HRPPD Meeting #13 Update

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Current Status

Ceramic Tasks:

- Tasks:
  - Kyocera 10-layer quote follow-up
  - Completed:
    - HRPPD 200um perimeter shrink included in design files
    - 10-layer files ready to share
  - Open items:
    - Notes
      - Simulations to be completed this week
      - Power and thermal dissipation
    - Mark measurement updates?
    - pfRICH items
      - Fitting 6.5mm into model to check compatibility
      - Gasket vs epoxy seal into pfRICH
      - Any other items?
    - Alignment marks
    - HRPPD 3D model and changes
      - Includes shell?
      - Does ceramic perimeter need to be reduced anymore?
    - 1mm vs 3mm spacer
      - Benefit: 2mm spacer + 1.6mm PCB vs 3mm spacer + 1.6mm PCB
      - Complicates assembly procedure
    - Plug-in card clearance when installed
      - Card digital output connectors and cables
      - Card orientation and cooling
    - Review action item list

Non-Ceramic Tasks:

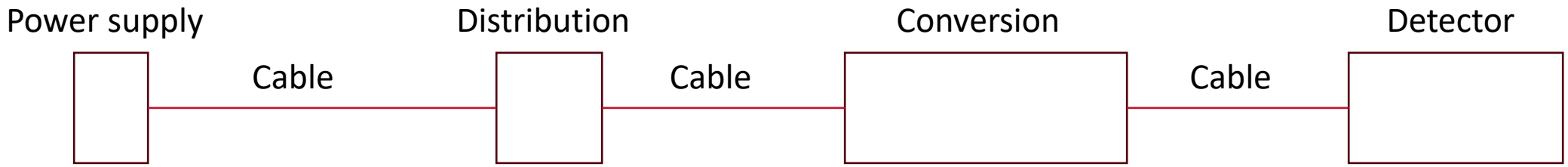
- FCFD Test Board
  - FCFD arriving this week (tentatively Wednesday)

No update

- Spacer thickness
  - TBD Will send ceramic and PCB 3D models to Alex once complete for spacer mockup
- Backplane Changes
  - See action item list

Power Distribution Tree

Sub-Detector: xxxx Type: LV or BIAS or HV



#Ch:
Ch V/I:
Model:
Qty:

On-detector: Y/N
Qty:

On-detector: Y/N
Qty:

DC/DC:
V/I:
Qty:

LDO:
V/I:
Qty:

To Adapter: Y/N
To FEB: Y/N

Wire Gauge:
Current/Wire:
Part#:
Length:
Qty:

Wire Gauge:
Current/Wire:
Part#:
Length:
Qty:

Wire Gauge:
Current/Wire:
Part#:
Length:
Qty:

Power Loss: *xxx* *xxx* *xxx* *xxx* *xxx*

Alignment Marks

- Issue: Need alignment marks visible through spacer to align spacer to ceramic during gluing. Afterwards, marks must be visible to ensure proper assembly. These marks may also be used to determine accuracy of metal features.
  - Option 1: Place markers in already existing screw holes of spacer
    - Concern: Will marks be visible? Spacer holes are only 2.7mm wide but 3mm deep.
  - Option 2: Place markers in “empty” locations with larger holes
    - Concern: Hole many marks needed? How large of a hole? Will additional holes impact spacer integrity or complicate machining?