

## Minutes of the Plenary meeting 2020 28 August 2020 14h00

### CHIPP Roadmap Workshop

Place of the meeting: Hotel Belle Epoque Victoria, Kandersteg

Time of the meeting: Friday, 28 August 2020, 14:00 - 16h00

Indico link: <https://indico.cern.ch/event/897920/timetable/#20200827.detailed>

The parallel session conveners are asked to present a short summary.

#### **Pillar1 – Anna Sfyrla**

Anna is presenting the status of the Pillar1 contribution<sup>1</sup> to the Roadmap. Pillar1 group discussed and redacted an action list for the work to be done in next weeks.

The document should be at the outreach level; the actual text should be very much reduced and uniformized across the various inputs. Introduction and conclusion should be added to each chapter to allow people to have a very high-level view of the content.

The synergies between Pillars are best discussed in the introduction and summary of the session “Synergies with other fields”. During next week the people that agreed to work on an action list item will produce a revised text to be sent to the editorial board by the 7 September. An overleaf document will be sent to the Pillar1 participants.

#### **Pillar2 – Michele Weber**

Michele is presenting the summary of the work done during the Workshop<sup>2</sup>. Thursday session was dedicated to the White Paper that is now ready. Michele shows the Neutrino pillar plan for the next 15 years; he presents a graphical view of the totality of projects as function of time; it is very appreciated by everybody and there is the suggestion to use it for every pillar in the CHIPP Roadmap.

The University of Bern will be the only Swiss institute to be involved in the near detector construction and exploitation of the DUNE project and in the SBN exploitation phase.

#### **Pillar3 – Ruth Durrer**

Ruth in her presentation<sup>3</sup> stresses the complementarity of Pillar3 to the other Pillars; in Pillar3 the research method is observation of the universe and then it come the interpretation of what is seen. In Pillar1 and 2 the method is mainly to prepare controlled experiments. Theory in Pillar3 is a fundamental tool for the modeling of the accelerating objects and for the interpretation of the observations.

She reminds the funding difficulty for experiments that sit in between particle physics and astronomy. Teresa Montaruli insists that the scientific prioritization should not depend on the FTEs of the people involved since they are divided between the two communities, and she suggests that the issues between the two communities should be presented at the Round Table International (RoTIORI) meeting. This will be discussed further and voted at the next Board meeting.

The Roadmap text for Pillar3 is mainly concentrated on Physics subjects that belong only to CHIPP that the community would like to explore in the next 10-15 years. If there are facilities that are at the border of CHAPS and CHIPP communities then it is important to mention these projects even if not in detail.

Gravitational waves represent a fundamental opportunity to study particle physics, astroparticle and

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<sup>1</sup> [https://indico.cern.ch/event/897920/sessions/344204/attachments/2091441/3517360/CHIPP\\_Pillar1\\_Roadmap.pdf](https://indico.cern.ch/event/897920/sessions/344204/attachments/2091441/3517360/CHIPP_Pillar1_Roadmap.pdf)

<sup>2</sup> <https://indico.cern.ch/event/897920/sessions/344204/attachments/2091441/3517397/Pillar2-summary-Kandersteg.pdf>

<sup>3</sup> [https://indico.cern.ch/event/897920/sessions/344204/attachments/2091441/3517421/pillarIII\\_summary.pdf](https://indico.cern.ch/event/897920/sessions/344204/attachments/2091441/3517421/pillarIII_summary.pdf)

cosmology; Switzerland needs a dedicated experimental program on it.  
The Pillar3 roadmap input will be finished in a week to be able to merge the text with the other Pillar.

### **Theory – Gino Isidori**

Gino explains that the main inputs from Theory in the “Swiss landscape” and “Major achievements” chapters have been extensively discussed and their text is almost final, in a week these two parts will be ready. How to insert the theory in the other Pillar texts is more complicate, for Pillar 1 we have agreed to insert the text in a concise, simple and sharp way in the introduction and conclusion for each chapter, for the other Pillars we have to evaluate how to proceed, Ruth proposed to write the cosmology part of the theory. The pillar structure of the roadmap will have anyway to be changed in a more homogeneous structure. The emphasis should go in the physics goals of the projects to justify the facilities and infrastructures, theory should be only of support with a short text.

### **Outreach – Katharina Müller**

Katharina presents the work done in the Education and Outreach editorial group<sup>4</sup>. Katharine shows the plan for the next week to write the remaining sections with preliminary list of activities in outreach and education. She asks for input in outreach, citizen science, collaboration with museums and education. After the discussion we had with the young physicists in the last days it has become clear that one of the target audience for the CHIPP Roadmap are the young CHIPP collaborators. The roadmap level should be appropriate and serve an educational purpose for them. It's foreseen to ask the young physicists to provide a dedicated section in the roadmap.

### **Final comments from Rainer Wallny**

Rainer in his final presentation<sup>5</sup> summarise the advances done in the roadmap process. All the necessary pieces are already in the text or will be added next week. By the end of September CHIPP should deliver to the SCNAT a rough idea of the text length and figures; the images requested are about the facilities maintaining balance of the contributions from different Institutions. The editorial team has now the responsibility to merge and balance the text to be able to make a coincised document that fulfils the requirements. The Board has empowered the editorial board to make the necessary changes to the inputs in order to provide a final document. In October the Board will hopefully has a first version that could be discussed and eventually the Board will be asked to vote the approval of the close to final document. Before the end of December it should be submitted to the ETH and Swiss Universities.

Rainer thanks everybody for the participation and for the good work done!

written by Angela Benelli  
approved by Rainer Wallny

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<sup>4</sup> [https://indico.cern.ch/event/897920/sessions/344204/attachments/2091441/3517358/summary\\_outreach.pdf](https://indico.cern.ch/event/897920/sessions/344204/attachments/2091441/3517358/summary_outreach.pdf)

<sup>5</sup> <https://indico.cern.ch/event/897920/sessions/344204/attachments/2091441/3517450/WorkshopWrapupV1.pdf>