Timeline



HELIOS@ISOLDE collaboration

First meeting 29th September 2015

Peter Butler, Robert Page, David Joss

Liverpool

Sean Freeman

Manchester

Mike Cordwell, Alan Grant, Marc Labiche,
Ian Lazarus, David Sharp, John Simpson

Daresbury

Tom Davinson

Edinburgh

Riccardo Raabe

Leuven

Janne Pakarinen

Jyväskylä

Ben Kay

Argonne

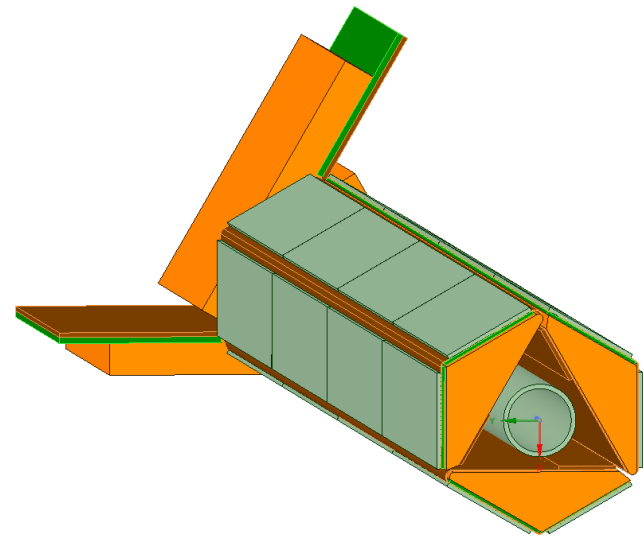
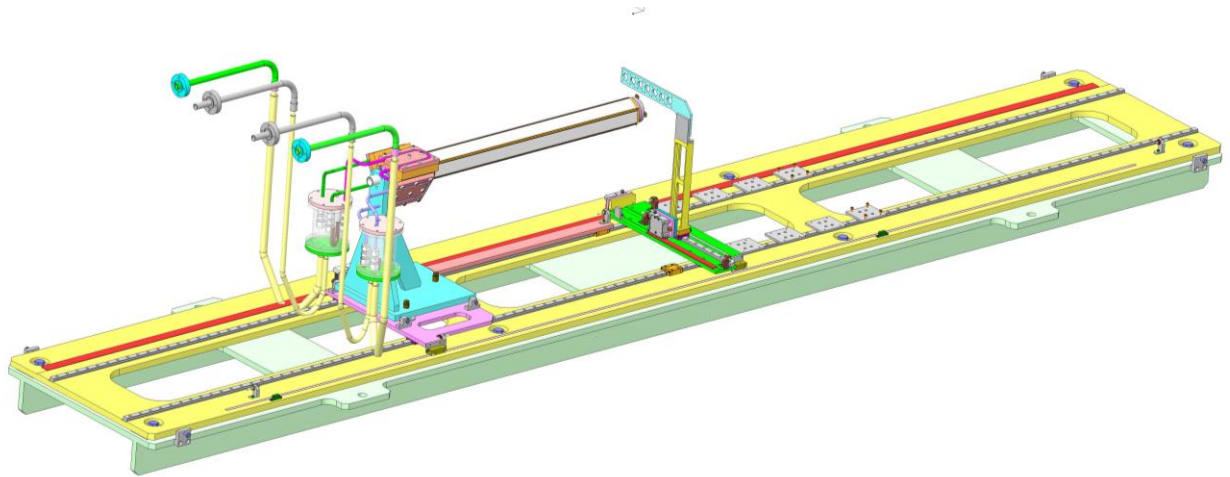
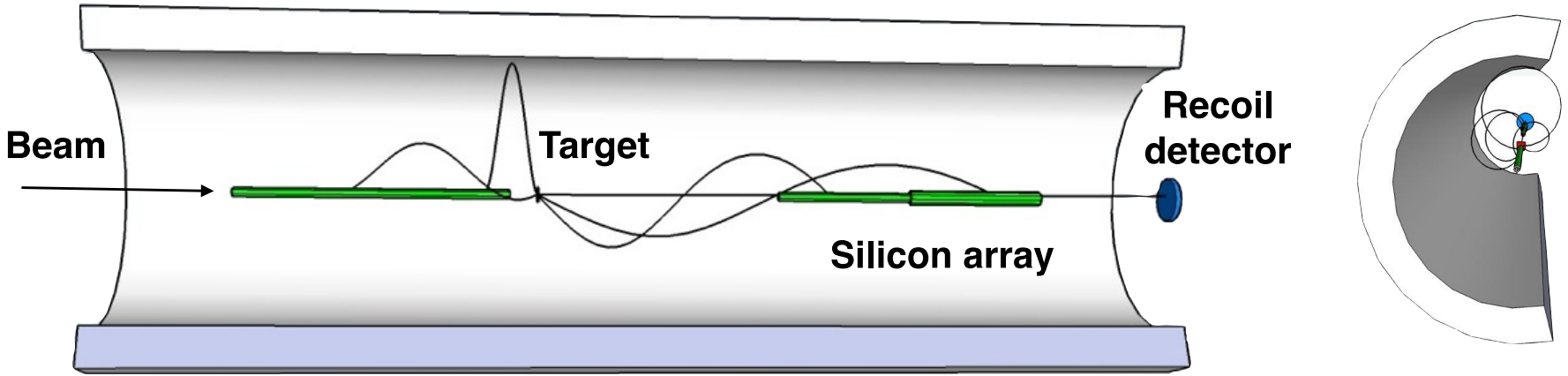
Lolly Pollacco

