

Minutes of the 7th Euro-Japan Compton capture&stacking meeting

Date: March 10th 17:00(JST) 9:00 (CET), 2008

A part of Attendees (whom Omori was able to hear the voices):
Vivoli(LAL), Variola(LAL), Chehab(LAL), Eugene(NSC-KIPT),
Louis(CERN), Frank(CERN), Vitaly(BNL), Takahashi(Hiroshima),
Kuriki(Hiroshima), Kamitani(KEK), Urakawa(KEK), and Omori(KEK)

Agenda:

1. Report from the Sendai GDE meeting : Omori
2. Capture simulation update : Vivoli-san
3. Stacking simulation update : Frank-san
4. Discussion 1, Plan of the POSIPOL2008 : Takahashi-san
5. Discussion 2, Toward the DESY Zeuthen ILC e+ meeting (7-9/Apr)
6. General Discussions

Presentations and materials:

T.Omori: Report from the Sendai GDE meeting
[http://www-jlc.kek.jp/~omori/EuroJapanMeeting/20080310/
20080310-Omori_SendaiTohokuGDE_Report.pdf](http://www-jlc.kek.jp/~omori/EuroJapanMeeting/20080310/20080310-Omori_SendaiTohokuGDE_Report.pdf)

F. Zimmermann: Staking Simulation Update
[http://www-jlc.kek.jp/~omori/EuroJapanMeeting/20080310/
20080310-Frank_StackingSimulations.pdf](http://www-jlc.kek.jp/~omori/EuroJapanMeeting/20080310/20080310-Frank_StackingSimulations.pdf)

Upcoming Meetings:

[http://www-jlc.kek.jp/~omori/EuroJapanMeeting/20080310/
20080310-Discussion_UpcomingMeetings.pdf](http://www-jlc.kek.jp/~omori/EuroJapanMeeting/20080310/20080310-Discussion_UpcomingMeetings.pdf)

Summary of the discussions:

1. Report from the Sendai GDE meeting

Please see 20080310-Omori_SendaiTohokuGDE_Report.pdf

Here is the summary of Omori's talk.

- (a) e+ source is still the '???' item in the GDE management.
- (b) Cost reduction may require further studies in a comparison of undulator- and conventional-sources.
- (c) Synergy is considered more important in GDE recently, in the context of the advanced accelerator technologies. The Compton is one of examples.
- (d) CLIC-ILC collaboration may include Compton.
- (e) Supports to the Compton source are increasing.
- (f) In the next GDE meeting at Dubna (June 3-7), GDE will focus on Siting and Conventional Facilities. Therefore, probably there will be no e+ discussion in Dubna. But we have to continue watching carefully.

Chehab-san asked the level of recognition of GDE about a crystal target conventional scheme. Omori answered "not yet". Omori thought revisit to conventional scheme with all three target type, metal, liquid metal, and crystal, was important.

Kuriki-san pointed out that cost estimation was important because GDE was very anxious about cost reduction.

Variola-san pointed out that the ambiguity in the stacking scheme made cost estimation of Compton difficult. If we decide to use pre-DR, it make cost increase.

Louis-san pointed out that CLIC assumed the pre-DR.

Valiora-san answered that the CLIC train length was short. This made usage of pre-DR easy. Since ILC has a long train, pre-DR should be big. This make cost of ILC pre-DR large.

2. Capture simulation update

Vivoli-san explained the status of the capture simulation.

He is now performing the capture simulation with three different requirements on energy spread.

Those are $\sigma_E = 12$ MeV, 5 MeV, and 3 MeV.

After completion of the simulations, he will send the results to Frank-san.

Also, Vivoli-san is now trying the full simulation up to 5 GeV.

3. Stacking simulation update

Please see 20080310-Frank_StackingSimulations.pdf.

Frank-san presented the results of the new simulation. In the new simulation, he assumed modifications of some parameters.

The modifications he assumed were, energy pre-compression [x3] (R. Chehab), additional DR wigglers for faster damping [x2], and larger rf voltage [x 1.5].

The numbers in [] were that "ILC2008" divided by "ILC2008-ComptonVersion"

"ILC2008" : Damping ring described in RDR.
"ILC2008-ComptonVersion" : DR assumed here.

The results was very good.

In the old simulation, the stacking loss was 76 %.
In the new simulation, this was improved. The loss in
the new simulation was 11 %.

Variola-san pointed out the possibility of further
modification of DR design which was more adequate to
the Compton scheme.

For the old simulation, please see this.
<http://www-jlc.kek.jp/~omori/EuroJapanMeeting/20080218/>

4. Plan of the POSIPOL2008

Takahashi-san reported the status of the
POSIPOL2008 preparation.

The biggest change from the first plan was the
conference venue. It was planned at Hiroshima University.
But now it is International Conference Center Hiroshima
located in Hiroshima city.

There will be no excursion.
We will have (almost) full 3 days for discussions.
As a banquette, we will have a dinner cruise in the
Hiroshima bay.

The registration of POSIPOL2008 will open on March 20th,
and will close on May 31st.

5. Toward the DESY Zeuthen ILC e+ meeting

We discussed about upcoming meetings.
Here is the list of upcoming meetings related to our
Compton activities.

- (a) ILC e+ meeting at DESY Zeuthen (April 7-9)
- (b) FJPPL at Paris (May 14-16)
- (c) Nano Beam WS at BINP (May 25-30)
- (d) GDE meeting at Dubna (June 4-6)
- (e) ECFA LCWS at Warsaw (June 9-12)
- (f) POSIPOL2008 at Hiroshima (June 16-18)
- (g) ILC Asia R/D Seminar at KyungPook (September 11-14)
- (h) GDE meeting + LCWS at Chicago (November 16-20)

We discussed the expected subjects and candidates of
attendees from the Compton group.

Please see "20080310-Discussion_UpcomingMeetings.pdf"
for details.

6. General Informations

Chehab-san will give the lectures "Positron sources for
CLIC and ILC" at CERN. The 1st lecture will be on 31st
March 2008 at 11h (CERN time or GMT +1).

There will be a webcast.
The address is: webcast.cern.ch

The date of the next meeting is 1st April,
17:00 JST (9:00 CET).

Reported by T. OMORI