CEPC Detector R&D Project

6.2 Interaction Region Mechanics

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| Document Responsible: | Microsoft Office User |
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| Revision number: | 1 |
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Change history

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| --- | --- | --- |
| **Revision** | **When** | **What changed and why** |
| 1 | 18/12/2019 | First draft |
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|  |  |  |
|  |  | < Add further lines to table as required > |

Readme first

1. Please do not delete or modify this section or its structure.
2. Only change text enclosed by (and including) angled brackets “< … >”.
3. Don’t change field directly, instead modify the document options, under File🡪 Properties (or similar)
	* Enter name of person that wrote the document in Document:Summary: Author
	* The project ID number, should follow the rules provided to you earlier. The number should be changed in Document:Custom: PBS.
	* The project name should be changed in Document:Summary: Subject.
4. In Section [*Project Objectives*](#ProjectObjectives) provide a brief description of the project goals, i.e. why and what is being produced, for PBS item **1.1** **Vertex Prototype**. If this project includes identifiable sub-projects you can indicate them in the [*Sub-projects Description*](#SubprojectsDescription) Section, otherwise submit a separate document for each of them. The sub-project IDs are free for you to define.
5. Finally, remember to update the [*Change History*](#ChangeHistory).

6.2 : Project Objectives

<Include a short description of the goals of the project>

1. Realize the remote vacuum connection between IP chamber of detector and vacuum tubes of accelerator.
2. Stable and simple support structure for the SC magnets of accelerator.

6.2 Interaction Region Mechanics: Sub-projects Description

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| --- | --- | --- |
| **Project ID** | **Title** | **Description** |
|  |  |  |
| 6.2.1 | Remote vacuum connection method | Design and development of the mechanisms for the remote vacuum connection methods, several candidate methods are considered and will be tested. |
| 6.2.2 | Support system of SC magnets | Design stable and simple support structure for the SC magnets of the accelerator in the limited space. |
| 6.2.3 | Installation scenario of MDI | Design a feasible installation scenario of MDI. |
|  |  | < Add further lines to table as required > |

6.2 Interaction Region Mechanics: CEPC Relationship

<Indicate to what extent this project is a CEPC-specific development.>

6.2 Interaction Region Mechanics: Project Schedule

<Enter a rough schedule for the project, indicating the ultimate schedule goal for when the objectives will be met, and some intermediate steps if found important.>

Now to Dec. 2021, finish the tests of the remote vacuum connection.

Now to June. 2022, finish the design of the support system of SC magnets and the installation scenario roughly.

6.2 Interaction Region Mechanics: Funding Availability

<Short statement about the funding sources and amount of funding available. If no funding yet, please indicate that. Indicate if funding is enough or more funds are desirable.>

There is no funding right now.

About 960 thousands RMB is needed for the remote vacuum connection tests.

6.2 Interaction Region Mechanics: Leadership Arrangement

<Indicate who is leading the project and the leadership arrangement within the project. Should identify names and institutions.>

Haijing Wang, IHEP.

6.2 : Manpower Resources

< Briefly summarize the manpower resources available for the project, including type (student, faculty, engineer, etc) and FTEs for each type. >

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| --- | --- |
| **Type** | **Average FTE Expected** |
| Faculty | 0.5 |
| Postdoc |  |
| Students |  |
| Engineers |  |