UT-BATTELLE

Hg System Status

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Muon Collaboration Friday Meeting

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OAK RIDGE NATIONAL LABORATORY
U. S. DEPARTMENT OF ENERGY

Syringe Pump at ORNL

- **Hydraulic power unit (HPU) and syringe cylinders delivered to ORNL July 21**
  - **Hg cylinder discharge piping shipped separately due to weld inspection problems, delivered Aug 1**
- **Cylinders set directly on target cart until secondary containment received**

HPU Setup

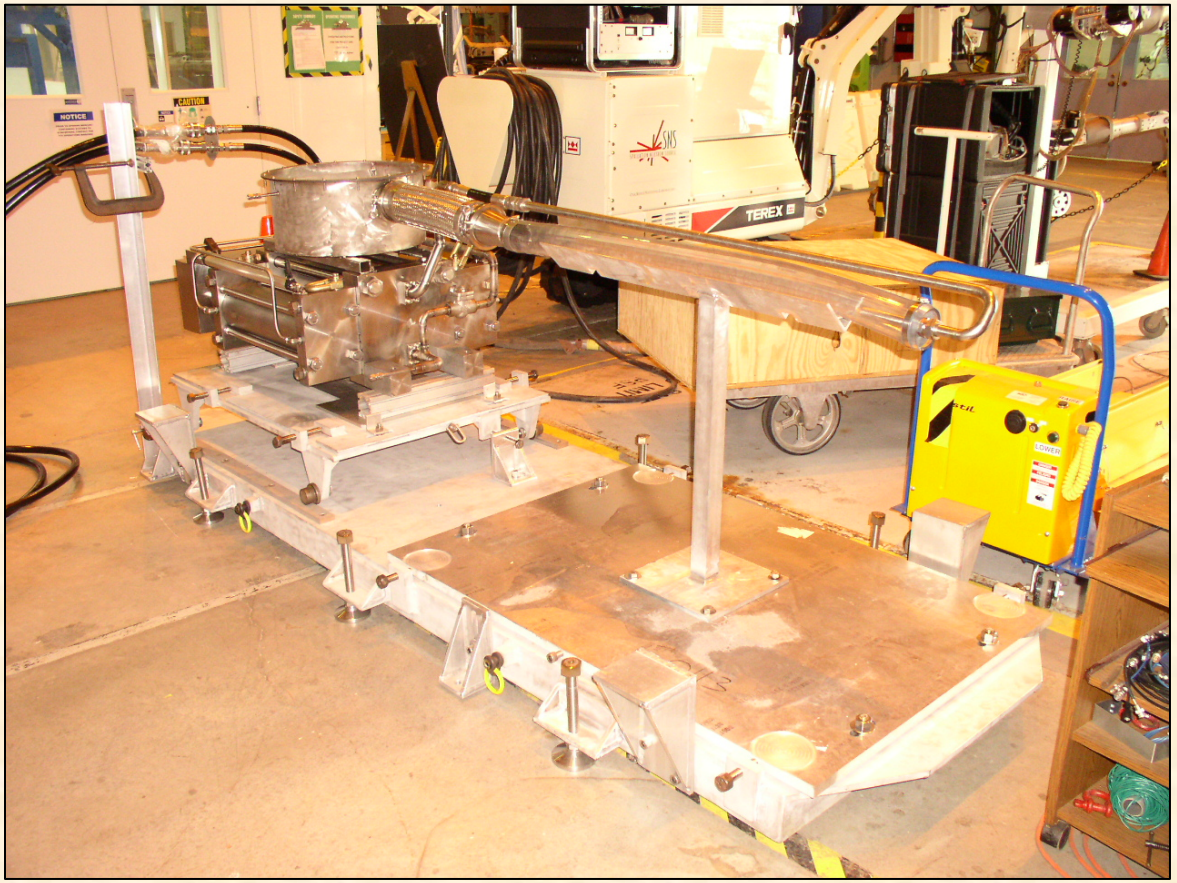
- **Hydraulic fluid fill and drain process developed using peristaltic pump**
  - **Pump works well, takes ~30 min to fill system**
- **Fluid filter assembly added to HPU**

