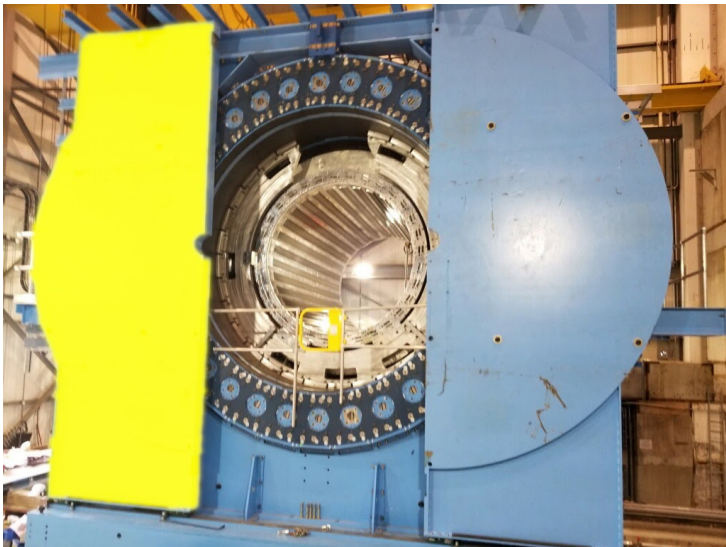
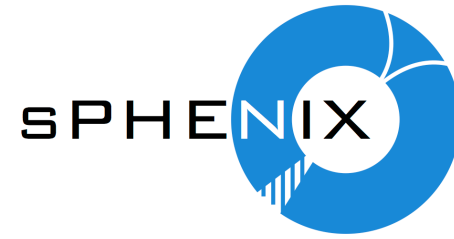


sPHENIX System Testing



John Haggerty

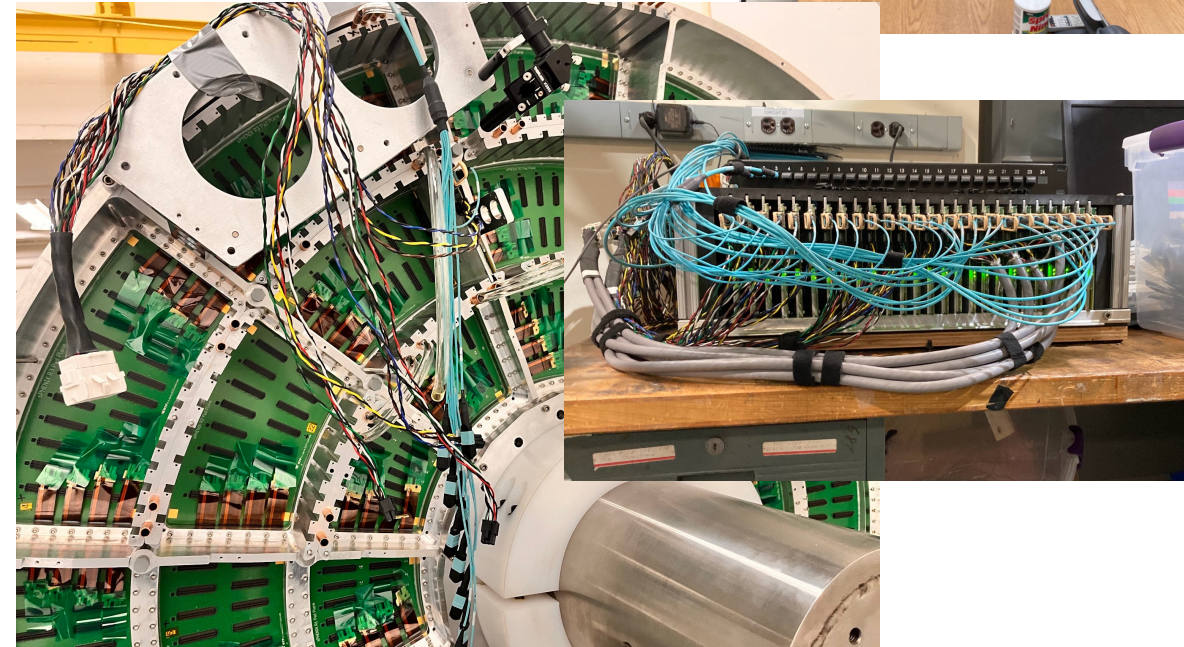
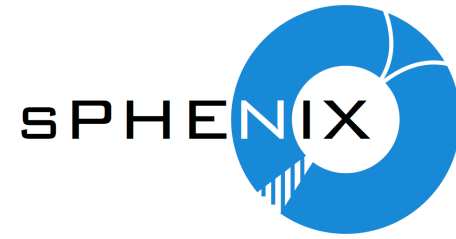
System testing narrative on one page



