Spokesperson Report

CLICdp Institute Board, 28 August 2018

Aidan Robson, University of Glasgow & CERN

Collaboration organisation issues

- Physics Analysis WG convenor
- Publications Committee chair and membership
- Speakers Committee membership
- IB membership

Updated luminosity staging baseline

Advisory Board report

European Strategy preparation

- Authorship and review plans
- National meetings update

Announcements / reminders

- Warsaw job opening
- Forthcoming meetings

Physics Analysis WG

- Victoria Martin (Edinburgh) has been co-convener of Physics Analysis WG since October 2016
- As with all collaboration roles, a certain degree of rotation is desirable
- *Many thanks to Victoria!*
  –> propose to replace Victoria by Filip Żarnecki (Warsaw) (joining Philipp Roloff)

Request to IB for endorsement

Publications Committee

- As Filip is moving to Physics Analysis WG co-convener and he currently chairs PubComm, new member & chair required
- *Many thanks to Filip!*
  –> propose to replace Filip as chair by Nigel Watson (Birmingham)
  (existing committee member)

  –> propose to replace Filip as member by Ulrike Schnoor (CERN)

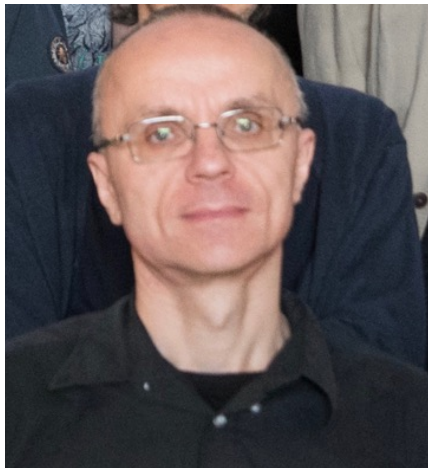
Member: Request to IB for endorsement

Chair: Request to IB for approval

- Other members: Aharon Levy (Tel Aviv), Simon Spannagel (CERN)

Speakers Committee

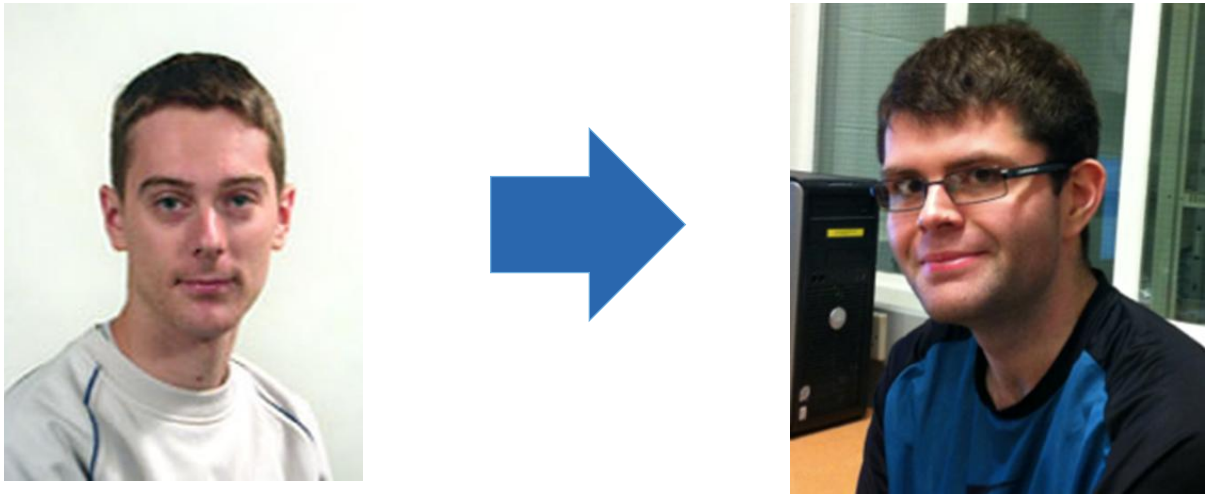
- Igor Boyko (JINR) has been member of the Speakers Committee since spring 2017
- As with all collaboration roles, a certain degree of rotation is desirable
- *Many thanks to Igor!*
  –> propose to replace Igor by Emilia Leogrande (CERN)
  (joining Naomi van der Kolk (Nikhef) and Eva Sicking (CERN))



