

Closing Remarks


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Activities of data-taking towards Global CRT

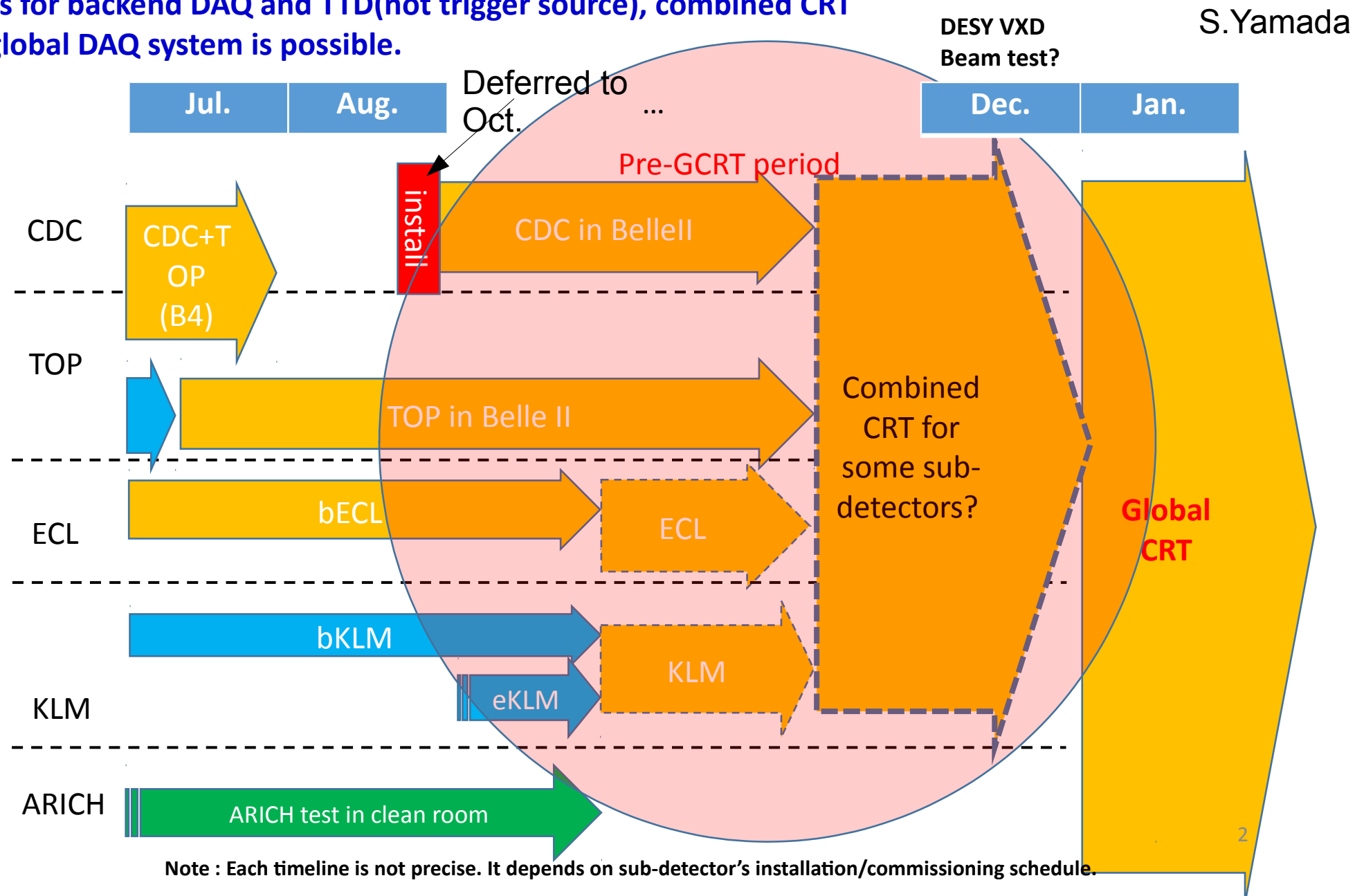
- Backend DAQ is flexible for standalone or combined cosmic data tests.
 - FTSW : one combined CRT + standalone CRTs.
- (Except for CDC. It can be combined with another sub-detector like CDC+TOP)

-> As for backend DAQ and TTD(not trigger source), combined CRT by global DAQ system is possible.

