Collider aspects of flavour physics at high pt

Planning towards final report

Living document

Top physics

- FCNC (tc) production (2HDM, MSSM)

- Bejar, Guasch, Hollik, Sola, Penaranda

Any experimental study of this signature? (My feeling is that the predicted cross section are below LHC sensitivity, of the order of ~1pb for **tb** in the s-channel)

- MSSM corrections to SM tt and single top production

- Verzegnassi, Bentvelsen, Cobal, …

Theory+ATLAS contribution

- Top FCNC

Castro (ATLAS) + Benucci (CMS) experimental studies

Some update of Theory predictions? Compare sensitivity with FCNC production?

- tWb anomalous couplings

Mojtaba, Onofre, Aguilar (ATLAS+CMS+theory)

- W+top+Higgs precision tests (consistency with SM, …)

Heinemeyer, Hollik, Penaranda

Supersymmetry

- FV ed RPV in squark and slepton decays.
- Define benchmarks consistent with low-pt constraints that can be studied by experimentalist.
- Provide public (well-documented, easy-to-use) tools to compute SUSY masses & BRs and low-pt observables given a set (to be agreed upon) of non-MFV susy parameters

Porod, Hurth, Misiak, Fuks, Bozzi, Klasen

Closely related topics.

For lepton flavour violation in susy: it may be possible to get an experimental study.Strong sector: too difficult and not enough manpower

- Determination of SUSY masses and parameters from LHC measurements. Constraints/cross checks with low-pt observables

Polesello, …

- Stop, light stop, electroweak baryogenesis

Lari, Polesello, Kraml, Raklev , Paktinat, Pape, Spiropulu

- …

…

Non-SUSY models

- E6 singlet quarks

Unel et al.,

- 4^{th} generation

Sultansoy, Hou

- Extra dimensions

Moreau, Burdman

- Little Higgs

Schmaltz