

M0 tentative upgrade

Sabrina Sacerdoti, for PDS

M1/M0 organization meeting - 02/02/2024

What we should change

- Cathode electronics: replace with DCEM1.3
 - The electronics card had many issues (warping, capacitors)
 - Lasers were a mix of everything we had (different defocusing parameters, with FC or pigtailed)
 - DCDC are not baseline (PICO) and had some issues
 - PoF is half GaAs half Si!
- Electronic boxes → should implement a solution for light leakage
 - New metallic cases with less holes
 - Adapter for DCEM 1.3
 - Covering of PoF
- Fibers? (but answer was that it's too complicated)
 - Different routing (as in FD)
- WLS: maybe change at least one to the 5.5mm?
 - Some are on their way to Milano (check quantity)
 - Spacers need to be changed to deal with different thickness
- Plan for accessing modules:
 - Mockup at IJCLab
- Re testing modules:
 - Should be done as in the previous installation
- Consider whether we change cards/box in 4 or 8 of the modules.
 - Option of using M1 material discussed but probably risky (don't know timeline of M1)
 - If modifying only 4 then it would be in one cathode to minimize field cage mess.
- Access to first membrane module installed?

Actions to be taken

- Follow up w/ Filippo for bridge building and dates
 - For now it's "before JUNE"
 - Discussed w/Francesco and Filippo already
 - Bring up to Steve for green light → Dave will contact.
- Ask for accessibility to replace electronics in top membrane module
 - But seems very difficult ("no real possibility")