**Global Belle II DAQ(COPPER to storage)**

Pocket DAQ in E-hut

PocketDAQ of each det. Gr.



One page summary of DAQ readiness for GCRT

	B2L data	B2L slow	Pocket DAQ (Testbench)	Pocket DAQ (E-hut)	Backend	Comment
PXD	-	-	○	×	×	(to be) tested at DESY TB
SVD	○	-	○	×	×	(to be) tested at DESY TB
CDC	○	○	○	○	○	full integ. aft. Oct.
TOP	○	○	○	△	△	full integ. in Oct.
ARICH	○	○	△(FTSW)	×	×	to be integrated in ????
ECL	○	○	○	○	○	fully integrated E. to be added
KLM	○	○	○	○	×	B,full integ. in Sep. E. to be added
TRG	○	-	○	×	×	

Trigger : Ready (ECLTRG, CDCTRG, KLMTRG, TOP?, GDL)

Timing dist : Ready.

Event Builder 1 : Switches are available. Still single fiber connection btw.E-hut and server rm.

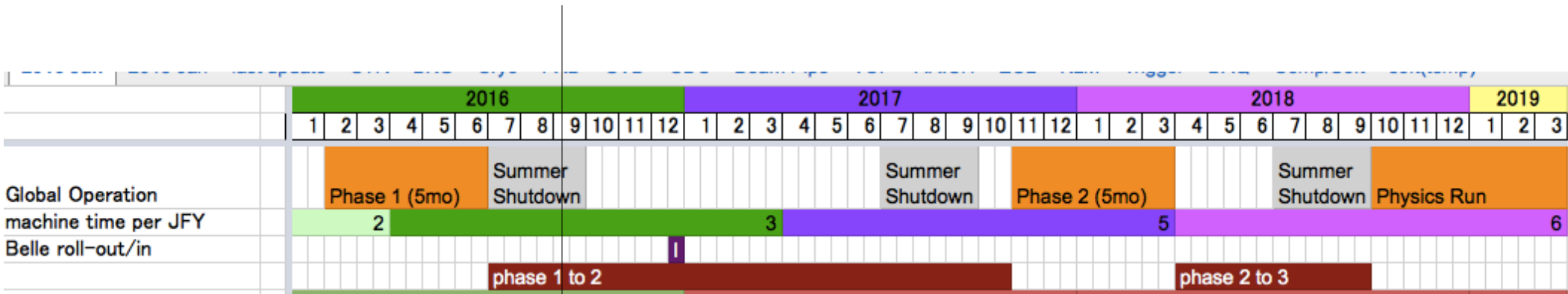
HLT & Storage : 3 units (of 5 at t=0) are ready to use. 1 unit is connected to kekcc.

Event Builder 2 : purchase in preparation. Waiting for PXD's output specification.

Exp reco : Components of the first unit is in hand.

Run control : Ready

Further schedule



We are here.