Request to IB for endorsement

Institute Board: Cambridge

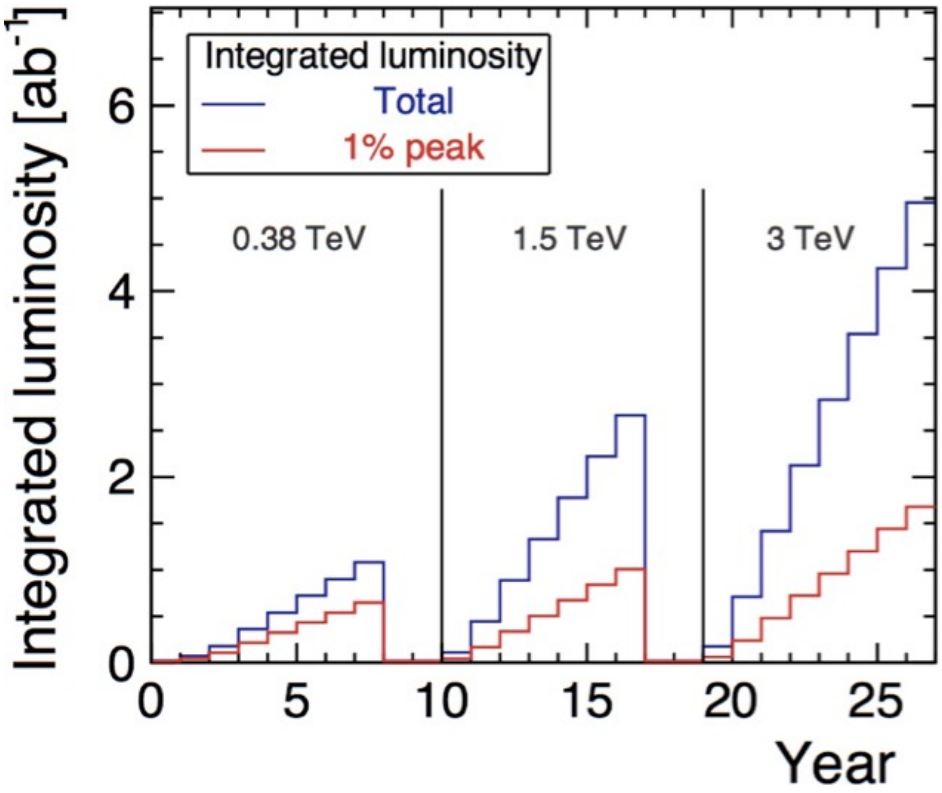
- When Mark Thomson became head of the UK's research council STFC, John Marshall took over as Cambridge's IB representative
- John has just taken up a permanent position at Warwick *Congratulations to John!*
- –> John will be replaced by Steve Green



- Both keen to maintain links with CLICdp and support our use of Pandora to the extent possible given their other commitments

Updated luminosity staging baseline

- For recording in the minutes:



1ab^{-1} at 380 GeV
(incl. ttbar threshold scan)
+ 2.5 ab^{-1} at 1.5 TeV
+ 5 ab^{-1} at 3 TeV

Splitting of beam polarisation configurations to maximise the overall physics potential:

- 380 GeV: equal luminosity with +80% and –80%
- 1.5 and 3 TeV: 80% of the luminosity with –80% polarisation

Advisory Board report

- Please note that the Advisory Board report is not for public circulation. We do however propose to send it to the CERN management.

- Continue discussion on Advisory Board report from morning session:
    - Physics case
    - Overall detector design
    - Vertex and tracker design and technologies
    - Calorimeter design and technologies
    - DAQ and detector readout
    - CLIC operating strategies

Report preparation

- Top-Quark Physics at the CLIC Electron–Positron Linear Collider
  –> submitted to JHEP in July

- The Compact e+e– Linear Collider (CLIC) – 2018 summary report [Yellow Report]

- The CLIC Physics Potential [Yellow Report]

- Detector Technologies for CLIC [Yellow Report]

