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**ORGANISATION EUROPÉENNE POUR LA RECHERCHE NUCLÉAIRE**  
**CERN** EUROPEAN ORGANIZATION FOR NUCLEAR RESEARCH

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COUNCIL

Hundred-and-eighty-first Session

Geneva – 17 June 2016

OPEN SESSION

MINUTES

As the Draft Minutes (CERN/3260/Draft, dated 4 October 2016) were approved without amendment at the Hundred-and-eighty-third Session of the Council on 16 December 2016, the attached document can be regarded as the final version.

CERN/3260/Draft  
Original: English  
4 October 2016

**ORGANISATION EUROPÉENNE POUR LA RECHERCHE NUCLÉAIRE**  
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DRAFT MINUTES

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### ANNEX 1:

REPORT ON THE DECISIONS TAKEN AT RESTRICTED AND CLOSED SESSIONS

LIST OF PARTICIPANTS – OPEN SESSION  
(17 June 2016)

<u>President:</u>	Prof. Sijbrand de Jong	Netherlands
<u>Participants:</u>	Prof. Jochen Schieck	Austria
	Mr Stefaan Thys Prof. Walter Van Doninck	Belgium
	Prof. Leandar Litov Prof. Dimitri Tonev	Bulgaria
	Prof. Rupert Leitner Mr Ondřej Novák	Czech Republic
	Mr René Michelsen	Denmark
	Prof. Juha Äystö Dr Pentti Pulkkinen	Finland
	Prof. Ursula Bassler Prof. Catherine Cesarsky Mr Olivier Martin	France
	Prof. Siegfried Bethke Dr Thomas Roth Dr Beatrix Vierkorn-Rudolph	Germany
	Prof. Konstantinos Fountas Mr Ioannis Michelogiannakis	Greece
	Prof. Peter Levai	Hungary
	Prof. Eliezer Rabinovici	Israel
	Prof. Umberto Dosselli Prof. Fernando Ferroni	Italy
	Dr Joseph T.M. Rokx	Netherlands
	Dr Bjørn Jacobsen Prof. Eivind Osnes	Norway
	Mr Dariusz Drewniak Prof. Jan Królikowski Mr Wojciech Piatkowski	Poland

Prof. Gaspar Barreira Prof. Paulo A. Pardal	Portugal
Prof. Branislav Sitár	Slovakia
Mr Fernando Ballesterro Mr Rafael Górgolas Prof. Mario Martinez	Spain
Prof. Barbro Äsman Dr Mats Johnsson	Sweden
Mr Patrick Pardo Prof. Olivier Schneider	Switzerland
Prof. Jon Butterworth Dr Sharon Ellis Prof. John Womersley	United-Kingdom

Candidate for Accession:

Dr Florin Buzatu Prf. Nicolae Zamfir	Romania
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Associate Member State in the Pre-stage to Membership:

Prof. Peter Adžić	Serbia
Prof. Panos Razis Mr Demetris Samuel	Cyprus

Associate Member States:

Mr Waqar Ahmad Mr Ghulam Jilani Butt	Pakistan
Mr Zafer Alper Mr Ufuk Gunes	Turkey

ALSO PRESENT:

Prof. Halina Abramowicz	Chair of ECFA
Ms Charlotte Jamieson	Chair of the Finance Committee
Prof. Tatsuya Nakada	Chair of the Scientific Policy Committee

EXTERNAL AUDITORS:

Mr Wieslaw Kurzyca  
Mr Jacek Koscielniak  
Mr Andrzej Przybylski

OBSERVERS:

H.E. Mr D.B. Varma Datla Bala	India
Dr Nicolai Russakovic	JINR
Prof. Kazunori Hanagaki Ms Fumie Hara Mr Yoshiaki Ishida Mr Masami Watanabe	Japan
Mr Vladimir Malinkin Prof. A.N. Skrinsky	Russian Federation
Dr Saul Gonzalez Dr James Siegrist	United States of America

CERN OFFICIALS:

Dr Fabiola Gianotti	Director-General
Dr Frédéric Bordry	Director for Accelerators & Technology
Prof. Eckhard Elsen	Director for Research & Computing
Dr Martin Steinacher	Director for Finance & Human Resources
Ms Charlotte Warakaulle	Director for International Relations

CERN SERVICES:

Dr Eva-Maria Gröniger-Voss

Legal Counsel

Ms Natalie Garde

Minute-Writers

Mr John Pym

Ms Brigitte Van der Stichelen

Council Secretariat

Ms Vedrana Zorica



## OPEN SESSION

The meeting resumed in Open Session at 9.00 a.m. on Friday 17 June.

