

FD2 PDS Short-term Plan

DUNE Far Detector #2
Photon Detector System
Photo-collector Working Group

Last update: May 10, 2022
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Schedule Update

- Based on 22 April 2022 presented schedule from Filippo:
<https://indico.cern.ch/event/1153409/contributions/4843332/attachments/2429635/4160682/coldboxPlanBeginning2022.pdf>
 - a. cathode out PD install for **CRP2** Week 25 (June 20, 2022 - to - June 26, 2022)
 - b. cathode out PD install for **PD-Run** Week 30 (July 25, 2022 - to - July 31, 2022) “CRP Cold Box 3” “PDS Cold Box B”
 - c. cathode out PD install for **CRP3** Week 39 (Sep 26, 2022 - to - Oct 2, 2022)
 - d. cathode out PD install for **CRP4** Week 47 (Nov 21, 2022 - to - Nov 27, 2022)

Cold Box pictorial schedule

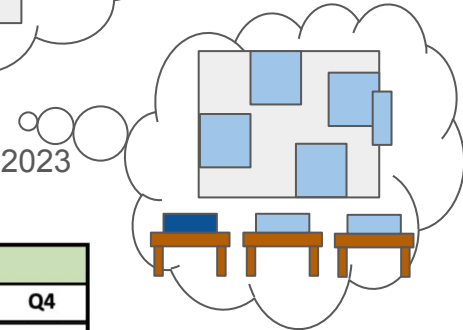
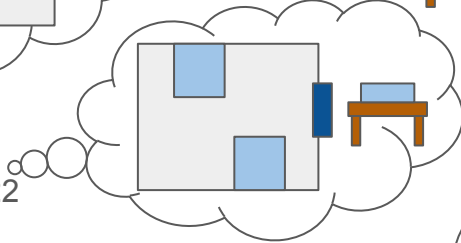
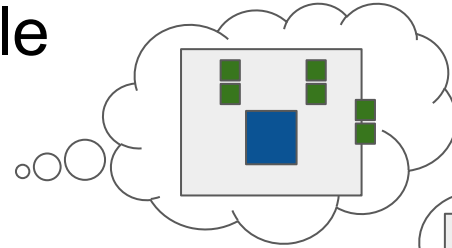
Parasitic ARIADNE run





Cold Box A PDS install is 18 April 2022

Cold Box B PDS install is July 2022

Cold Box C PDS install is October 2022

Cold Box D (no CRP) PDS install is June 2023



-  xARAPUCA
-  mini-ARAPUCA
-  Cold Box
-  Test stand

FD2-VD	2022				2023				2024			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Cold-box runs												
CRP #1												
CRP #2	production	production	production	production								
CRP #3			production	production	production	production	production	production				
CRP #4												

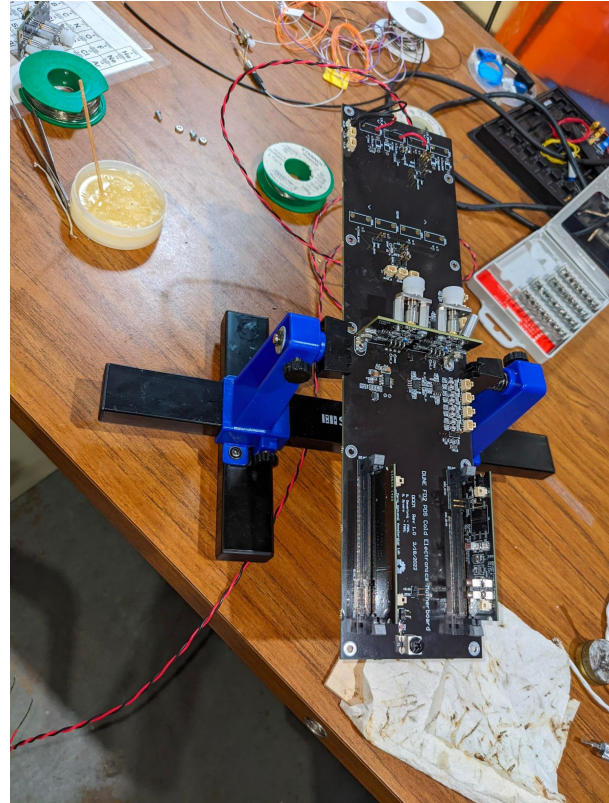
-  production
-  installation
-  operation