- A detector for CLIC: main parameters and performance

CLIC Summary Report

- Along the lines of CDR vol 3 / updated baseline yellow report
- Joint with accelerator collaboration
- Intended as Yellow Report
- Schedule: assemble in Sept/Oct, but relies on final results/plots from other reports
- Deadline for submission to CREB: 1st December [for all yellow reports]

Summary Report Editorial Team:

Lucie Linssen [lead]
Phil Burrows
Aidan Robson
Daniel Schulte
Eva Sicking
Steinar Stapnes

Total number of pages ~63

Detector Technologies for CLIC ['R&D Report']

- Covering vertex and tracker R&D, summaries of CALICE & FCAL work, and DAQ.
- Intended as Yellow Report
- Schedule: aim to submit to PubCom mid-Oct
- Deadline for submission to CREB: 1st December [for all yellow reports]

R&D Editorial Team:

Dominik Dannheim (CERN) [lead]
Andreas Nürnberg (Karlsruhe)
Aharon Levy (Tel Aviv)
Katja Krüger (DESY)

Contents

The CLIC Physics Potential ['BSM Report']

- Combination of theory contributions arising from Physics Potential WG, and full simulation studies (including summary of earlier studies to be comprehensive).
- 3 main chapters:
  Standard Model Effective Field Theory
  Direct Searches
  Flavour Physics
- > 50 studies contributing
- Deadline for individual contribution drafts is past
- Chapter editors to deliver ~complete drafts by end August
- Overall editing happening during September

BSM Editorial Team:

TH: Jorge De Blas (INFN-Padova)
Roberto Franceschini (Rome)
Francesco Riva (EPFL)
Michael Spannowsky (Durham)
James Wells (Michigan)
Andrea Wulzer (CERN)
Jure Zupan (Cincinatti)

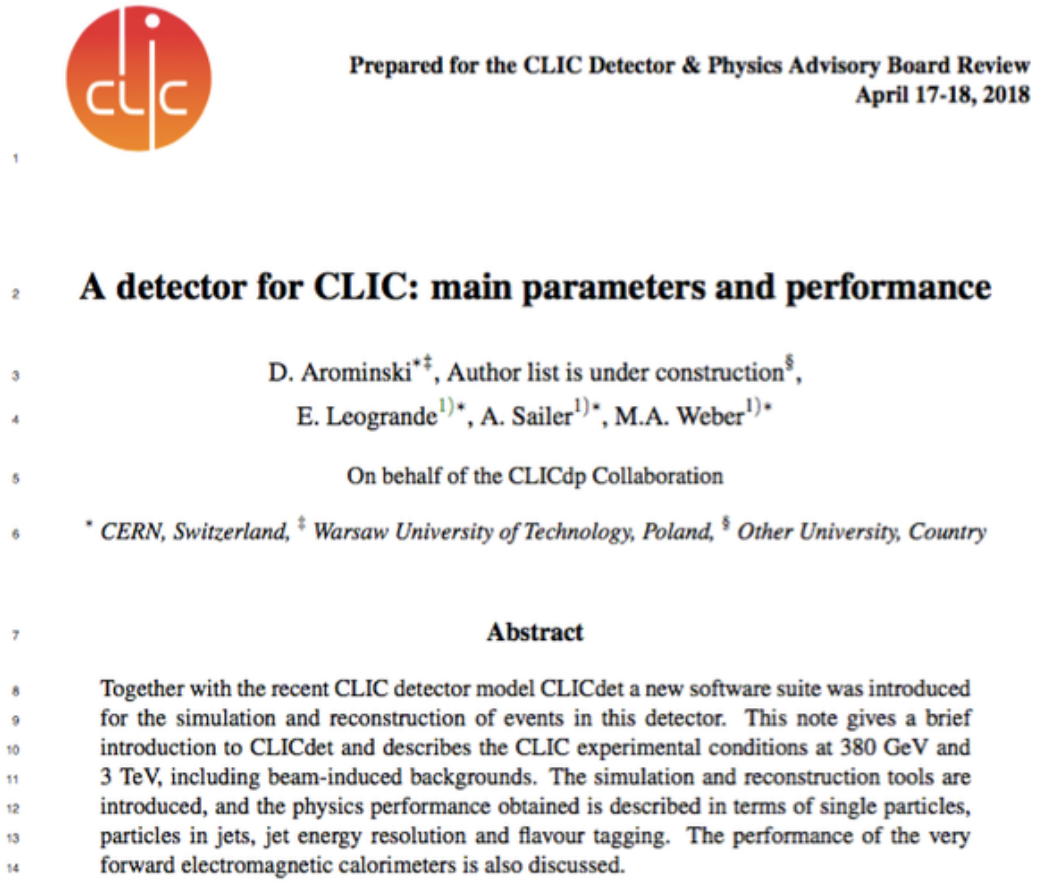
EXP: Philipp Roloff (CERN)
Ulrike Schnoor (CERN)