The PRESIDENT welcomed the Cyprus delegation, made up of Professor P. Razis, Mr D. Samuel and Ms M. Avani, who were attending a Council Session for the first time since the ratification, on 1 April 2016, of the Agreement granting Cyprus Associate Membership as the pre-stage to Membership. He also welcomed the External Auditors, Mr W. Kurzyca, Mr J. Koscielniak and Mr A. Przybylski, representing the Supreme Audit Office of Poland (NIK), the observers, H. E. Mr D. B. Varma Datla Bala (India), Mr M. Watanabe, Professor K. Hanagaki, Ms F. Hara and M. Y. Ishida (Japan), Mr N. Russakovich (JINR), Mr V. Malinkin and Professor A. Skrinsky (Russian Federation), and Dr S. Gonzalez and Dr J. Siegrist (United States). Apologies had been received from Ms I. Bokova and Ms F. Schlegel (UNESCO), from Mr Di Giulio (European Commission) and from Dr A. Patwa (United States). He also wished to extend a special welcome to Professor Y. Wang, Director of the Institute of High-Energy Physics of the Chinese Academy of Sciences, who would present Item 10 of the Agenda, and Professor M. Yamauchi, Director-General of KEK, who would present Item 11 of the Agenda.

Finally, he wished to propose a slight alteration to the agenda, namely that Item 9 (LHC Matters) should be taken after Items 10 (Particle Physics in China, present and plans) and 11 (Particle Physics in Japan, present and plans).

It was so agreed.

1. APPROVAL OF THE DRAFT MINUTES OF THE 178TH OPEN SESSION ON 18 DECEMBER 2015  
(Item 1 of the Agenda) (CERN/3232/Draft)

The Minutes of the Hundred-and-Seventy-Eighth Session of Council, Open Session (CERN/3232/Draft), were approved.

2. REPORT ON THE DECISIONS TAKEN AT THE RESTRICTED AND CLOSED SESSIONS  
(Item 2 of the Agenda)

The PRESIDENT presented his report<sup>1</sup> on the decisions taken by the Council at its March and June 2016 Restricted and Closed Sessions, emphasising in particular the Council's

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<sup>1</sup> See Annex 1.

official approval of the High-Luminosity LHC (HL-LHC) project, in line with the updated European Strategy for Particle Physics that defined the full exploitation of the LHC's potential as Europe's highest priority.

The Council took note of the President's report on the decisions taken at the Restricted and Closed Sessions in March and June 2016.

### 3. REPORT BY THE CHAIR OF THE FINANCE COMMITTEE

(Item 3 of the Agenda)

Ms JAMIESON reported on issues examined at the Finance Committee's March and June meetings, noting in particular:

- the Annual Progress Report and the Financial Statements of the Organization for 2015, the latter being notably affected by the new policy for recording fixed and intangible assets, which had caused a substantial increase in the value of CERN's assets;
- the Annual Report and Financial Statements of the Pension Fund for 2015, with appreciation expressed for the new structure of the document;
- the 19 contract adjudication proposals that were approved;
- the status of payment of Member State contributions for 2016, deemed to be at a satisfactory level, with 79% of contributions settled to date;
- consideration of the document presented by the Management pertaining to the HL-LHC, which had been well received and led to the Committee's recommendation that the Council should approve the proposal contained therein;
- the Medium-Term Plan and Draft Budget for 2017, geared towards the full exploitation of the LHC, a diversified scientific programme and preparation of the Laboratory's future, plus infrastructure and site consolidation and renovation, and increased resources for safety;
- the scale of Member States' contributions for 2017;
- proposed amendments to the Staff Rules and Regulations, which had previously been presented at TREF;

- reports by the Chair of the Governing Board of the Pension Fund and by the Fund's Chief Executive Officer, notably underlining that the Fund's performance remained satisfactory in a difficult context.

The Council took note of the report by the Chair of the Finance Committee, Ms Jamieson, on matters discussed at the March and June 2016 meetings of the Finance Committee, not addressed under other items of the Agenda.

#### 4. REPORT BY THE CHAIR OF THE SCIENTIFIC POLICY COMMITTEE

(Item 4 of the Agenda)

Professor NAKADA reported<sup>2</sup> on the work and discussions of the Scientific Policy Committee at its March, May and June 2016 meetings, at which it had heard reports on the LHC restart, the operation of the accelerator complex, the experiments and computing. The Committee had also considered the Annual Progress Report and the Medium-Term Plan at various stages of their preparation. At its June meeting, the Committee had notably given its full support to the document summarising the High-Luminosity LHC project and had examined the draft note to the Council on future high-energy frontier machines and the strategy to be adopted in that regard in the light of the results obtained at the LHC, the development of the Future Circular Collider (FCC) and International Linear Collider studies and finally the various new developments that had arisen since the update of the European Strategy for Particle Physics, in particular the new circular collider project in China and ideas for muon beams in Europe. The Committee intended to submit to the Council a final document on the subject in September. Finally, the Committee had heard a presentation on MoEDAL, one of the "smaller" experiments at the LHC, devoted to searches for hypothetical magnetic monopoles.

