

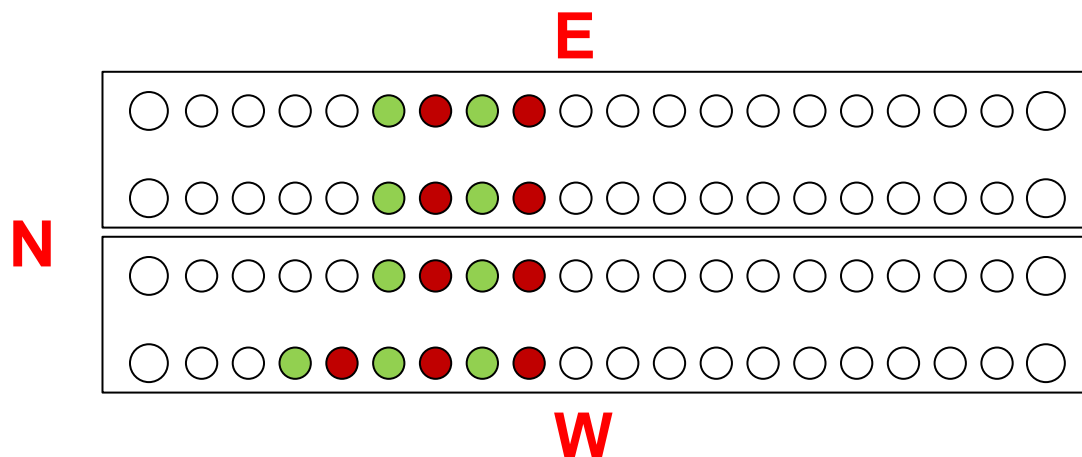
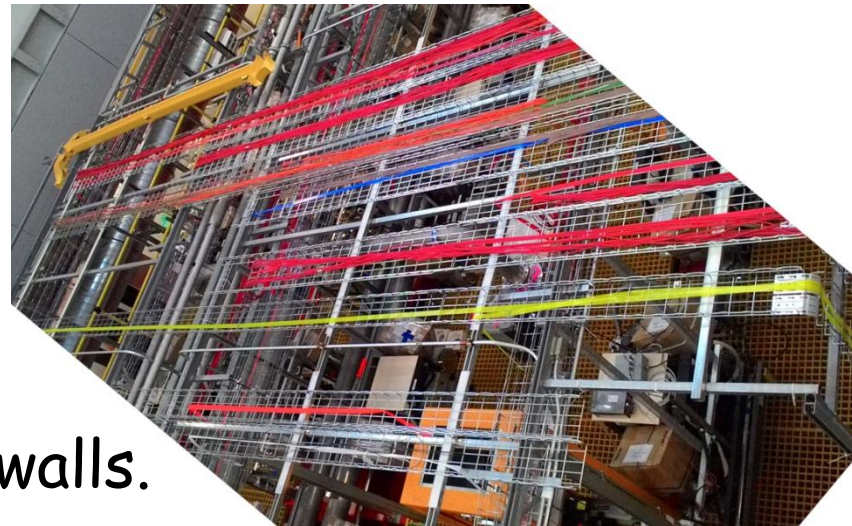
*Plan for cabling of PMTs and optical fibers
and other ongoing works*

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WA104 meeting, 09-OCT-2019

Status of PMT Cable Installation

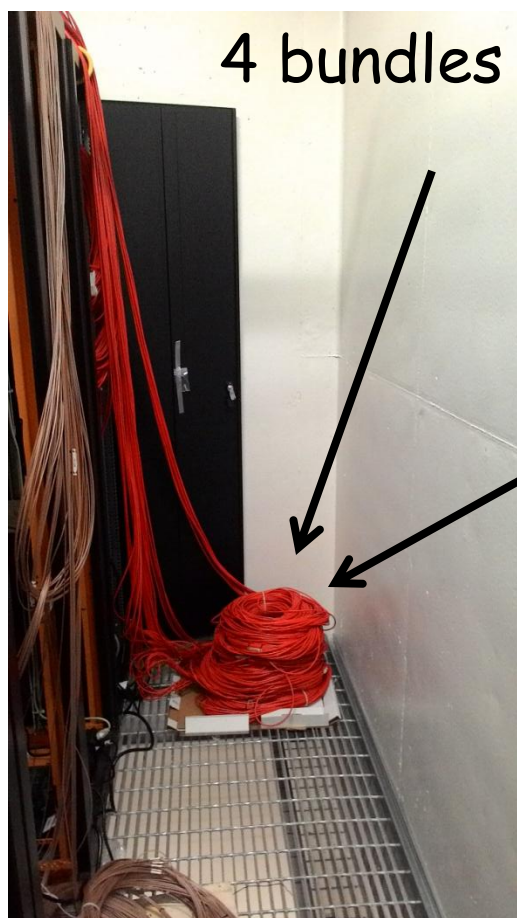
- In September we installed 90 (+9 spare) HV cables and 90 (+9 spare) signal cables.
- This covers $\frac{1}{4}$ of the work.
- Cables are distributed over:
 - 3 chimney on the WW wall:
 - 2 chimney on the WE, EE, EW walls.
- Presently, for each module we have 2 facing TPC Chambers, 2 m wide, equipped with 20 PMTs.



