**International Assessment of the Institute of High Energy Physics**

June 13-15, 2018, IHEP, Beijing, China

**Charge**

The Institute of High Energy Physics of the Chinese Academy of Sciences (IHEP) conducts the international assessment as a key element in planning, performance evaluation and organizationof the institute, its divisions, and its key research programs. This assessment followsthe first one that took place in 2013. The International Review Committee (IRC), chaired by Professor Barry Barish, is invited to review the progresses which IHEP made over the past five years and to provide advices for future development.

The IRC will be provided with an IHEP status report well in advance of the review. On-site at IHEP the IRC will hear presentations which will include an overview of IHEP, reports from each of IHEP’s divisions, and reports of thekey research programs. The Committee will also visit the laboratories and meet with the staff and students.

The Committee is requested to provide comments on, and evaluations of the institute, each of the divisions, and key research programs.For the assessment of theinstitute and divisions, the Committee is asked to examine IHEP on the following aspects:

* Doesthe Institute/Division have a clear vision and mission?
* Hasthe Institute/Division developed a clear and executable plan and/or programthat is well aligned withthe vision and the mission?
* Howhas the Institute/Division performed over the last 5 years?
* Are the research resources, including but not limited to manpower, funding, and laboratories, adequate to support the strategy and programs, especially the highlighted researches?
* What is international standing of the Institute/Division and whatcan IHEP/Division do to improve its standing?

For the assessment of the key research programs, the Committee is expected to reviewon:

* Is the scientific goal(s) well defined, significant, and credible?
* Is there a clear and credible research and R&D plan to realize the scientific goal(s)?
* How has the programperformed over the last 5 years?
* Is the progress of research, R&D and personnel development going according to the plan?
* Are the research resources, e.g. funding and laboratories, adequate to support the R&D?

Those with long-term researches and/or operating large facilities should be evaluated with emphasis on their international standing, achievements, and planning. The large facilities under-construction, as well as new programs, should be reviewed with emphasis on their planning and progresses towards the goal(s).

The International Review Committee is invited to make comments or suggestions on any aspects beyond those specifically included in this charge.It is requested that a formal committee report responding to this charge be forwarded to the IHEP Director by July 15, 2018.

**Members of the International Review Committee**

**Barry Barish(Chair), Caltech (USA)**

Alex W. Chao, Stanford Univerisity (USA)

AmaresChatt, Dalhousie U (Canada)

Michel Davier, LAL (France)

QuanHao, HKU (HK, China)

Tetsuya Ishikawa, RIKEN (Japan)

Michel Kenzelmann, PSI (Switzerland)

ChryssaKouveliotou, GWU (USA)

Luciano Maiani, INFN (Italy)

Robert McGreevy, ISIS (UK)

Ulf-G. Meissner, Bonn U/F.Z. Juelich (Germany)

KatsunobuOide, KEK (Japan)

Peter Ratoff, Cockroft (UK)

Ian Shipsey, Oxford (UK)

George Smoot, UC Berkeley (USA)

Yoshishige Yamazaki, MSU (USA)

Lu Yu, IoP (China)

Frank Zimmermann, CERN

**Ranking and Comments**

**Ranking Standard** for research programs and performance:

**A+: Outstanding.** International leadership in this area, with internationally recognized major breakthroughs or significant achievements.

**A: Excellent.** International first-tier, possessing first-class academic standards and research quality; highly recognized by international peers.

**B: Good.** Internationalaverage, recognized but not in the international first-tier.

**C: Fair.** Below average internationally.

**D:Poor.** Has little international impact.

**Ranking Standard** for institute/division’s mission/vision/plans/resources:

**A+: Outstanding.** Best possible internationally.

**A: Excellent.** Very good internationally.

**B: Good.** Internationalaverage.

**C: Fair.** Below average internationally.

**D:Poor.** Poor by international standard.

**IHEP global Assessment**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | A+ | A | B | C | D |
| **Overall ranking** |  |  |  |  |  |
| Doesthe Institute have a clear vision and mission? |  |  |  |  |  |
| Has the Institute developed a clear and executable plan and/or program that is well aligned with the vision and the mission? |  |  |  |  |  |
| Howhas the Institute performed over the last 5 years? |  |  |  |  |  |
| Are the research resources, including but not limited to manpower, funding, and laboratories, adequate to support the strategy and programs, especially the highlighted researches? |  |  |  |  |  |
| What is international standing of the Institute and what can IHEP do to improve its standing? |  |  |  |  |  |

