

Planning towards CD-2/3

Actions by approval

CD-2

- Establish performance baseline
- Continue Design
- Request construction funding

CD-3

- Approve expenditure for construction

Documents pre-CD 2&3 review

- CD-2

- Performance Baseline
- Preliminary Design
- Updated Risk Assessment
- Update PEP
- Updated Hazard Analysis
- Updated SVAR
- NEPA documentation

- CD-3

- Final design
- Updated CD-2 documents
- Updated QA program
- An approved Construction Project safety and health plan

Next steps

- It is unusual to have CD-2/3 together, since all documents really have to be ready.
- Consider if there are items that can be pulled out and identified as 'long lead items' (these are usual civil construction, large long lead item procurements)

- In the planning process we also have to think about the end-game
- Run-14/run-15 plans.
 - Priorities for getting sub-systems together
 - Recall the scope contingency comment in CD-1 report
- At least think about CD-4a/b.

Time before, next review

- By end May have CD-1
 - Preparation schedule
 - 2 month cost& schedule development
 - Finalize designs (if CD2/3)
 - Cost & schedule review (with BNL people)
 - Technical review (with BNL people)
 - Likely 2 months following this to finalize documents and presentations
 - Earliest September Review (also considering Summer commitments).
- Can this be speeded up – only if more people are working on this.

Issues, area than requires attention

- Management
 - BNL-PO needs NP budget, accounting to gather financial reports properly (Discussed this again with Ed)
 - Clarify procedures and responsibilities between management at different institutions, particular in area of budgeting, and cost controls.
 - Document responsibility

- Integration, IDS
 - Service req. Weight increase. How does mass increases effect other STAR programs ?
 - Stability requirements for IDS (for near-term review)
 - Finalize HV limits.
 - Installation plans (under different scenarios) and end dates.
 - Beam pipe back-out jackets, blankets.

- PXL – mechanical
 - Exterior structures, platforms.
 - Beam-pipe modifications, BBC mods, supports
 - Review of design
 - Vibrations (critical parameter)
 - Internal alignment
- PXL – electric
 - AI cable development (critical parameter)
 - Full ladders system test completed
 - Sensor development timescale

IST

- Sensor prototype and readout
- Manpower for developing cost & schedule, technical aspects
- The cable that Eric don't like (kapton->T.box) EA
- MIT resources in coming years and competition with FGT data taking and analysis
- Electronics plan (review comment)
- (analog cross talk) –HW
- Ladder prototype, mounting issue (GvN)
- Discussion on tube return. (SM vs. EA)
- Lots of design work for cabling from ladders over MSC through transition region.

SSD

- Sensor prototype review and finalize design
- Cooling, cabling and integration need real effort in near term.
- Evaluating flex cable segment-how to redo this?
- Needs Nantes Eng to have FPGA coding specified to have review in Sept?
- Manpower level sufficient? (note TBD slow control e.g.)

Software

- Development of schedule, and manpower needs
 - Calibration model near term milestone.
(workshop)
 - Manpower in broader sense (Purdue, UCLA).
Bringing people back.

Backup slides

- On-Project labor is defined as the effort associated with preliminary/final design, construction, and assembly. The scope is included in the work breakdown structure; the cost is included in the HFT TPC and is funded by the DOE.
- Redirected labor is also associated with all design, construction, and assembly. The scope is included in the work breakdown structure; the cost is included in the HFT TPC and is planned as a redirection of base DOE funding at LBNL, BNL and MIT.
- Contributed labor is scientific and IT labor supporting the overall development and operational capability of the HFT detector within the STAR experiment including software and physics analysis models. Contributed labor cost is not included in the HFT TPC but tasks and milestone dates related to this scope are embedded in the HFT Project schedule. Part of the funding comes from the DOE Base for Heavy Ion Physics Research Program.

Control via MOU's

- MOUs between BNL/HFT and the collaborating institutions will describe the expected efforts of both redirected and contributed labor; summarizing people (names/category) and their anticipated fraction (%) of activity related to specific tasks in the WBS. Draft MOUs which summarize the full scope and detail the first year's expected effort and milestones will be prepared for CD-2 and signed thereafter. The MOUs will then be updated annually to assert the task efforts for each institution for the next 12 month period.

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Contingency

- Scope funded as redirected labor will be assigned risk and contingency in the WBS. Contributed efforts will be assigned risk. Overruns in this category may result in overall schedule slip due to the special expertise of contributed scientific labor. Contingency funds will be set aside for use of short-term hires or support of scientist and students, and/or other measures that can be made available to alleviate a shortfall in effort on specific WBS tasks. In case an institutional commitment cannot be met, the HFT and STAR management will jointly seek solutions to identify and commit resources.