

DCH

Towards the TDR

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1. Conclusion of RD

- a) R&D is strictly needed only for the *Cluster Counting*.
- b) We do not expect we can *conclude* the R&D on C.C. in 1 year (assuming the TDR is due by end of 2011). However, in the TDR the DCH baseline readout will be the standard first-electron discriminated time + integrated charge as in BABAR, while C.C. will be presented as an option. We will describe whatever results have been obtained at the moment of the TDR writing.
- c) A discussion is ongoing to understand how the system should be designed to implement C.C. as an upgrade

2. ... and beam tests

- a) Beam test at TRIUMF suspended until the long prototype is ready
 - construction currently on hold, pending SuperB approval and tests on single tube
- b) Aim to schedule beam test at the BTF beginning of 2011. No detailed discussion on this yet

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3. Resolution of outstanding technical issues

- Decision made for square cells, 3:1 field:sense wire ratio
- Axial/stereo arrangement
 - to large extent negligible effect on tracking;
 - need dedicate effort to study impact on z trigger.
- Gas mixture: studies with prototypes and Garfield simulation ongoing
- DCH geometry: backgrounds and integration
 - a) solve large discrepancy between SuperB and SuperBelle simulations emerged in this meeting
 - b) amount and placement of shielding
 - c) need design of cryostats for I.R. magnets ASAP to define inner DCH radius (hence the chamber geometry and the layer layout)
- Detailed design of readout electronics, including trigger

4. Detailed design and engineering drawings

- It should be possible to have mechanical drawings (pending resolution of point **b**) above) and FEE design by fall 2011

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5. Detailed budget (at WBS level 5 or below)

- detailed construction schedule
- manpower estimate
- collaboration forming and division of work
- hiring of physicists and engineers

- *Estimates up to level 4 already provided for our subsystem*
- *We feel that for the DCH the points above should be deferred until we have official approval*
 - in fact, the approval will likely change drastically the level of people involvement