

**Status of
SB2009 Rebaselining Proposal Document
and
Feedback from PMs + Editor**

This version includes the touch ups applied during the
AD/I webex meeting

20091105 vers.D
N.Toge

What this thing is

- This is the first (or second?) feedback from the PMs and the editor, concerning your initial (or revised) draft as you find at <http://ilc.kek.jp/SB2009/> .
- Let us go through this at this webex meeting (2009/11/5), so that,
- Each of us would know what content issues to address before our next encounter.
 - **BTW, our next deadline is the end of 2009/11/20, where everyone is expected to have submitted “substantially complete” drafts to the editor, addressing the issues identified here,**
 - so that a major editorial organization work can ensue, before the December DESY meeting.

Template: Section Title ()

- Outline on the web?
- Zeroth draft on the web?
- System / Layout description?
- Tables / Illustrations?
- Risks / Implications / Open Design Issues / Plans description?
- Cost implications?
- Remarks
 - Title colors
 - **GREEN** = Fairly advanced for this stage
 - **BLUE** = Reasonable for this stage
 - **MAGENTA** = Items which need attention.
 - **RED** = Items which need some work.

Introduction (PMs)

<http://ilc.kek.jp/SB2009/IntroDraft20091105A.docx>

- Outline on the web?
 - Sort of
- Zeroth draft on the web?
 - Sort of
- Remarks
 - **Still need writing and elaboration**

SB2009 Overview (PMs)

<http://ilc.kek.jp/SB2009/IntroDraft20091105A.docx>

- Outline on the web?
 - Barely
- Zeroth draft on the web?
 - Barely
- Remarks
 - **The following has to be articulated more clearly**
 - **Low-current luminosity issues**
 - **Low-energy operation**
 - **Low-current → high-current transition, i.e. upgrade**
 - **For now, it'd be safe for everyone to assume that the parameter table in the summary of the DESY meeting in May is “it”.**

SB2009 Layout (PM + Paterson)

- Outline on the web?
 - No
- Zeroth draft on the web?
 - No
- Remarks
 - **Need to clarify our position on the beamline length issues at this moment (e.g, to give a solution case, or work plan, etc)**

Parameters (PMs + Toge)

<http://ilc.kek.jp/SB2009/IntroDraft20091105A.docx>

- Outline on the web?
 - Sort of
- Zeroth draft on the web?
 - Barely
- Remarks
 - **Latest reference is the last table in**
<http://ilc.kek.jp/TDP/DESYMeeting200905.pdf>
 - **Need more work / writing**

Gradient Issues (Yamamoto)

- Outline on the web?
 - Yes
- Zeroth draft on the web?
 - Yes
- Remarks
 - **MCR and NKT need to read**

Injectors / Sources - Electrons (Brachmann)

<http://ilc.kek.jp/SB2009/PES-Draft20091030.doc>

- Outline on the web?
 - Yes
- Zeroth draft on the web?
 - Yes
- System / Layout description?
 - Yes
- Tables / Illustrations?
 - Yes
 - **Need to mark up the (minor) changes wrt RDR.**
- Risks / Implications / Open Design Issues / Plans description?
 - R/D issues: Yes
 - **Need an itemized list (or a tabulation) of design issues to pursue?**
- Cost implications?
 - TBC
- Remarks

Injectors / Sources - Positrons (Clarke)

<http://ilc.kek.jp/SB2009/Injectors-BulletList20091006.doc>

- Outline on the web?
 - Yes
- Zeroth draft on the web?
 - **No. Still waiting.**
- System / Layout description?
 - No
- Tables / Illustrations?
 - Not yet
- Risks / Implications / Open Design Issues / Plans description?
 - Not yet
- Cost implications?
 - TBC
- Remarks

Damping Rings (Guiducci)

<http://ilc.kek.jp/SB2009/DR-Draft20091101.doc>

- Outline on the web?
 - Yes
- Zeroth draft on the web?
 - Yes
- System / Layout description?
 - Yes
- Tables / Illustrations?
 - Yes
- Risks / Implications / Open Design Issues / Plans description?
 - Yes
 - **Is the D.A. issue known to be OK, in terms of particle yield (in particular for posit)? If so (or not), please make a more substantial statement, if possible.**
 - **SB2009 vertical emittance(0.035@IP) is somewhat smaller than that of RDR (0.040@IP). --- diff is in the transport**
 - **When making comparison with the previous design we should do so with respect to RDR, not TILC08.**
 - **BTW lumi upgrade description might go elsewhere in the editorial process. So, beware please.**
- Cost implications?
 - TBC
- Remarks

RTML (Solyak)

<http://ilc.kek.jp/SB2009/RTML-BulletList20091021.docx>

- Outline on the web?
 - Yes
- Zeroth draft on the web?
 - Yes
- System /layout description?
 - Yes
- Tables / Illustrations?
 - Yes
 - **Would be good to have a tabled comparison with RDR**
- Risks / Implications / Open Design Issues / Plans description?
 - **Introductory motivation can be worded more strongly and upbeat.**
 - **200 micron bunch length no longer supported – Everyone please, confirm, that this is OK.**
 - **When making comparison with the previous design we should do so with respect to RDR, not TILC08.**
 - **SB2009 vertical emittance(0.035@IP) is somewhat smaller than that of RDR (0.040@IP). We'd like to be sure that that is OK, and would like to see some statements in RTML section.**
 - **No need to quote FTEs when talk about future plans.**
- Cost implications
 - TBC
- Remarks

