

HOW TO MAKE THE E-LASER AND **GAMMA-LASER MODE SWITCHABLE?**

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e-laser low field normal compton run





e-laser high field compton edges





γ-laser high field





What if we want to add vacuum and automatized?

- In reality we have to leave a gap between the cherenkov and the vacuum chamber to be able to readout the scintillating screen.
- To automatise the 3 runs:
 - Push the cherenkov detector closer to the pipe (compton run vs edge run.)
 - Replace new vacuum chamber between the magnet vacuum chamber and the cherenkov by tracker.





Assymetric detector layout?

- If we move the electron arm closer to dump we probably don't need to have the two different type of compton runs.
 - Pros:
 - No movement of the detectors closer to pipe.
 - No need to modify the magnetic field.
 - Cons:
 - Probably more background on the back of the detectors.
- Install the γ -laser on top of New vacuum chamber A.
 - Pros:
 - If we move it up or down then we can fully automatized the two runs.
 - Cons:
 - Vacuum chamber A has to be detached from magnet vacuum chamber, so we will need 2 different vacuum and windows at interface.
 - The vacuum in chamber A can also be worse than in the beam so the window on this chamber could be made of a lighter material.
 - That still means more material in the way of the electrons.
 - The chamber has to sustain the weight of the detectors.
 - Because one need to read out the scintillating screen and have the cherenkov detector outside the vacuum there is still a section which is in air.



by Matt



Laser/gamma

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Back up









Assymetric detector layout?



Could fix the problem of two different run type for compton edges and intence compton scattering? So no need to move cherenkov detector?

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