Flex circuits

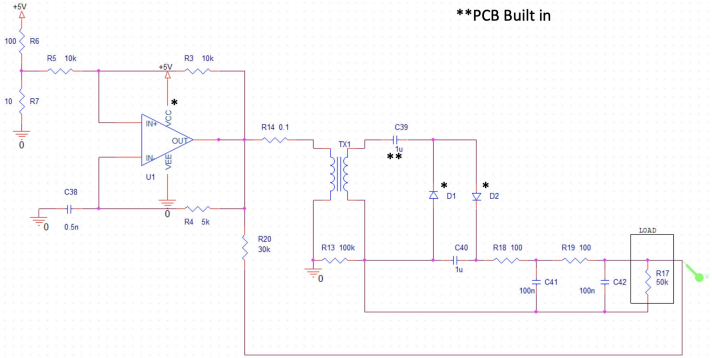
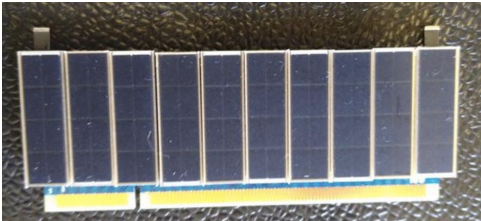
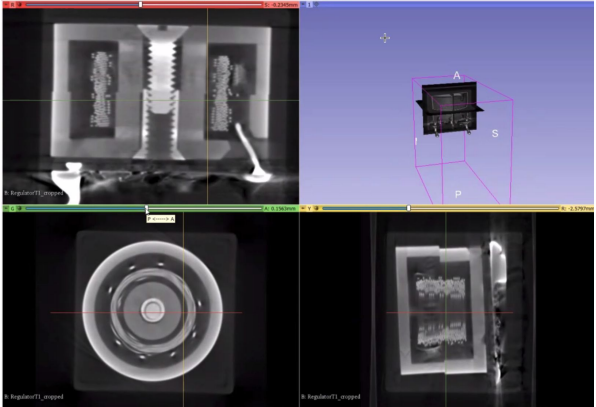
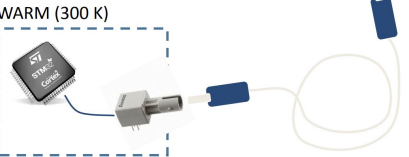
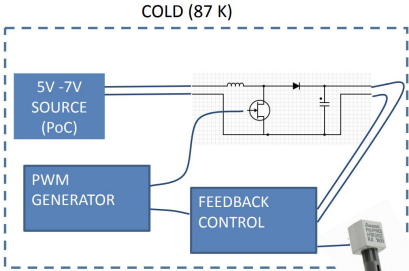
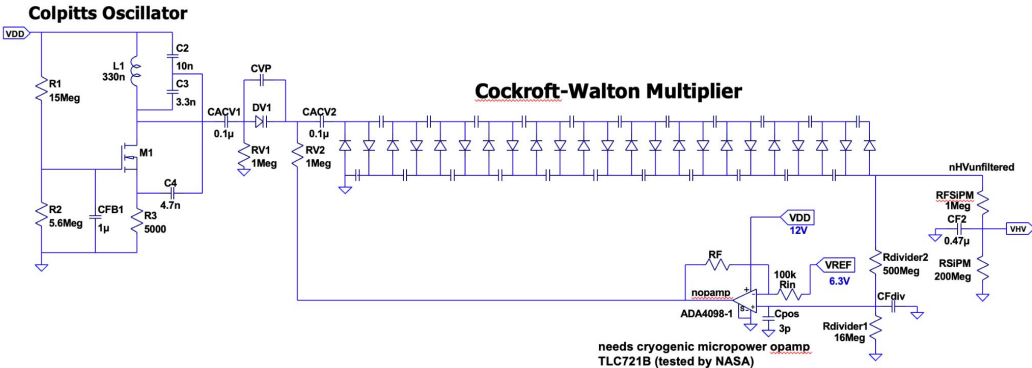
- UCSB sends 8 flex circuits to NIU by May 18
 - For spring module
- UCSB sends 8 flex circuits to INFN/Carla by May 25
 - For gluing module

Cold Electronics Status

- Alex says first populated board seems to be working.
 - Still want to verify bias daughter card.
- We will ask Paula to populate the remaining 29.

