



Science & Technology Facilities Council

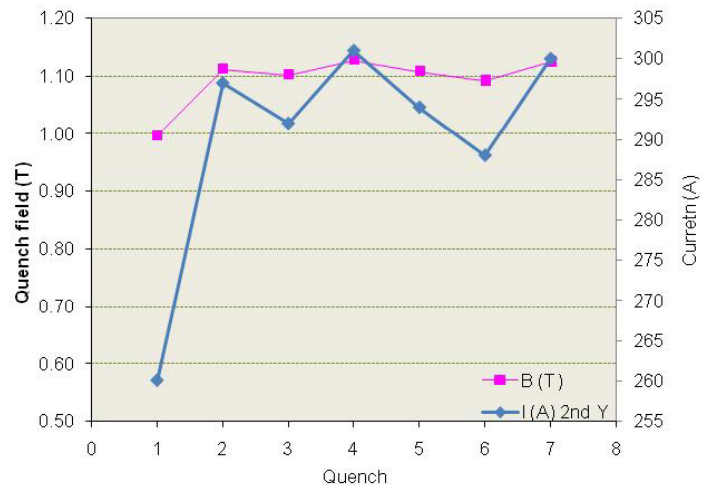
Technology

Helical undulator current status

James Rochford
on
behalf of Helical team

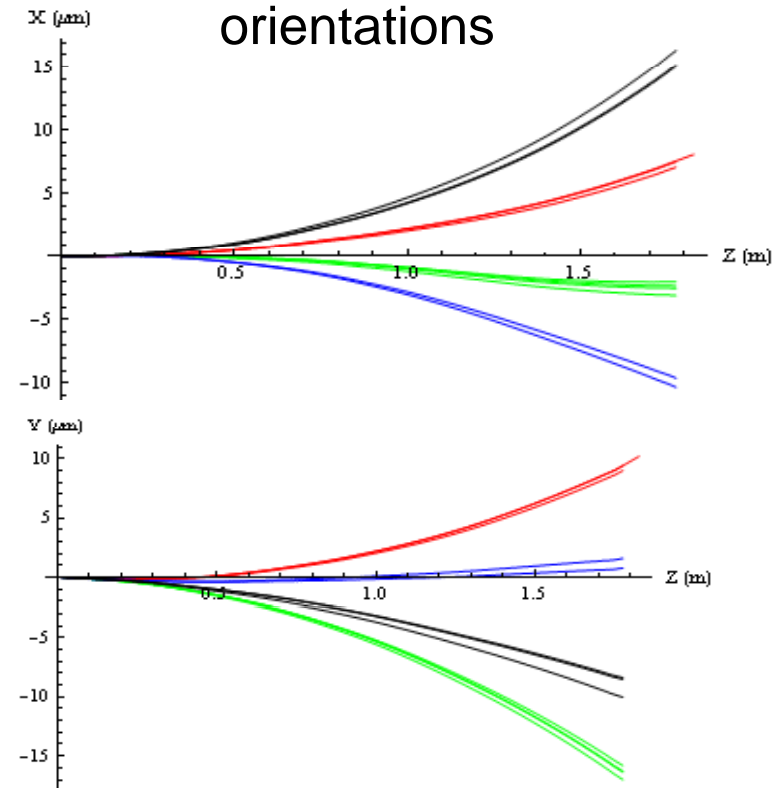
22 July 2008

From last talk-magnets tested' both deliver the required field



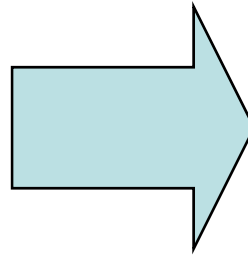
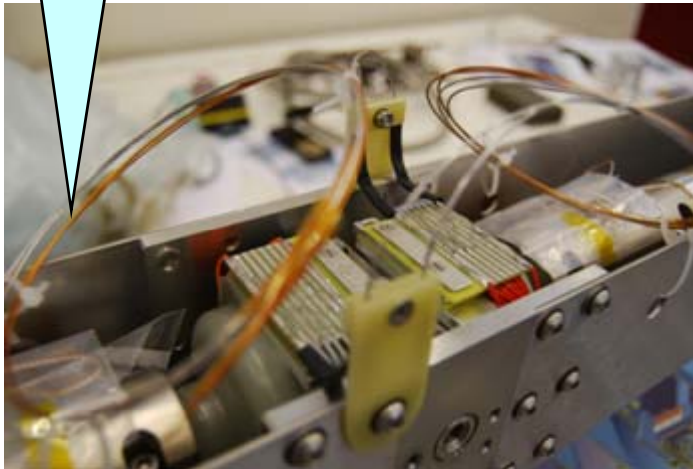
Using measured field data, the particle trajectories were calculated by using SPECTRA. Both magnets create a 5-10um deviation which should be easy to correct

