



PM Report CFS /Gbl 13.04.2011

- **ILC PAC (19-20 May) Agenda:**
 - Akira, Rongli, Hitoshi H, Marc, Nick, Toshiaki, Mark P., Peter G.
 - Nick will report on Design
 - Marc on FLASH 9mA
 - Peter G. on costing (likely his last PAC report for GDE)
- **Fixed TDR Baseline Review dates**
- **PM to meet with XFEL (28-29 April)**
- **Prep DR TDR Review INFN and**
- **Prep 9mA Workshop DESY (John)**



Request for information to SRF industries

- **12 each**
- **GDE Plan:**
 - 1) Receive initial responses before PAC review;
 - 2) Provide a common forum for discussion (24 July Chicago, prior to SRF2011);
 - 3) Develop the scope of cost estimate effort (to end 2011)

Goal: Replace the RDR estimate – which was based on DESY / TESLA studies



TDR Technical Baseline Reviews

- Dates and venues:**

Baseline Technical Reviews		
Area / Group	When	Where
DR	7-8 July, 2011	INFN
RTML	11-12 Oct 2011	Fermilab
Sources	13-14 Oct 2011	ANL
BDS	27-28 Oct 2011	DESY
SCRF / Main linac integration	19-20 Jan 2012	KEK
CFS	Winter 2011 / 2012	Fermilab or Cern

- Physics and Detector to be represented**



Planning for the TDP 2

	2010	2011	2012
Risk Mitigating R&D	█	█	█
Re-Baseline (CC)	█	█	
AD&I (TLCC)	█	█	
AD&I (TBR*)		█	█
TeV upgrade study		█	█
Update VALUE estimate		█	█
Tech. Risk Assessment		█	█
PIP		█	█
Write TDR report(s)			█



! You are here!

* Technical Baseline Reviews



TDP Key Focus (beyond R&D)

SCRF Cost

- mass production models
- global distribution

Highest Priority
(new estimate)

CFS design & cost

- Design update
- Value engineering

High Priority
(updated estimate)

Baseline Design

- Final design decisions
- Documentation
- Cost estimate

RDR update
Documentation
(scaled estimate)



CFS requirements
critical input



TDR Prep Review Meeting Goals:

- Review the **TDP R & D** and summarize progress and plans.
- Review the **system design**
 - including a **change control procedure** so that key design changes can be discussed openly
 - The updated baseline will be used for the TDR plan and cost estimate.
- Review the **system cost**
 - For SCRF and CFS, additional meetings, parallel sessions etc are also required.
- Review **system interface criteria**;
 - for example, requirements to CFS
- Review **supporting documents** for inclusion in the EDMS
- Discuss TDR preparation plans.
 - Upon the completion of the review, we should be able to publish a plan for producing that part of the TDR; resources, milestones, etc
- The review to be accessible to the community



Topics for System Design Review

- Review the TDP R & D and summarize progress and plans.
- Review the system design
 - including a change control procedure so that key design changes can be discussed openly

Example topics:

1. Cavity pairing – Power Distribution System.
2. Marx modulator
3. RDR HLRF fallback
4. RTML RF design and civil design.
5. Tunnel diameters
6. Power dissipation in the tunnel
7. DRFS components
8. Optimization of Positron production parameters:
 1. undulator length and field;
 2. polarization collimator space