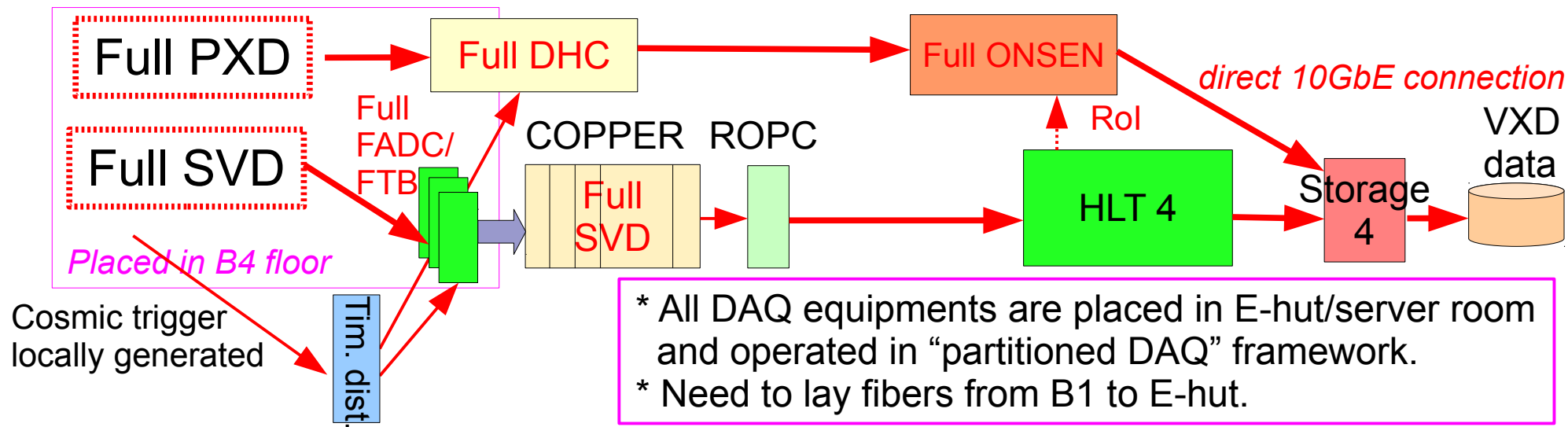
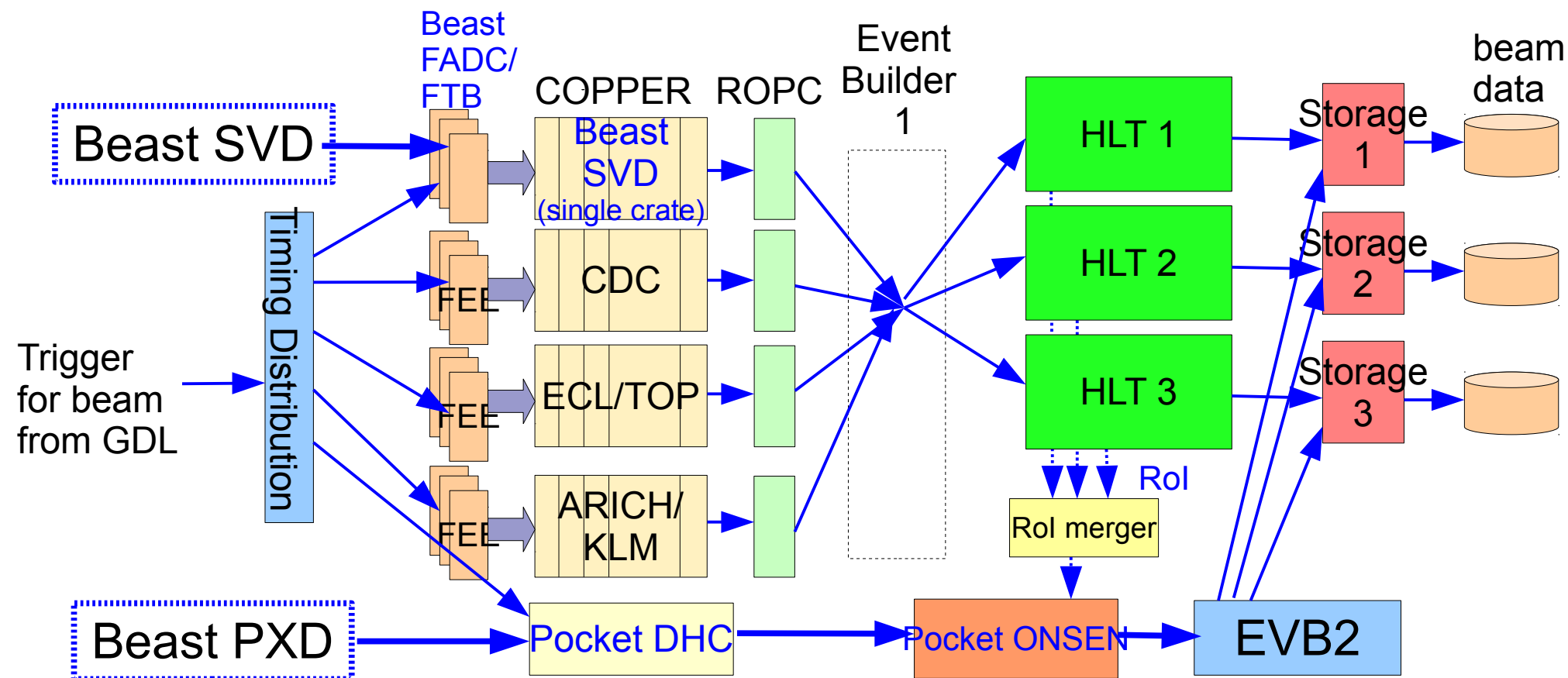
* But phase II schedule seems to be delayed: Early 2018

