As the Draft Minutes (CERN-Council-S/101/Draft, dated 4 December 2012) were approved without amendment at the fifteenth European Strategy Session of Council on 22 March 2013, the attached document can be regarded as the final version.
CERN

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

FOURTEENTH EUROPEAN STRATEGY SESSION OF COUNCIL
Geneva – 21 September 2012

OPEN SESSION

DRAFT MINUTES
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIST OF PARTICIPANTS</td>
<td>ii</td>
</tr>
<tr>
<td>1. REPORT TO THE CREDENTIALS COMMITTEE</td>
<td>1</td>
</tr>
<tr>
<td>2. APPROVAL OF THE DRAFT MINUTES OF THE THIRTEENTH</td>
<td>1</td>
</tr>
<tr>
<td>EUROPEAN STRATEGY SESSION OF THE COUNCIL</td>
<td></td>
</tr>
<tr>
<td>3. ADOPTION OF THE AGENDA</td>
<td>1</td>
</tr>
<tr>
<td>4. MATTERS ARISING FROM THE PREVIOUS MEETING</td>
<td>1</td>
</tr>
<tr>
<td>5. PRESIDENT’S REPORT</td>
<td>1</td>
</tr>
<tr>
<td>6. SCIENTIFIC SECRETARY’S REPORT</td>
<td>2</td>
</tr>
<tr>
<td>7. MEMBER STATE MATTERS</td>
<td>5</td>
</tr>
<tr>
<td>8. ECFA MATTERS</td>
<td>5</td>
</tr>
<tr>
<td>9. EC-CERN WORK PLAN, STATUS AND ANNUAL MEETING</td>
<td>7</td>
</tr>
<tr>
<td>10. STATUS REPORT - TECHNOLOGY TRANSFER NETWORK</td>
<td>8</td>
</tr>
<tr>
<td>11. REPORT FROM THE COMMUNICATION NETWORK</td>
<td>9</td>
</tr>
<tr>
<td>12. CONFIRMATION OF THE ACCESS STATUS OF THE DOCUMENTS OF THE SESSION</td>
<td>11</td>
</tr>
<tr>
<td>13. ANY OTHER BUSINESS</td>
<td>11</td>
</tr>
</tbody>
</table>
## LIST OF PARTICIPANTS

**President:**
- Prof. Michel Spiro, France
- Prof. Tatsuya Nakada, Scientific Secretary, European Strategy Sessions

**Participants:**
- Dr Johann Spitzer, Austria
- Prof. Walter Van Doninck, Belgium
- Prof. Leandar Litov, Bulgaria
- Dr Rupert Leitner, Czech Republic
- Prof. Jens Jørgen Gaardhøje, Denmark
- Dr Pentti Pulkkinen, Finland
- Prof. Dan-Olof Riska
- Dr Catherine Cesarsky, France
- Prof. Siegfried Bethke, Germany
- Dr Thomas Roth
- Dr Beatrix Vierkorn-Rudolph
- Prof. Petros Rapidis, Greece
- Prof. Gyoergy Vesztergombi, Hungary
- Prof. Maurizio Biasini, Italy
- Prof. Fernando Ferroni
- Prof. Sijbrand De Jong, Netherlands
- Prof. Eivind Osnes, Norway
- Prof. Agnieszka Zalewska, Poland
- Prof. Gaspar Barreir, Portugal
- Prof. Branislav Sitár, Slovakia
- Prof. Francisco Del Aguila, Spain
- Prof. Barbro Åsman, Sweden
- Dr Per Karlsson
- Mr Bruno Moor, Switzerland
- Prof. Ulrich Straumann
- Dr Graeme Reid, United-Kingdom
Candidate Member State:

Prof. Florin Buzatu  Romania

Associate Member State/Pre-stage to Membership:

Prof. Eliezer Rabinovici  Israel
Prof. Dragan Popović  Serbia
H.E. Mr Ugljesa Zvekić