Saclay

Maria Borge, Magdalena Kowalska,
Karl Johnston, Fredrik Wenander

ISOLDE

Solenoidal spectrometer concept



DSSDs with ASIC readout. x: 128×0.95 mm, y: 11×2 mm

Status of magnet procurement

- Magnet funding awarded (STFC/UoL)
- Magnet available from Brisbane (UQ)
 - OR66 4T ex-MRI magnet
 - “Active shield” reduces stray field
 - Installed February 2003
 - Discharged then warmed ~2013
- UoL received draft contract from UQ
- Contract with UoL Procurement
- To be delivered & paid by 31/3/2016

Status of procurement



Status of procurement



Plans for transport

- Discussed requirements with Siemens
- Purchased shock log device
- Discussing with UK shipping company
- Details of Brisbane company
- Despatch December 2015?
- Transportation ~40 days?
- Delivery address at CERN needed

Storage and tests on arrival at CERN

- Special area for commissioning, ...
- Commissioned by Siemens?
- Will need to be cooled (6500 l He)
- Field mapping
- Shielding tests
- KU Leuven have offered effort

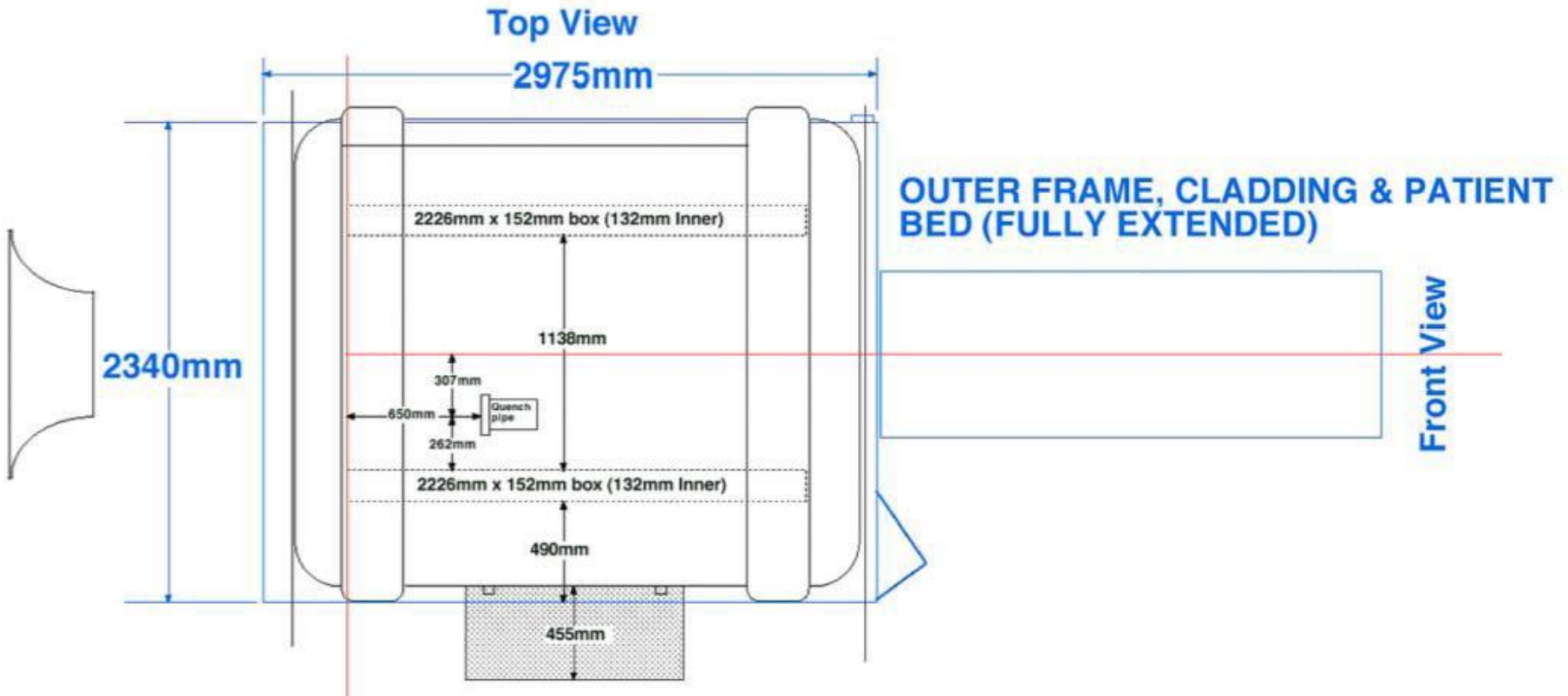