The Council took note of the report by the Chair of the Scientific Policy Committee, Professor Nakada, on matters discussed at the March, May and June 2016 meetings of the Scientific Policy Committee, not addressed under other items of the Agenda.

#### 5. ANNUAL PROGRESS REPORT

(Item 5 of the Agenda)

##### a) Annual Progress Report for 2015

(CERN/SPC/1061/Rev.-CERN/FC/5986/Rev.-CERN/3228/Rev.)

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<sup>2</sup> See <http://indico.cern.ch/event/536771/>

Dr STEINACHER, presenting<sup>3</sup> document CERN/SPC/1061/Rev.-CERN/FC/5986/Rev.-CERN/3228/Rev., observed that the structure of the document had been enhanced with a view to improving readability, and recalled that the highlights of the year had been the completion of the first long shutdown (LS1), the first steps towards installing the CERN neutrino platform and, finally, the accession of Pakistan and Turkey to Associate Membership status.

b) Assessment and Comments by the External Auditors on the Annual Progress Report for 2015  
(CERN/FC/6000-CERN/3236)

Mr KURZYCA, presenting document CERN/FC/6000-CERN/3236, confirmed that the information set out in the Annual Progress Report was consistent, in all material respects, with the information contained in the CERN Financial Statements for 2015, audited by the External Auditors, and underlined that they had expressed a positive opinion on the approach chosen by the CERN Management with respect to the introduction of key performance indicators for use in future annual progress reports.

c) Assessment and Comments by the SPC on the Annual Progress Report for 2015

Professor NAKADA reported that, at its June meeting, the Scientific Policy Committee had expressed the view that the Annual Progress Report constituted a full description of the activities undertaken in 2015 and recommended it to the Council for approval. The Committee also welcomed the Management's open approach in having taken previous comments about the structure of the document into account.

d) Assessment and Comments by the FC and SACA on the Annual Progress Report for 2015

Ms JAMIESON reported that both the Finance Committee and SACA had heard a detailed presentation of the Annual Progress Report by the Director for Finance and Human Resources and the Finance Committee was in a position to recommend the document for approval by the Council.

The Council took note of:

- the information set out in document CERN/SPC/1061/Rev.-CERN/FC/5986/Rev.-CERN/3228/Rev. and the presentation by the Director for Finance and Human Resources, Dr Steinacher;

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<sup>3</sup> See <http://indico.cern.ch/event/536771/>

- the External Auditors' assessment and comments on the 2015 Annual Progress Report, as set out in document CERN/FC/6000-CERN/3236, and of the presentation by Mr Kurzyca, team leader from the Supreme Audit Office of Poland (NIK);
- the oral reports by the Scientific Policy Committee Chair, Professor Nakada, and by Ms Jamieson, in her capacity as SACA and Finance Committee Chair, on the outcome of those committees' examination of the 2015 Annual Progress Report at their meetings in June 2016;

On the recommendation of the Finance Committee, the Council unanimously decided:

- to approve the 2015 Annual Progress Report set out in document CERN/SPC/1061/Rev.-CERN/FC/5986/Rev.-CERN/3228/Rev.; and
- to endorse the External Auditors' comments and suggestions for future Annual Progress Reports.

## 6. FINANCIAL STATEMENTS OF CERN

(Item 6 of the Agenda)

### a) Financial Statements for the Financial Year 2015 (CERN/FC/6001-CERN/3237)

Dr STEINACHER, presenting<sup>4</sup> CERN's Financial Statements for 2015, underlined that certain important changes had been made to the document as a result of the implementation of recommendations by the External Auditors in previous years. In particular, he wished to draw attention to the 1.2 BCHF increase in net assets at the start of the year, which was due to the implementation of the new method of accounting for plant, property and equipment and intangible assets, and to the change in the figure used for the discount rate, aimed at achieving a better approximation of the time value of money.

### b) Report by the External Auditors on the Financial Statements of CERN for the Financial Year 2015 (CERN/FC/6002 CERN/3238)

Mr KURZYCA, introducing document CERN/FC/6002-CERN/3238, confirmed that, in the External Auditors' opinion, the CERN Financial Statements for 2015 presented fairly, in

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<sup>4</sup> See <http://indico.cern.ch/event/536771/>

all material respects, the financial position of CERN as at 31.12.2015 and that the underlying transactions had been conducted in compliance with the relevant rules.

c) Recommendations from the External Auditors to the CERN Management on the Financial Statements of CERN and comments from the CERN Management (CERN/FC/6003-CERN/3239)

Dr STEINACHER presented document CERN/FC/6003-CERN/3239, observing that the recommendations related especially to the management of visiting team and collaboration accounts and that the Management was committed to strengthening procedures in that regard.

d) Assessment and Comments by the FC and SACA on the Financial Statements of CERN for 2015

Ms JAMIESON, in her capacity as Chair of the Finance Committee and of the Standing Advisory Committee on Audits (SACA), reported that the Committees had examined the 2015 Financial Statements and received assurances from the External Auditors that they were a fair representation of the financial position of the Organization. The Finance Committee thus recommended that the Council approve the CERN Financial Statements for 2015.