Detector Performance/Validation Note

- Complete version of the CLICdet detector performance & validation note was available for the Advisory Board review

- Already went through a round of review in CDS
- Aim for completion 1st Nov and review thereafter
- Final completion: 1st Dec

Editorial Team:
Andre Sailer (CERN) [lead]
Emilia Leogrande (CERN)
Matthias Weber (CERN)
with support from
Konrad Elsener (CERN)



Prepared for the CLIC Detector & Physics Advisory Board Review
April 17-18, 2018

A detector for CLIC: main parameters and performance

D. Arominski[*‡], Author list is under construction[§],
E. Leogrande[1)*], A. Sailer[1)*], M.A. Weber[1)*]

On behalf of the CLICdp Collaboration

[*] *CERN, Switzerland,* [‡] *Warsaw University of Technology, Poland,* [§] *Other University, Country*

Abstract

Together with the recent CLIC detector model CLICdet a new software suite was introduced for the simulation and reconstruction of events in this detector. This note gives a brief introduction to CLICdet and describes the CLIC experimental conditions at 380 GeV and 3 TeV, including beam-induced backgrounds. The simulation and reconstruction tools are introduced, and the physics performance obtained is described in terms of single particles, particles in jets, jet energy resolution and flavour tagging. The performance of the very forward electromagnetic calorimeters is also discussed.

Authorship and review planning

- CLIC Summary Report:

  Author list: Complete CLICdp + CLIC accelerator
  IB members will be contacted to provide authors

  'Normal' CLICdp review process

- Detector Technologies Report:

  Author list: those who provided input to the studies
  IB members will be contacted to provide authors

  'Normal' CLICdp review process

- Physics Potential Report:

  Author list: those who provided input to the studies
  (opportunity to check during review)
  Very many theorists involved (not members of CLICdp)

  Editors should already be in contact with individual contributors regarding editing of their sections
  Report will be circulated to authors and entire CLICdp for comment

- Detector performance/validation note:

  Author list: those who provided input to the studies
  (opportunity to check during review)

  'Normal' CLICdp review process (one round already)

For IB discussion

ESU National Meetings

- At CLIC January workshop I asked to be kept informed of national meetings preparing for ESU, so that we could consider how/when to provide CLIC input.
- So far, aware of three that have taken place where CLICdp has been able to provide input to speakers or to give talks:

- DE: Community strategy workshop on particle physics, Bonn 3–4 May
  – culmination of several years of preparatory workshops
  strategy is very favourable to e+e–
  http://www.ketweb.de/e199632/e199635/e268373/e296589/Abschlusserklaerung.pdf
  – ESU input will be drafted later

- CH: CHIPP Strategic Workshop, Roadmap Planning, 3–5 April
  – follow-up meeting ~September

- UK: 'Mid-career' strategy discussion meeting, Durham 16–18 April
  Community-wide meeting, RAL 16–17 July
  Follow-on meeting, Birmingham 20–21 September

–> please continue to let us know about such meetings

–> please take opportunities to give local seminars on CLIC to raise awareness

Announcements / Reminders

CLICdp job opening at Warsaw

- Reminder: University of Warsaw has an open fixed-term (2-year) research Assistant Professor position
- To work on CLICdp, particularly in top/BSM physics analysis
- Open to those whose PhD was awarded in 2011 or later
- Deadline is extended to 15th September
- –> encourage interest ; contact Filip Żarnecki

Forthcoming meetings

- CLIC Workshop 2019:
  21–25 January 2019 at CERN
- LC Strategy Meeting
  Expected late March / early April
- ESU Community Meeting
  13–16 May 2019, Granada