SuSy Les Houches Accord

Interfacing Spectrum Calculators, Decay Packages, and Event Generators.

- SLHA writeup v2 (last week): JHEP 0407:036.
  (= hep-ph/0311123).
  - Now implemented in FeynHiggs, SoftSusy, SPheno, Prospino, Pythia, Whizard, MicrOmegas, NMHDecay, SDecay, (IsaSusy), ... + more coming
  - + other tools: SLHAlib-1.0, Sfitter, Fittino, ...
- Aims of discussion here: extension towards
  - CP Violating MSSM (cf. CPSuperH).
  - NMSSM (cf. NMHDecay).
  - Theory errors? Cross sections? Effective Parameters?

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We have agreed to: Conserve colour, charge, and spin!

- $\rightarrow$ add (optional) new LARGE mixing blocks which in principle can deal with all possible consequences of CPV, RPV, etc. (normally will be block-diagonal to a large extent.)
- Include (option for) giving either effective (loop-improved) mixing matrices OR mixing in $\overline{\mathrm{DR}}$ scheme at a given scale.
- Include imaginary parts in new mixing structure.
- Conventions for NMSSM adopted, for CPV underway.
- Theory errors: highly non-trivial issue. Sub-group organised by K. Desch & W. Porod to investigate solutions.
- Cross sections: even more thorny issue. No general concensus yet — but strong interest from SPA project for e^+e^- case.