EPPSU 2020

Progress report

Halina Abramowicz
Tel Aviv University

- Input submission
- Calendar for PPG
- Open Symposium
- European Strategy Group
- Calendar for ESG
Total number of submissions (13/12/2018 at 20:00)

<table>
<thead>
<tr>
<th>#</th>
<th>Contact</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Robert Shrock</td>
<td>Searches for Sterile Neutrinos at CERN: Contribution to European Strategy for Particle Physics</td>
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<tr>
<td>2</td>
<td>Philip Yock</td>
<td>Newtonian Test of the Standard Model</td>
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<tr>
<td>3</td>
<td>Roy Aleksan</td>
<td>TIARA contribution to the European Strategy of Particle Physics</td>
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<td>4</td>
<td>Maurizio Pierini</td>
<td>A European Data Science Institute for Fundamental Physics</td>
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<td>5</td>
<td>Mieczyslaw Krasny</td>
<td>Gamma Factory for CERN</td>
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<tr>
<td>6</td>
<td>Brigitte Cros</td>
<td>Advanced LinEar collider study GROup (ALEGRO) Input</td>
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<td>7</td>
<td>Francois Richard</td>
<td>DM follies and the ‘Krisis’ of particle physics</td>
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<tr>
<td>8</td>
<td>Sergei Ginenko</td>
<td>Prospects for exploring the Dark Sector physics and rare processes</td>
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<tr>
<td>9</td>
<td>Abdel Nasser Tawfik</td>
<td>Implication of results on transport and viscous properties of QGP</td>
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<tr>
<td>10</td>
<td>Bostjan Golob</td>
<td>The Belle II experiment at SuperKEKB: Input to the European Particles</td>
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<tr>
<td>11</td>
<td>Andrei Golutvin</td>
<td>The SHiP experiment at the SPS Beam Dump Facility</td>
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<tr>
<td>12</td>
<td>Marek Gazdzicki</td>
<td>Proposal from the NAG1/SHINE Collaboration for the update of the</td>
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<tr>
<td>13</td>
<td>Anatoly Petrushin</td>
<td>Complex NEVOD for multi-component investigations of cosmic rays</td>
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</tbody>
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Traffic
EPPSU 2020

Calendar (Physics Preparatory Group)

- Input submission will be closed at 23:59 CET December 18th 2018
- January 9th 2019 - PPG vidyo meeting to review/assign to thematic groups the submitted inputs
- Around January 10th 2019 - open access to European Strategy Group
- Around mid-January 2019 - open access to public
- January 21st 2019 - PPG meeting at CERN to finalize the programme for the Open Symposium, including invited speakers/experts; decide on follow-up vidyo meetings
- May 12th 2019 - PPG meeting in Granada, before the Symposium
- May 17th 2019 - PPG debriefing meeting in Granada, right after the Symposium
- ….  
  ➢ ECFA/EPS-HEPP meeting July 13th 2019 in Ghent  
  ➢ Deliver Briefing Book for September 2019
Preparations of the Open Symposium

Web page for the Open Symposium in Granada
Please register

CERN Council Open Symposium on the Update of European Strategy for Particle Physics
13-16 May 2019 - Granada, Spain

List of participants

24 participants
Format of the Open Symposium

**Monday**
- **Morning**
  - Plenary session
    - “Where do we stand” (still to be discussed)
- **Afternoon**
  - Parallel sessions
    - B1 - Electroweak physics
    - B2 - Flavour physics and CP violation
    - B3 - Neutrinos
    - B4 - Accelerator science and technology

**Tuesday**
- **Morning**
  - Parallel sessions
    - B5 - BSM at colliders
    - B6 - Strong interactions
    - B7 - Detectors and computing
    - B8 - Dark matter and dark sector
- **Afternoon**
  - Parallel sessions
    - B1 - Electroweak physics
    - B2 - Flavour physics and CP violation
    - B3 - Neutrinos
    - B4 - Accelerator science and technology

**Wednesday**
- **Morning**
  - Parallel sessions
    - B5 - BSM at colliders
    - B6 - Strong interactions
    - B7 - Detectors and computing
    - B8 - Dark matter and dark sector
- **Afternoon**
  - Plenary session
    - “Future facilities”

