

# Introductory remarks

João Guimarães da Costa

August 28, 2018



中國科學院高能物理研究所

*Institute of High Energy Physics  
Chinese Academy of Sciences*



# CDR Schedule

- **Sat, Aug. 25:** Steering Group meeting
  - Endorsed International Review Committee (although we will still try to increase it by two members)
  - Endorsed plan for the International Review
  - No major concerns about the current CDR draft
  - Got results from internal review organized by Xinchou, comments were sent directly to the corresponding editors
    - No show stoppers —> Endorsed to move forward for International Review
- **Sat, Sept. 1:** Draft v2.0 for review by international committee
  - This version will already be made public (by steering committee decision)
- **Thu-Sat, Sept. 13-15:** International Review Committee Meeting
  - Get preliminary recommendations from committee
- **Fri, Sept. 21:** Publish CDR on the CEPC website



# Draft Version 1.2

- <https://indico.ihep.ac.cn/event/8650/contribution/18/material/0/0.pdf>
- Major Outstanding issues:
  - Author list included in the draft — 834 people — Please check
    - Please reply to emails and be proactive gathering authors in your community and institutions. It is better to send a list of names to Zhaoru.
  - Calorimeter optimization needs to be updated — Jianbei
  - Magnet update with more details — Zhao Wei
  - Muon chapter needs numbers verified — Liang
  - Chapter 12 on Future Plans and R&D Prospects to be edited — Joao
  - Anything to update in the performance numbers? — Jianming, Manqi?
    - Some of these already happened. See discussion later.
  - List of known issues in draft v1.0 early in document, and indicated in red in the text. Please CHECK and give us FEEDBACK
  - Further general editing — Joao/Gang/Zhaoru
    - Typos, references, formatting, etc
- Encourage senior people in your institution to read and provide feedback
- Draft can be given to people that want to consider being an author



# Draft v1.2 - Outstanding Issues

- Calorimeter - Figure 5.45: Improve resolution, increase size of legend, [232](#)
- Calorimeter - Figure 5.48: Substitute with proper resolution picture, [235](#)
- Calorimeter - Figure 7.2: crop pictures to increase size, [254](#)
- Calorimeter - Text: Move text into the introduction at start of chapter, [187](#)
- Calorimeter-ECAL - Check: check text and results for intrinsic performance, [190](#)
- Chapter 3 - DECISION: Remove any mention of the name IDEA and substitute it with alternative detector?, [130](#)
- Chapter 3 - Figure: Expand caption for IDEA detector, [132](#)
- Chapter 3 - Figure: expand caption., [114](#)
- Chapter 3 - Figure: update with labels., [127](#)
- Chapter 3 - Table: expand caption., [126](#)



# Draft v1.2 - Outstanding Issues

Introducton - Reminder - text to be added later:

A preliminary version of this Physics and Detector CDR was reviewed by an international review committee in September 2018. The comments from the reviewers have been taken into account in this final document, and details about it can be found in Appendix, [2](#)

Magnet - Check: check number of size of yoke, [243](#)

MDI - Text: Include beampipe information, [265](#)

Muon - Figure: Needs update with proper geometry., [252](#)

Muon - Text: Discussion of muons inside jets., [254](#)

Muons - Table 7.1: Check number in this table., [253](#)



# Draft v1.2 - Outstanding Issues

Performance - Check: check numbers below in red., [300](#)

Performance - Check: check numbers in red below – several need update, [295](#)

Performance - Figure 10.11: (b) update? change y-axis title, [295](#)

Performance - Figure 10.9: update? (a) Comment on what photons are used for the resolution curves, [292](#)

Performance - References: Check references..., [285](#)

Silicon Tracker - Add Text: add information about sensors in baseline, and angles, etc., [162](#)

Silicon Tracker - Figure: Let's make sure the baseline numbers are consistent with what we presented earlier in the baseline subsection, [174](#)

Silicon Tracker - Text: check text for definitions and modify, [166](#)

Silicon Tracker - Text: Edit strip detector details., [170](#)



# Draft v1.2 - Outstanding Issues

Theory - Figure: Update to add GeV to  $m_H = 600$ , [61](#)

Theory - References: Higgs section, [39](#)

Theory - Textual: Check text for the usage of the word Higgs, without boson. It should be “Higgs boson”., [8](#)

TPC - CHECK: Check overall recent modifications, [147](#)

TPC - Figure 4.10: Expand caption of TPC read-out electronics, [152](#)

TPC - Figure 4.1: Expand caption of TPC sketch, [147](#)

TPC - Table 4.4: Expand caption , [152](#)

Vertex - Figure 4.3: Expand caption, add material for CO2 cooling, [145](#)