Ex-Officio Members:

Prof. Rolf-Dieter Heuer  Director-General
Dr Bjorn Jacobsen  Chairman of the Finance Committee
Prof. Manfred Krammer  Chairman of ECFA
Dr Philippe Chomaz  Representative National Laboratories
Prof. Fabio Zwirner  Chairman of the Scientific Policy Committee

Observers: (Institutions)

Prof. Maurice Bourquin  Representative ApPEC
Dr Octavio Quintana  Representative EC

Observers:

Prof. Shoji Asai  Representatives of Japan
Mr Hiroshi Kamiyama

Mr Dmitry Filatov  Representatives of the Russian Federation
Mr Alexander Petrov
Prof. Alexander N. Skrinsky

Mr Ramazan Ercan  Representative of Turkey
Dr James Siegrist  Representative of the USA
CERN Officials:

Dr Sergio Bertolucci        Director for Research and Computing
Mr Sigurd Lettow            Director for Administration and General Infrastructure
Prof. Felicitas Pauss       Head International Relations

CERN Services:

Dr Eva-Maria Gröniger-Voss  Legal Counsellor
Mrs Lisa Morris             Minute-Writers
Mr John Pym                 Council Secretariat
Mrs Brigitte Van der Stichelen
OPEN SESSION

The PRESIDENT opened the meeting at 9.30 a.m. and welcomed the Observers, Dr O. Quintana of the European Commission, Professor S. Asai and Mr H. Kamiyama of Japan, Mr D. Filatov, Mr A. Petrov and Professor A. N. Skrinsky of the Russian Federation, Mr R. Ercan of Turkey and Dr J. Siegrist of the United States. Apologies had been received from Professor G. Kalonji of UNESCO.

1. REPORT TO THE CREDENTIALS COMMITTEE
   (Item 1 of the Agenda)

   The Council took note that the credentials of all the delegations were in order and that the credentials list had been signed by the Vice-Presidents and unanimously approved the report to the Credentials Committee.

2. APPROVAL OF THE DRAFT MINUTES OF THE THIRTEENTH EUROPEAN STRATEGY SESSION OF THE COUNCIL
   (Item 2 of the Agenda) (CERN-Council-S/095/RA/Draft)

   The Minutes of the Thirteenth Session (CERN-Council-S/095/RA) were approved.

3. ADOPTION OF THE AGENDA
   (Item 3 of the Agenda) (CERN-Council-S/096)

   The Agenda (CERN-Council-S/096) was adopted.

4. MATTERS ARISING FROM THE PREVIOUS MEETING
   (Item 4 of the Agenda)

   There were no matters arising that were not covered by other items of the agenda.

5. PRESIDENT’S REPORT
   (Item 5 of the Agenda)

   The PRESIDENT reported that he would be unable to attend the next meeting of the Funding Agencies for Large Colliders (FALC) forum to be held at Fermilab from 12 to 13 November 2012, and that the Council, in Restricted Session, had agreed that he be replaced as head of the European delegation at the meeting by one of the Council Vice-Presidents, Professor Wade.
The Council took note of the information provided by the President regarding the arrangements for the forthcoming FALC meeting to be held at Fermilab from 12 to 13 November 2012.

6. SCIENTIFIC SECRETARY’S REPORT
(Item 6 of the Agenda)

- **General status report**

  Professor NAKADA presented a report\(^1\) on the status of implementation of FP7 programme projects relevant to the European Strategy for Particle Physics and on the progress of the Strategy update process.

  The Council took note of the oral report by the Scientific Secretary, Professor Nakada.

