

Summary Notes of

3rd Institute Board Meeting of the CLIC Detector and Physics Study

Held at CERN on 5 February 2014, 12:30-14:00

Present at CERN: Marc BOLAND (Australian Collaboration for Accelerator Science **ACAS**), Ivanka BOZOVIC-JELISAVCIC (**Vinca** Institute of Nuclear Sciences, Belgrade), Jean-Jacques BLAISING for Yannis Karyotakis, (LAPP **Annecy**), Phil BURROWS (University of **Oxford**), Marco Aurelio DIAZ GUTIERREZ (Pontificia Universidad Catolica de Chile, **Santiago**), Gerald EIGEN (University of **Bergen**) Konrad ELSENER (**CERN**), Aharon LEVY (**Tel Aviv** University), Titi PREDA (**Institute for Space Science**, Bucharest), Marcel VOS replacing Alberto RUIZ (**Spanish Network for Future Linear Colliders**), Aidan ROBSON (University of **Glasgow**), Frank SIMON (**Max Planck Institut für Physik**, Munich), Mark THOMSON (University of **Cambridge**), Harry WEERTS (**Argonne**)

Also present: Lucie LINSSEN (CERN), CLICdp spokesperson

Attended via Webex: Konstantin AFANACIEV (**Minsk**, Bielorrussia), Marek IDZIK (**AGH** University of Science and Technology, Cracow), Tomas LASTOVICKA (Institute of Physics, Academy of Sciences, **Prague**), Leszek ZAWIEJSKI (The Henryk Niewodniczanski Institute of Nuclear Physics, **Polish Academy of Sciences**, Cracow), James WELLS (University of **Michigan**)

Apologies/absences: Ulrik UGGERHOJ (**Aarhus** University), Nigel WATSON (University of **Birmingham**),

Link to Meeting (Indico page): <http://indico.cern.ch/event/295250/>

1) News / Requests from the Institutes

Vinca Institute had submitted a few slides, on which they express concern about the fact that, internally, only LHC activities are recognized as CERN related work. Lucie explains that one next step to improve this situation should be the inclusion of CLICdp and its institutes in the CERN "Grey Book".

2) Report from the Spokesperson

a) CLICdp Membership

As of the beginning of this meeting, CLICdp has 21 members. Recently, a request to participate has been received from the University of Liverpool - the MoC has meanwhile been signed on their part. The Institute Board **unanimously welcomed Liverpool** to CLICdp.

b) Organisation and Nominations

Lucie proceeded with a number of proposals/nominations. She first proposed two additional members of the Executive Team:

- Konrad Elsener (CERN) as Technical Co-ordinator
- James Wells (Michigan) for physics/theory expertise

In order to have a well-focused and co-ordinated effort on detector optimization (one of the goals for 2014 being a new CLIC detector model) Lucie proposes a new CLICdp working group on detector optimization. As conveners, Frank Simon and Christian Grefe are proposed.

The present chair of the Speakers Committee, Erik van der Kraaij, will be leaving particle physics. Lucie proposes Ivanka Bozovic-Jelisavcic as Erik's successor. (A third member of this committee will have to be found - this is the task of the spokesperson together with the chair of the committee).

Mark Thomson is proposed to formally take up the role as CLICdp representative to the LCC Physics and Detectors Executive Board - so far, he had this function "ad interim".

All of the above proposals and nominations were approved unanimously by the IB members.

c) Dates for the end of Mandates

The MoC and its Annex 3 are purposely kept rather vague concerning the exact terms of the mandates for the IB chair and the spokesperson. Lucie proposes to define the end of term of the present mandates, i.e. for herself and for Frank. After a short discussion, the IB **decided** that the end of the present term for the IB chair is end of June 2015, and for the spokesperson end of December 2015.

d) Upcoming Meetings

- At the forthcoming **Americas** Workshop on Linear Colliders (**12-16 May** at Fermilab), it is planned to hold a CLICdp session. We are also suggesting to reserve time for a common session of ILC and CLIC detectors to discuss issues of detector optimisation.
- The next **LCWS** workshop will be held in Belgrade, **6-10 October**.