- OHCAL (installed, post-installation testing complete)
 - Racks 2E2, 2W2 (control/digitizer) are installed, 3B4 (LV/bias) needs to be installed
 - Control/TP/signal cabling needs to be installed
 - Trunk fibers need to be installed
 - DCM's and enough GTM/GL1 are basically ready now
 - Estimate that detector could begin system testing by Oct 15
- IHCAL (installed, post-installation testing complete)
 - Same racks as OHCAL
 - Control/TP/signal cabling needs to be installed; most likely this happens after magnet mapping completed (Nov 15) and completion of EMCAL installation
 - Estimate begin system testing Nov 30
- EMCAL (installation under way, post-installation testing ongoing)
 - Racks 1E1, 1E3, 1W1, 1W3, 3A1, 3A6, 3C1, 3C9 (digitizer), 3A2, 3A5, 3C2, 3C8 (control/bias) need to be installed
 - Cooling manifolds, control/TP/signal cabling need to be installed
 - Detector system testing starts in December, continues after cabling complete (Jan 1)
- TPOT (system testing under way at SBU, modulo equipment move snafu)
 - 1 week of system testing after detector installation (Jan 15)
- TPC (system testing beginning at SBU next week)
 - Racks 3A3, 3A4, 3C3, 3C4 (LV) and 3B7 (HV) probably there when detector installed
 - Gas system and cooling required
 - system testing without gas starting Jan 15
- INTT (testing of complete detector in 510 under way)
 - Racks 2W1, 2W3 should be operational at detector installation
 - Cooling system and interlocks
 - Installation and system testing starting Feb 15
- MVTX (cosmic telescope in rack room used to test complete readout chain is under way)
 - Racks 2E1, 2E3 should be ready at detector installation
 - Cooling system and interlocks
 - Installation and system testing starting Mar 15
- MBD (testing of full detector and trigger under way in Rack Room now)
 - Necessary for trigger

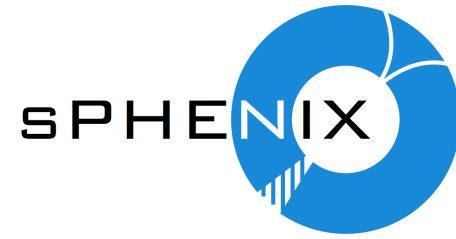
System testing status

- Magnet mapping preparation (shipping bench, supports, compressed air)
- OHCAL cabling completed 2022-09-18; LV to sector when 3B4 energized
- TPC cooling blocks going onto wagon wheels at SBU; 2 sectors of tested FEE delivered, >4 more ready to deliver; shipping $\frac{1}{4}$ LV next week, burn-in of FEE continues
- Essential infrastructure racks and cabling ongoing
- TPOT assembly under way in 510
- GL1/GTM using synthesized RHIC clock; move to 56.299 MHz shortly



BACKUP

Introduction



- The detector is necessarily cabled and tested from the outside in
- The computers, interfaces, disks, and network in the rack room are pretty far along
- GL1/GTM has started to be exercised
- I'm assuming that a great deal of infrastructure (AC power, networking, trunk fibers, chillers, gas) will be complete in Sep-Oct
- The schedule is aggressive, but there are still places where we may beat the clock due to the fantastic engineering, technician, and trade support and the incredible support we have gotten from C-AD, SMD, and ATRO