Thurs 15th Sept 2016. ISIS coffee lounge
AB, CW, VB, MW, MC, JB, SF, JC later KL

Magnet tests -SF

Tuesday MIPO/Magnets meeting US team advised:

- working on noise problem.
- Noise on both halves of ECE.
- Noise is related to magnet – lead G, one of trim leads
- Measure impedance to ground at cryostat – not a 'firm' connection – variable.
- No noise on SSD QD Monday night
- Tuesday 5am, while running trim supplies into shorts, QD tripped on lead trip – **Action on PMH** to investigate archiver data and post to wiki.

Action

- Disconnect active ground fault detection.

Tried to run with full system

- not possible due to noise
- caused by trim power supplies which have 100ohm to ground when operating. 2.5kohm when off. - Not possible to run with trim supplies connected.
- Induces 10mV on HTS,LTS lead protection.
- Isolated trim power supplies. Noise level returned to normal.
- Able to run SSD ECE to 140A.
- SSU now also at 140A. Plan to ramp simultaneously to 205A.

Action on MICE-DC to arrange to disconnect cabling at 'tag board' on SSD to verify noise on magnet terminals.

Action on SG - contact Lakeshore to see if we can eliminate ground connection.

Consequences.

If we were to develop another ground fault – assume worst case of a hard short - ground potential would simply move to the hard short and current would be driven to soft 'ground'. QD system would detect this very quickly as a noise signal, QD would then trip.
Result is we are running with slightly increased risk of quench.

di/dt for FC ramp compensation in SS QD now working.

Plan

Tomorrow plan to develop QD settings for SSU trim supply 'adjustments' .

Update 'Forces'

JB presented FEA results of forces acting on SS bobbin which show total relative movement of bobbin could be in the mm range if highest force scenarios are realised.