Collider aspects of flavour physics at high pt

February meeting-introduction

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On behalf of the WG1 conveners

- The meeting in November was intended to bootstrap activities
  - People will present their work and ideas…
  - So that topics and sub-topics can be identified…
  - And people working on similar subjects get in touch

- This meeting should
  - Update the community on recent progress
  - Present new ideas (it's not too late…)
  - Identify more clearly which will be our contributions to final report
  - Improve communication within sub-groups, but also with other WG2 and WG3 $\rightarrow$ common sessions and discussions
  - A Working Group should be more than a sum of individuals…

WG1 tasks

- Explore/document the potential of ATLAS/CMS for BSM flavour studies
- Identification of observables that allow the different models to be distinguished
- Explore the complementarity of LHC studies and low-energy flavour physics; how can the information put together to get a coherent picture of the flavor sector

Top physics

A number of presentation on this subject in November

Theory: New physics contributions to top production

Experiments: Search for FCNC decays at LHC

Some more talks this afternoon

Verzegnassi, Guasch will update us on their studies

Also a talk from Najafabadi on tWb anomalous couplings

Some work also started on constraints from B-physics

Supersymmetry

In November: emphasis on the need to go beyond mSUGRA-like models (flavour-diagonal and conserving)

Some work on defining benchmarks consistent with low-pt constraints that will can be studied by experimentalists

- Strong sector (scalar quark spectroscopy, mixing, FV decays)

Concern: available manpower on the experimental side. Proposed signatures are challenging (limited jet tagging at hadron colliders).

- Models with light scalar top, electroweak baryogenesis

Some work will be presented in this meeting (later this morning)

- Neutralino/gaugino sector

Easier than strong sector for ATLAS/CMS, hope we will get a study of the LHC potential to measure flavour-violation couplings.

Non-SUSY models

- ATLAS study on E6 isosinglet quarks in november, an update will be presented this morning

- To be followed by an other talk on FCNC decays of the Higgs in top quark, in the context of the 2HDM model.

The Agenda

- **WG1 session Monday 9-10.30**

Non-SUSY BSM models

- **WG1+2 session Moday 11-13**

SUSY scalar top talks

- **WG1 session Monday afternoon**

Top (and one SUSY) talks

- **WG1+2 common session Tuesday afternoon**

Dedicated to the low pt/high pt connection.

Important, we need to have the two WGs collaborate more (main aim of the workshop…)

Talks to be followed by a discussion

- **WG1 Wednesday morning**

Planning of future work and Yellow book contributions

- **WG reports, Wednesday afternoon**

Recommendation to speakers

- Agenda includes 10 minutes discussion after each 20 min talk

Please leave this time free for discussion!