Manual Control Operational

- **Fluid added to HPU and hoses connected to syringe cylinders**
- **Manual control on HPU used to stroke cylinders**

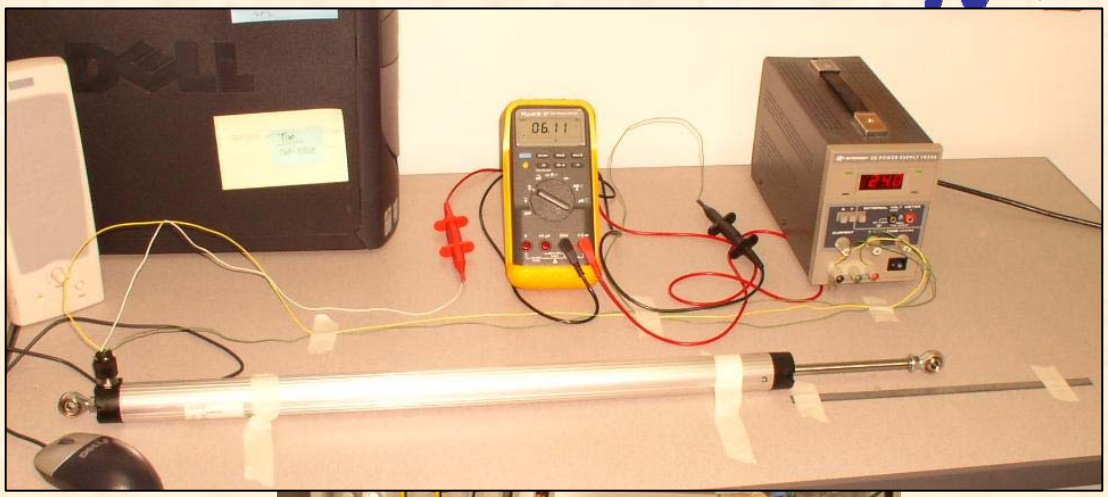
Initial Water Testing Setup

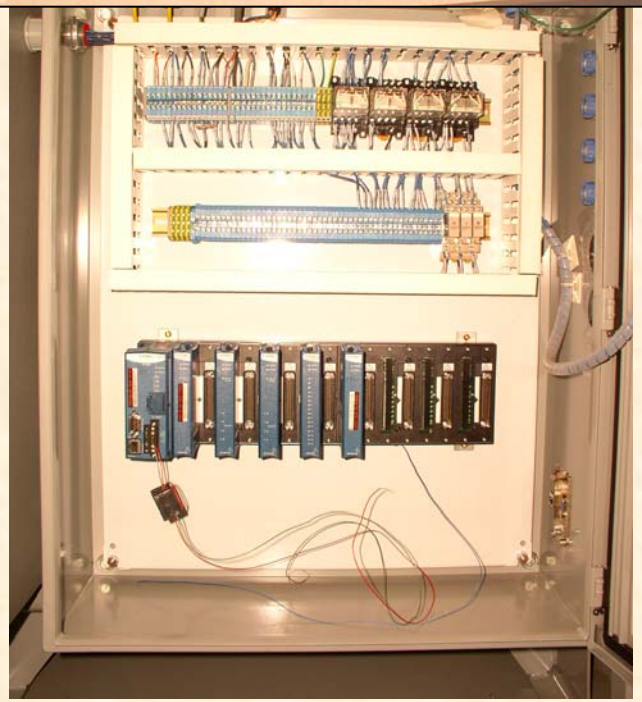
- **A primary containment has been mocked up to allow initial water tests to be performed**
- **Will be used to debug Labview control software and test some of the sensors**



Control System Connections

- **Calibrated position sensors**
- **Labview hardware installed in HPU cabinet**
- **Wiring to start later this week**
- **Initial version of Labview software complete, ready for test and debug once wiring in place**





Other Fabrications

- **Secondary containment progressing at Princeton**
- **Jet chamber shell weldment completed, machining to proceed soon**

Conclusions

- **Manual control of syringe demonstrated**
- **Hydraulic system fill and drain procedures developed**
- **Hg control system wiring is underway, water tests to start afterwards**
- **Ready for Hg testing after conclusion of water tests and when remainder of fabricated components available**