

INTENSE ACTIVITY
REPORT OF
Massimo Rossella

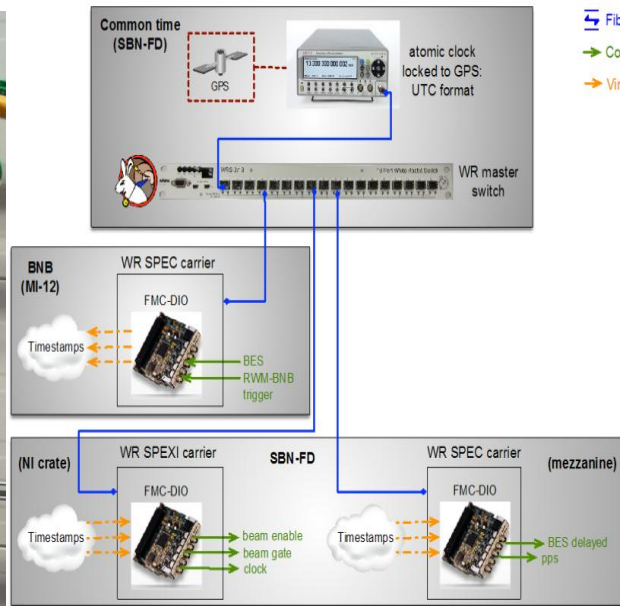
Intense Meeting

06-Nov-2019

Intense Activities Outline

- All the 2019 activities have been carried out in the framework of the WP 1 Neutrino Detectors and in particular in the installation of the ICARUS at Fermilab in the SBN program.
- Description of work:
 - Installation of signal and HV flanges of PMT system;
 - Deployment of signal and HV cables of PMT system;
 - Implementation of ICARUS trigger electronics;
 - Test of ICARUS trigger electronics for timing and beam extraction;
 - Installation of the detector pumping vacuum system.
- Total secondments benefit in 2019: 3 month

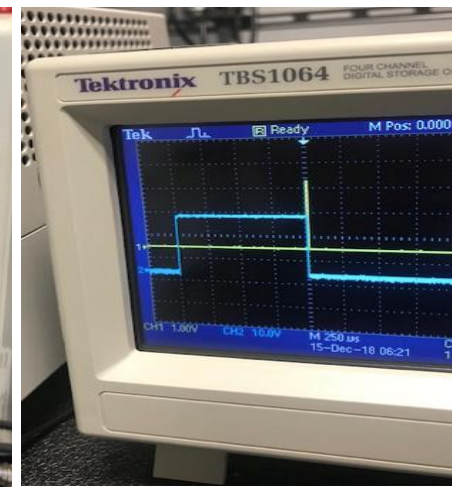
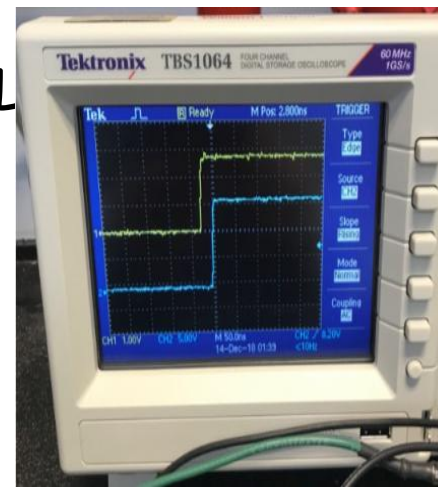
Test of ICARUS trigger electronics



- A NI-PXIe 1062Q crate installed at ICARUS site close to WR master switch:
 - A NI-PXIe 8130 RT controller;
 - A SPEXI board with DIO FMC.
- BNB beam signals broadcasted on WR network via WR_NIC software on DIO;
- A SPEC card with DIO FMC installed in a server on the ICARUS site as a slave node (used to cross check the SPEXI signals).

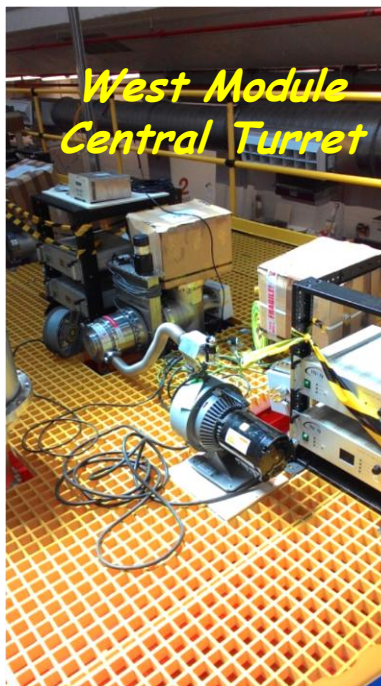
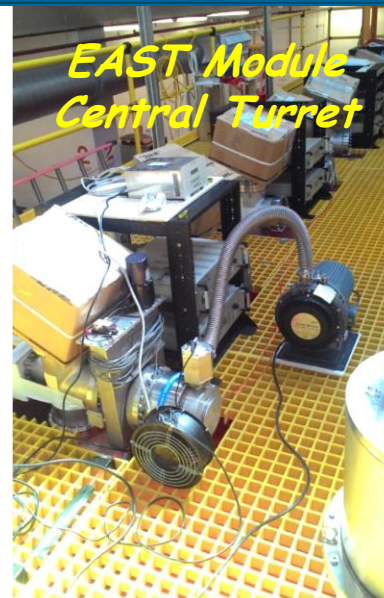
- Extensive successful test in progress @FNAL

- Phase locking of clocks generated by SPEXI with the common time has been validated;
- Correctness of decoding of beam extraction signals has been assessed.



