

FD2 PDS Under the RADAR Procurement Concerns

21 October 2022

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Raising awareness on a few procurement concerns:

- The flex to motherboard cables (8 per XA)
- The fiber tubing
- The flange assembly

The flex to motherboard cables (8 per XA)

- 5 weeks from November 30th! ... January 5 delivery date to Fermilab
- History:
 - Order was supposed to be deliver this week; vendor had trouble procuring components in Europe and finding the 'send' button in their email app, so we did not learn of the problem until I asked for delivery confirmation 2 weeks ago. We just send them more money so they can order the components from the US. The expected delivery is November 30th to FNAL.
- Mitigation:
 - Jon at UMich has manually made the cables up to this point. He can make (10) per day if pressed, but it is time consuming and boring work. He made (18) and shipped them to NIU this week, but is now also out of materials. He is working on understanding lead times for the materials today. He will try to order enough materials for (18) more which would line us up to have a backup plan for the first (4) XA, but depends on Jon finding reasonable lead times.
 - If Jon cannot find the material, we would have to look at alternative wire and connector material, a la Sabrina's pic. We can always solder wires too. But for a lot of flex circuits all this custom work can become overwhelming.

The fiber tubing

- History:
 - Order was given to FNAL procurement two weeks ago. They have still not placed the order blaming the vendor for not registering. I am trying to help pester the vendor. No expected delivery date yet.
- Mitigation:
 - We go without secondary tubing? Trust the black fibers to not leak light. Is this a good idea?
 - Find some other tubing? May not be so easy - I had a hard time finding this vendor that is halfway responsive.

PTFE $\frac{3}{8}$ " ID $\frac{1}{2}$ " OD black tubing order

- Enforces min bending of 10cm
- Procedure is slit and install 8 fibers



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The flange assembly

- **History:**
 - Manhong at BNL is working on the CAD design. The Septum for the cathode fibers is a critical procurement, and it has not been specified completely by Manhong yet. It seems like the installation date of the septum will be January.
 - The fiber routing from the cathode we are getting help from Nick Joniak at BNL. The details were changed this week (Ryan sent email). The critical installation date for these seem to be January.
- **Status:**
 - 14" flange is in-hand at Fermilab
 - (11) feedthroughs BSWS5-026-B8-V ordered October 4th, 6 week lead time ⇒ 21 November
- **Need:**
 - Institution identified to machine/weld flange

The flange

- 3/4" NPT for cathode fibers have 45mm center-to-center spacing. There are 8 feedthroughs planned on an 8" secondary flange
- The primary flange is 14" with these features:
 - In **green**, two NIOBE-VD locations (one may turn into a coax feedthrough)
 - each can fit (4) DAPHNE-cables
 - Attached below are two strain relief bars (same as HD flange, 2 instead of 3)
 - In **orange**, three CF-75 locations (one may turn into a CF-40)
 - each CF-75 can fit (5) Response Monitoring System fibers
 - each CF-40 can fit (3) Response Monitoring System fibers
 - one CF-75 will be left spare for now
 - In **pink**, a pressure release valve
 - Chimney flange reducer to secondary flange for cathode fibers.
 - supports a 2.89" ID 3" OD septum in **yellow** for (64) cathode fibers

