

MicroBooNE Rack/Infrastructure Update

Bryce

Notes Before Getting Into Details

- A number of racks have been built up, reviewed and installed; some have done some but not all of these steps
- 'Building Up'
 - Experts: it would be best to have this build-up done well in advance of the scheduled rack installation period (early September).
 - Common issues Linda has noticed in previous racks:
 - Messiness/ambiguity now = headaches later.
 - Proper cable routing: straight lines, no diagonals! Keep cables in trays as much as possible
 - Separate AC and data cables as much as possible
 - Labelling: Label everything! Even power cords! It makes troubleshooting during running much, much easier. If you have questions about how something should be labelled, ask me, Linda, or Anne

Notes Before Getting Into Details

- Reviewing:
 - ‘pORC’
 - Done at DAB; checks ‘interior’ of rack (cables, fire protection, AC, grounding, etc.) to make sure rack can be safely operated
 - I think all remaining racks’ experts are familiar with writing ORC documentation. If not, see Linda and me
 - All interior components/cabling should be installed before this happens. If not installed, it should be noted in documentation
 - Sowjanya will be testing slowmoncon, temp sensor, power supply readout on most racks after pORC.
 - ‘ORC’
 - Done in final installed location (LArTF platform or computer room); checks connections between racks and from rack to building
 - ORC documentation for TPC2 in computer room available on DocDB as an example for others:
 - <http://microboone-docdb.fnal.gov:8080/cgi-bin/ShowDocument?docid=3286>

Overview of Rack Status

| Rack | Built up? | pORC? | Install/ORCed? | Notes |
|----------|-----------|--------|----------------|--|
| DAQ 1-4 | Green | Green | Green | Part of completed Computer room |
| NETWORK | Green | Green | Green | Part of completed Computer room |
| TPC 1 | Green | Yellow | Red | pORC Written; scheduling pORC now |
| TPC 2 | Green | Green | Yellow | Installed, ORCed in comp room; Re-ORC on platform |
| TPC 3-5 | Green | Yellow | Red | pORC Written; scheduling pORC now |
| PS | Green | Yellow | Red | pORC partially written; schedule pORC in a few weeks |
| PMT | Yellow | Red | Red | Rack built but needs finishing; pORC partially written |
| PM1 | Green | Green | Yellow | Installed/ORCed for LArTF garage; Re-ORC on platform |
| PM2 | Yellow | Red | Red | Rack infrastructure installed; need other components |
| DRIFT HV | Green | Green | Yellow | Installed/ORCed for LArTF garage; Re-ORC on platform |
| LASER1 | Green | Green | Red | pORCed for DAB testing; Will ORC on platform |
| LASER2 | Yellow | Red | Red | Build a copy of Laser1; nearly identical pORC needed. |
| EXTRA | Red | Red | Red | Extra rack for trigger/PMT/cosmics; will build up next week. |
| CRYO | - | - | - | Cryo folks in charge; Progress is good, I think... |

See Next Pages for Individual Status

Picture Progress



TPC1



TPC3



Power Supply

Individual Rack Notes

- Purity Monitor:
 - Hear status/timeline from Roberto/Ben
- Laser:
 - Hear status/timeline from Thomas
- PMT:
 - Hear status/timeline from Matt/Kazu
- Extra Rack:
 - Fiber/Copper translator status: Anne
 - NIM bin allocation/installation status: Matt/Georgia
 - Possible future needs from cosmic system: ???

Cabling Installation

- Ground Monitor installed by electricians prior to rack/cabling installation; overseen by Linda/Dave/EEs
- Cabling installation in late August/ early September; overseen by Anne
 - Cabling can be done in parallel with some other activities under/near platform during this time; will need to assess further closer to install date
 - Very good progress on procuring cables:
 - In hand/labelled: Warm, HDMI (ASIC control/config), LV power
 - Ordered: USB (ASIC calib), HV power (parts), BNC-lemo (parts), Wiener Inlk., fiber
 - Easy to obtain on-site: more Cat5, more lemos
 - If you have cabling needs for your system that you think we are providing but haven't talked to us about them, LET ANNE/LINDA/ME KNOW!!!
- Volunteers needed for install, although we have quite a few volunteers already (Mindy, Jason, Tia, Roberto, Anne, Bryce, Linda)

Rack Installation

- Rack Installation is slated to happen on the platform in September
 - Happens after/during installation of cabling
 - Rack installation will follow a specific order determined by Linda/Bryce based on inter-rack dependencies and other platform activities
 - Experts on each rack should plan to co-lead the installation of their racks; Linda, Bryce and Anne will co-load and support this rack/cable installation effort.
 - Georgia, etc: TPC 1-5 (TPC 1 will be installed first)
 - PS: Bryce, Linda, Anne
 - Matt, MIT, Columbia: PMT/Trig, Extra Rack
 - PM: Roberto and Ben
 - Thomas: Laser
 - Drift HV: Sarah
 - Some semi-independent rack systems may be installed earlier in order, if other platform activities do not interfere

Questions/Discussion?