Colours refer to different probe orientations



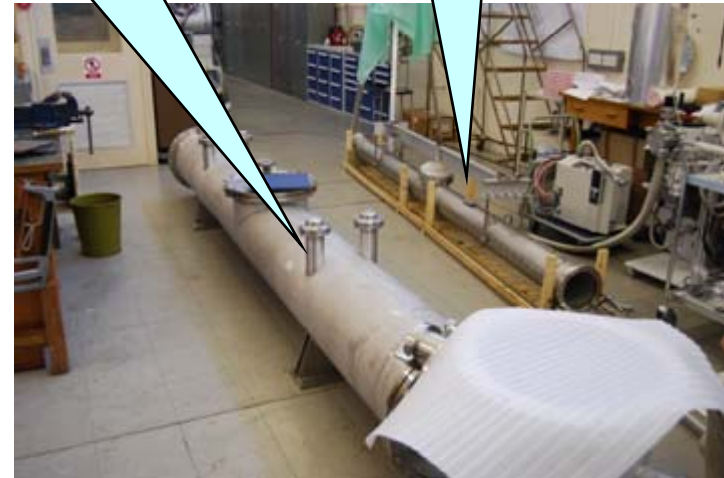
Magnet integration

'U' section



Vac vessel

He vessel



Put this into these

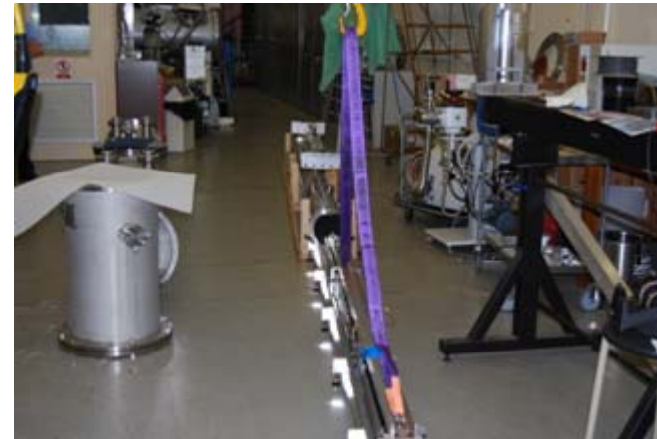


Magnet integration in helium vessel

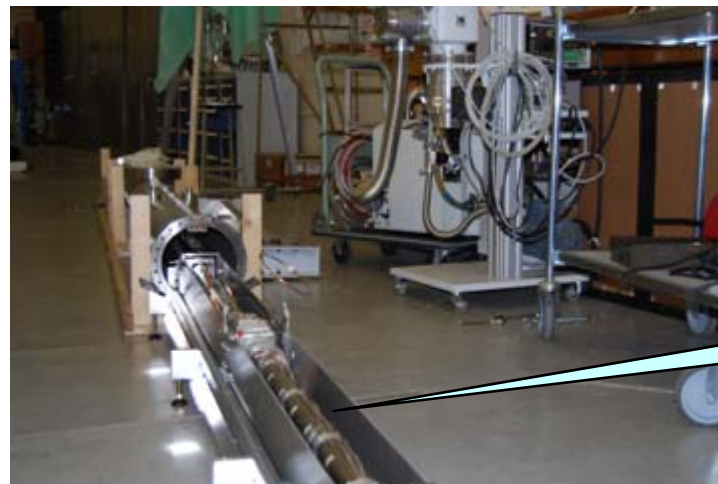


Cold mass rails

1. Rail alignment



2. Cold mass onto rails



Cold mass

3. Insertion into helium vessel

Magnet integration in helium vessel

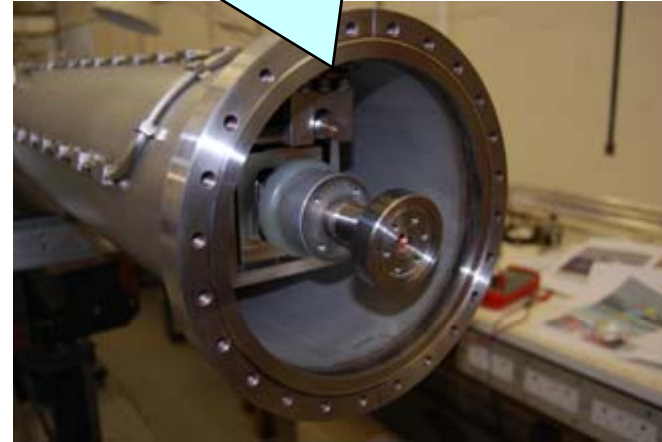
Suspension point

Alignment scope



1. Alignment check

Cold mass restraint



2. Beam line bellows