**Comments and suggestions:**

**Divisions**

1. **Experimental Physics Division**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | A+ | A | B | C | D |
| **Overall ranking** |  |  |  |  |  |
| Doesthe Division have a clear vision and mission? |  |  |  |  |  |
| Has the Division developed a clear and executable plan and/or program that is well aligned with the vision and the mission? |  |  |  |  |  |
| Howhas the Division performed over the last 5 years? |  |  |  |  |  |
| Are the research resources, including but not limited to manpower, funding, and laboratories, adequate to support the strategy and programs, especially the highlighted researches? |  |  |  |  |  |
| What is international standing of the Division and whatcan the Division do to improve its standing? |  |  |  |  |  |

**Comments and suggestions:**

1. **Particle Astrophysics Division**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | A+ | A | B | C | D |
| **Overall ranking** |  |  |  |  |  |
| Doesthe Division have a clear vision and mission? |  |  |  |  |  |
| Has the Division developed a clear and executable plan and/or program that is well aligned with the vision and the mission? |  |  |  |  |  |
| Howhas the Division performed over the last 5 years? |  |  |  |  |  |
| Are the research resources, including but not limited to manpower, funding, and laboratories, adequate to support the strategy and programs, especially the highlighted researches? |  |  |  |  |  |
| What is international standing of the Division and whatcan the Division do to improve its standing? |  |  |  |  |  |

**Comments and suggestions:**

1. **Theoretical Physics Division**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | A+ | A | B | C | D |
| **Overall ranking** |  |  |  |  |  |
| Doesthe Division have a clear vision and mission? |  |  |  |  |  |
| Has the Division developed a clear and executable plan and/or program that is well aligned with the vision and the mission? |  |  |  |  |  |
| Howhas the Division performed over the last 5 years? |  |  |  |  |  |
| Are the research resources, including but not limited to manpower, funding, and laboratories, adequate to support the strategy and programs, especially the highlighted researches? |  |  |  |  |  |
| What is international standing of the Division and whatcan the Division do to improve its standing? |  |  |  |  |  |

**Comments and suggestions:**

1. **Computing Center**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | A+ | A | B | C | D |
| **Overall ranking** |  |  |  |  |  |
| Doesthe Division have a clear vision and mission? |  |  |  |  |  |
| Has the Division developed a clear and executable plan and/or program that is well aligned with the vision and the mission? |  |  |  |  |  |
| Howhas the Division performed over the last 5 years? |  |  |  |  |  |
| Are the research resources, including but not limited to manpower, funding, and laboratories, adequate to support the strategy and programs, especially the highlighted researches? |  |  |  |  |  |
| What is international standing of the Division and whatcan the Division do to improve its standing? |  |  |  |  |  |

**Comments and suggestions:**

1. **Accelerator Division**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | A+ | A | B | C | D |
| **Overall ranking** |  |  |  |  |  |
| Doesthe Division have a clear vision and mission? |  |  |  |  |  |
| Has the Division developed a clear and executable plan and/or program that is well aligned with the vision and the mission? |  |  |  |  |  |
| Howhas the Division performed over the last 5 years? |  |  |  |  |  |
| Are the research resources, including but not limited to manpower, funding, and laboratories, adequate to support the strategy and programs, especially the highlighted researches? |  |  |  |  |  |
| What is international standing of the Division and whatcan the Division do to improve its standing? |  |  |  |  |  |