The Council took note of:

- documents CERN/FC/6001-CERN/3237, CERN/FC/6002 CERN/3238 and CERN/FC/6003-CERN/3239 and the presentation by the Director for Finance and Human Resources, Dr Steinacher,
- the report by Mr Kurzyca on behalf of the External Auditors, stating their view that the 2015 Financial Statements presented fairly, in all material respects, the financial position of CERN as at 31.12.2015 and its financial performance and cash flows for the year, in accordance with IPSAS, and that the underlying transactions ensuing from the execution of the CERN Budget had been conducted in compliance with the CERN Financial Rules and all other relevant rules, regulations and service agreements,
- the report by Ms Jamieson, in her capacity as Finance Committee Chair and SACA Chair, on the outcome of those committees' examination of CERN's 2015 Financial Statements at their meetings in June 2016;

On the recommendation of the Finance Committee, the Council unanimously decided:

- to approve the 2015 Financial Statements set out in document CERN/FC/6001-CERN/3237; and
- to grant discharge to the Director-General.

## 7. FINANCIAL STATEMENTS OF THE CERN PENSION FUND

(Item 7 of the Agenda)

### a) Annual Report and Financial Statements for the Year ended 31 December 2015 (CERN/FC/6004-CERN/3240)

Mr EYTON-JONES, Chief Executive Officer of the Pension Fund, presented<sup>5</sup> the Annual Report and Financial Statements for the year ended 31 December 2015, noting that the net assets stood at 4.09 BCHF at that date, an increase compared with the previous year, and that the funding ratio at 31 December 2015, calculated according to the best-estimate assumptions, was 73%. He further pointed out that the Financial Statements were now supplied together with an annual report, in line with recommendation by the External Auditors, and that practically all of the previous years' recommendations by the External Auditors were now closed.

### b) Report by the External Auditors on the Annual Report and Financial Statements for the Year ended 31 December 2015 (CERN/FC/6005-CERN/3241)

Mr KURZYCA, introducing document CERN/FC/6005-CERN/3241 on behalf of the External Auditors, expressed satisfaction at the inclusion of an annual report, in line with the previous year's recommendation, in a relatively short time-frame, and noted that the report in question was consistent with the financial and non-financial information contained in the Financial Statements. Following the External Auditors' examination of the Financial Statements, he could state that the financial information contained therein was correct and that the financial transactions examined had been conducted in accordance with the applicable rules. The most noteworthy aspects were, on the one hand, the inclusion of an annual report and, on the other hand, the reduction of the volatility of the actuarial liabilities due to the change in the discount rate. The External Auditors' Management Letter was included in the document for the Council's information.

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<sup>5</sup> See <http://indico.cern.ch/event/536771/>

c) Recommendations from the External Auditors to the CERN Pension Fund Management on the Annual Report and Financial Statements for the Year ended 31 December 2015 and comments from the CERN Pension Fund Management (CERN/FC/6006-CERN/3242)

Mr KURZYCA, introducing document CERN/FC/6006-CERN/3242, said that the External Auditors had no additional observations at the present time. Practically all the previous years' recommendations had been implemented; the one recommendation that was still open, by the previous External Audit team, on the monitoring of potential conflicts of interest by an independent body, had been amended, because the current team considered that such a monitoring function could be fulfilled by the Pension Fund Management Unit. The latter had proposed to introduce a register of interest and the External Auditors could accept that way forward, would check on its implementation in 2017 and close the observation if the register of interest were duly introduced and properly managed.

Mr EYTON-JONES explained that he had himself recommended to the Pension Fund Governing Board the introduction of a register of interest, in line with best practice in the pension fund field, and that such a measure could be in place by the end of the year. To facilitate the monitoring of the issue, it might also be useful to include conflicts of interest as a permanent item on the agendas of meetings of the Pension Fund Governing Board.

d) Assessment and Comments by the FC and SACA on the Annual Report and Financial Statements of the CERN Pension Fund for 2015

Ms JAMIESON, in her capacity as Chair of the Finance Committee and SACA, expressed appreciation for the quality of the document and the excellent collaboration between all parties concerned. The Finance Committee recommended that the Council approve the Financial Statements of the Pension Fund for 2015.

