Follow-on MERIT Testing at ORNL

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New Capabilities at ORNL

• Discussions with Tim Bigelow, ORNL Fusion Energy Division, indicate some existing experimental power supplies will be moved from Y-12 to ORNL

• Some of the power supplies will have capability to power MERIT solenoid
  – 650V peak
  – 15,000A pulsed > 5sec
  – Voltage and/or current can be controlled by SCR gate waveform control
7627 Power Supply Building

- New building
- Final design complete
- Located behind 7625

Schedule completion:
Sept 2008

Several power supplies will be installed
**Bldg 7625**

- Pit capable of housing MERIT experimental equipment
- LN2 dewar in place
- 20T overhead crane
Equipment Layout 7627

Vertical field power supplies
650V peak
15,000 A pulsed > 5 sec
Voltage and/or current can be controlled by
SCR gate waveform control
Comments

- Major infrastructure should be available in late 2008, but connection costs may be incurred
- Hazard analysis (radiation, Hg, LBE) will have to be performed, but no major obstacles envisioned
- Other power supplies will be available (capabilities unknown at this time) that might be useful for other HEP experiments in the future