# International Review

- **Meeting dates: Sept 13-15**
- **Committee Members (present in Beijing):**
  - Mogens Dam (NBI) - FCC-ee - FCC-ee design studies
  - Sasha Glazov (DESY) -- LEP/ATLAS/BELLE Physicist -- International detector mini-review
  - Hitoshi Yamamoto (Tohoku University) -- ILC
  - Bill Murray (Warwick) - LEP/ATLAS Physicist
  - Liang Han (USTC) - ATLAS
  - Marcel Vos (Valencia) - ATLAS/ILC/FCC/silicon
  - Marcel Stanitzki (DESY) - SiD spokespersons - silicon detectors
  - Claudia Cecchi (INFN/Perugia) - Calorimetry (Belle2/CMS) - former member of LHCC
  - Maxim Perelstein (Cornell) - Theorist
  - Tao Han (Pittsburgh) - Theorist
  - Christophe Grojean - Theorist
- **Three other people offered to attend remotely**
- **Some more offered to read the draft ahead of time**





# International Review Agenda

- **Preliminary agenda:** <https://indico.ihep.ac.cn/event/8706/other-view?view=standard>
- Conveners and editors should be available to attend this meeting in person
  - There will be limitations on the numbers to attend since I assume we will use A415, but we need to have experts to answer the questions from the committee
  - Expect one talk per chapter/section
    - Vertex
    - Silicon tracker
    - TPC
    - Full Silicon Tracker
    - Drift Chamber
    - ECAL
    - HCAL
    - Dual Readout calorimeter
    - Magnet
    - Muon detector
    - DAQ
    - MDI
    - Physics performance
    - Physics benchmarks



# CDR Editors

- **General:**
  - **Charlie Young**
  - **Chris Tully**
  - **Joao, Yuanning, Shan**
- MDI:
  - Zhu Hongbo
- Luminosity:
  - Suen, [suen@sinica.edu.tw](mailto:suen@sinica.edu.tw)
  - Ivanka Bozovic, [ibozovic@vin.bg.ac.rs](mailto:ibozovic@vin.bg.ac.rs)
- VTX:
  - Ouyang Qun, [ouyq@ihep.ac.cn](mailto:ouyq@ihep.ac.cn)
  - Lu Yunpeng [yplu@ihep.ac.cn](mailto:yplu@ihep.ac.cn)
- Silicon Tracker:
  - Wang Meng, [mwang@sdu.edu.cn](mailto:mwang@sdu.edu.cn)
- Full Silicon Tracker:
  - Weiming Yao, [weiming.yao@cern.ch](mailto:weiming.yao@cern.ch)
  - Fu Chengdong, [fucd@ihep.ac.cn](mailto:fucd@ihep.ac.cn)
- TPC Tracker:
  - Li Yulan, [yulanli@mail.tsinghua.edu.cn](mailto:yulanli@mail.tsinghua.edu.cn)
  - Qi Huirong, [qih@ihep.ac.cn](mailto:qih@ihep.ac.cn)
  - Deng Zhi, [dengz@mail.tsinghua.edu.cn](mailto:dengz@mail.tsinghua.edu.cn)
- Drift Chamber:
  - Franco Grancagnolo, [franco.grancagnolo@le.infn.it](mailto:franco.grancagnolo@le.infn.it)
- DAQ and readout:
  - Zhu Kejun, [zhukj@ihep.ac.cn](mailto:zhukj@ihep.ac.cn)
  - Liu Zhen-an, [liuza@ihep.ac.cn](mailto:liuza@ihep.ac.cn)
- ECal:
  - Hu Tao, [hut@ihep.ac.cn](mailto:hut@ihep.ac.cn)
  - Liu Jianbei, [liujianb@ustc.edu.cn](mailto:liujianb@ustc.edu.cn)
- HCal:
  - Yang Haijun, [haijun.yang@sjtu.edu.cn](mailto:haijun.yang@sjtu.edu.cn)
- DR Cal:
  - Roberto Ferrari, [roberto.ferrari@cern.ch](mailto:roberto.ferrari@cern.ch)
- Muon:
  - Li Liang, [liangliphy@sjtu.edu.cn](mailto:liangliphy@sjtu.edu.cn)
  - Paolo Giacomelli, [paolo.giacomelli@cern.ch](mailto:paolo.giacomelli@cern.ch)
- Physics Analysis and Detector Optimization:
  - Ruan Manqi, [ruanmq@ihep.ac.cn](mailto:ruanmq@ihep.ac.cn)
  - Fang Yaquan, [fangyq@ihep.ac.cn](mailto:fangyq@ihep.ac.cn)
  - Li Qiang, [qliphy@gmail.com](mailto:qliphy@gmail.com)
  - Li Gang, [li.gang@mail.ihep.ac.cn](mailto:li.gang@mail.ihep.ac.cn)
  - Liang Zhijun (IHEP), [zhijun.liang@cern.ch](mailto:zhijun.liang@cern.ch)
  - Jianming Qian (Univ. Michigan), [qianj@umich.edu](mailto:qianj@umich.edu)
- Magnet:
  - Zhu Zian, [zhuza@ihep.ac.cn](mailto:zhuza@ihep.ac.cn)
  - Zhao Wei, [zhaow@ihep.ac.cn](mailto:zhaow@ihep.ac.cn)
  - Liu Xuyang, [liuxuyang@ihep.ac.cn](mailto:liuxuyang@ihep.ac.cn)
  - Zhao Ling, [zhaoling@ihep.ac.cn](mailto:zhaoling@ihep.ac.cn)