

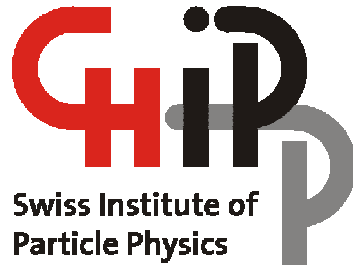
Agenda item 7: CRUS Report: 'cost-intensive' infrastructures

Introduction:

- Audience: University rectors
- Assignment: Benefit from more coordination?
- Guinea pigs:
 - Particle physics: CHIPP
 - Biomedical imaging
 - High performance computing
 - Access to scientific information
- Deadline: July 2012
- Vehicle to promote our own agenda

Agenda item 7: CRUS Report: Definitions

- Infrastructure:
 - Accelerators: national (PSI), international (CERN) organizations, government funded
 - Detectors: mix national-cantonal-institutional
 - Observatories: both models
- Cost intensive:
 - Investments > 1.5 MCHF, and/or
 - Annual operating costs > 0.5 MCHF (salaries and operations)
 - PP is cost intensive globally, not necessarily at university group level



Agenda item 7: CRUS Report: Characteristics of PP

- Long term nature:
 - Requires sustainable funding policy
 - De facto exists: SNF policy, FLARE
- Self-organization:
 - CHIPP essential, may serve as prototype
 - Bottom up, peer review, consensus
 - Strong coordination inside pillars
 - NCCR to improve transverse coordination
- Proposal:
 - **CRUS ought to participate in CHIPP operations cost**

Agenda item 7: CRUS Report: Characteristics of PP (2)

- Proliferation of Swiss actors:
 - Political, scientific and financial
 - Local, cantonal and federal
 - Usually works: strength rather than weakness
 - Problem: approval mechanism of large international projects, commitment of sustainable funding
- Proposal:
 - Formalize **Round Table International Infrastructure** (legislative) and **LA-FLARE + SNF** (executive)

Agenda item 7: CRUS Report: Conclusions I

Costly infrastructure?

1. Particle and astroparticle physics (PP & ApP) require costly research infrastructure, which are **cost intensive** when their **total construction and operations cost** is considered.
2. PP & ApP **at the level of the individual university institute** are **not cost intensive** in the majority of cases, because these research fields benefit from a well established bottom-up self-organization, collaboration and cost-sharing.

Agenda item 7: CRUS Report: Conclusions II

Coordination

3. Accelerator based projects require large **national or international laboratories**, where coordination is in the focus from the start.
4. At national level, **inter-university coordination** is well developed and essential in determining the weight of the participants in a multi-national project.
5. In the field of PP & ApP, **an additional layer of coordination would not reduce cost**.
6. PP & ApP are willing to explore the sketched '**purchasing cooperation**' at local level and for smaller infrastructure projects, but fear that the cost-benefit ratio would not be to its advantage.
7. CHIPP provides a Swiss national forum for dialogue and coordination and plays an essential role in finding consensus and defending its conclusions. It is suggested **that CRUS contributes to the operations cost of CHIPP** in its effort of maintaining the coordination in PP & ApP at the present level.

Agenda item 7: CRUS Report: Conclusions III

Funding and funding policy

8. In PP & ApP, a **consistent and reliable long-term funding policy** is essential; it is therefore suggested that
 - (1) the direct federal funding with **FLARE** is sustained at least at the present level, and
 - (2) that the **SNF** reviews its policy of long-term funding of large (and long-lasting) infrastructure projects.
9. The **Swiss approval mechanism** of large international projects is a cumbersome road. It is suggested to develop a more formal process with the aim of enhancing the 'Round Table International Infrastructures' to a Think Tank for international participation, and the LA-FLARE to a recognized body for recommending project participation to the Research Council of SNF.

Agenda item 7: CRUS Report: Conclusions IV

Transversal collaboration and access policy

10. The transversal collaboration between the disciplines within PP & ApP on the one hand and between theoretical and experimental PP & ApP on the other hand must be developed and the input from neighbouring fields like high-energy astrophysics and cosmology strengthened. The proposed **NCCR 'Universe'** will allow a large step forward in this matter. It is suggested that **the members of CRUS encourage and support local efforts** in transversal integration, like e.g. the AEC in Berne and the CAP in Geneva.
11. **Access to national infrastructure should remain free of charge** and subject to scientific criteria only. The principle of mutual access to facilities without financial compensation simplifies administration.

Agenda item 7: CRUS Report: Decision

→ **The Board is invited:**

- to endorse the report 'Cost-intensive Infrastructures: Particle and Astroparticle Physics', and
- to entrust M. Pohl with handing the report over to CRUS.

[final deadline for still missing numbers: day after tomorrow!]