**Thursday**
- **Plenary session**
- Summary Reports (8)
- Close-out
- ESG meeting
Proposed Input Themes and PPG/ESG assignments

- Large experiments and projects - PPG
- National road maps - ESG
- Accelerator Science and Technology - Caterina Biscari and Lenny Rivkin
- Beyond the Standard Model at colliders (present and future) - Gian Giudice (th) and Paris Sphicas (exp)
- Dark matter and dark sector (accelerator and non-accelerator dark matter, dark photons, hidden sector, axions) - Marcela Carena (th) and Shoji Asai (exp)
- Instrumentation and computing - Xinchou Lou (exp) and Brigitte Vachon (exp)
- Electroweak physics (physics of the W, Z, H bosons, of the top quark, and QED) - Keith Ellis (th) and Beate Heinemann (exp)
- Flavour Physics and CP violation (quarks, charged leptons and rare processes) - Belen Gavela (th) and Antonio Zoccoli (exp)
- Neutrino physics (accelerator and non-accelerator) - Stan Bentvelsen (astro-exp) and Marco Zito (exp)
- Strong interactions (perturbative and non-perturbative QCD, DIS, heavy ions) - Krzysztof Redlich (th) and Jorgen D’Hondt (exp)
- Other (communication, outreach, strategy process, technology transfer, individual contributions,…) - ESG

There are 8 physics themes and 3 general ones. The large experiments/projects will be split among the physics themes.
# Draft Proposal for plenary sessions

## Monday - Plenary

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Duration</th>
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<tbody>
<tr>
<td>9:00 - 9:10</td>
<td>Greetings</td>
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<tr>
<td>9:10 - 9:20</td>
<td>Overview of Symposium</td>
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<tr>
<td>9:20 - 9:30</td>
<td>Goals of the Symposium</td>
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<tr>
<td>9:30 - 10:00</td>
<td>Outcome of 2013 Strategy Update</td>
<td>25+5</td>
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<tr>
<td>10:00 - 10:30</td>
<td>Outstanding questions in particle physics</td>
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<td>10:30 - 11:00</td>
<td>Coffee break</td>
<td>30</td>
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<td>11:00 - 11:25</td>
<td>The American Persective</td>
<td>20+5</td>
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<tr>
<td>11:25 - 11:50</td>
<td>The Asian Perspective</td>
<td>20+5</td>
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<tr>
<td>11:50 - 12:15</td>
<td>ApPEc roadmap</td>
<td>20+5</td>
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<tr>
<td>12:15 - 12:40</td>
<td>NuPEC long term plan</td>
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<tr>
<td>12:40 - 13:05</td>
<td>Education, Communication and Outreach</td>
<td>20+5</td>
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<tr>
<td>13:00 - 14:30</td>
<td>Lunch</td>
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## Monday Parallel

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<tr>
<td>14:30 - 16:00</td>
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<td>16:00 - 16:30</td>
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<tr>
<td>16:30 - 18:30</td>
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## Wednesday Parallel

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<tr>
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<tr>
<td>10:30 - 11:00</td>
<td>coffee break</td>
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<tr>
<td>11:00 - 13:00</td>
<td>session</td>
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<tr>
<td>13:00 - 14:30</td>
<td>Lunch</td>
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## Wednesday Plenary

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<tbody>
<tr>
<td>14:30 - 15:00</td>
<td>Physics at hadron colliders</td>
<td>25+5</td>
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<tr>
<td>15:00 - 15:30</td>
<td>Challenges for energy frontier hh colliders</td>
<td>25+5</td>
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<tr>
<td>15:30 - 16:00</td>
<td>Heavy Ion physics</td>
<td>25+5</td>
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<tr>
<td>16:00 - 16:30</td>
<td>coffee break</td>
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<tbody>
<tr>
<td>16:30 - 17:00</td>
<td>Physics with fixed targets</td>
<td>25+5</td>
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<tr>
<td>17:00 - 17:30</td>
<td>Physics with ee colliders</td>
<td>25+5</td>
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<tr>
<td>17:30 - 18:00</td>
<td>Challenges for precision frontier ee colliders</td>
<td>25+5</td>
</tr>
<tr>
<td>18:00 - 18:30</td>
<td>Physics with ep/eA colliders</td>
<td>25+5</td>
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<tr>
<td>18:30 - 19:00</td>
<td>Challenges for high energy ep colliders</td>
<td>25+5</td>
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## Thursday - summary reports from parallel sessions