Dr ELLIS said that the United Kingdom delegation welcomed the positive developments regarding the Pension Fund and the introduction of measures with respect to conflicts of interest. Noting that the question of conflicts of interest had been raised at the Council's Restricted Session the previous day, she asked whether the measure being introduced would allow the matter to be tackled effectively in future years.

Mr EYTON-JONES noting that conflicts of interest were, by their very nature, difficult to establish, said that it was at least a step in the right direction. Moreover, the review of the governance of the Pension Fund by a dedicated Council working group constituted a good opportunity to review the situation.

The Council took note of:

- documents CERN/FC/6004-CERN/3240, CERN/FC/6005-CERN/3241 and CERN/FC/6006-CERN/3242 and the presentation by the Chief Executive Officer of the Pension Fund, Mr Eyton-Jones;
- the presentation by Mr Kurzyca on behalf of the External Auditors, stating their view that the Fund's 2015 Financial Statements presented fairly, in all material respects, the financial position of the Fund as at 31.12.2015 and its financial performance and cash flows for the year, in accordance with IPSAS, and that the underlying transactions had been conducted, in all material respects, in compliance with the CERN and Pension Fund Rules and all other relevant rules, regulations and service agreements;
- the report by Ms Jamieson, in her capacity as SACA Chair and Finance Committee Chair, on the outcome of those committees' examination of the Pension Fund's 2015 Annual Report and Financial Statements at their meetings in June 2016;

On the recommendation of the Finance Committee, the Council unanimously decided:

- to approve the Financial Statements of the CERN Pension Fund for the 2015 financial year set out in document CERN/FC/6004-CERN/3240; and
- to grant discharge to the Pension Fund Governing Board.

8. DRAFT TIMETABLE FOR COUNCIL SESSIONS AND COMMITTEE MEETINGS 2017

(Item 8 of the Agenda) (CERN/3244/Draft)

The PRESIDENT presented the draft timetable for the meetings of the Council and its committees in 2017, underlining that, compared with the previous years, the September Session was being pushed back to the end of the month, and that the Finance Committee was no longer scheduled to meet in November.

The Council took note of document CERN/3244/Draft and, in the absence of any comment by the Chairs of the Scientific Policy Committee and the Finance Committee, unanimously decided to approve the draft timetable for Council Sessions and Committee meetings in 2017 set out in the document.

The meeting was adjourned at 10.15 a.m. and resumed at 10.45 a.m.

## 9. PARTICLE PHYSICS IN CHINA, PRESENT AND PLANS

(Item 10 of the Agenda)

At the invitation of the PRESIDENT, Professor WANG gave a presentation<sup>6</sup> on the current status and future projects of particle physics and astroparticle physics in China, describing the main facility currently in operation, BEPC II, which had been running since 2009 in association with the BESIII detector, and other physics experiments being conducted in China or with the collaboration of Chinese teams. The most ambitious future project was the Circular Electron-Positron Collider (CepC), which would be used for the intensive production and study of the Higgs, the Z and the W bosons. In the longer term, that facility would then be replaced in the same tunnel by a proton collider, the SppC. The unprecedented configuration of the CepC was based on a double-ring layout exclusively at the interaction regions, which would enable high luminosity to be generated at optimal cost. Construction of the CepC was scheduled to take place from 2022 to 2028, and operation from 2029 to 2035 in a location that was yet to be decided. The financing plan, also yet to be approved, would in principle be based on international collaboration.

In reply to Professor RABINOVICI, who wished to know which model of international collaboration was being envisaged for the current and future projects in China, Professor WANG said that, for the BESIII detector, which had been built some time ago, international collaboration had essentially been limited to data analysis. By contrast, for the CepC project, the idea was to build up a real international collaboration, both for the machine and the detectors, of a type that remained to be determined, bearing in mind that it would not be possible to reproduce the model for the much smaller neutrino experiments, nor would it be appropriate to copy the models of other international projects such as ITER, CERN or ILC.

In reply to Professor NAKADA, who wished to know whether, independently of the CepC project, any plans existed for the upgrade of BEPCII and in particular an increase in its luminosity, Professor WANG explained that, in view of the very small circumference of the machine, it would not be possible to increase the luminosity significantly. Nevertheless, it was planned to increase the energy slightly, from 2.3 to 2.5 GeV, which would allow charmed baryons to be covered.

In reply to Professor BETHKE, who wished to know whether any collaboration existed between the two major projects currently being planned in Asia, namely the CepC in China and the ILC in Japan, Professor WANG recalled that the CepC would operate at much lower energies, would thus be better suited to Higgs precision studies and could also host a larger

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<sup>6</sup> See <http://indico.cern.ch/event/536771/>

number of detectors. He further noted that the two projects could be considered, to a certain extent, complementary and that the two project teams would be able to exchange experience and technologies on the basis of already existing contacts. The Asian Committee for Future Accelerators (ACFA) and the Asia High-Energy Physics Panel (AsiaHEP) had published a joint declaration of support for the two projects.