Random list of items to be worked toward Phase II Run

- Trigger: Tuning of 3D and Neuro trigger
- VXDDAQ: BEAST-VXD integration in DAQ + Full VXD cosmic
- PXDDAQ: Event Builder 2
 - * The protocol from ONSSEN to EVB2 should be fixed as early as possible => decided to use 1x10GbE connection?
 - * Configuration of event builder 2 may be simplified because of less data size estimation.
- Global run control
- Software for HLT/ExpressReco: Reconstruction and DQM codes for cosmic ray and beam
- Database : Start management of detector configuration, global event logging
- Data exchange with offline facility : raw data transfer, database import
- Environment monitor and interlock
- Accelerator feedback
 - * Luminosity
 - * Vertex position

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DAQ operation during Phase II run



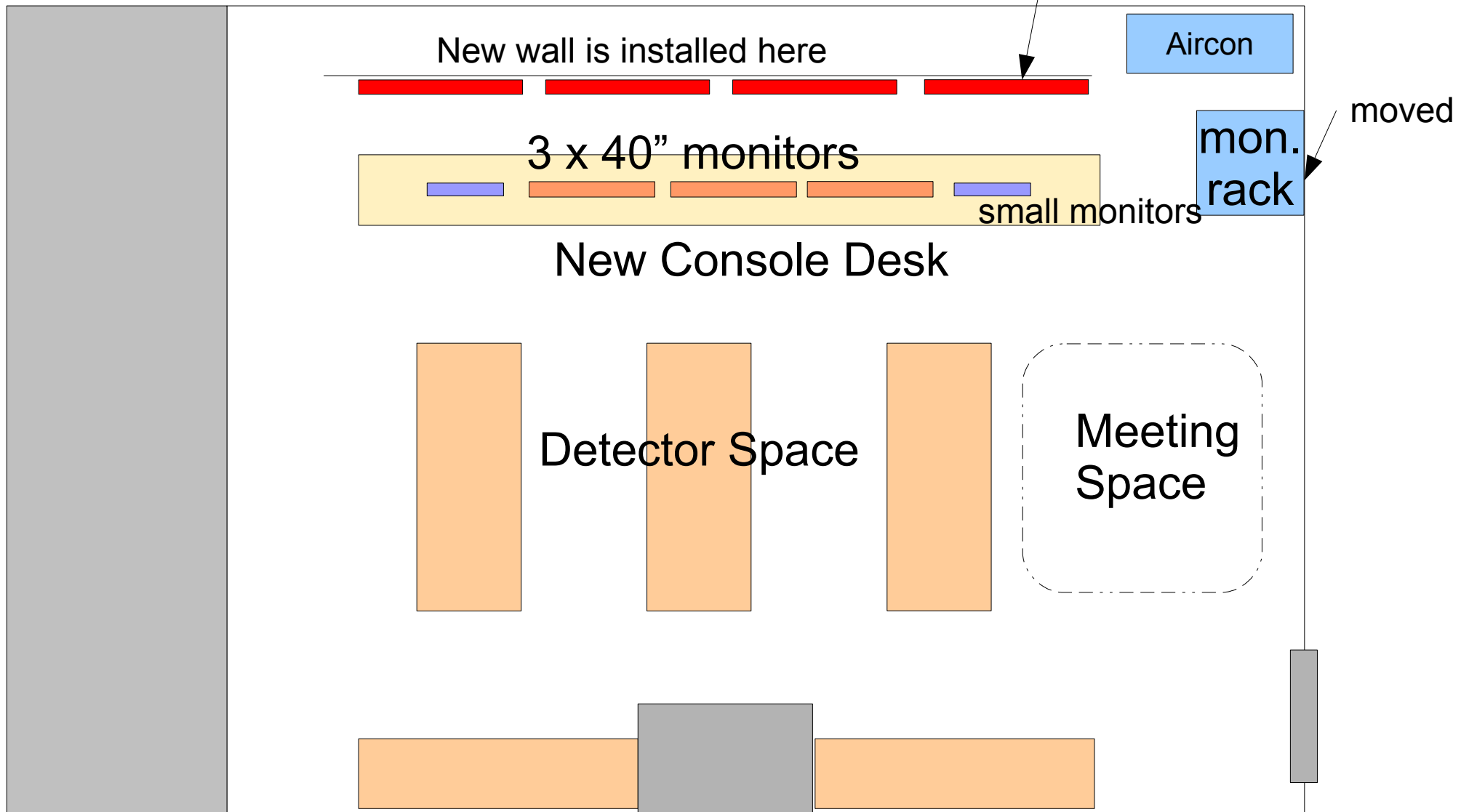
* All DAQ equipments are placed in E-hut/server room and operated in "partitioned DAQ" framework.
 * Need to lay fibers from B1 to E-hut.

Upgrade: Timeline

- Original idea was to start the R&D for the upgrade from 2018, but it may be deferred by one year because of the delay in Belle II schedule.
- It will require two years to complete the R&D.
- We will start the mass production of new readout cards from next year after the R&D, and complete the production in 3 years.