- **Report on the Open Symposium, Krakow, 10-12 September 2012**

  Professor NAKADA then presented a report\(^2\) on the discussions at the Open Symposium held in Krakow from 10 to 12 September in order to collect input from the particle physics community and other stakeholders in and outside Europe in preparation for the 2013 update of the European Particle Strategy for Particle Physics. He also outlined the work being done by the five working groups set up by the European Strategy Group (ESG) to discuss non-physics aspects of the Strategy, and the schedule of ESG and other milestone meetings of the update process, explaining that a draft version of the updated Strategy document would be presented to the Council at its March 2013 meeting for discussion, and that the final version would be submitted for adoption at a special session in Brussels on 23 May 2013, scheduled to coincide with a meeting of the EU Competitiveness Council. The following points were made on the report:

  - exploration of the high baryon density field at the SPS has potential overlap not only with the future NICA facility at JINR Dubna but also with the FAIR facility under construction in Darmstadt;
  - in addition to proton decays, direct dark matter searches and neutrino-less double beta decays, the particle physics questions being addressed by astroparticle physics projects include high-energy cosmic rays;

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\(^1\) See Indico http://indico.cern.ch/event/207540

\(^2\) See Indico http://indico.cern.ch/event/207540
the potential synergies between the studies of high-energy cosmic rays and particle production at the LHC were discussed at the Krakow Symposium, but no concrete proposal for a combined project has been put forward to date.

The Council took note of the oral report by Professor Nakada.

- Discussion of the outcome of the Open Symposium

  The PRESIDENT said that, on behalf of the Council, he wished to thank the Scientific Secretary, the Preparatory Group and the local organising committee for making the Symposium such a success. The event, which had been attended by a large number of participants, had constituted an important step in the comprehensive consultation process leading to the drafting and adoption of the updated Strategy document in 2013.

  Professor ZWIRNER, thanking Professor Nakada for his summary of the main issues emerging from the complex scientific discussions at the Symposium, observed that the Scientific Policy Committee had heard the report at its meeting earlier that week. Given that insufficient time had elapsed between the Symposium and the SPC’s meeting for the Preparatory Group to clarify various outstanding physics issues and for the SPC to formulate an opinion, it had been decided to schedule a special SPC meeting devoted to the update of the Strategy on 27 November 2012. The Committee would aim to submit advice on scientific policy issues to the Council in December, taking care not to duplicate the work of the Preparatory Group and the European Strategy Group.

  The following main points were made during the ensuing discussion:

  • the idea to construct in Japan a 250-500 GeV linear e⁺e⁻ collider which could start to take data around 2030 is strongly backed by the Japanese high energy physics community and may become a priority of the Japanese high-energy physics programme beyond the completion of the Super KEKB facility around 2015;

  • the Japanese HEP community is inviting expressions of support and interest in participation in the project from other regions as soon as possible in order to take advantage of time-limited funding opportunities within the framework of the earthquake and tsunami recovery fund; this essentially means that Europe needs to determine its position on the project in the framework of the forthcoming Strategy update, based on a careful analysis of the physics case;

  • the second of the five working groups set up by the ESG to discuss non-physics aspects of the Strategy update is studying the framework for European participation in a global
project and the role of national laboratories and the CERN laboratory in Geneva. The third working group is studying CERN's relations with other organisations: the group will build upon the extensive work done by the Council working group that addressed similar issues during the discussions on the Scientific and Geographical Enlargement of CERN between 2009 and 2010;

- while much of the discussion at the Krakow Symposium focussed on possible future facilities, the strategy for CERN and for Europe must continue to be science-driven; thus, when the updated Strategy document is eventually drafted and publicised, it is important to make sure that the scientific case, which is the subject of the Briefing Book being prepared by the Preparatory Group and the secretaries of the various sessions of the Symposium as input for the drafting of the Strategy document by the ESG, is given sufficient prominence;

- the updated Strategy document must also make clear that the forthcoming LHC run at design energy and ultimate luminosity constitutes the main focus of CERN and European particle physics for the immediate future and many years to come and that the emerging physics results will play a vital role in decisions on any of the future high-energy frontier projects on the table;

