

ProtoDUNE-SP operation updates

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June 26, 2020

This week

- Data taking
 - Cosmic runs for attenuation studies
 - Trigger specific CRT cells
 - Data taking with full CRT as well
 - Distorted electric field runs
 - Modify beam left downstream and upstream top FC termination voltages intentionally to distort electric field close to APAs
 - -1950V on upstream, middle was at default -1165V and downstream was set to -330
 - Collected random, CRT, CRT specific cell triggered data
 - Analysis is ongoing
 - LED pulser runs for SIPM array
- DAQ tests and developments
 - FELIX hit finding studies
 - Micron FPGA tests on APA2
 - Details in Manu's talk today
- Neutron generator tests
 - Neutron generator was successfully tested on last Tuesday again
 - Design for the shielding was finalized, materials has been purchased and assembling will start next week
- HV noise filter preparations
 - Special connectors has been machined
 - We have all necessary components in hand now
 - Safety procedure has been finalized

This weekend and next week

- **This weekend:**

- FELIX stability test of the new firmware to look for possible data integrity problems
- Cosmic runs with PDs+TPC for attenuation studies

- **Next week:**

- **Operations:**

- Movable temperature probe measurements (Monday or Tuesday)
- Replace HV noise filter and power supply
- Preparations for neutron generator runs

- **Data taking:**

- Cosmic runs with PDs+TPC for attenuation studies
- Distorted electric field runs
- CE calibration runs (+ few short runs with different gain and peak time settings)
- Pulse injection (30kHz-300kHz) into the wire bias connection to verify the filter/ripple requirement

- **DAQ tests:**

- FELIX test and developments
- Hit finding with SSPs

End of NP04 and remaining tasks to be finalized

- Operations
 - Move thermometer once (week of June 30th)
 - HV filter and power supply swapping (week of June 30th)
 - Neutron generator run preparations
- DAQ:
 - FELIX test and development
 - SSP hit finding
- Data taking:
 - Attenuation runs (week of June 30th)
 - Standard runs (week of June 30th)
 - CE calibration runs (week of June 30th)
 - FC termination change and runs (week of June 30th)
 - Wire bias change and runs (week of June 30th)
- High voltage ramp up during the week of July 6th and operations after that
 - Cosmic data taking with TPC at higher field
 - Neutron generator runs
 - Cryogenic test with closing purge pipes

July 2020						
Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	X	22	23	24	25	26
27	28	29	30	31		

**The last day of
ProtoDUNE-SP
operations is July 20th**