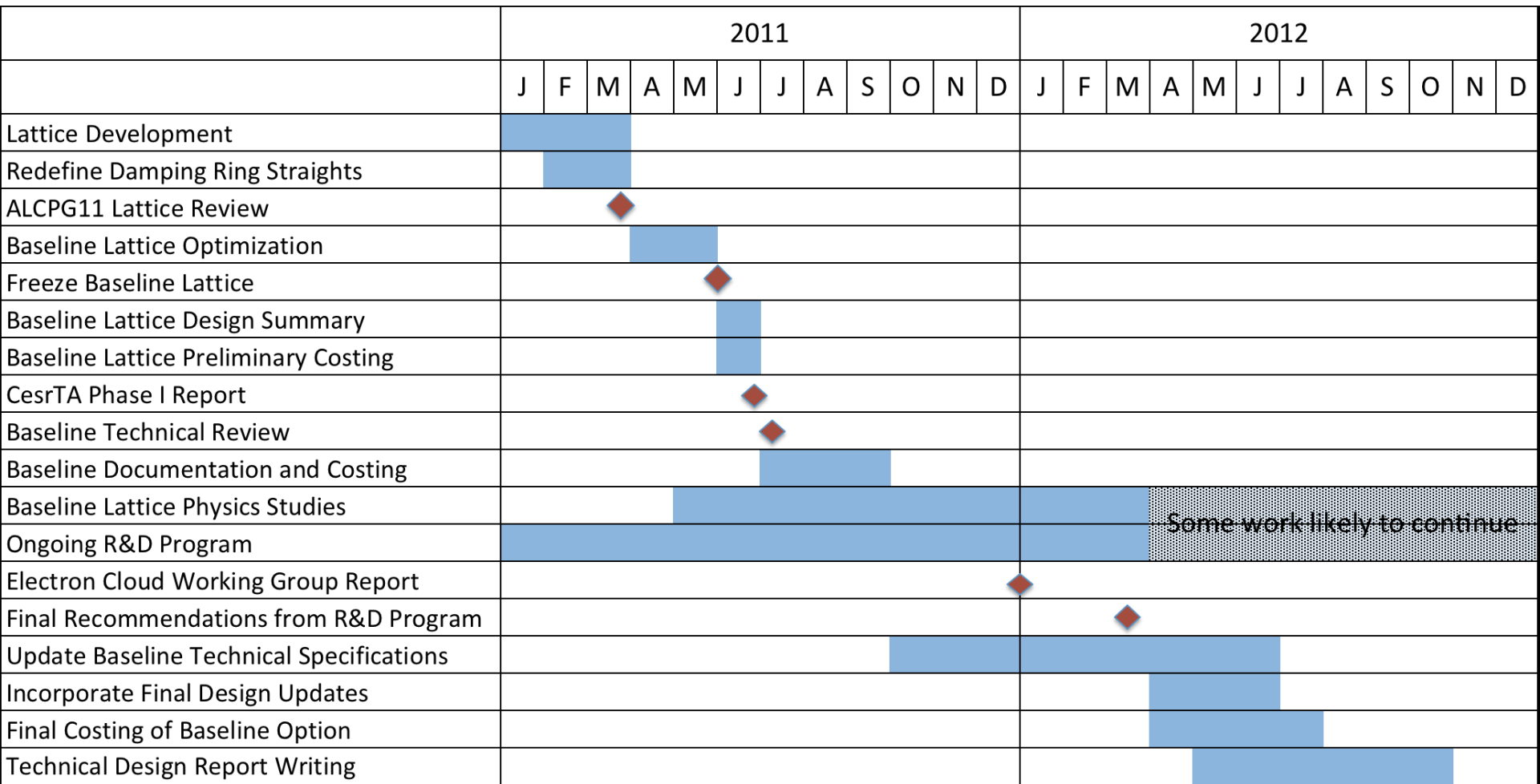


CFS – DR Review Preparation

- **CFS should meet with AS groups via webex, starting May 2011, and process the list of questions**
 - (should have no *new* questions at Baseline Review)
 - Started ALCPG11
 - See questions from Emil for e+ (posted)
 - shown June in DR TDP-II schedule
- **Tuesday weekly meeting topic?**



DR TDP-II Schedule





DR Agenda

Thursday, July 7

Morning Session

- Introduction
- DR Parameter Specifications
- Baseline Lattice Choice
- TDP R&D Progress/Plans

Afternoon Session

- Interfaces to Adjacent Area Systems
- Layout & CFS Interface

Friday, July 8

Morning Session

- Documentation
- Costing

Afternoon Session

- TDP-II Schedule
- Review Closeout
- EDMS Session



AD I notes – 01.04.2011

- **1) We should produce a written, prioritized, list of specific topics for discussion**
 - DR TAG and the PM (AND CFS)
 - to be merged
 - timing constraint concerns
- **2) 'final' all-system review where interfaces and dependencies are discussed.**
- **3) term: 'WBS' in AD&I and ALCPG to refers the outline structure to be used for organizing documents in EDMS.**
- **4) We will devote the 25 May ADI meeting to the 1 Tev upgrade.**



Global Sys. SRF Review Prep

- **How will we meet the ‘S2’ goals set forth in the S2 RDB report, generally, and in the RD Plan?**
- **we will not be able to do it all – but what are the problems and limits?:**
 - Cavity detuning measurement
 - Cavity gradient – what do we miss with only limited high grad cavities? (note SNS gradient limits $\sim <20$ MV/m)
 - Beam current – what do we miss by having $\frac{1}{2}$ nominal 9 mA?
 - LDF compensation performance
 - Q_I adjustment control
 - Tuner reliability



Global Sys. SRF Review Prep (2)

- **What should we plan to do at FLASH in 2011/12?**
 - Other test facilities?
- **Dark current interaction with linac operation**
- **Workshop – June 2011...**
- **Review – January 2012**
 - how do 9mA tests define the new baseline?
 - Given our experience with FLASH - what are the implications for upcoming baseline technical choices?
 - mainly in support of the cryomodule gradient operation spec:
 - → reaffirm the CM Specification determined at BAW-1