KCS (Nantista)

<http://ilc.kek.jp/SB2009/KCSDraft20091104.doc>

- Outline on the web?
 - Yes
- Zeroth draft on the web?
 - Yes
- System / Layout description?
 - Yes
- Tables / Illustrations?
 - **Need illustrations (unit concept, system layout)**
 - **Need tables (system params, component params, RF power accounting including LLRF aspects)**
- Risks / Implications / Open Design Issues / Plans description?
 - **Consistency with the reduced beam power case**
 - **More itemized description desirable.**
 - **Statements filled in on thermal implications wrt cooling requirements in the latest draft 20091104.**
 - **Need statements on R&D + system validation plans**
- Cost impacts?
 - TBC
- Remarks

DRFS (Fukuda)

<http://ilc.kek.jp/SB2009/DRFSbullets20091105.doc>

- Outline on the web?
 - Yes
- Zeroth draft on the web?
 - Yes
- System / Layout description?
 - Yes
- Tables / Illustrations?
 - **Illustrations updated in the latest draft (20091105)**
 - **Need tables (system params, component params, RF power accounting including LLRF aspects)**
- Risks / Implications / Open Design Issues / Plans description?
 - **Consistency with the reduced beam power case**
 - **More itemized description desirable.**
 - **Need statements on implications wrt cooling requirements.**
 - **Need statements on R&D + system validation plans with more contents**
- Cost impacts?
 - ~yes
- Remarks

BDS (Seryi)

<http://ilc.kek.jp/SB2009/BDSDraft20091104.docx>

- Outline on the web?
 - Yes
- Zeroth draft on the web?
 - Yes
- System / Layout description?
- Tables / Illustrations?
 - **Appreciate the good drawings on BDS beamline**
- Risks / Implications / Open Design Issues / Plans description?
 - **Luminosity discussion requires more refinement.**
 - **Same for collimation.**
 - **“Attack plans” and “open issues” need to be described more specifically.**
- Cost impacts?
 - TBC
- Remarks

CFS (Kuchler)

<http://ilc.kek.jp/SB2009/CFSDraft20091104.docx>

- Outline on the web?
 - Yes
- Zeroth draft on the web?
 - Yes
- System / Layout description?
 - Yes
- Tables / Illustrations?
 - Draft illustrations prior to ALCPG, yet not part of SB2009 proposal doc
 - **Must identify key illustrations to use, and circulate them.**
- Risks / Implications / Open Design Issues / Plans description?
 - **Seen refined statements in the latest draft (20091104) on**
 - **The notion that the single-tunnels can accommodate the expected hardware components.**
 - **Single-tunnel power/cooling issues**
 - **Single-tunnel safety issues**
 - **Single-tunnel installation schedule issues, is possible. If not, identify this as an open issue to pursue during TDP2.**
- **2D drawings and activities to follow**
 - **2D drawings be readied by Friday 11/06 end**
 - **Check to be done by AGLs that they are “reasonable” by Wed 11/11**
 - **If the desires high and the situation allows, some AGLs may proceed to produce implementation figures**
- Cost impacts?
 - ~ yes
- Remarks

Costing (Garbincius)

<http://ilc.kek.jp/SB2009/CostDraft20091023.docx>

- Outline on the web?
 - Yes
- Zeroth draft on the web?
 - Yes
- Methodology discussion?
 - Yes
- Tables / Illustrations?
 - WIP
- Remarks
 - The Comparison to show is a comparison with respect to RDR, not TILC.

Risk Analysis (Ross)

- Outline on the web?
 - Soon
- Zeroth draft on the web?
 - **RSN**
- Methodology description?
 - No
- Tables / Illustrations?
 - No
- Remarks

Availability Analysis (Ross)

<http://ilc.kek.jp/SB2009/AvailDraft20091104.docx>

- Outline on the web?
 - Yes
- Zeroth draft on the web?
 - Yes
- Methodology description?
 - Yes
- Tables / Illustrations?
 - Yes
- Remarks
 - One section still missing.

Conclusions

- Hope that we have identified key content issues to address immediately,
- ... in addition to the ordinary word-smithing and preparatory work for illustrations and tables.
- We are asking you please to strive to submit your **next, refined, advanced-stage draft by the end of November 20, 2009** with these issues addressed.
- If you can keep this next deadline, you are likely giving enough time to the editor and PMs for organizing these materials into what looks like a coherent proposal document, well before the DESY meeting.
- At the DESY meeting in December, then, we will give one more triage process for refining this proposal document. And as found necessary, we shall address the few remaining nagging issues (whatever they may be) and fix them all before December 18.
- TIA for your continued support and cooperation.