Goals of TRG/DAQ Workshop in Hawaii

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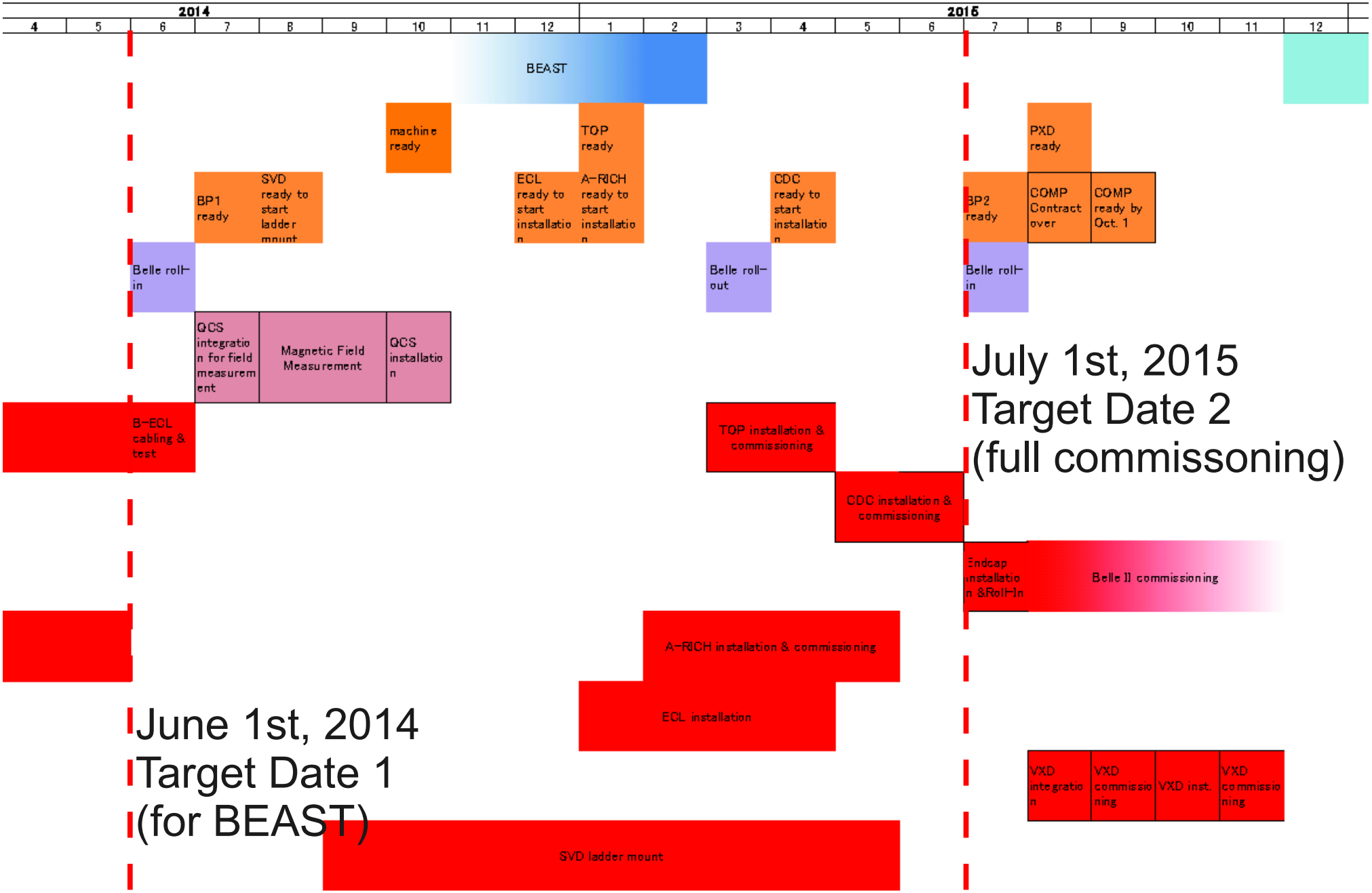
- Belle II commissioning schedule is almost fixed.
- 2 target dates for Trigger and DAQ



1. Things to do by “target date 1”

What are we supposed to make ready on target date 1?

- We will have (barrel) ECL and KLM installed by the date.
- In the “BEAST operation era” after the date, we can test the trigger and DAQ with these detectors both in cosmic (summer) and beam(winter). => “System Test”

Trigger:

* ECL and KLM sub-triggers should be ready by the date
* GDL should also be ready with the special firmware for BEAST operation

DAQ:

* COPPER based readout system for ECL and KLM should be ready.
  - Interface between Trigger and Timing Distribution system
  - Full operaiton of Belle2link including slow control link
* (Partial) event building + (Partial) HLT operation + Public access to online storage for detector studies
* DQM/Monitoring/Run control (skelton) scheme should be ready.

Some considerations for “BEAST era”

- In the “BEAST” era, we suppose “system test” of TRG/DAQ is being performed independently of BEAST data taking.
  -> Is it really OK?

- For the background analysis, it is desired to have both BEAST and ECL/KLM data on the same tape.

- Do we need to consider some interface between BEAST and Bellel II TRG/DAQ?
  * BG measurements given by BEAST are better to be recorded in DAQ data files.

- BEAST readout could also give a good opportunity to to establish our monitoring/interlocking system.
  -> interface to slow control should be considered.

2. Things to do by Target Date 2

What are we supposed to make ready on target date 2?

- Should be ready for full commissioning.
- Critical path is that we have only one month before beam for the system test using cosmic which includes the integration of PXD.

Trigger:

- All sub-triggers should be ready by the date.
  -> CDC 3D trigger also.
- GDL should be ready for physics run. In addition it should be prepared for high-background condition.

DAQ:

- COPPER readout system operational for all detectors.
- PXD integration should be done as quick as possible.
  -> test of data reduction using HLT info.
- HLT operation with full reconstruction software.
- DQM with express reco should be ready.
- Monitoring/interlocking system should be fully implemented.

Aiming at these two target dates, we will discuss following in this workshop in Hawaii.

- Status of development/mass production of front end electronics of each subdetector.
- Status of / discussion on TRG/DAQ<->detector interface
  * subtrigger status in Trigger session
  * Belle2link session for DAQ interface
    - Belle2link system test status/plan are discussed.
    * PXD is special and its interface is being discussed in separate workshops.
- Report on DAQ backend status
  * Event builder, PXD-integration, HLT, PromptReco, and DQM
- Discussions on
  * Data reduction strategy in Belle II DAQ
  * Slow control scheme
  * Space allocation / Services

Goals of this workshop

- In our current design, basically we don't have any show-stoppers up to now.
- R&D phase is now being completed and we are now in the “mass production” phase.

Goals:

1. Revisit TRG/DAQ<-> detector FEE interface and find short-comings in current design so as to fix/improve them as soon as possible.

2. Clarify design of control scheme of DAQ, consisting of run control and slow control.

3. Revisit trigger/data reduction strategy in Belle II DAQ and have a consensus in TRG/DAQ people. Then bring it to the discussion with physics group in next B2GM.

4. Confirm readiness of Trigger and DAQ for new target dates and update our schedule to match with the dates.


and,
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