

Minutes of the 15th Euro-Japan Compton capture&stacking meeting
(Corrected on Oct/10th)

Date: October 6th 17:00(JST) 10:00 (CET), 2008

A part of Attendees (whom Omori was able to hear the voices):
Louis(CERN), Vivoli(CERN), Frank(CERN), Wanming(ANL), Eugene(NSC-KIPT),
Ian(Cockcroft), Takahashi(Hiroshima), Kuriki(Hiroshima),
Urakawa(KEK), and Omori(KEK)

Agenda:

1. Program of the "Inj & DR" WG of CLIC08 WS : Louis-san
2. Cost estimate of ILC conventional source : Kuriki-san
3. Compton slides for Clarke-san's talk in SPIN 2008 : Kuriki-san
4. Report from 2nd Asia ILC R/D Seminar : Omori
5. Upcoming meetings : Omori
6. Discussion, ILC/CLIC common issues for Compton
7. General Discussions

Presentations:

L. Rinolfi: Program of the "Inj & DR" WG of CLIC08 WS
http://www-jlc.kek.jp/~omori/EuroJapanMeeting/20081006/20081006-Louis_CLIC08Program_C.pdf

M. Kuriki: Cost estimate of ILC conventional e+ source
http://www-jlc.kek.jp/~omori/EuroJapanMeeting/20081006/20081006-Kuriki_Conv_cost.pdf

M. Kuriki: Compton slides for Clarke-san's talk in SPIN 2008
http://www-jlc.kek.jp/~omori/EuroJapanMeeting/20081006/20081006-Kuriki_Posi.pdf

T. Omori: Report from 2nd Asia ILC R/D Seminar
http://www-jlc.kek.jp/~omori/EuroJapanMeeting/20081006/20081006-Omori_ReportAsiaILCRD.pdf

T. Omori: Upcoming Meetings
http://www-jlc.kek.jp/~omori/EuroJapanMeeting/20081006/20081006-Discussion_UpcomingMeetings.pdf

Materials:

Summary of the discussion about "ILC/CLIC common issues for Compton"
http://www-jlc.kek.jp/~omori/EuroJapanMeeting/20081006/20081006-Omori_ILC_CLIC_Common.pdf

Summary of the discussions:

1. Program of the "Inj & DR" WG of CLIC08 WS:

Please see "20081006-Louis_CLIC08Program_C.pdf".

Louis-san explained the program of the "injector and damping ring session" of CLIC08 workshop.

2. Cost estimate of ILC conventional e+ source:

Please see "20081006-Kuriki_Conv_cost.pdf".

Kuriki-san presented the cost estimation of a conventional positron source.

He assumed that we employed a single target instead of employing 3-4 targets. He also assumed to employ a SC booster linac (except first 500 MeV).

Under those assumptions, the cost of the conventional e+ source was estimated to be about half of the RDR baseline e+ source.

Omori pointed out that survivability of a single target is not sure, even if we employ new target technology such as a liquid lead target and a hybrid target, and even if we assume 1500 bunches instead of 3000 bunches.

Omori also pointed out that we should change the RDR baseline to use QWT and longer undulator then make re-estimation the cost.

3. Compton slides for Clarke-san's talk in SPIN 2008:

Clarke-san is going to give a talk "High Intensity Polarized Positron Sources for Future Linear Colliders" at SIPN 2008.

<http://www.faculty.virginia.edu/spin2008/>

Kuriki-san made 14 slides which explain Compton-based e+ source and sent them to Clarke-san.

Please see "20081006-Kuriki_Pos.pdf".

Clarke-san will include those slides into his talk.

4. Report from 2nd Asia ILC R/D Seminar:

Omori made a report from "2nd Asia ILC R/D Seminar" which was held on September 29-30 at KNU Daejeon Korea.

<http://chep.knu.ac.kr/ILCRD/>

(a) about BB's talk in the seminar:

Omori made question to BB about "reducing scope".

His answer was that "reducing scope" does not mean reducing energy or luminosity. He said that positron polarization for example.

- (b) about Kuriki's talk in the seminar:
Kuriki pointed out the problem of the matching device AMD in the RDR base-line positron source. He pointed that in the minimum machine we should consider QWT and 350 m undulator.
He also pointed that importance of the study of the conventional source, and new baseline should be a conventional source.

5. Towards Upcoming Meetings:

Please see "20081006-Discussion_UpcomingMeetings.pdf".

- (a) CLIC workshop at CERN (October 14th-17th)
Louis-san, Frank-san, Variola-san, Chehab-san, and Urakawa-san will attend.
- (b) Channeling Meeting at Sicily (Italia) (End of October)
The topics of this meeting is all sort of positron source using the channeling effect.
Chehab-san and Louis-san will attend.
- (c) ILC e+ face-to-face Meeting at Daresbury (October 29th-31st)
Kuriki-san will attend on the 3rd day though WebEx.
Frank-san will present the results of stacking study through WebEx.
- (d) GDE meeting + LCWS at Chicago (November 16th-20th)
There will be e+ source discussions and Minimum Machine discussions.
Louis-san, Urakawa-san, Kuriki-san, Takahashi-san, and Omori will attend.
As a new working group of CLIC-ILC working groups, the positron source working group was created.
This is very good news.
- (e) Paris meeting

KEK and Hiroshima people are considering to visit LAL for a small meeting.

Subjects: Compton design, LAL 4-mirror-cavity in ATF,
conventional with a hybrid target
Date : beginning of December?

December 2-5 were not convenient for Louis-san and Frank-san because there will be another important meeting.
December 1st is not preferable for them, because that is the one day before the important meeting.
So after December 5th is preferable.
Omori asked them about possibility of the week starting December 15th. The week is OK for Both Louis-san and

Frank-san.

6. Discussion, ILC/CLIC common issues for Compton:

We made a discussion about possible topics which have to be discussed in "ILC/CLIC common issues for Compton" session at CLIC 2008 workshop. Here is a list of candidates of the topics.

- (a) e+ stacking (except Linac scheme)
 - short damping time
 - pre-DR
 - Large current in Compton Ring, beam stability
 - choice of ERL parameters
 - energy compression before DR
- (b) optical cavity
- (c) high quality and high power laser

7. General Discussions:

- (a) Announcement from Louis-san:

A candidate site of Posipol 2009 will be in near CERN. Bordeaux is one of candidates. Please give your comments/opinions.
- (b) Announcement from Louis-san:

As Variola-san mentioned in the last phone meeting, France-CERN collaboration has been launched. The first meeting was held successfully.
- (c) Request from Kuriki-san:

Kuriki-san is going to ask Logatchov-san to give a talk about a liquid lead target in the ILC e+ source meeting in Daresbury. Kuriki-san also ask Chehab-san to give a talk about a hybrid target in the Daresbury meeting. However, schedules of both Logatchov-san and Chehab-san are not confirmed yet. If you know other good candidates of presenters, please give your suggestion to Kuriki-san.

The date of the next meeting is 23rd October (Thu)
17:00 JST (10:00 CET).

Reported by T. OMORI