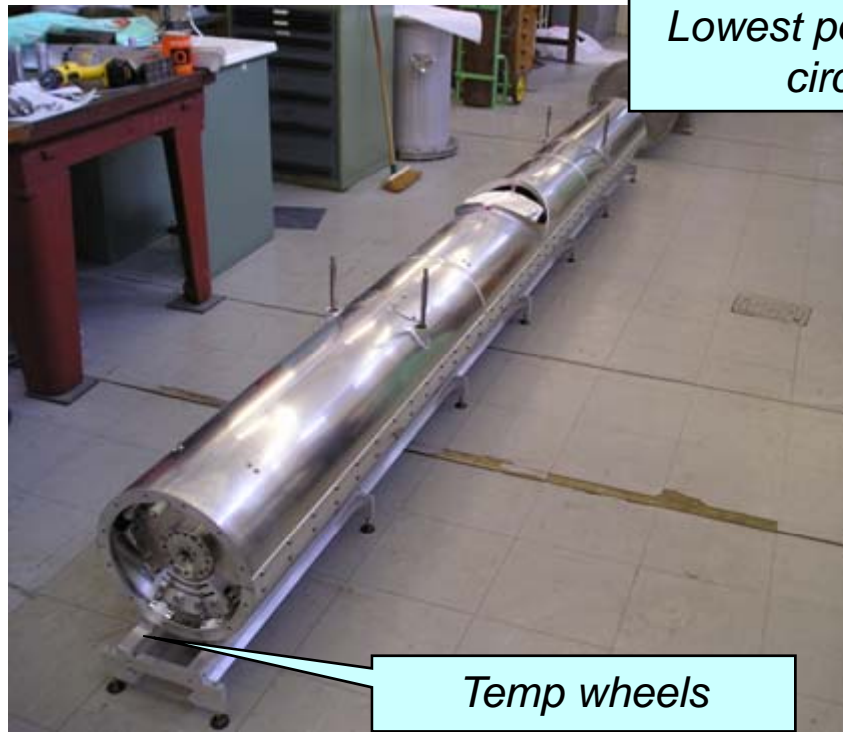


Cold mass restraint

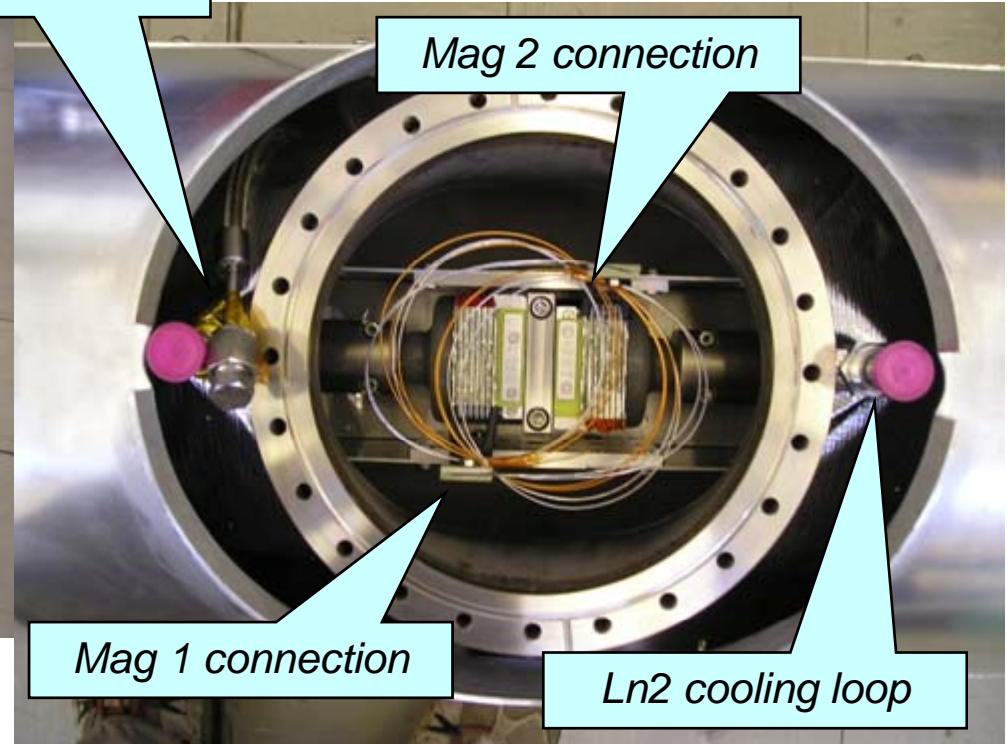
3. Cold mass securing pin



He vessel integrated with rad shields



Lowest point in He circuit



1. Insertion into radiation shields

2. Turret connections

Mli over radshield



1. Mli blanket over radiation shield



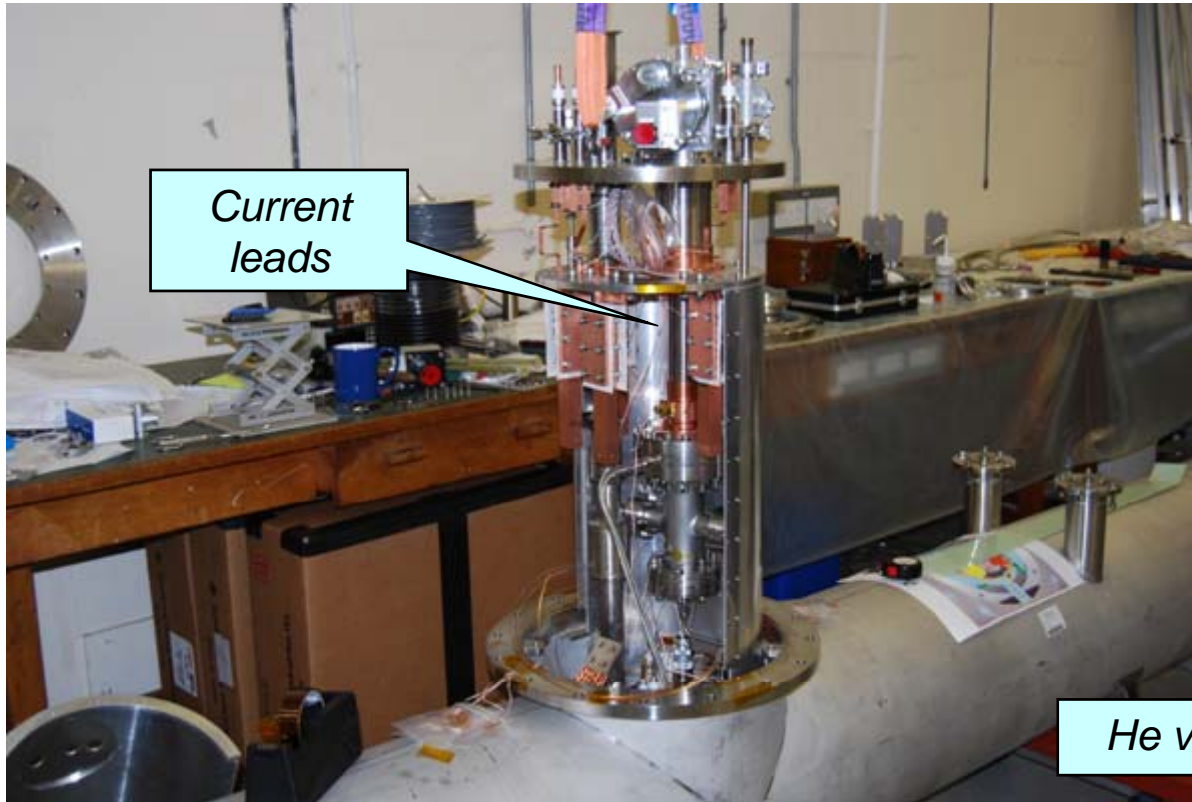
2. Ready for insertion into vac vessel

Suspension points



3. Cold mass and radiation shields inserted into vessel

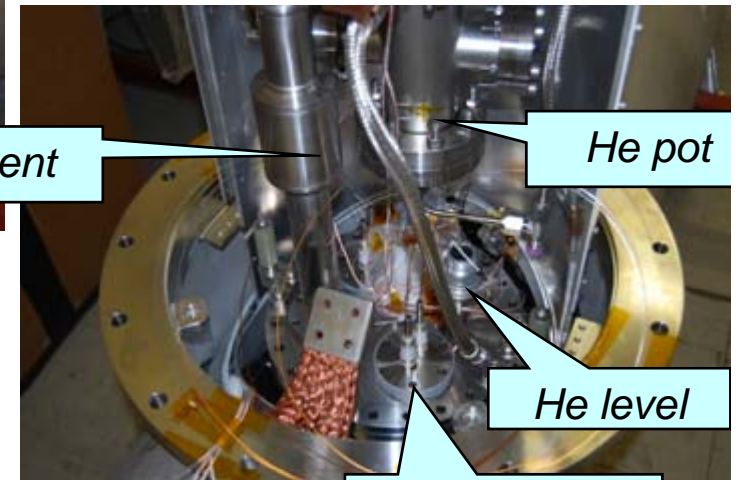
Turret dry fit



1. Dry fit of turret section



3. Radiation shield