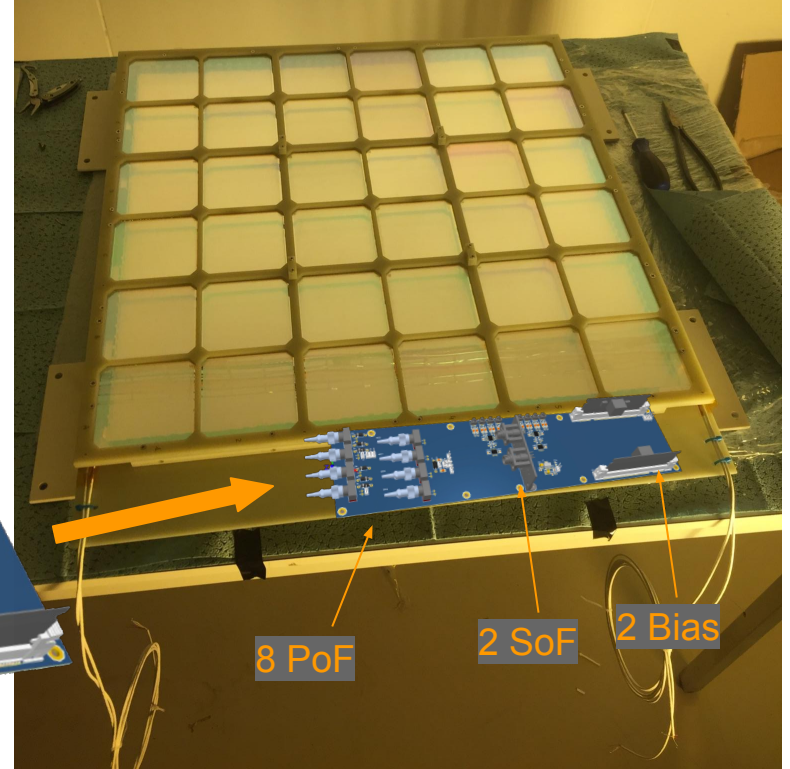
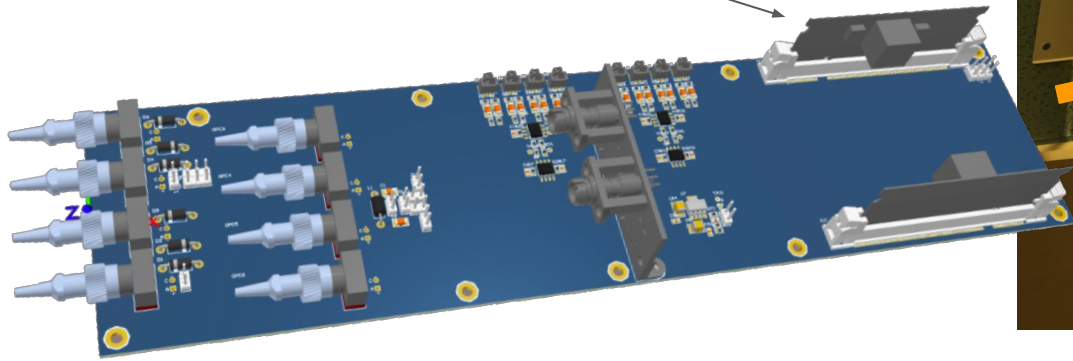


Bias Generation



Bias Generation downselect

- All bias generation prototypes are targeting July-August '22 Cold Box demonstration in daughter card form-factor.



Detector Assembly

- We want June 1 test of first X-ARAPUCA at Fermilab
- Status:
 - Iowa is fabricating spring assembly and finishing unified mechanical model
 - UCSB is receiving 25 flex circuits next week
 - NIU is identifying dummy WLS and filter sources
 - Cold Electronics are at Fermilab