

Goals for the Fall 2012 Solenoid Test

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1. Verify correct operation of mechanical, cryogenic, safety and control/monitoring/archiving systems.
2. Demonstrate proper cooldown from room temperature to LHe temperature and filling of the LHe vessel.
3. Demonstrate stable cryogenic operation with full LHe vessel for minimum 24 hours with minimal operator intervention required.
4. Demonstrate proper ramp-up of the magnet to full current (1500A) and stable operation at full current for minimum 4 hours with minimal operator intervention required.
5. Perform field measurements to verify that numerical models of the field are correct.
6. Demonstrate proper ramp-down to 0A.
7. Demonstrate fast-dump and slow-dump systems are working properly.
8. Verify there are no turn-to-turn shorts or other anomolous behaviours during powered operations.