*To be discussed with PPG*
Role of the ESG (section 3.2a of the CERN/3092/Rev.2)

• To establish a proposal for the periodic update of the medium- and long-term European Strategy for Particle Physics for submission to the Council for approval
• To draft the Strategy update proposal taking into account, inter alia, the scientific input submitted by the Physics Preparatory Group (drafting session in January 2020)
• To endorse the proposal by consensus prior to the submission to the Council for approval (March 2020)

This implies
- Revisiting the previous strategy update
- Proposing additional themes in support of (the realisation of) the scientific programme
- Forming working/discussion groups around selected themes for the current update
- Prioritising the scientific programme

First contact established November 26th 2018
Reminder of Organisational Matters discussed in 2013

In parallel to the discussion on scientific issues, ESG deals with organizational and other matters through discussions in working groups (WG)

During the 2013 Strategy update, 5 WGs were set up (see Summary of the 2013 European Strategy Update) to discuss recommendations for

1. **WG1** - Mandate and organisational structure for the Council for the European Strategy and its implementation (to be handled by the President's Group);
2. **WG2** - Organisational structure for European participation in global projects, including the role and definition of the National Laboratories and the CERN Laboratory in the European Strategy;
3. **WG3** - Relations with external bodies, in particular EU-related;
4. **WG4** - Knowledge and technology transfer, relations with industry;
5. **WG5** - Outreach, education and communication
Proposal by Strategy Secretariat of themes to be added to the ESG deliberations during the present Strategy update process

1. Interdisciplinary nature of research in particle physics (with the aim to promote accelerator science, detector R&D, computing and engineering in the physics community "au large") - to be added to the discussion on technology transfer and outreach/communication

2. Social and career aspects of the young generation in long time-scale projects - how to make the field attractive and to preserve expertise in all aspects of particle physics science

3. Sustainability and environment - whether/how to include criteria evaluating energy efficiency and carbon footprint of present and future projects

The ESG members were invited to comment and to propose other themes deemed important for the future of the community.

No input received, but no deadline provided
Reminder will be resent after December 18th with deadline
Proposal for ESG meetings

- First plenary meeting, Friday March 15, 2019, CERN - review of previous strategy update, converge on main themes for the present update and the mandates and chairs of the agreed upon working groups (to be partly prepared by email communication)

Subsequent plenary meetings for discussions and interim reports:
- Thursday May 16, Granada
- During Council weeks at CERN, in June 2019, September 2019, December 2019 - either Tuesday afternoon and/or Wednesday afternoon.

- Drafting Session - January 20-24, 2020 in Bad Honnef

- To be considered - plenary meeting at CERN in March 2020 to include comments of Council

- Working Group meetings as needed, to be organized by designated chairs of the agreed upon groups
EPPSU 2020 timeline

2017

Jan. 2018
Call for proposals for venues for Open Symposium and Strategy Drafting Session

2018

Febr. 2018
Call for scientific input

March. 2018
Call for nominations of PPG & ESG members

June 14, 2018
Council decision on venues and dates

Sept. 27, 2018
Council launches the Strategy Update process and establishes the PPG and ESG

2019

Dec 18, 2018
Closing submission of community input

May 13-16, 2019
Open Symposium Granada, ES

Physics Briefing Book available

2020

Jan 20-24, 2020
Strategy Update Drafting Session Bad Honnef, GE

March. 2020
Strategy Update to be submitted to Council

May. 2020
Council to approve Strategy Update

ECFA/EPS-HEPP session during EPS2019 in Ghent 13/07 afternoon

Organisation & input preparation by community

Physics results appearing after May 2019 will be taken into account in the process
Gratitude to the Council Secretariat for all the support
in particular to Vedrana for all her effort
to get the webpages and the submission ready
on time

Happy Holidays