In reply to a question from Professor MARTINEZ, who wished to know whether the CepC project could be redesigned in the event of a new discovery at the LHC by the end of the summer, Professor WANG said that, in any event, the physics community needed a Higgs factory capable of producing the particle in large quantities in order to study its properties in detail.

Dr VIERKORN-RUDOLPH suggested that it might be useful to place new machine projects in China on the list compiled by the G7's Group of Senior Officials (GSO) on Global Research Infrastructures with a view to facilitating international cooperation.

In reply to a request for clarification from Professor NAKADA of the question mark over the projects at the Jinping laboratory, Professor WANG explained that, despite the interesting prospects for that underground laboratory and the fact that the funding for the facility had been approved, no definitive detector design currently existed or funding for experiments.

In reply to a question from Professor LEITNER, who wished to know whether the energy and luminosity of the CepC would one day allow, in addition to Higgs production, study of the production of t-tbar pairs, Professor WANG stated that a circular machine was not the most economically viable option for such projects, which would be the natural hunting ground for the ILC.

In reply to the DIRECTOR-GENERAL, who wished to know whether the partial double-ring layout of the CepC machine would allow the number of bunches to be increased beyond 50 while still avoiding beam-beam effects, Professor WANG explained that, in his opinion, for the purposes of Higgs boson production, it was not necessary to go beyond 50 bunches per beam nor to increase the luminosity. The aim of the partial double-ring layout was primarily to enhance the production of Z bosons.

The DIRECTOR-GENERAL, referring to the question by Professor RABINOVICI, asked how projects originating in China could become part of the global particle physics picture, given that, for the major projects in the field, reciprocal collaboration existed between the various regions. Such collaboration obviously had to go both ways.

Professor WANG, acknowledging that in the present global framework of particle physics major projects necessarily entailed reciprocal financial contributions and knowledge and technology exchanges, emphasised that China had no experience in the matter and it was therefore difficult to convince the country's policy-makers that it could be useful to make a contribution to a project not located within its borders, especially as the financial decision-makers were generally not particle physicists and had trouble understanding the requirements of the discipline; the scientists had a responsibility to bring about change in that respect.

The Council took note of the presentation by the Director of the Institute of High Energy Physics (IHEP) of the Chinese Academy of Sciences, Professor Y. Wang, of the major current and future particle and astroparticle physics projects in China and of his replies to questions from the floor.

#### 10. PARTICLE PHYSICS IN JAPAN, PRESENT AND PLANS

(Item 11 of the Agenda)

At the invitation of the PRESIDENT, Mr WATANABE, Director, Basic Research Promotion Division, Research Promotion Bureau, Ministry of Education, Culture, Sports, Science and Technology (MEXT) of Japan, thanked CERN for inviting him to address the Council, three days after the visit to the Laboratory by Minister Hase. Japanese physicists were very impressed by the progress of the LHC machine and experiments during Runs 1 and 2 and looked forward to the new results that might be announced in the near future, which could make a big impact on the future particle physics programme worldwide. The Japanese government had decided to contribute to the construction of the LHC in 1995, as CERN's first non-Member State to go down that path. Since then, Japan had been continuously supporting the Japanese physicists in the LHC experiments and providing first-class accelerator facilities in Japan to teams of physicists from all around the world. Fully aware of the importance of international cooperation in the field of high-energy physics, Japan would continue supporting the LHC and its upgrade projects. Moreover, Japan expected that the LHC upgrade project would provide a great opportunity to train young Japanese scientists and engineers so that they would become the next generation of leaders of accelerator science in Japan.

At the invitation of the PRESIDENT, Professor YAMAUCHI, Director-General of KEK, presented<sup>7</sup> an overview of his laboratory's highly diversified programmes, giving special mention to various ongoing or future projects: in the field of neutrinos, the construction of Hyper-Kamiokande and the upgrade of J-PARC; in flavour physics,

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<sup>7</sup>See <http://indico.cern.ch/event/536771/>

SuperKEKB and Belle II as well as the longstanding participation of Japanese teams in the ATLAS experiment and the future participation of Japan in the HL-LHC project. He further recalled that the project aimed at building the International Linear Collider (ILC) in Japan was currently being discussed; the ILC Advisory Panel set up by the Ministry of Education, Culture, Sports, Science and Technology had issued a preliminary report on that subject in August 2015.