- given the synergy between LHC physics and astroparticle physics and the fact that several astroparticle physics experiments are CERN recognised experiments, CERN was put forward by ApPEC some time ago as one of the possible locations for a future European centre for astroparticle theory but no agreement was reached; the idea of setting up such a centre at CERN was mentioned again at the Symposium, but CERN has not yet received any formal proposal to that effect;

- many members of the neutrino physics community have voiced support for a long baseline neutrino experiment involving a superbeam from CERN to the deep Pyhäsalmi Mine in Finland; if the project is mentioned in the Strategy document it is important to bear in mind that no agreement currently exists with the present private owners of the site;

- given budget constraints and the competition for available resources, the long baseline neutrino projects under consideration in the other regions will have to be carefully taken into account in weighing up the case for building such a facility in Europe, irrespective of the scientific case.
The Council took note of the comments made during the discussion and agreed that they should be referred to the appropriate working groups and taken into account in the ongoing Strategy update process.

7. MEMBER STATE MATTERS
   (Item 7 of the Agenda)
   - Developments that delegations wish to bring up

   No developments were reported.

8. ECFA MATTERS
   (Item 8 of the Agenda)
   - Report on ECFA Activities
     (CERN/SPC/993 - CERN-Council-S/097)

   In his capacity as Chairman of ECFA, Professor KRAMMER presented ECFA's activities between September 2011 and August 2012, as set out in the document\(^3\), covering in particular:

   - the meetings of Restricted and Plenary ECFA during the period concerned,
   - the recent RECFA country visits to Spain, the Netherlands and Poland, the forthcoming visit to Serbia on 19 October and the 2013 visit programme,
   - the progress of the ECFA review panels on European detector R&D efforts for accelerator-based particle physics projects without a host laboratory and the LHec CDR sponsored by ECFA and NuPECC, and
   - highlights from the meetings of the High Energy Particle Physics Board of the European Physics Society (EPS HEPP).

   Professor ZWIRNER reported that the Scientific Policy Committee had not had time to examine the report in detail at its September meeting and had therefore agreed to defer the presentation and discussion to its December meeting.

   The following points were made during the ensuing discussion:

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\(^3\) Slides and document available on Indico http://indico.cern.ch/event/207540
• RECFA has planned four country visits in 2013, of which the first three will be to France in March, Denmark in May and Hungary in October; the fourth country has yet to be decided and may be a new CERN Associate Member State, depending on the progress of current application and ratification procedures;

• the purpose of RECFA’s visits to new CERN Associate Member States soon after their accession is to discuss and evaluate the activities of the particle physics community concerned and to make recommendations designed to help the scientists make the best possible use of CERN, whereas the mission of the fact-finding task forces set up by the Council is to visit applicant States prior to accession in the framework of assessing whether they meet the criteria for Associate Membership, which are industrial and technical as well as scientific; in general, a significant amount of time elapses between the two visits, which are complementary, and RECFA’s recommendations are very well received;

• given that ECFA members are generally active particle physicists who travel quite extensively for the purposes of their own research, it would be desirable to limit the amount of travel they are required to undertake on ECFA business.

Professor POPOVIC stated that the Serbian HEP community welcomed the opportunity to present its activities to RECFA during its forthcoming visit to Belgrade on 19 October and looked forward to receiving RECFA’s advice and recommendations.

The Council took note of the report on ECFA’s activities from September 2011 to August 2012, as set out in document CERN/SPC/993 - CERN-Council-S/097, of the presentation by the ECFA Chairman, Professor Krammer, and of the points made during the discussion.

- Report on ICFA meetings

Professor KRAMMER presented an oral report on the recent activities of the International Committee for Future Accelerators (ICFA), recalling the Committee’s purpose, organisation and membership and summarising the items relevant to the European Strategy Session of the Council discussed at its 2012 meetings.

