

Snowmass EF subgroup:
Flavor mixing and CP violation at high energy
(from Seattle to Minneapolis)

Seattle Energy Frontier Workshop
June 30 – July 3, 2013

<http://www.snowmass2013.org/tiki-index.php?page=Flavor+Mixing+and+CP+Violation+at+High+Energy>

Marina Artuso, Michele Papucci,
Soeren Prell (conveners)

Our (draft) report outline

1. Introduction
2. Flavor and CPV arising in BSM models
3. Indirect probes of flavor and CPV (low energy)
4. Probing flavor and CP at the EF
5. Future EF facilities studies
6. Complementarity of IF and EF flavor and CP violation probes
7. Summary

Report sections (1)

2. Flavor and CPV arising in BSM models

- Theoretical overview of BSM models

3. Indirect probes of flavor and CPV (low energy)

- Summary of current limits and measurements
- Expected improvements over the next decade or so in low-energy flavor and CPV observables

4. Probing flavor and CP at the EF

- Summary of current limits and measurements relevant to flavor and CPV observables at the EF

Report sections (2)

4. Future EF facilities studies

- Expected improvements in limits and measurements and sensitivity of new measurements of flavor and CPV observables
 - e.g. top FCNC, FV Higgs decays, FV in BSM models (see slides from Sunday)

5. Complementarity of IF and EF flavor and CP violation probes

- constraints from combined low- and high-energy observables on BSM models

The next 4 weeks

- Yesterday we continued discussing a rough outline of the working group report
- Will refine in the next week or so in order to have a rough draft by July 15
 - (more) input from the community is welcome
- Revise and smooth draft until Minneapolis