

Follow-on MERIT Testing at ORNL



Van Graves

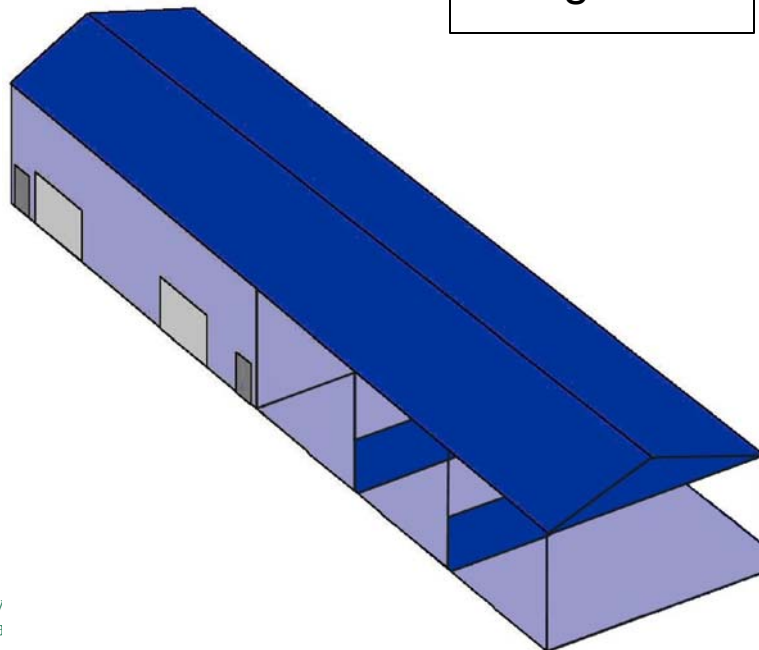
(Feb. 8, 2008)

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**
- **To be located behind 7625**
 - **Construction bids requested**



Schedule completion:
Sept 2008

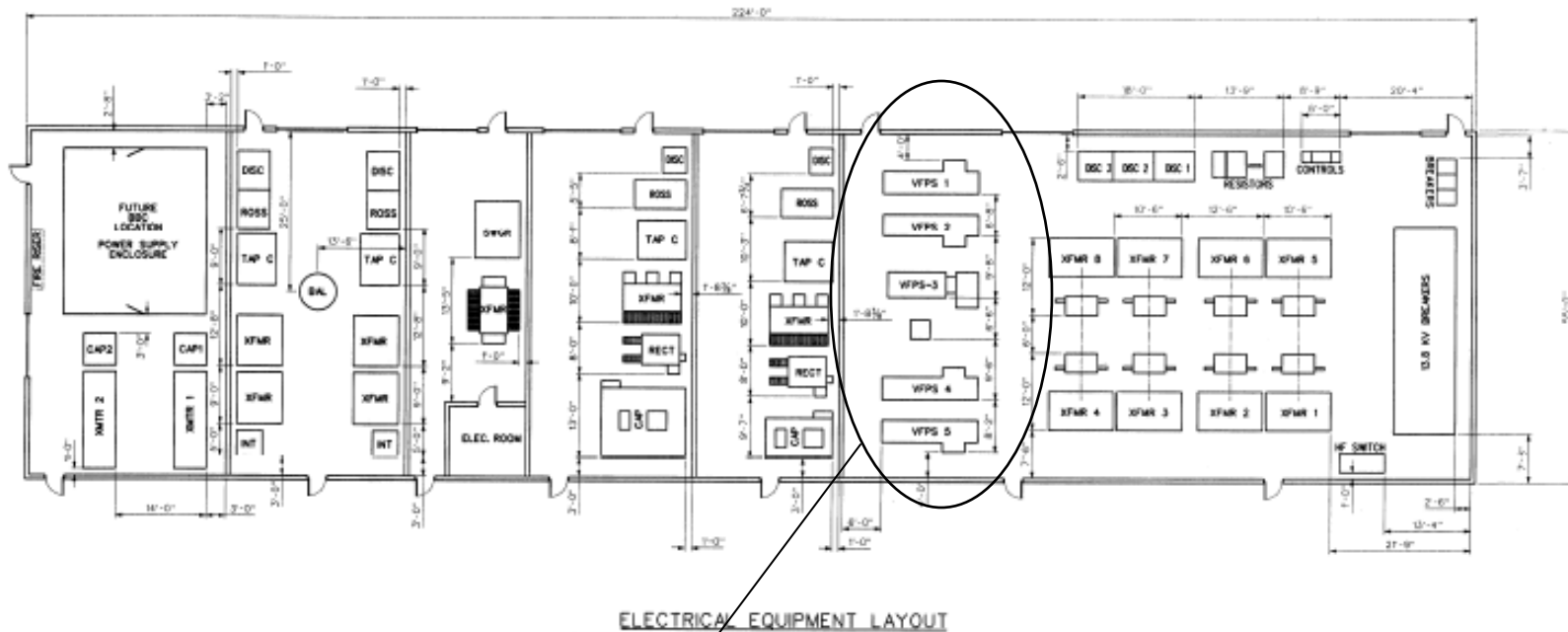
Several power supplies
will be installed

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**
- **Hg system access and operations in activated condition unknown**
 - **Try to replace activated components or clean syringe pump such that it can be green-tagged?**
 - **Equipment access and modification will be more complicated (costly) than before experiment**
- **Other power supplies will be available (capabilities unknown at this time) that might be useful for other HEP experiments in the future**