He further provided the following information in response to questions:

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4 See Indico http://indico.cern.ch/event/207540
• the Japanese HEP community's proposal to host a global 250-500 GeV linear collider project is one of the initiatives that will be addressed by the new Linear Collider Board, which will replace the International Linear Collider Steering Committee (ILCSC) at the end of 2012; the Board will establish and provide oversight for a Linear Collider Directorate, for carrying forward the activities of the ILC Global Design Effort, the CLIC collaboration and the physics and detector studies for the two collider concepts;

• the Linear Collider Board will comprise a chairman, plus five members from each of the three regions (Europe, the Americas and Asia-Pacific); the members will represent all the major stakeholders and will include the directors of the major particle physics laboratories and at least one community representative from each region. Although the nominations have yet to be finalised, the proponents of the Japanese project should be well represented;

• the Board, which will be a sub-panel of ICFA, will work with FALC and other national and international agencies to obtain the resources needed to advance the linear collider project; in addition, the Board will assess and endorse budget requests for a common fund, which the Linear Collider Director will then present to FALC.

The Council took note of the oral report by Professor Krammer and of the clarifications provided in response to questions raised during the brief ensuing discussion.

The meeting adjourned at 10.55 a.m. and resumed at 11.25 a.m.

9. **EC-CERN WORK PLAN, STATUS AND ANNUAL MEETING**
(Item 9 of the Agenda) (CERN-Council-S/098)

Dr STAVREV presented a summary\(^5\) of activities in the different areas of cooperation between CERN and the European Commission during the period to August 2012 in the framework of the 2012-2013 work plan presented to the Council in September 2011\(^6\). He noted that progress in the implementation of the work plan and possible new actions and initiatives would be reviewed at the next annual CERN-EC meeting scheduled to take place in Brussels on 26 September 2012.

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\(^5\) Document and presentation available on Indico [http://indico.cern.ch/event/207540](http://indico.cern.ch/event/207540)

During the discussion, delegations voiced satisfaction with the progress achieved in the implementation of the CERN-EC work plan.

In response to a request for clarification regarding the possibility of using CERN’s LEIR accelerator for a biomedical facility available to European researchers, the DIRECTOR-GENERAL explained that the idea had been the subject of a brainstorming meeting held at CERN in June 2012. As a first step, LEIR, which operated only a few weeks per year, could be made available, for example, for research into new ions with the potential for subsequent use in clinical applications. More details on the project could be found in a report⁷ on the medical applications of CERN technologies presented to the Finance Committee at its meeting on 19 September.

The representative of the European Commission, Dr QUINTANA, said that he wished to inform the Council that the venue for the special meeting in Brussels in May 2013 would be very close to the building in which the Competitiveness Council would be held. A window of between an hour and an hour-and-a-half would be allocated to the presentation of the updated Strategy to the European ministers present, and the event would be followed by an official reception. The only detail that remained to be clarified was whether the ministers in question would be those responsible for research or for industry, which would depend on the other items on the Competitiveness Council's agenda.

The Council took note of document CERN-Council-S/098, of the presentation by Dr Stavrev and of the information provided during the ensuing discussion.

The Council requested that it be informed, in due course, of the outcome of the next annual CERN-EC meeting to be held in Brussels on 26 September 2012.

10. **STATUS REPORT - TECHNOLOGY TRANSFER NETWORK**
   (Item 10 of the Agenda) (CERN/SPC/994 - CERN-Council-S/099)

   Mr TRACEY, coordinator of the Technology Transfer Network of institutions active in particle, astroparticle and nuclear physics (HEPTech), presented the Network's activities over the 12 months since its last report to the Council in September 2011⁸. In particular, he recalled the Network's objective of enhancing the transfer of technology from fundamental physics research to society, outlined its membership and organisational structure, reviewed the various

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⁷ Oral presentation to the Finance Committee available on Indico http://indico.cern.ch/event/205926

⁸ Slides and document available on Indico http://indico.cern.ch/event/207540
workshops and other events held during the year and summarised plans to strengthen and expand the Network and increase its links with industry.