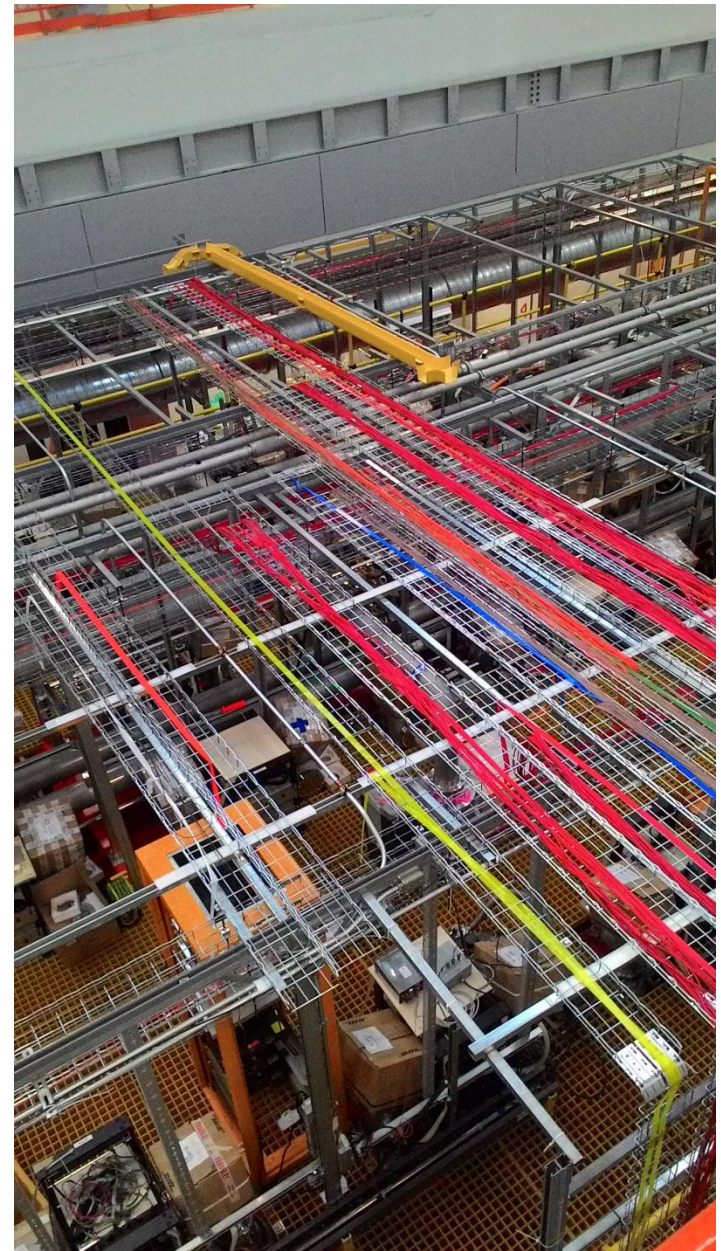
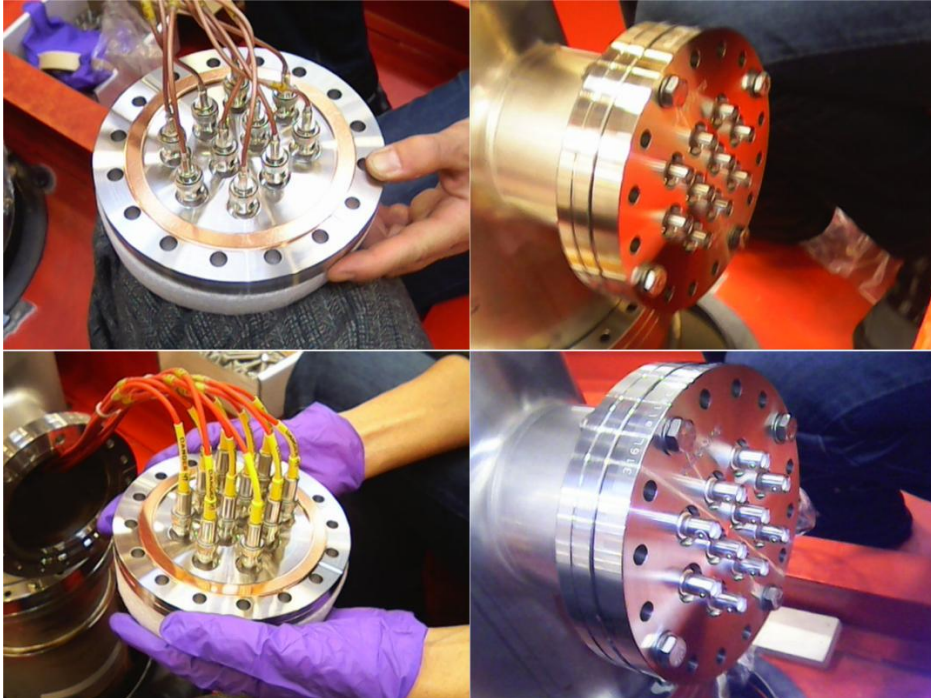
Assembled 6 pumping station

- For each T300 cryostat, the vacuum inside the detector is carried out by means of 3 pumping stations.
- Each station consists of:
 - A primary scroll pump;
 - A safety valve;
 - A turbo-molecular pump with its controller and cooling fans;
 - A DN200 Gate pneumatic valve controlled by a DC 24V actuator.



PMT Cables and Flanges Installation

- The PMT flanges installation involved 72 chimneys/crosses, installed with all the necessary flanges from Dec. 2018 to Feb. 2019.
- Installation of PMT cables (HV and signal) started on Sep. 2019: work is proceeding in these days.



Thank You