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.,
- 4th generation
  Sultansoy, Hou
- Extra dimensions
  Moreau, Burdman
- Little Higgs
  Schmaltz