- In between these two big workshops, it was felt useful to have a CLICdp two-day workshop, probably best scheduled around the end of June at CERN. **Date to be decided and communicated.**
- The (bi-)monthly information and discussion meetings will continue on Mondays, but we will try to hold these at **15:00** from now on (this is a change welcomed by colleagues in Australia, but also by Argonne). The next such meeting is scheduled on **3 March**.

e) Work Plan and Milestones

For the near future, we have two goals for our work, which are rather easily defined:

- A comprehensive "Higgs-Paper" summarizing the potential of CLIC for precision Higgs studies, to be completed as soon as possible, within a few months;
- A new optimised CLIC detector model, implemented in the DD4hep geometry description software, by the end of 2014.

Moreover, there is a list of outstanding analysis topics, to be assigned to volunteers following the completion of the ongoing Higgs analyses.

After a short discussion, the IB **agreed** that it was useful to have a couple of general milestones as the ones above, but that it was not recommended at this point to have a very detailed work plan for CLICdp.

During the presentation of this agenda item, and in particular linked to the proposed work on a new CLIC detector model, the possibility of an external group (not part of CLICdp) proposing a detector design for CLIC was mentioned. Lucie stated that - mainly due to limited resources and given the results of the optimisation studies carried out so far - CLICdp will normally focus on only one detector model in future. However, this does in no way prevent other, independent initiatives. If additional detector designs for CLIC are being proposed, a mechanism to integrate these with the CLIC machine design effort will be found, e.g. through the MDI working group.

3) CLICdp in the context of the European Strategy for Particle Physics

After reminding the IB members of statement "d" of the European Strategy Update, Lucie explained why there are now efforts to have CLIC (and CLICdp) reviewed at CERN, in parallel with the *Future Circular Collider* studies. The review mechanism for the accelerator part of these studies appears rather straightforward: CERN has a "Machine Advisory Committee", which can review both studies.

Future reviews for energy frontier physics studies (FCC and CLICdp) and for the detector design concepts still need to be organized. Discussions have started at CERN, a next meeting is planned for March - news on this topic will be communicated after that.

There was **broad support** by the IB members for a CLICdp review (possibly every two years) within the CERN structures, and linked to other CERN studies at the high energy frontier.

4) Report from the LCC PD Executive Board

Mark Thomson gave a brief report on the LCC PD EB weekly meetings, and on the structure being set up. Recently, an MDI WG with Karsten Buesser as convener, and an R&D liaison (Maxim Titov, with deputy Jan Strube) have been put in place. Discussions on the scope and composition of a Physics Working Group are still on-going.

5) Discussion of MoC Annex 3

A draft version of Annex 3 of the MoC had been distributed before this meeting. Some minor editorial changes, suggested by Aharon Levy, have already been inserted. The IB **unanimously approved** this slightly modified version of Annex 3.

6) CLICdp and AIDA-2

Prior to this IB meeting, Frank had sent a call for ideas and topics for AIDA-2, being submitted or being considered by the institutes. His slide 2 summarizes the replies received. Frank stressed that, even more than in the original AIDA, the infrastructure aspects of each proposal must be very clearly identifiable.

An open meeting of AIDA-2 will be held at CERN on 17 February, starting at 10:00. This should give an overview of the Expressions of Interest received, and will be the starting point for discussing the possible ingredients of an AIDA-2 proposal. The IB supports the presently proposed agenda for the meeting on 17 February, i.e. that the CLICdp and the ILC detector matters are presented in separate talks. The IB members asked Lucie to give the CLICdp overview talk at that meeting.

Lucie encouraged institutes within CLICdp to submit their own EoI to Laurent Serin, to show their interest in participating in one or the other of the efforts with AIDA-2. As in the past, it will be a policy of the CERN LCD group to support the principle that smaller institutes should be given decent opportunities to participate in the EU-funded project.

7) A.O.B.

No further discussion topics were raised. The next IB meeting will be announced in due time.