In reply to a question from Professor WOMERSLEY, who wished to know the time scale for decisions on the construction of Hyper-Kamiokande, Professor YAMAUCHI said that, while it was difficult to give precise dates, the decision would probably not be taken before one year.

Professor NAKADA, referring to slide No. 39 in the presentation, which summarised the recommendations of the ILC Advisory Panel, enquired as to how costs might be shared “internationally” as stated in the first recommendation.

Professor YAMAUCHI said that it was up to the particle physics communities to mobilise themselves so that governments understood the importance of giving financial support to the ILC project; that was a message that he was personally trying to convey to all his physicist colleagues around the world.

In reply to a question from the DIRECTOR-GENERAL, Professor YAMAUCHI said that the construction time for Hyper-Kamiokande would be seven years once the green light was given.

The PRESIDENT, noting the ILC Advisory Group’s recommendation No. 2 “Closely monitor and analyse the development of the LHC experiments”, wished to know what would be the implications for the ILC project of the discovery or non-discovery of new phenomena at the LHC.

Professor YAMAUCHI said that while the announcement of new phenomena would open a discussion on the orientations of the ILC project, it was very difficult to predict what would happen if no such announcements were made.

The Council took note of the introductory statement by the Director for Basic Research at MEXT, Mr M. Watanabe, and of the presentation by the Director-General of Japan’s KEK Laboratory, Professor M. Yamauchi, of the particle physics programme in Japan and of his replies to questions from the floor.

## 11. LHC MATTERS

(Item 9 of the Agenda)

### a) Status Report on the LHC machine and injector chain

Dr BORDRY, Director for Accelerators and Technology, reported<sup>8</sup> on the developments in the accelerator chain since the beginning of the year. The whole complex had restarted very satisfactorily, with notable highlights including a commissioning phase for the new AWAKE (Advanced Wakefield Acceleration Experiment) facility, where the first test beam had been sent down the proton line; commissioning of the Linac 4 beams, which should reach nominal energy by the end of the year; ongoing work on HIE-ISOLDE with the installation of two cryomodules; continued installation of the ELENA facility for which beam commissioning should start in 2016. The first half of the year had also seen a number of incidents at the PS and SPS, and although solutions had been found, they had inevitably led to schedule readjustments: the breakdown of a power capacitor in the PS had led, initially, to the use of an old rotating machine before the accelerator could ultimately be started with five modules; a vacuum leak in the SPS beam dump had made it necessary, as a precautionary measure, to limit temporarily the beam intensity to the fixed-target experiments in the North Area and into the LHC; finally, a beech marten had unfortunately found its way onto a transformer at Point 8, causing a loss of power. Despite all those setbacks, the machine availability had been excellent and the integrated luminosity collected had been remarkable - about  $5 \text{ fb}^{-1}$  to date for 2016, which gave good grounds to expect that the objective of  $10 \text{ fb}^{-1}$  for the summer conferences would be achieved by the middle of July. He wished to thank and congratulate the teams responsible for all the technical systems, as well as the machine operators who had demonstrated a great team spirit, without which such performance levels would not have been possible.

### b) Status Report on the LHC Experiments and Computing

Professor ELSÉN, presenting<sup>9</sup> a status report on the LHC experiments and computing, observed that 2015 had seen the LHC's first run at 13 TeV collision energy, with an integrated luminosity slightly exceeding  $4 \text{ fb}^{-1}$ . The experiments had resumed data-taking after the winter 2016 stop, having used that opportunity notably to repair the CMS magnet system and to make a number of improvements to the detectors. Data production and quality had been excellent, and physics results were in preparation, notably with a view to the upcoming ICHEP conference in August. For ATLAS and

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<sup>8</sup>See <http://indico.cern.ch/event/536771/>

<sup>9</sup>See <http://indico.cern.ch/event/536771/>

CMS, the appearance in the 2015 data of an excess of events at 750 GeV had raised some considerable interest and it had been agreed with the spokespersons of both experiments that any announcement of important (i.e. “discovery-like”) results, such as a confirmation of the excess in the 2016 data, would be first made at a seminar at CERN. Work in preparation for the Phase 1 and Phase 2 upgrades of the detectors continued in parallel. On the computing side, the Worldwide LHC Computing Grid (WLCG) continued to expand, with 167 sites in 42 participating countries by April 2016, and all the hardware and software required for the 2016 run in place. Far-future extrapolations of computing requirements nevertheless remained uncertain in the light of technological progress and advances in software.

The Council took note of the presentations by the Director for Accelerators and Technology, Dr F. Bordry, and by the Director for Research and Scientific Computing, Professor E. Elsen.

## 12. CONFIRMATION OF ACCESS STATUS OF DOCUMENTS

(Item 12 of the Agenda)

The Council unanimously decided to confirm the access status of the documents for the present Open Session, as shown on the Agenda.

