

R&D and Verification of Key Technologies for High Energy CEPC

Internal Discussion

所属专项： 大科学装置前沿研究
项目负责人： João Guimarães da Costa
项目承担单位： 中国科学院 高能物理研究所



中国科学院高能物理研究所

*Institute of High Energy Physics
Chinese Academy of Sciences*



Items for discussion

- 1. Review of Morning Meeting Outcome (Gang, Zhijun)**
- 2. Most Guidelines Regarding Usage of Funds and Organization Matters**
- 3. Project Organizational Issues**

Project Organization Issues: Communication Issues

- Monthly videoconference meetings on the global project
- Weekly or biweekly video conference meetings on various research topics
 - (e.g. international meeting on ASIC design every monday)
- Satellite Meeting with CEPC Workshops
 - Hong Kong, Oxford?
- **Documentation archiving:**
 - Indico: Meetings and minutes
 - DocDB: Internal reports and technical reports archiving
 - Need new project webpage
- Project management:
 - Common gantt software

Project Organization Issues: Funding Issues

- Check slides from MOST on Indico page
 - <https://indico.ihep.ac.cn/event/9111/other-view?view=standard>
- Need to spend the money
- Cannot use funds for other projects!

Project management organization

- **Risks and Response Measures**

- There may be some risks in the implementation of this project, but they can be effectively avoided by different kinds of methods:

- Intermediate small-scale prototypes
- Strengthening international communication/collaboration

- **Examples:**

- Precision of accelerator dipole magnet can be explored and achieved by means of small prototype
- Technical limit of coating for bending vacuum box and Detector design errors can be effectively avoided through international communication and learning from the experience of others
- Due to the installation accuracy of detector and the delay risk of calorimeter packaging process, automatic control system and automatic packaging scheme can be used to ensure the accuracy and progress.
- Chip embargo/submission rules: problem can be managed by integrating into international collaboration (e.g. ATLAS)

Project Organization Issues

- **Communication and Inspection Mechanisms**
 - **Exchange mechanism:**
 - Weekly or biweekly video conference meetings on various research topics
 - (e.g. international meeting on ASIC design every monday)
 - Monthly videoconference meetings on the global project
 - Integration in the CEPC Study Group activities and workshops
 - **Documentation archiving:**
 - Indico: Meetings and minutes
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 - Establish a project webpage
 - **Special meetings** will also be held regularly to discuss the completion of the project and conduct academic exchanges (e.g. hold satellite meetings at CEPC international workshops to stimulate interaction with international partners)

Project management organization

- **MOST Project Responsibility Expert**
 - **Zhao Hongwei** (Institute of Modern Physics, CAS)
 - **Wang Qiuliang** (Institute of Electrical Engineering, CAS)
 - **Xu Hongjie** (Shanghai Institute of Application Physics, CAS)
- **Expert Team (8 people)**
 - **Xu Nu** (Institute of Modern Physics, CAS)
 - **Tang Chuanxiang** (Tsinghua University)
 - **Lv Jinguang** (Institute of High Energy Physics, CAS)
 - **Li Jin** (Institute of High Energy Physics, CAS)
 - **Gao Yuanning** (Peking University)
 - **Youjin Yuan** (Institute of Modern Physics, CAS)
 - **Hu Guo Chaoying** (IN2P3–CNRS–University of Strasbourg, IPHC)
 - **Zhentang Zhao** (Shanghai Institute of Applied Physics, CAS)

Project management organization

- **Project office**
 - **Contact person:** Zhaoru Zhang
 - **Academic assistant:** Zhijun Liang (Associate professor)
 - **Financial assistant:** Zhaoru Zhang
 - **Contact person of Task 1:** Yunlong Chi (task leader)
 - **Financial assistant:** Jie Zhou
 - **Contact person of Task 2:** Joao Guimaraes da Costa (task leader)
 - **Financial assistant:** Wanyu Niu
 - **Contact person of Task 1:** Jianbei Liu (task leader)
 - **Financial assistant:** Li Wang
- **Project implementation scheme is finalized**

Project management organization

- **Communication and Inspection Mechanisms**
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Assessment Indicators of Science and Technology Report

序号	Report type	数量	提交时间	公开类别及时限
1	Annual technical progress report	1	2019 年 6 月	公开
2	Annual technical progress report	1	中期检查前	公开
3	Annual technical progress report	1	2021 年 6 月	公开
4	Annual technical progress report	1	2022 年 6 月	公开
5	Annual technical progress report	1	结题验收前	公开
6	High Energy Circular Collider Detector Design Report	1	2021 年 4 月	公开
7	High Energy Circular Collider Detectors Test Report (task 2+3)	1	2023 年 4 月	公开
8	High Energy Circular Electron-Positron Collider Key Technology Design and Test Report	1	2023 年 4 月	公开