

差出人: Masao KURIKI mkuriki@hiroshima-u.ac.jp

件名: Re: Positron WG report (revised plan)

日付: 2018年2月15日 17:32

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MK

Dear Kaoru,

The Lyn's message about the configuration change which should be after the green sign, does not mean that we have a plenty time for the decision. His intention is the configuration change before the green sign might cause some confusion on the official process by MEXT, e.g. TDR evaluation working group, etc., and not for ILC team (LCC). We have to prepare the list of things to do after the green sign EVEN BEFORE THE GREEN SIGN, otherwise, we do not know what we should do when we got the green sign. That is not what Lyn (and we) want.

The issues are

- 1) List up things to be done before the green sign,
- 2) List up things to do after the green sign,

I expect good discussions in the next coming WS at Fukuoka (May 2018) and the report should be summarized even before the WS to reserve our discussion prior to the WS, as you wrote in the first mail as

>> "I would like to define the deadline as the end of February so that  
>> people (TCMB, LCC, physics) would have sufficient time to think  
>> before AWLC."

According to these considerations, the boundary condition for the report does not change at all.

Even though, the end of February is too short to finish the report. How about the deadline for the first draft is in two weeks (March 2) and followed by two weeks for our discussion, correction, and final editing by Kaoru.

Masao KURIKI

2018-02-15 14:32 GMT+09:00 yokoya <kaoru.yokoya@kek.jp>:

Dear Positron Working Group

More than a month ago I wrote a mail to you on the plan of writing a report on the progress of the positron system. You may be wondering what's happening since then.

In fact I have been lazy but the main reason of the delay is the change of the nature of the report. The intention of Lyn and TCMB turned out that a significant change of the system before the "green light" might cause unnecessary confusion in the ILC team and also in the agencies/committees. Change of the system, if needed, can be done after the "light".

Thus, though a status report is anyways needed, the timeline can be a bit later, not the end of February. I have no idea about the new deadline. April?

Accordingly, the report can go to a bit more detail.

Here is a possible table of contents:

( ) : writer of draft

[ ] : number of pages

## 1. Introduction (Yokoya) [2]

### 1.1 Positron working group

### 1.2 Purpose of the report

### 1.3 Caveats (number of bunches, etc)

## 2. Undulator Scheme

### 2.1 From water cooling to radiation cooling (Yokoya) [1]

### 2.2 Change of parameters for Ee=125GeV

Longer undulator (Yokoya) [1]

Distance between undulator and target (Yokoya+Okugi) [1]

Thickness of the target and Positron yield with FC and QWT  
(Ushakov) [3]

### 2.3 Target (radiation cooling only)

Target design progress (Riemann) [5]

Key technologies (Sievers) [3]

R&D plan for next couple of years (Riemann) [3]

### 2.4 Positron capture

Flux concentrator (Martyshev) [1]

- QWT (Ushakov+Fukuda) [1]
- 2.5 Photon dump
  - Water curtain (Sievers) [2]
  - Graphite (Morikawa) [2]
- 3. e-Driven Scheme
  - 3.1 System overview (Kuriki) [5]
    - beam structure, system layout, yield calculation
  - 3.2 Target (Omori) [5]
  - 3.3 Flux concentrator (Martyshkin) [1]
- 4. CFS issues (very preliminary)
  - Target replacement (Kuriki, Sievers) [1]
  - Target region shielding (Terunuma, Kuriki) [2]
  - Staging (Yokoya) [2]
- 5. Cost comparison (Yokoya) [2]
- 6. Summary (Yokoya)

Give me questions and opinions.

Kaoru

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**Sent:** Wednesday, January 10, 2018 3:10 PM

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**Subject:** Positron WG report

Dear Positron Working Group

We are expecting the decision by MEXT on ILC project sometime in this summer (or autumn?). The last face-to-face meeting before the decision will be the ALCW2018 in Kyushuu in Japan near the end of May.

We have to make a consensus on the positron scheme by the workshop.

This must be eventually decided by LCC upper level but necessary technical information must be provided by our Positron WG.

For this purpose I think we should write a report (DOC but not PPT) which contains

- 1) technology progress by now
- 2) possible R&D plan in the next couple of years
- 3) evaluation of the status for the technology completion
- 4) cost comparison
- 5) minimum info about the upgradeability

for each of undulator and e-driven scheme and finally

- 6) comparison.

The number of pages may be 20-30 pages.

I would like to define the deadline as the end of February so that people (TCMB, LCC, physics) would have sufficient time to think before AWLC.

A possible process may be

- 1) First I write the table of contents and assign the writers for each section.
- 2) Give the writers a few weeks for the first draft

3) Discuss about the dratts within us in a tew phone meetings

4) Final touchup by me.

Please give me your opinion about the contents, deadline,  
etc.

Kaoru

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