

# KLF Beamline Meetings

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# Purpose of these KLF beamline meetings

- CPS and KPT development moved into engineering design and procurement stage
  - We need to hear updates from engineering group and provide feedback if needed.
- KFM detectors will be shipped to JLAB
  - It is important to coordinate activities at JLAB, York, and Julich.
- There will be a Physics Division ERR-2 sometime next winter.
  - We need to prepare all the beamline components as they will be the main topic of the review.
    - No committee or charge at this time.
- These KLF beamline meetings are to address these needs.
  - New meeting time maybe needed starting from June.
- The beamline web page on KLF wiki  
[https://wiki.jlab.org/klproject/index.php/KLF\\_Beamline](https://wiki.jlab.org/klproject/index.php/KLF_Beamline)
- New JLAB mailing list [halld-klf-beam@jlab.org](mailto:halld-klf-beam@jlab.org) has been created for KLF beamline related communications.
  - Please, subscribe to this mailing list via mailman interface:  
<https://mailman.jlab.org/mailman/listinfo/halld-klf-beam>

# Status of the major components

- General description of the KLF beamline and its components and the specifications are available in PAC 48 proposal for K-long facility in Hall-D.
- KPT target conceptual design is complete.
  - Engineering design still ongoing.
  - We plan to submit Purchase Orders this calendar year.
  - We would like to have progress reports on this.
- CPS conceptual design is complete.
  - Engineering design is ongoing, a lot of progress has been made.
  - Some procurements are in progress.
  - We would like to have regular progress reports.
- KFM configuration has been chosen
  - TOF planes, tracker planes, no magnet.
    - No final decision on which tracker to use.
  - York University was awarded money for the project.
    - Will cover the shipping of the detectors.
    - Should cover one post-doc.
  - We plan to move the components from Germany to JLAB late summer or fall.
  - Integration of KLF components will need to be discussed at these meetings.
- We need RadCon to start reviewing the impact on the radiation environment by CPS and KPT.

# Status of electron beamline components

- KLF beam time structure
  - 64/128 ns beam studies are being conducted, look promising.
  - Compatibility with MOLLER.
    - We need to provide the ERR-1 recommendation response by June to Physics Division regarding this.
  - It would be great to have status reports from the accelerator folks.
- CEBAF beam optics model for CPS.
  - Edy showed the status during the last collaboration meetings.
  - We would be interested in hearing about new developments.
- Standard electron beamline instrumentation upstream of CPS
  - We need a stripline BPM, BCM, and a super-harp on a new girder just before CPS.
  - Tagger dump will not be used during KLF
    - Some of the instrumentations could be used for KLF.
  - We would like to keep the amorphous radiator wire scanner in order to monitor the beam halo level.
  - It would be good to get progress reports from accelerator folks.
- New electron beam excursion protection
  - We need to design a system to protect against electron beam excursions beyond 1mm using FSD.
  - ERR-1 CPS design document suggested a small ring around beam to create excessive background during electron beam excursions.
    - We are in the process of working out the details for such a system.

# Status of $\gamma$ and $K_L$ beamline components

- Active Collimator for KLF
  - UConn (R. Jones) is working on the design and construction of the KLF AC to continuously monitor photon beam positions and to prevent large photon beam excursion via FSD.
  - Richard could provide progress reports on these meetings.
- Analogue of GlueX Beam Profiler
  - No definite plans on such a device
  - New profiler for GlueX recently arrived from Regina.
    - It has not been tested yet.
    - If works, it potentially could be used for KLF.
- Cryo-target
  - JLAB target group will be taking care of it.
  - I will be asking Chris Keith for progress reports.
- Start Counter upgrade
  - Start Counter is needed for energy determination of the beam kaons.
  - Unlikely to make a big progress before ERR-2.
  - Probably should have its own meetings to go into details.