

Thursday, February 16, 2023

Toward FD2 PDS Final Design Review

Guidelines (discussion at FD2 PDS FDR internal kickoff mtg)

INPUTS from Mary B. (Review Office Chair) reported somehow in order of importance:

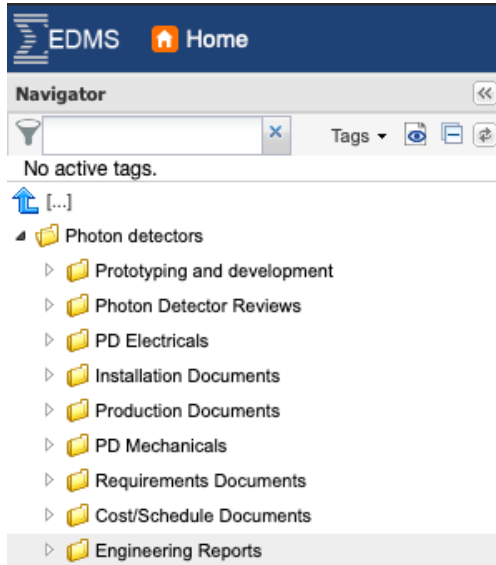
- **Completeness of Documentation** [mechanical and electrical]
 - Compliance Office Evaluation may come later (acceptable if not complete)
- **Integration&Installation in Module-0** within schedule: Primary importance and focus of FDR on achievement.
 - *Lesson learned from Module-0* (operation) and incorporation in Final Design not expected (no operation and no time given by schedule). If Module-0 installation successfully achieved, important proof of lesson learned on fabrication, integration, assembly.
 - *Tests in Cold (and Warm)* from new test set up: No Module-0 operation is expected by the time of FDR. Showing (instead) validation from Cold tests of full Module+Electronics(PoF&SoF) prior to installation will be highly valuable - proof of lesson learned on detector Design.
- **QA/QC plan & Documentation:** if not fully completed, show availability and engagement of Groups (at this 90% Review detailed plan not strictly needed)
- **Interface Documents, Risks Assessment Document, high level Schedule and Cost Documents** need to be in order.
- **Presentations** at the FDR Review should be technical - showing component choice based of goal or spec to achieve. [Several short talks can be given instead of longer general talks - need to discuss with Chair of Committee and agree on this]
- **Chair** of FDR Committee: J. Spalding.
- **Members** of FDR Committee: tbd (presumably from CERN and DarkSide)
- **Dates** of FDR: April 18 to 20, 2023 at CERN (in person with opportunity of Zoom connection)
- **Charge** of FDR: in preparation (similar but not identical to FD1 PDS FDR Charge)

- **SUGGESTIONS:**

- **Do NOT present OPTION A and OPTION B.** Use instead “**Baseline Design**” and “**Risk Mitigation Opportunity**” (e.g. two-vendors, possible lower cost, simpler installation,...)
 - *Warm Electronics (Digitizer): DAPHNE ?? HD-Modified-DAPHNE ?? Other solutions ? Define Baseline Design (and justify choice)*
 - *HD-style or VD-style CE (signal conditioning stage) for Membrane modules. Define Baseline Design (and justify choice) [2 CE types will not be seen favorably]*
- Clarify **unresolved items/components** from PDR (May 2022)
 - *DC-DC converter*
 - *Fibers (for PoF and SoF)*
 - *Mitigation of light leakage and Optical Noise (PE background)*
 - *... any other item from PDR recommendations*

Notes from the meeting (Mon. Feb. 13):

Repository for Documentation (in color active links)

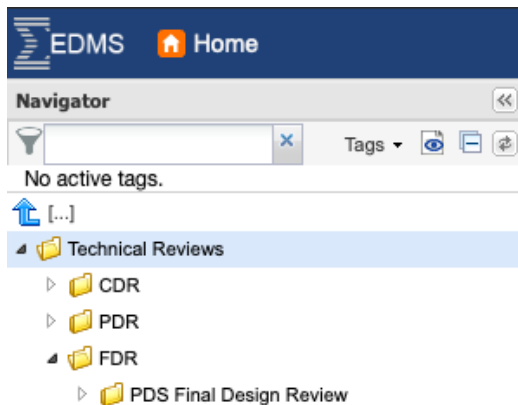


FD2 PDS in EDMS

FD2-VD project/SystemsConsortia/Photon detectors

[FD2 PDS Doc's in EDMS](#)

collection of all relevant **FD2 PDS Documentation**



FD2 PDS Final Design Review in EDMS

FD2-VD project/Technical Reviews/FDR/PDS Final Design Review

[FD2 PDS Final Design Review in EDMS](#)

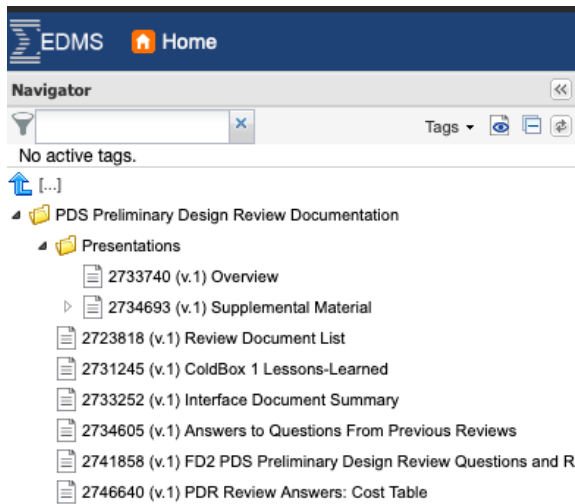
just created, empty for now

(The list of documents required by Review Office is in preparation)

Documentation provided at the PDR (May-June, 2022). Presumably similar lists of Documents are due for the FDR

[FD2 PDS Preliminary Design Review in Indico](#)

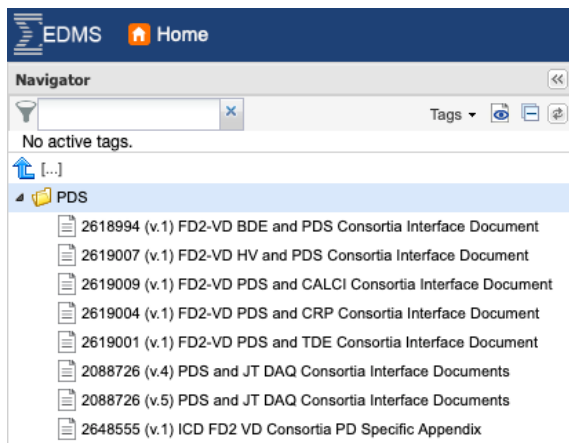
[Talks at the Review](#)



FD2 PDS Preliminary Design Review in EDMS

FD2-VD project/Technical Reviews/PDR/PDS Preliminary Design Review Documentation

[Preliminary Design Review Documentation in EDMS](#)



[Technical Documentation in EDMS](#)

(Interface Docs)