- Meeting Thursday to discuss details

Installation in the ISOLDE Hall



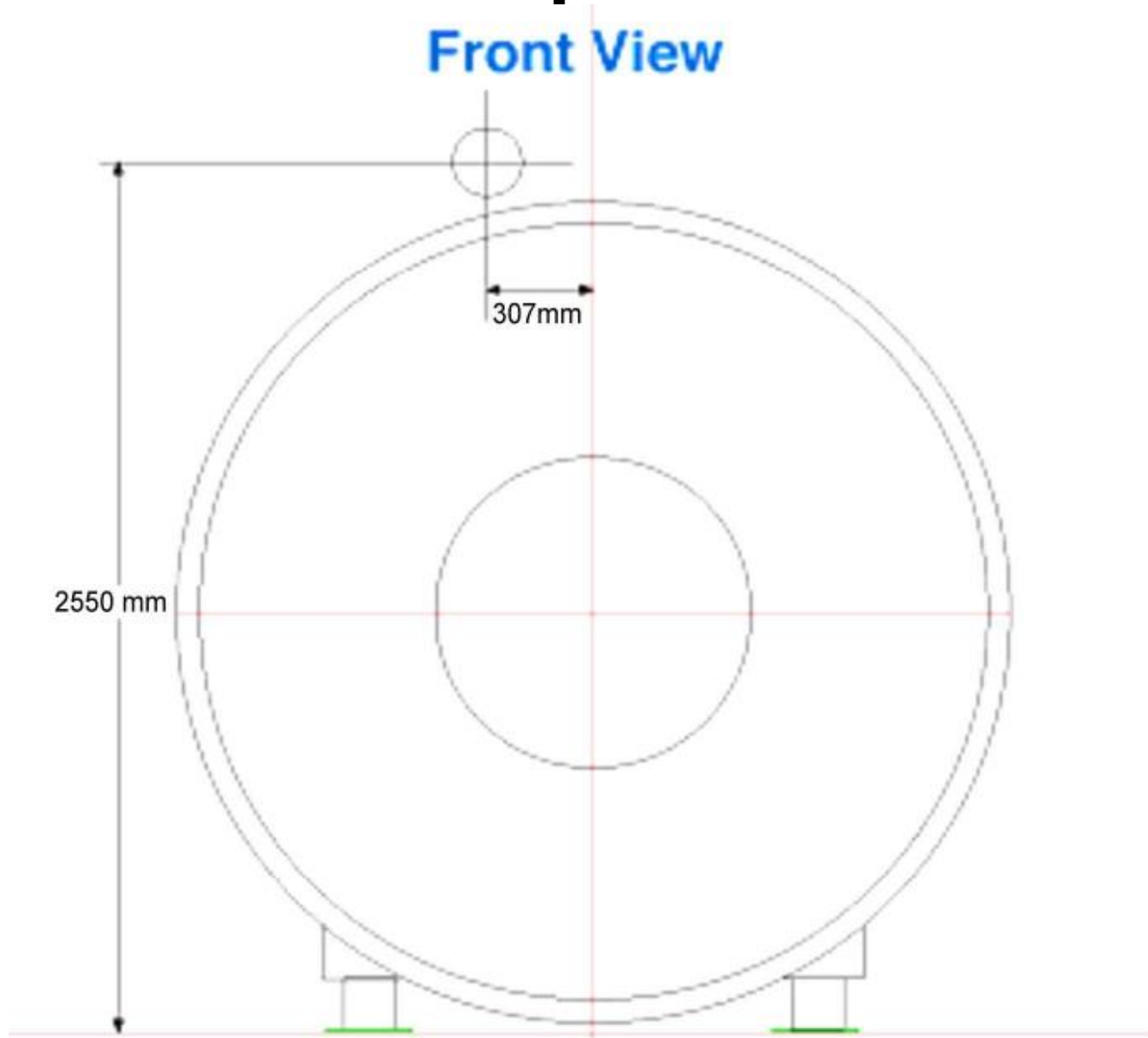
>17 t magnet, 10 t crane => skate

Footprint



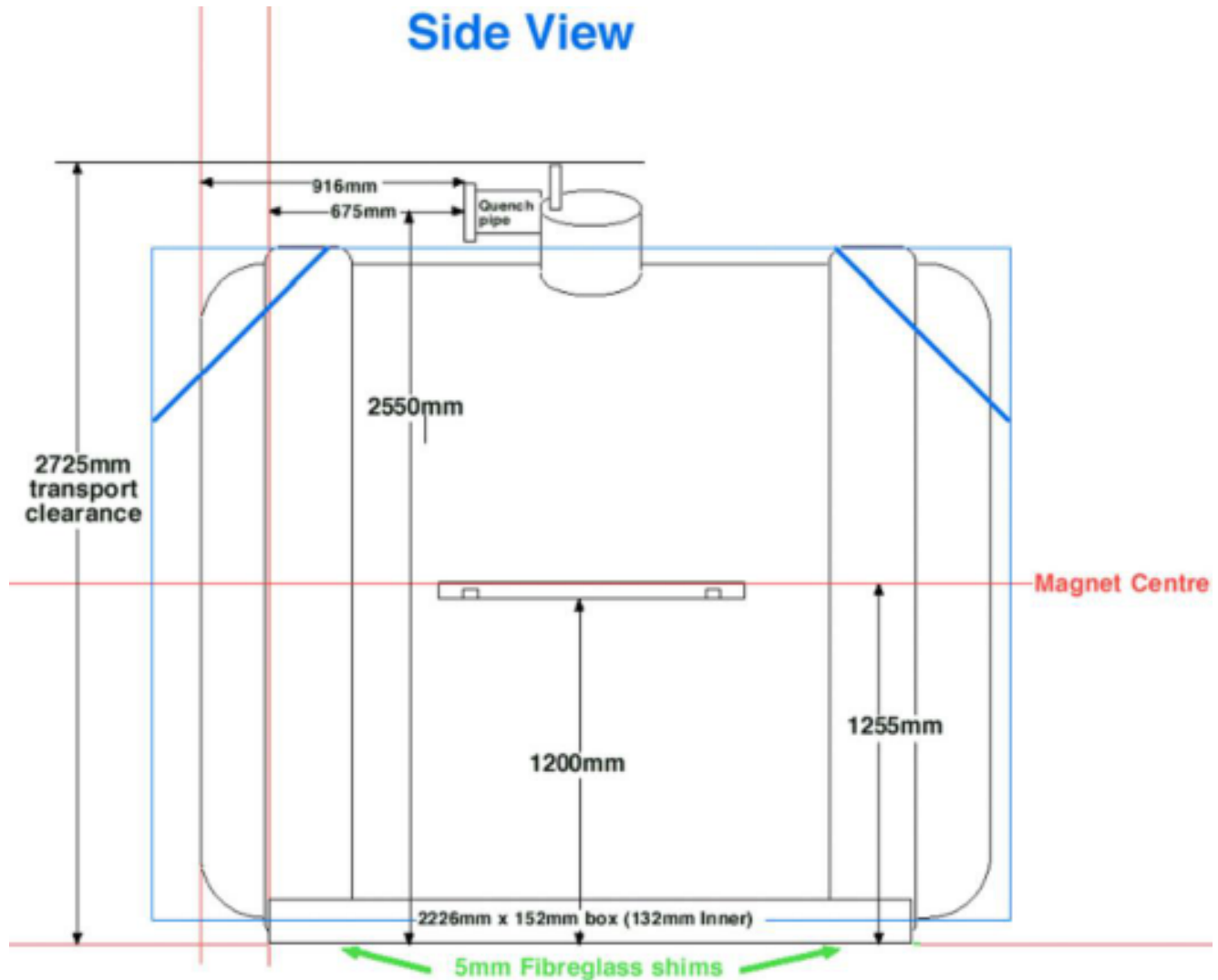
Footprint

Front View

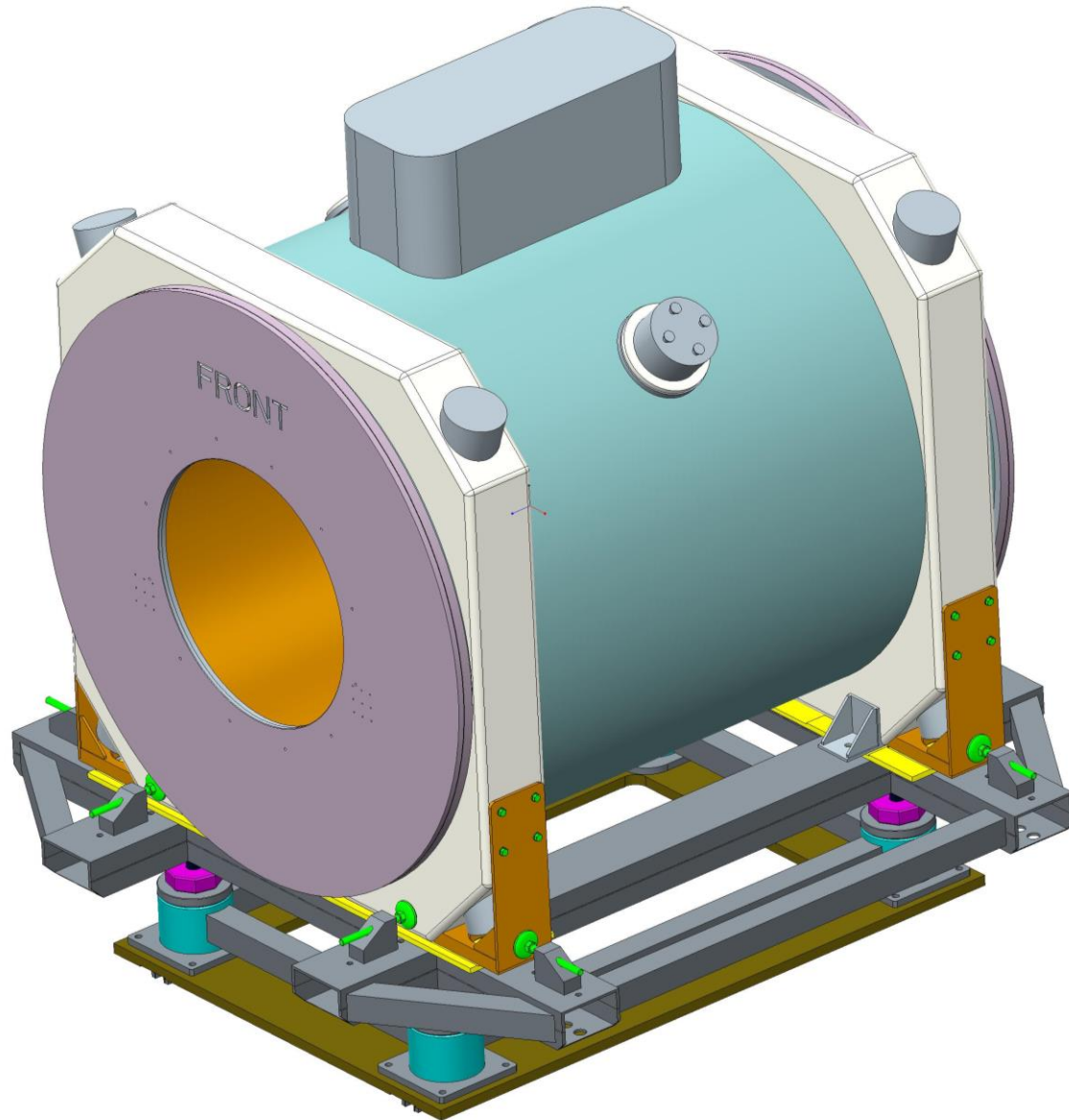


Footprint

Side View

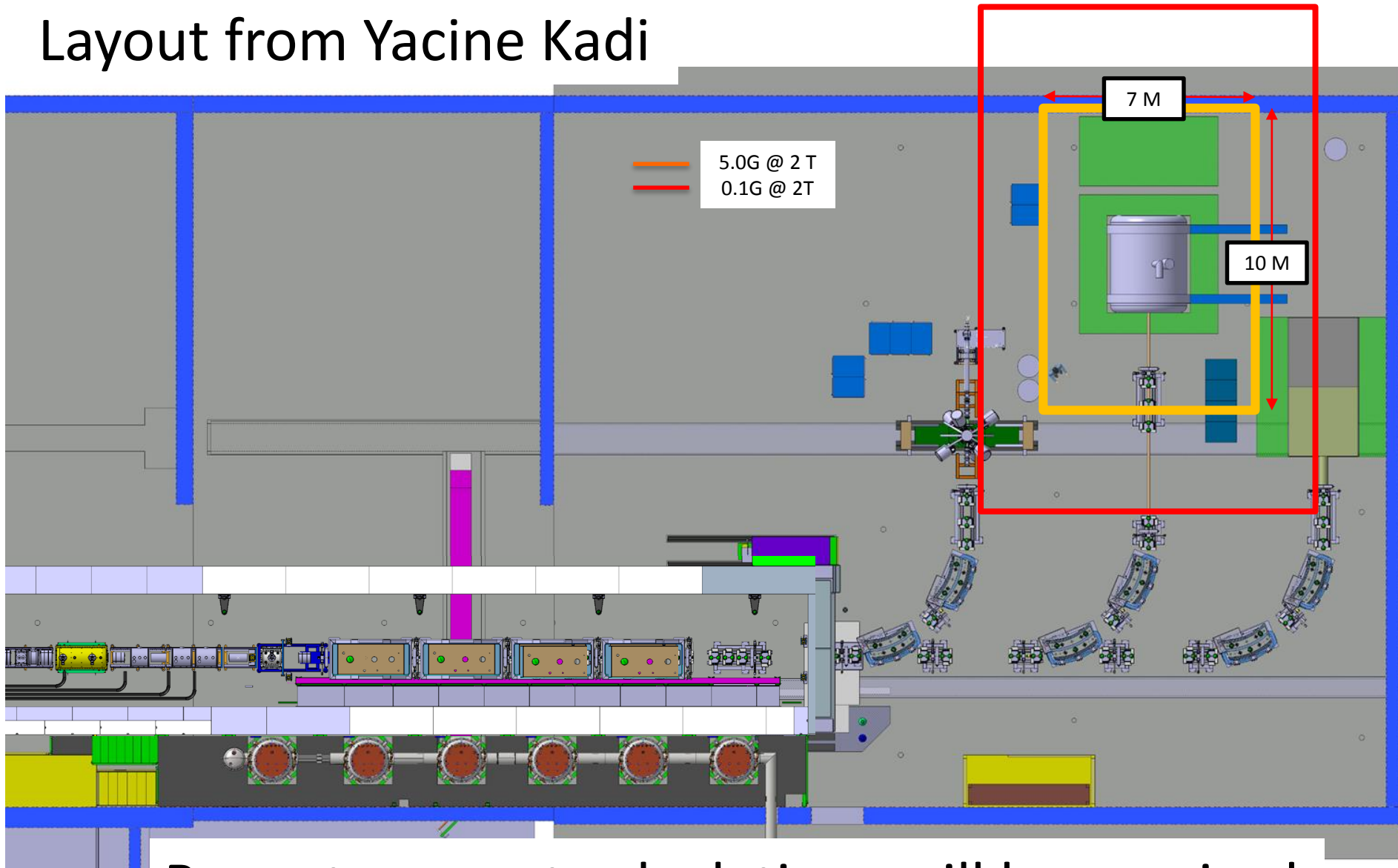