EE12 EE13 EE14 EE15
EW12 EW13 EW14 EW15
S *WE12 WE13 WE14 WE15*
WW12 WW13 WW14 WW15 WW16
WW17

Status of PMT Cable Procurement

- Still waiting the delivery from CERN of the remaining $\frac{3}{4}$ of cables. The SBND container used for the shipment of cables and servers has been stopped at the Chicago customs.



4 bundles

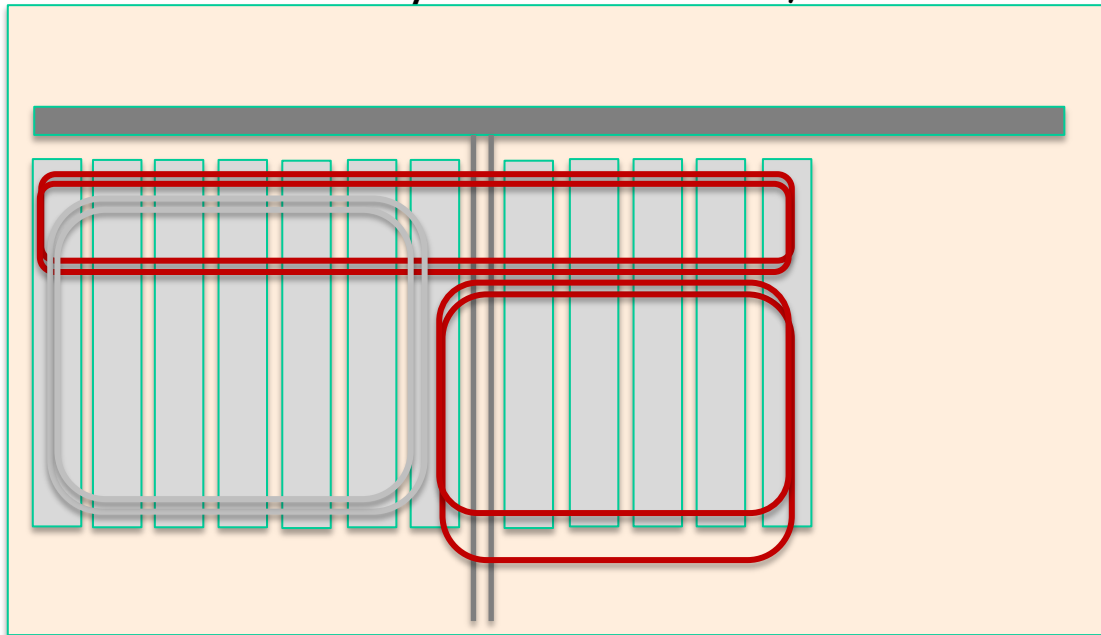
We need to solve the problem of the cable length excess behind the crates on the mezzanine.

We have to stock 18 HV bundles in this space!!!

The proposed solution is to mount some remnant cable trays on the wall.

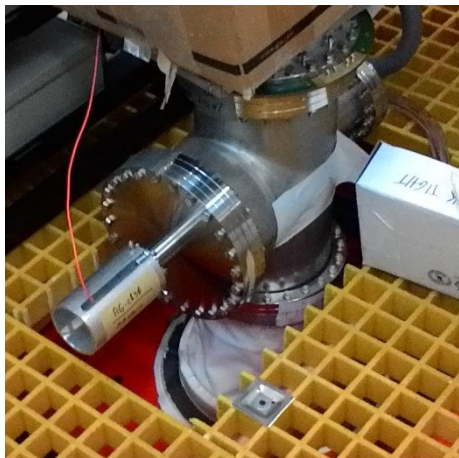
Status of PMT Cable Procurement

- A line of vertical trays on this wall
 - 12 to 14 of them, side by side
 - On both sides of the electrical conduit
- 2 brackets per tray
- Locations of brackets are marked
- Loops of excess cable can span across multiple trays. Think of the trays as an attachment grid made up of the side walls of the tray which stick out, as well



Status of Optical Fiber Installation

- The optical splitter has been installed on the TOP of the detector.
- 36 optical fibers (20 m long) connect the optical splitter outputs to the 36 optical feed-through flanges.
- Mounted 36 fiber/feed-through metal protections.
- Some corrugated protections are being installed to better protect the fiber deployment.
- Replaced one faulty optical feed-through during the vacuum breaking. Tested, it is now OK.



Other ongoing works

- Continue the PMT/Trigger crates assembling. We need to complete them for the pORC / SEDR reviews.
- Complete the rack AC (detector ground) power distribution (FNAL duty, work in progress).
- The PMT VST is now working. We are using this for:
 - Acquire PMT signals with the actual PMT DAQ chain;
 - Perform LVDS tests to set correctly their configuration (baseline, threshold, polarity, width...not all implemented);
 - Connect LVDS outputs (one board) to the NI trigger system;
 - Perform preliminary tests with FPGA (counting, multiplicity evaluation).
- Started the definition of automatic PMT calibration procedure.