

Module-0:

Cathode PD Electronics exchange ... and other components swap

5W-Update": What, Which, Where, When & Who

April 19, 2024 -

Modified Apr. 20, Apr. 23

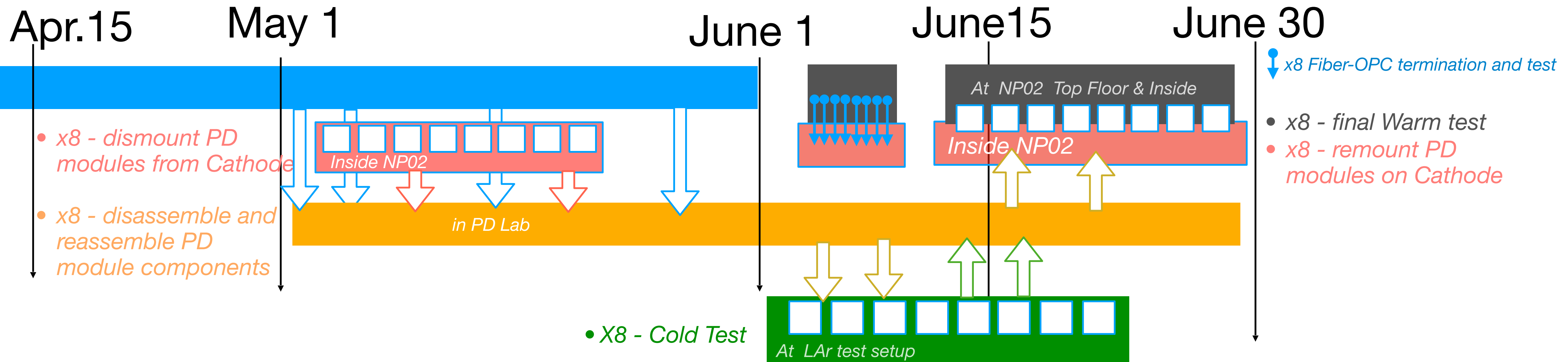
Modified Apr.26

Updated - June 21

- x8 CE Boards production (*DCEM1.3.1 + DCDC card + 2LD-SoF Card + 2OPC-PoF Card*), assembly & test at IERC-FNAL
- x8 shield boxes fabrication
- x8 light leakage protection kits fabrication
- x8 WLS 5.5mm thick production
- x2 glass-substrates (non-dichroic) set (16+16 units) +
 - pTp coating
- x2 2OPC-PoF Card+enclosure (for test set-up's: PD Lab open Dewar, LAr Test Cryostat)
- Shipping to CERN

Approximative What, When & Where

TCO Closing (t.b.c)



- Remove 8 Cathode Modules (bridge in place) in NP02
- Replace PD Components (CE, WLS, dichroic)
- Test of PD Module w/ new Electronics Board in LAr
- NP02 Fiber tip cleaning & Test, *2OPC-PoF+enclosure mount* & *V_{out} Test*
- Reinstall 8 Cathode Modules (bridge in place) in NP02
- **Final Warm Test**

What was NOT done or NOT COMPLETELY DONE and what was added (not initially in the plan)

<ul style="list-style-type: none"> Set of fibers in Tube, Check, tip Clean & PWR_out test (w/ PoF Laser from Top of NP02 Cryostat) + OPC-in-LLenclosure-fiber termination and V_out test 	<ul style="list-style-type: none"> Tube1 to Tube 8 	inside & on top NP02 (<i>Controlled Access</i>)	June 4 to June 10	<ul style="list-style-type: none"> Team(3-4p) <i>Bill, Drew, Diana, FLC + Supervisor(NP-CRP)</i>
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Cold Test set-up preparation: <ul style="list-style-type: none"> check/replace fibers, OPC&LightLeakage fiber termination, CAEN & DAPHNE (tbc) digitizers, LAr procurement (fill ranger) 	--	EHN1-NP Cold Test set-up	June 3 to June 7	<ul style="list-style-type: none"> PD Team(4 people): <i>Anselmo, Manuel, Drew, Jacob, (Sam, Esteban-if DAPHNE)</i>
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Replace PE Dichroic Filters (2 Modules)

Replace FBK SiPM with HPK SiPM (2 Modules - HPK from Mod-1 XAs)

<ul style="list-style-type: none"> XA Cold Test in LAr 	M1 to M6 M8	EHN1-NP Cold Test set-up	June 8 to June 21	<ul style="list-style-type: none"> PD Team(8 people-rotation): <i>Dante, Diana, Sabrina, Renan, Federico, Henrique, Eleonora, Jacob, FLC, ...</i>
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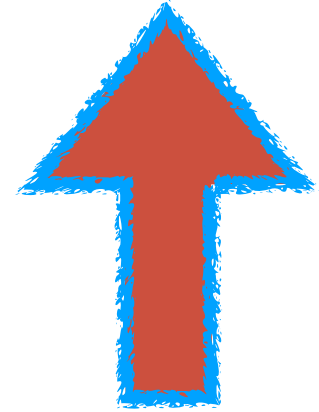
• ***XA Warm Test in Air & in Dark***
(procedure tbd)

M1 to
M8

NP-EHN1 Cold Test set-up

June 26 to June 28

• PD Team(4 people): *Dante, Sabrina, Henrique, Jacob,...* tbd



- test Optical-Electrical-Optical continuity with PoF (both OPC ON needed in warm):
 - Measure/record LDs Offset, and compare w/ warm data from Warm prelim test
- Test Signal (LED) from SiPM:
 - collect (large) signals - LED ramp in DARK

What is needed:

- Laser Power Unit on NP02 top [safety & operation procedures approved and implemented (Laser Box 8 ch.s available - need dedicated Rack (?))] - no people inside NP02 during test
- Black coat or coverage of open ports on NP02 Top
- Black curtain on TCO (inside NP02) in addition to current plastic double curtain with zips
- LED flasher & diffuser - probably a new dedicated one can be temporarily installed