

Accelerators (C. Biscari – L. Rivkin)

About 60 different inputs + national inputs which include accelerators

- e+e- colliders
- hh colliders
- ep colliders
- FCC
- Gamma factories
- Plasma acceleration
- Muon colliders
- Beyond colliders
- Technological developments

Input to speakers:

- Contributions of the community
- Coherent parameters (Integrated luminosity, duty cycle, readiness definition, ...)
- What about costs and time schedule?

Output from speakers

- comprehensive summary of 2-3 slides, including open questions, challenges, opportunities and objectives.

Monday Plenary Session

30' - State of the Art and Challenges in Accelerator Technology — Past and Present
- Akira Yamamoto (CERN/KEK)

- HEP today
- Technology - mainly rf and magnets
- Lessons learnt

30' - Future - path to very high energies - Vladimir Shiltsev (Fermilab)

Monday afternoon parallel session

30' - LHC Future (Lucio Rossi - CERN)
- HiLumi/High Energy

30' - FCCs (Michael Benedikt - CERN)
-hh
-ee including tau and B
-ep

30' - Future Linear Colliders (Steiner Stapnes CERN)
-ILC (Japan decision?)
-CLIC
-gamma/gamma

Common session with Higgs

15' - Overview and Technological Challenges of proposed Higgs Factories - (Daniel Schulte, CERN)

Tuesday afternoon parallel session

30' - Muon collider (Daniel Schulte, CERN)

30' - Accelerator based neutrino beams
(Shiltsev - Fermilab)

30' - Energy efficiency (Erk Jensen, CERN)
- Comparison among different proposed HEP projects

30' - Present of plasma acceleration projects
(Edda Gschwendtner - CERN)

- AWAKE
- EuPraxia

30' - Challenges of plasma acceleration (Wim Leemans - DESY)

- New acceleration techniques
- Synergies with other communities

30' - Beyond colliders (Mike Lamont - CERN)

- Proposals for SPS
- Proposals for LHC
- Other national labs, ESS,...?

Wednesday evening plenary session

Conclusions (Biscari/Rivkin)

Big Questions

Accelerator Science and Technology

- **What is the best implementation for a Higgs factory?
Choice and challenges for accelerator technology: linear vs. circular?**
- **Path towards the highest energies: how to achieve the ultimate performance (including new acceleration techniques)?**
- **How to achieve proper complementarity for the high intensity frontier vs. the high-energy frontier?**
- **Energy management in the age of high-power accelerators?**