

BSM group meeting - introduction

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ILD BSM group meeting, 1 Mar 2017



Ongoing analyses

- 1 Higgsinos (J. Yan, T. Tanabe, & al.)
- 2 Parameter extraction from results of (1) (S-L Lehtinen, H. Baer & al.)
- 3 STC4 (M.B., S. Caizza)
- 4 WIMPs (M. Habermehl, T. Tanabe & al.)
- 5 SUSY “Point 5” (M. Chera)
- 6 FCNC in top (F. Zarnechi)

Talks today - Brief reports on the status.

- **New topics** are welcome! Some ideas:
 - Dark-sector WIMPs decaying in the detector.
 - Lighter-than-125 Higgs(like) states, eg. nMSSM singlet.
 - Direct signs of extra dimensions.

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 - The **LHC** exists!
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Questions for today

- 1 The physics of your analysis
- 2 Current status of the analysis: starting – on-going – close to final ?
- 3 Level of ambition of the analysis
 - Pure theory
 - Simple 4-vector smearing
 - Advanced 4-vector smearing (Delphes-level)
 - Fastsim (SGV)
 - Fullsim
- 4 Requests for samples: signal/background
- 5 LHC connection:
 - Not yet seen, but will be before ILC starts
 - Might be seen after the full HiLumi LHC
 - No way LHC would see it.
 - etc
- 6 Any interest for ILC@250, or is ≥ 500 mandatory ?

Organisational - a reminder

- Conveners: M.B. (mikael.berggren@desy.de) and Jacqueline Yan (jackie@post.kek.jp).
- Mailing list:
 - Send mail to sympa@desy.de with "SUBSCRIBE ild-physics-bsm *firstname lastname*" as subject.
 - Wait for an OK from the maintainers (M.B. and Jackie).
 - This list is for people *active* in BSM analyses in ILD (and their supervisors).
- Request to give talks to ild-physics-conveners@desy.de.

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- As of today, we intend to setup regular BSM working-group phone meetings, where more detailed discussions can take place.
- Suggest: Every 4 (or 6) weeks, at this time: If every 6 weeks, it would always be the week before the BSM-focus Analysis meeting. But maybe that's to seldom?
- In any case, future meetings should be more focused on actual analysis.
 - Technical issues that every one will or might profit from.
 - Problems encountered: Any new ideas?
 - Ideas for new analyses.
 - ... and so on.
 - But *not* full analysis reports: Those should go into the BSM-focus Ana/opt meetings.

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