**Comments and suggestions:**

1. **Dongguan Branch (and Proton Accelerators)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | A+ | A | B | C | D |
| **Overall ranking** |  |  |  |  |  |
| Doesthe Division have a clear vision and mission? |  |  |  |  |  |
| Has the Division developed a clear and executable plan and/or program that is well aligned with the vision and the mission? |  |  |  |  |  |
| Howhas the Division performed over the last 5 years? |  |  |  |  |  |
| Are the research resources, including but not limited to manpower, funding, and laboratories, adequate to support the strategy and programs, especially the highlighted researches? |  |  |  |  |  |
| What is international standing of the Division and whatcan the Division do to improve its standing? |  |  |  |  |  |

**Comments and suggestions:**

1. **Multi-disciplinary Research Division**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | A+ | A | B | C | D |
| **Overall ranking** |  |  |  |  |  |
| Doesthe Division have a clear vision and mission? |  |  |  |  |  |
| Has the Division developed a clear and executable plan and/or program that is well aligned with the vision and the mission? |  |  |  |  |  |
| Howhas the Division performed over the last 5 years? |  |  |  |  |  |
| Are the research resources, including but not limited to manpower, funding, and laboratories, adequate to support the strategy and programs, especially the highlighted researches? |  |  |  |  |  |
| What is international standing of the Division and whatcan the Division do to improve its standing? |  |  |  |  |  |

**Comments and suggestions:**

1. **Division of Nuclear Technology and Applications**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | A+ | A | B | C | D |
| **Overall ranking** |  |  |  |  |  |
| Doesthe Division have a clear vision and mission? |  |  |  |  |  |
| Has the Division developed a clear and executable plan and/or program that is well aligned with the vision and the mission? |  |  |  |  |  |
| Howhas the Division performed over the last 5 years? |  |  |  |  |  |
| Are the research resources, including but not limited to manpower, funding, and laboratories, adequate to support the strategy and programs, especially the highlighted researches? |  |  |  |  |  |
| What is international standing of the Division and whatcan the Division do to improve its standing? |  |  |  |  |  |

**Comments and suggestions:**

**Key Research Programs**

1. **CEPC**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | A+ | A | B | C | D |
| **Overall ranking** |  |  |  |  |  |
| Is the scientific goal(s) well defined, significant, and credible? |  |  |  |  |  |
| Is there a clear and credible research and R&D plan to realize the scientific goal(s)? |  |  |  |  |  |
| How has the programperformed over the last 5 years? |  |  |  |  |  |
| Is the progress of research, R&D and personnel development going according to the plan? |  |  |  |  |  |
| Are the research resources, e.g. funding and laboratories, adequate to support the R&D? |  |  |  |  |  |

**Comments and suggestions:**

1. **BESIII Experiment**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | A+ | A | B | C | D |
| **Overall ranking** |  |  |  |  |  |
| Is the scientific goal(s) well defined, significant, and credible? |  |  |  |  |  |
| Is there a clear and credible research and R&D plan to realize the scientific goal(s)? |  |  |  |  |  |
| How has the programperformed over the last 5 years? |  |  |  |  |  |
| Is the progress of research, R&D and personnel development going according to the plan? |  |  |  |  |  |
| Are the research resources, e.g. funding and laboratories, adequate to support the R&D? |  |  |  |  |  |

**Comments and suggestions:**

1. **Neutrino Physics**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | A+ | A | B | C | D |
| **Overall ranking** |  |  |  |  |  |
| Is the scientific goal(s) well defined, significant, and credible? |  |  |  |  |  |
| Is there a clear and credible research and R&D plan to realize the scientific goal(s)? |  |  |  |  |  |
| How has the programperformed over the last 5 years? |  |  |  |  |  |
| Is the progress of research, R&D and personnel development going according to the plan? |  |  |  |  |  |
| Are the research resources, e.g. funding and laboratories, adequate to support the R&D? |  |  |  |  |  |

**Comments and suggestions:**

1. **Space programs**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | A+ | A | B | C | D |
| **Overall ranking** |  |  |  |  |  |
| Is the scientific goal(s) well defined, significant, and credible? |  |  |  |  |  |
| Is there a clear and credible research and R&D plan to realize the scientific goal(s)? |  |  |  |  |  |
| How has the programperformed over the last 5 years? |  |  |  |  |  |
| Is the progress of research, R&D and personnel development going according to the plan? |  |  |  |  |  |
| Are the research resources, e.g. funding and laboratories, adequate to support the R&D? |  |  |  |  |  |

