



Graphics by Marta Tarone, 2023

Summary and next steps

During these three days we discussed

- Present and future muon facilities
- Muon beam technologies
- Physics with high energy muon beams
- Muon magnetic moment and $g-2$
- Hadronic vacuum polarization
- Charge lepton flavor violation
- Muons in other fields

This session is dedicated to discussion organized:

1. Half an hour of discussion in subgroups
2. Final discussion all together
3. A paper summarizing findings, synergies, possible new developments

The discussion should be focused on possibilities on a time scale of ~10 years

The idea of this workshop is born from the experience of aMUSE a European funded RISE project, maybe a new European call involving also US and Japan can be submitted as outcome of this workshop connecting different activities.

Ken Long yesterday proposed *Muon physics beyond colliders*.

1. Half an hour of discussion in subgroups:

We propose to split in three subgroups

Theory

- Synergies among different fields
- Identification of new possible measurements
- ...

Experiment

- Synergies on detector R&D and new applications
- Identification of common needs on theory and accelerator
- Participation to new experiments/measurements
- ...

Facilities

- Evolution and possible synergies & cooperation
- Possible measurements at each facilities
- ...

2. Final discussion all together

Reconvene all together and present a short summary of the group

3. A paper summarizing findings, synergies, possible new developments

Draft a paper of ~ 10 pages summarizing all the discussions

In addition to the summary paper, we will publish also proceedings, you will have information very soon.