Argonne magnet support structure



Installation in the ISOLDE Hall

Layout from Yacine Kadi

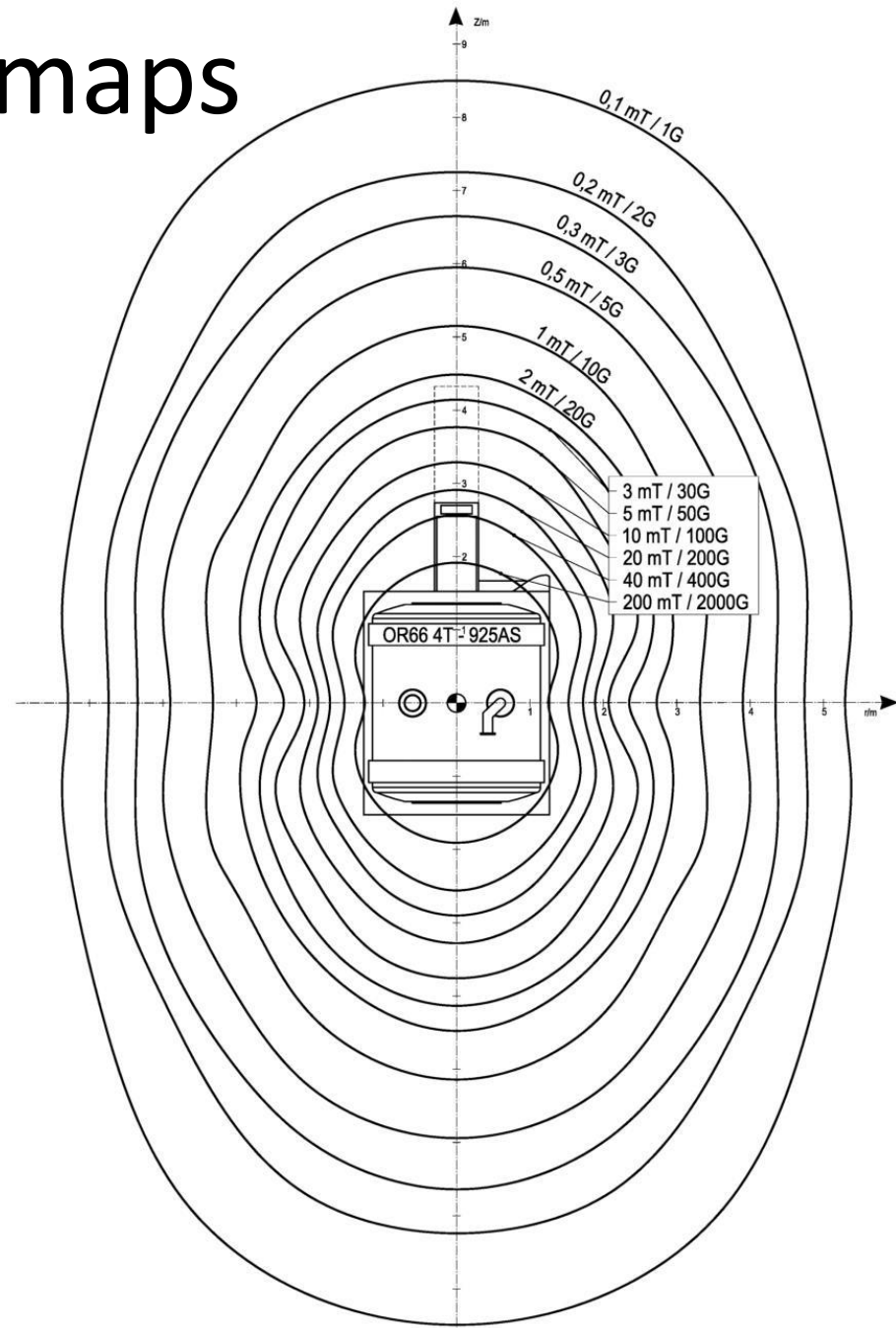
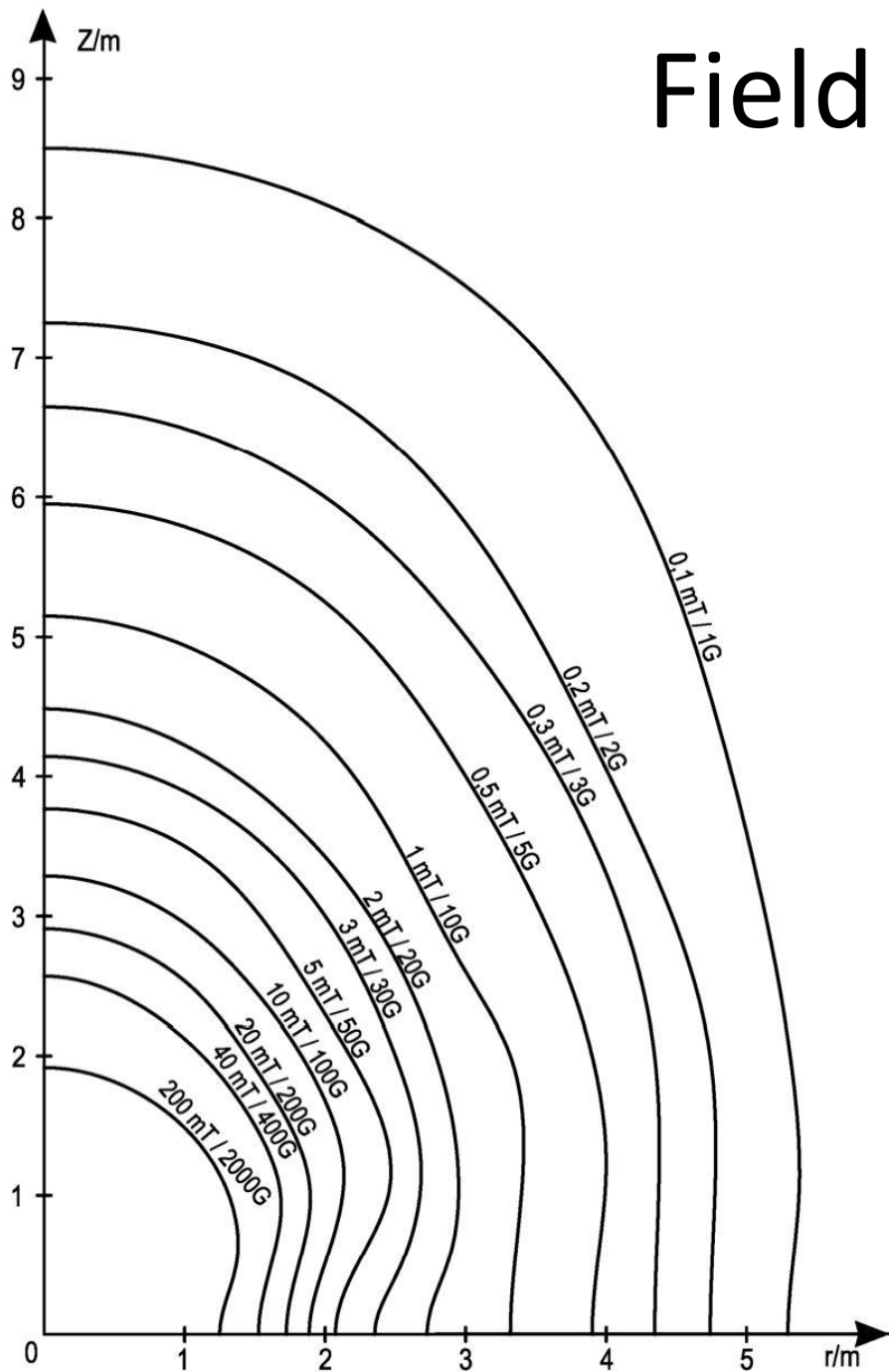


Beam transport calculations will be required

Shielding

- Contacted Davide Tommasini
- He will perform shielding calculations
- CAD layout of ISOLDE Hall sought
- Siemens field maps provided to DT

Field maps



Timeline

- Magnet leaves Brisbane December 2015
- Arrives CERN January/February 2016
- Magnet commissioning & field mapping
- Move into ISOLDE Hall – when?
- Construct shielding – when?
- Preliminary physics experiments 2017/18
 - Argonne's prototype detector available
 - Leuven TPC plans
- Early 2019 – commission new Si detector

Some ISOLDE Hall logistics

- Magnet to be in place before 3rd beam line
- 3rd beam line supports will be moved
- Magnet initially downstream of existing detectors on 2nd beam line?
- Move detectors to 3rd beam line when ready
- Move magnet and triplet to final positions
- Later think about move to TSR Hall