

Plan 2020a

Belle II Main Goal

- Luminosity! High quality data taking with **stable** conditions
 - → Limited time for study/changes/calibration/optimization
 - 20(?)min once a day with stored beam
- For us that means → Fewer state switching
 - Changes between ‘DAQ tests’ and ‘Physics’ (STANDBY ↔ PEAK)
 - OFF ↔ PEAK (because of Diamond ‘Interlock’)

Our Main Goals

- Stable running :-)
- → HV control **fully** by Control Room shifter
 - Automatic upload of last used pedestals ✓
 - Automatic ‘special’ handling for some modules
 - (feedback vs injection blocking → global HV update needed)
- Recovery of HV trips by CR shifter
 - Automatic switching from OVP, ERROR to OFF (✓)
 - Steering of single modules which are in ‘illegal’ states (✓)
 - Implement Recovery in HV control
- → PXD shifter only checks and intervene if any problems.
- Fix calibration procedures (pedestals, rad damage compensation, ...)
- Proper clean-up after local work, reliable switching to data taking
<https://confluence.desy.de/display/BI/Expert+to+Shifter+Transition>

- Calibration tuning
- Investigate flip-current etc procedures
- HV recovery procedures (automation)
- Reduce readout length (currently still a bit too many gates for “safety”)
 - Will affect gated mode offsets!
- PSU updates
- DAQ (HLT) issues
- Propagate meaningful messages to CR shifter (not only error)
- ... all the small things left open
 - → Work on/close JIRA tickets!
- What to do with 1.8.2 , 1.5.2? Ideas?

Get Rid of CR Shifter Confusing Behavior

- (or better, get rid of PXD ERROR which are not really PXD related)
- For Missing and Delayed Events
 - Unclear if this is now (completely) fixed by switching to ZeroMQ framework
- During Run:
 - Should be ignore them to make running smoother?
 - e.g. dont go to ERROR if we detect too many missing triggers?
 - Stopping a run because we lost 1000 Events does not make sense ...
- After Run (STOP)
 - Memory full → ERROR
 - Should we change this directly to ABORT (we loose debugging possibility)
 - Not sure if this is more intuitive for CR shifter