Minutes of the 11th Euro-Japan Compton capture&stacking meeting

Date: June 2nd 17:00(JST) 10:00 (CET), 2008

A part of Attendees (whom Omori was able to hear the voices):
Variola(LAL), Vivoli(LAL), Eugene(NSC-KIPT), Louis(CERN),
Frank(CERN), Li(IHEP), and Omori(KEK)

Agenda:
1. Report from Nanobeam2008 : Omori
2. Capture simulation update : Vivoli-san
3. General Discussions

Presentations and materials:

T. Omori: Report from Nanobeam2008
http://www-jlc.kek.jp/~omori/EuroJapanMeeting/20080602/
20080602-Omori_Nanobeam2008.pdf

A. Vivoli: Capture Simulation Update
http://www-jlc.kek.jp/~omori/EuroJapanMeeting/20080602
20080602-Vivoli_Table.pdf

Summary of the discussions:

1. Report from Nanobeam2008

   Please see "20080602-Omori_Nanobeam2008.pdf".

   Omori made a report from Nanobeam2008 workshop.

   In this year's Nanobeam workshop, there was the session
   of "advanced e+ sources and crystal channeling".

   During the workshop, Logatchov-san, Urakawa-san,
   Takahashi-san, and Omori made the discussion of a conceptual
   design of a conventional e+ source with liquid lead target
   for ILC. Then they made a pre-conceptual design.
   For the detail of the design, please see the last half
   of the "20080602-Omori_Nanobeam2008.pdf".

   This design assumed that we employed the 600 Hz operation
   of the drive beam and the injector. Variola-san asked a
   feasibility of 600 Hz operation of a linac. Omori answered
   that the linac at Tohoku university is operatng at 300
   Hz. The linac is normal conducting, of course. So with
   an improvement of factor two, we could realize such
   a linac.

   This design will be presented in the GDE meeting (June/4-6)
   at Dubna by Urakawa-san/Logachev-san.

2. Capture simulation update

Please see "20080602-Vivoli_Table.pdf"

In the last meeting on May/13th, Vivoli-san reported the result of the simulation with a newly installed bunch compressor at 180 MeV. However, in the last meeting he only showed the results up to 1.129 GeV due to lack of time. In this meeting, he showed the result of the simulation up to 5 GeV.

The result of the simulation with (withOUT) the bunch compressor was shown in the second table (the first table) of the page-2 of the his file.

Here is the comparison of his simulations with and withOUT the bunch compressor at 180 MeV.

Table of the comparison at E = 5 GeV

with the bunch compressor	withOUT the bunch compressor
sig_z = 0.30 cm	sig_z = 0.49 cm
sig_E = 31.1 MeV	sig_E = 63.75 MeV

The simulation with the bunch compressor showed significantly smaller values in both sig_z and sig_E.

He will continue the optimization. The third table of the page-2 is an example of such trial toward the optimization.

Omori asked the relation between the E vs sig_E.
Vivoli-san will make the plot of sig_E as a function of E.

The date of the next meeting is 15th July,
17:00 JST (10:00 CET).

Reported by T. OMORI