Notes on planned Focus Coil operations week beginning 12th Oct. Edits C.Whyte.
Approval only for 10A at this stage. Further work subject to MIPO 13th Oct.

Josef Boehm

Helium gas pressure is stable within the focus coil.
We can see a miniscule drop in pressure over the weekend, and 0.2% drop in the helium level.
I would say that the system is balancing on a cryogenic knife edge.
It would be better if we could tempt the magnet to drop helium can pressure which would indicate that the system is actually condensing a surplus, not just the life-maintaining boil-off.

The increased performance, to previous runs, may be traced to three subtle alterations

- adding pressure to the down-stream side of the OVC and thus shift the OVC very slightly away from the radiation shield on the H2 side (thereby slightly loosening the suspected touch)
- adding fresh helium gas to the compressor to 330psi (now dropped to 320 psi)
- tightening the thermal interface of the cold heads to allow better heat removal from the shields.

None of these was a real deal-maker but, perhaps, they combined to improve performance.

We can still do two things:

- Increase the pressure on the compressors to about 340psi, ie by about 1.5bar
- Add a small amount of pressure onto the down-stream end plate

If we can do this tomorrow and Wednesday we may see a falling helium can pressure (and temperature) by Thursday and then we could start to energise in order to see the effect of added heat-load caused by eddy currents.

Trevor Hartnet:

10A maximum into the FC, interested in the voltage drop across the coils not the maximum current.

Setting 10A means that have a voltage across the magnet for enough time to balance a quench detection cannel.

It also means that there will be a sufficient field to verify if we are in Flip or solenoid mode and the direction of the field.