

Interlock on beam size

- Objective: Interlock second extraction when beam size smaller than threshold
- HW limitations
 - Probability of loosing an acquisition is $\sim 1/10000$ due to camera acquisition read
- SW limitations
 - 30ms to read through VME an image, compute profiles and fit
 - Full image size read time $> 30\text{ms}$
 - Computing fit is not always possible depending mainly on noise

Requirements

- Dedicated BTV system and CPU
- Dedicated software
- Selection of image area of $\sim 100 \times 100$ pixels as a first estimation maybe smaller

Conclusion

■ Even then...

- Acquisition cannot be guaranteed 100%
- Size computation cannot be guaranteed either
- Needs testing in any case with FESA v2
- BTVI is a CERN wide instrument and cannot be subject to specific behaviour
- Implementing this interlock (if test successful) will need allocation of extra resources