- The actual replacement of COPPERs will start in 2nd year of the production at the earliest.
- Subsystem-by-subsystem replacement is planned (as we did in Belle I to replace FASTBUS TDC with COPPERs).
- Complete the replacement by 2023(could be 2024) at the earliest.

Final Design of Control Room

3~4 wall mount 50" monitors



Next Workshop. Where and When?

- TRG/DAQ workshop series has been started from 1997 and workshops were annually held until 2006 at various places **in Japan**. After 3-year intermission, the WS series was restarted from 2010.
- History:
 - 2010 : Seoul (Korea Univ. hosted by E.Won)
 - 2011 : Beijing (Peking Univ. hosted by Z.-A.Liu)
 - 2012 : Hawaii (U. of Hawaii hosted by G.Varner)
 - 2013 : Seoul (Hanyang Univ. hosted by B.G.Cheon)
 - 2014 : Taipei (NTU hosted by J.G Shiu)
 - 2015 : Osaka (OCU hosted by E.Nakano)
 - 2016 : Novosibirsk (BINP hosted by A.Kuzmin)**
- When? -> Traditionally, we had this meeting in winter. But moved to summer for this workshop.
 - => Could be summer in 2017 before Phase II?
- Where? -> Difficult to decide now. Could be outside of Asia?
 - Let's keep discussion.

Let's thank Alex and his colleagues for organizing this great workshop!

Excellent coordination and Excellent parties....!!!!