**Comments and suggestions:**

1. **Ground-based cosmic-ray programs**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | A+ | A | B | C | D |
| **Overall ranking** |  |  |  |  |  |
| Is the scientific goal(s) well defined, significant, and credible? |  |  |  |  |  |
| Is there a clear and credible research and R&D plan to realize the scientific goal(s)? |  |  |  |  |  |
| How has the programperformed over the last 5 years? |  |  |  |  |  |
| Is the progress of research, R&D and personnel development going according to the plan? |  |  |  |  |  |
| Are the research resources, e.g. funding and laboratories, adequate to support the R&D? |  |  |  |  |  |

**Comments and suggestions:**

1. **HEPS**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | A+ | A | B | C | D |
| **Overall ranking** |  |  |  |  |  |
| Is the scientific goal(s) well defined, significant, and credible? |  |  |  |  |  |
| Is there a clear and credible research and R&D plan to realize the scientific goal(s)? |  |  |  |  |  |
| How has the programperformed over the last 5 years? |  |  |  |  |  |
| Is the progress of research, R&D and personnel development going according to the plan? |  |  |  |  |  |
| Are the research resources, e.g. funding and laboratories, adequate to support the R&D? |  |  |  |  |  |

**Comments and suggestions:**

1. **CEPC accelerators**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | A+ | A | B | C | D |
| **Overall ranking** |  |  |  |  |  |
| Is the scientific goal(s) well defined, significant, and credible? |  |  |  |  |  |
| Is there a clear and credible research and R&D plan to realize the scientific goal(s)? |  |  |  |  |  |
| How has the programperformed over the last 5 years? |  |  |  |  |  |
| Is the progress of research, R&D and personnel development going according to the plan? |  |  |  |  |  |
| Are the research resources, e.g. funding and laboratories, adequate to support the R&D? |  |  |  |  |  |

**Comments and suggestions:**

1. **ADS**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | A+ | A | B | C | D |
| **Overall ranking** |  |  |  |  |  |
| Is the scientific goal(s) well defined, significant, and credible? |  |  |  |  |  |
| Is there a clear and credible research and R&D plan to realize the scientific goal(s)? |  |  |  |  |  |
| How has the programperformed over the last 5 years? |  |  |  |  |  |
| Is the progress of research, R&D and personnel development going according to the plan? |  |  |  |  |  |
| Are the research resources, e.g. funding and laboratories, adequate to support the R&D? |  |  |  |  |  |

**Comments and suggestions:**

1. **CSNS Neutron Science**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | A+ | A | B | C | D |
| **Overall ranking** |  |  |  |  |  |
| Is the scientific goal(s) well defined, significant, and credible? |  |  |  |  |  |
| Is there a clear and credible research and R&D plan to realize the scientific goal(s)? |  |  |  |  |  |
| How has the programperformed over the last 5 years? |  |  |  |  |  |
| Is the progress of research, R&D and personnel development going according to the plan? |  |  |  |  |  |
| Are the research resources, e.g. funding and laboratories, adequate to support the R&D? |  |  |  |  |  |

**Comments and suggestions:**

1. **Biomedical Effects of Nanomaterials and Nanosafety**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | A+ | A | B | C | D |
| **Overall ranking** |  |  |  |  |  |
| Is the scientific goal(s) well defined, significant, and credible? |  |  |  |  |  |
| Is there a clear and credible research and R&D plan to realize the scientific goal(s)? |  |  |  |  |  |
| How has the programperformed over the last 5 years? |  |  |  |  |  |
| Is the progress of research, R&D and personnel development going according to the plan? |  |  |  |  |  |
| Are the research resources, e.g. funding and laboratories, adequate to support the R&D? |  |  |  |  |  |

**Comments and suggestions:**