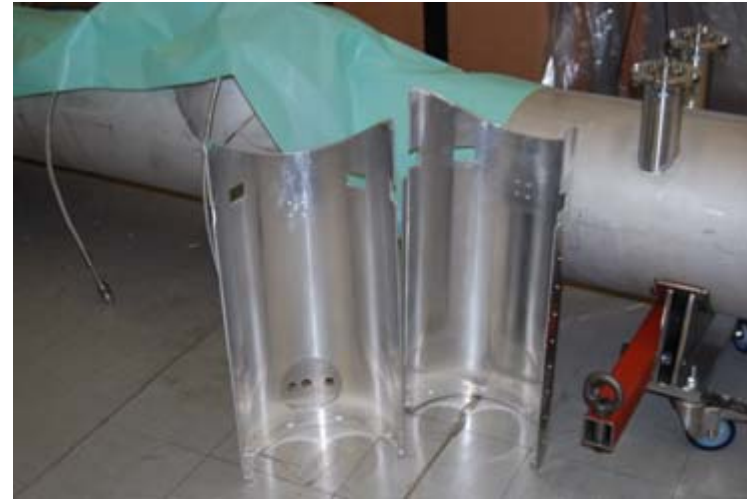
2. Connections from turret to He bath



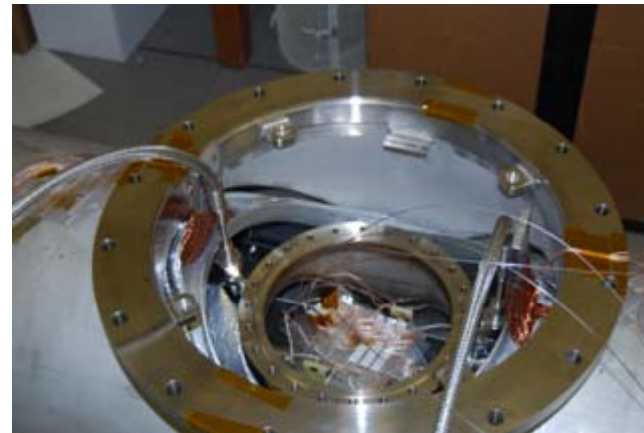
Readying turret for final fit



1. Final leak checks



2. Radiation shield modifications



3. Turret today!

Logging system



In the process of getting the data logging system ready.

Basic system is almost complete.
All the hardware is ready

Logging software all ready written
in labview

Installing lab view logging PC at
the moment

Just need final connections to
cryostat

In the coming fortnight.....Final fit of turret

Cold end connections

- Connection of radiation shield sections and Ln2 cooling loops
- Final current lead connections to be made
- Instrumentation on turret section to be added temp sensors ,voltage taps
- Harnesses to be connected to the instrument flanges
- MLI blankets installed

Turret vessel dropped onto assembly and connected

Warm end connections

- Connection of radiation shield sections and Ln2 cooling loops
- Final current lead connections to be made
- Harnesses to be connected to the instrument ports

Vessel closed should be by the end of this week.

Following week connect logging system.

Get ready to test.....