Professor ZWIRNER stated that the Scientific Policy Committee had examined the report at its meeting earlier that week. The Committee had obtained clarifications from Mr Tracey and G. Anelli, Head of CERN's Knowledge Transfer Group, on the work of the Network but had made no specific comments that needed to be brought to the Council's attention.

In response to a question regarding the progress of the 2012 study by the OECD Global Science Forum (GSF) on the social and economic impacts of large basic research facilities, of which CERN and the LHC were the main focus but which also encompassed Fermilab, KEK and a number of non-HEP facilities, the PRESIDENT stated that he had been informed by the GSF's Secretary, S. Michalowski, that the final report had been drafted but was not yet ready for release. He hoped that it would be available by the end of the year as input for the update of the European Strategy for Particle Physics.

The Council took note of document CERN/SPC/994 - CERN-Council-S/099 and of the presentation by the HEPTech coordinator, Mr Tracey.

11. REPORT FROM THE COMMUNICATION NETWORK
(Item 11 of the Agenda) (CERN/SPC/995-CERN-Council-S/100)

Dr GILLIES, Chairman of the European Particle Physics Communication Network (EPPCN), presented the Network's activities over the last twelve months, reviewing, in particular, the media coverage of the OPERA neutrino time-of-flight announcements and the 4 July Higgs update seminar, and the communication plans for the special Council Session to adopt the update of the European Strategy for Particle Physics in Brussels in May 2013. Noting that the Network had been joined by several new and active members since his last report to the Council in September 2011, he said that he wished to encourage those Member and Observer States which were not currently active members of the Network, i.e. Belgium, Bulgaria, Israel, Russia and Turkey, to appoint professional science communicators or scientists to represent them.

Professor ZWIRNER stated that the Scientific Policy Committee had examined the report at its meeting earlier that week and had referred various comments and suggestions to the CERN Communication group.

9 Slides and document available on Indico http://indico.cern.ch/event/207540
The following main points were made during the ensuing discussion:

- the communication initiatives planned for the Council's adoption of the updated European Strategy for Particle Physics in Brussels in May 2013 include an exhibition highlighting research and collaboration in particle physics and the associated technological developments and other spin-offs; it is planned that the exhibition, which will be staffed, will open on the day of the Council's European Strategy Session and continue until the Monday or Tuesday of the following week;

- in the framework of the exhibition, it would be desirable to feature collaborative research in particle physics together with technological developments in various fields and their impact on society in order to underline the close link between them;

- rather than holding the exhibition in the European Commission’s Berlaymont building, as indicated in the document, it might be more appropriate to stage it at the European Parliament directly to maximise attendance;

- the EPPCN contributes significantly to the efficiency of the professional communicators who take part in it and, since its creation in the framework of the Strategy process in 2006, has played an indispensable role in enhancing media coverage of CERN and particle physics in general in the Member States;

- the Network's members are mainly professional science communicators who do not specialise in particle physics but have an excellent understanding of communication needs in the individual Member States; they are informed of CERN news stories in advance and, where possible, are given advance copies of its press releases to allow them to organise their translation into different languages or add quotations relevant to the national context; furthermore, in the case of milestone events such as the 4 July Higgs update seminar, they work closely with the CERN Communication group to organise their own satellite events.

The Council took note of document CERN/SPC/995-CERN-Council-S/100, of the presentation by Dr Gillies and of the comments made during the discussion.
12. CONFIRMATION OF THE ACCESS STATUS OF THE DOCUMENTS OF THE SESSION  
   (Item 12 of the Agenda)  
   
   The Council unanimously decided to confirm the access status of the documents for the present Session, as shown on the Agenda.

13. ANY OTHER BUSINESS  
   (Item 13 of the Agenda)  
   
   There was no other business.

   The meeting rose at 12.15 p.m.

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