## 13. OTHER BUSINESS

(Item 13 of the Agenda)

- End of the term of office of one Vice-President of the Council

The Council expressed its appreciation to Dr C. Cesarsky on the occasion of her last meeting as Vice-President of the Council.

- Expression of appreciation to delegations

The DIRECTOR-GENERAL said that, on behalf of the whole Management team, she wished to express her appreciation to the delegations for their constant support for the Organization and for the important decisions taken over the course of the present Council Session.

Applause.

The meeting rose at 1.00 p.m.



## ANNEX 1

### President's summary of decisions

#### reported to the June 2016 Open Session of the Council

Here is my report on the decisions taken by the Council since the last Open Session in December 2015.

#### **Cooperation agreements**

On 17 March, the Council approved a Cooperation Agreement with the Qatar Foundation for Education, Science and Community Development concerning Scientific and Technical Cooperation in High-Energy Physics, and yesterday it approved a similar Cooperation Agreement with the Government of Latvia.

#### **Elections and appointments**

At its Closed Session in March, the Council:

- appointed Dr Véronique Halloin of Belgium member of the Pension Fund Governing Board for a period of three years, as of 1 April 2016,
- and elected Professor Jens-Jørgen Gaardhøje of Denmark Vice-President of Council for a first period of one year as of 1 July 2016.

At its Closed Session yesterday, the Council:

- reappointed Dr Thomas Roth member and Chair of the Pension Fund Governing Board for a period of three years, as of 1 November 2016, and appointed Dr Alessandro Raimondo Vice-Chair of the Board, for the same period, with immediate effect and up to 30 April 2018,
- appointed Mr James Purvis Head of the Human Resources Department for the period from 1 August 2016 to 31 December 2020.
- and elected Mr Ossi Malmberg as chair of the Finance Committee starting 1<sup>st</sup> January 2017.

### **Pension Fund matters**

The Council yesterday took note of the conclusions of the periodic actuarial review of the Fund, presented by the Consulting Actuary Buck Consultants, and agreed on the mandate for a cost analysis by the actuary of potential measures relating to the CERN pension scheme. The Council also decided to establish a working group on the governance of the Fund. The members of this working group are to be nominated by the various constituencies for the September Session of the Council and they will start their work immediately thereafter, with the aim of concluding in 2017.

### **Five-yearly review**

At the request of the Council in December 2015, the Tripartite Employment Conditions Forum (TREF), at its meetings in March and May, conducted a thorough evaluation of the need for a revision of Annex A.1 of the Staff Rules and Regulations, relating to the methodology for the five-yearly review procedure, and concluded that no such need has been established.

As a consequence, I hereby confirm, on the Council's behalf, that the 2015 five-yearly review of the financial and social conditions of CERN personnel has concluded.

I would like to take this opportunity to thank everybody involved at TREF for this result, including its Chair, Bernard Dormy, the Head of the Human Resources Department, Anne-Sylvie Catherin, who will be leaving CERN this summer to take up a prestigious position at the European Central Bank and to whom we extend our very best wishes for the future, and those representatives of the Member States who attended the Forum's meetings in March and April.

### **Other decisions**

At its Restricted Session yesterday, the Council also approved:

- a new procedure governing access to the various categories of Council documents (confidential, restricted, open),
- the general procedure for the selection and appointment of the External Auditors, with a call for expression of interest for the future External Auditors, from 2018 onwards, being sent to the Supreme Audit Institutions of the Member States this very day,
- a number of minor technical amendments to the 11<sup>th</sup> Edition of the Staff Rules and Regulations resulting from the approval of the 2015 five-yearly review, together with a set of amendments relating to apprentices ,
- the Organization's overall strategy for the years 2017-2021, as set out in the Medium-Term Plan, as well as the Organization's Budget for 2017.

**Resolution on Greece's contribution arrears**

At its Closed Sessions in both March and June, the Council extensively discussed the situation with respect to the contribution arrears of Greece, and yesterday approved a resolution paving the way for a 15-year repayment plan for the arrears and an exceptional 15% reduction in Greece's Member State contribution for the years 2017, 2018 and 2019, to be fully compensated on terms to be determined by the Council in 2019, as the conditions for the immediate reinstatement of Greece's voting rights in the Finance Committee and the Council.

**HL-LHC project approval**

Finally, in response to requests from a number of Council delegations, the Management has produced a highly informative document setting out the scientific and technical aspects and cost and schedule of the High-Luminosity upgrade of the LHC machine, the so-called HL-LHC project, and on that basis the Council formally approved the HL-LHC project which, as part of the overall LHC programme, implements the highest priority of the European Strategy for Particle Physics. I would like to thank and congratulate the Management and all the members of the Council for achieving this important milestone in the Organization's history.