

EF08 “BSM : model specific”

Topical Group Meeting : 6 Aug 2020

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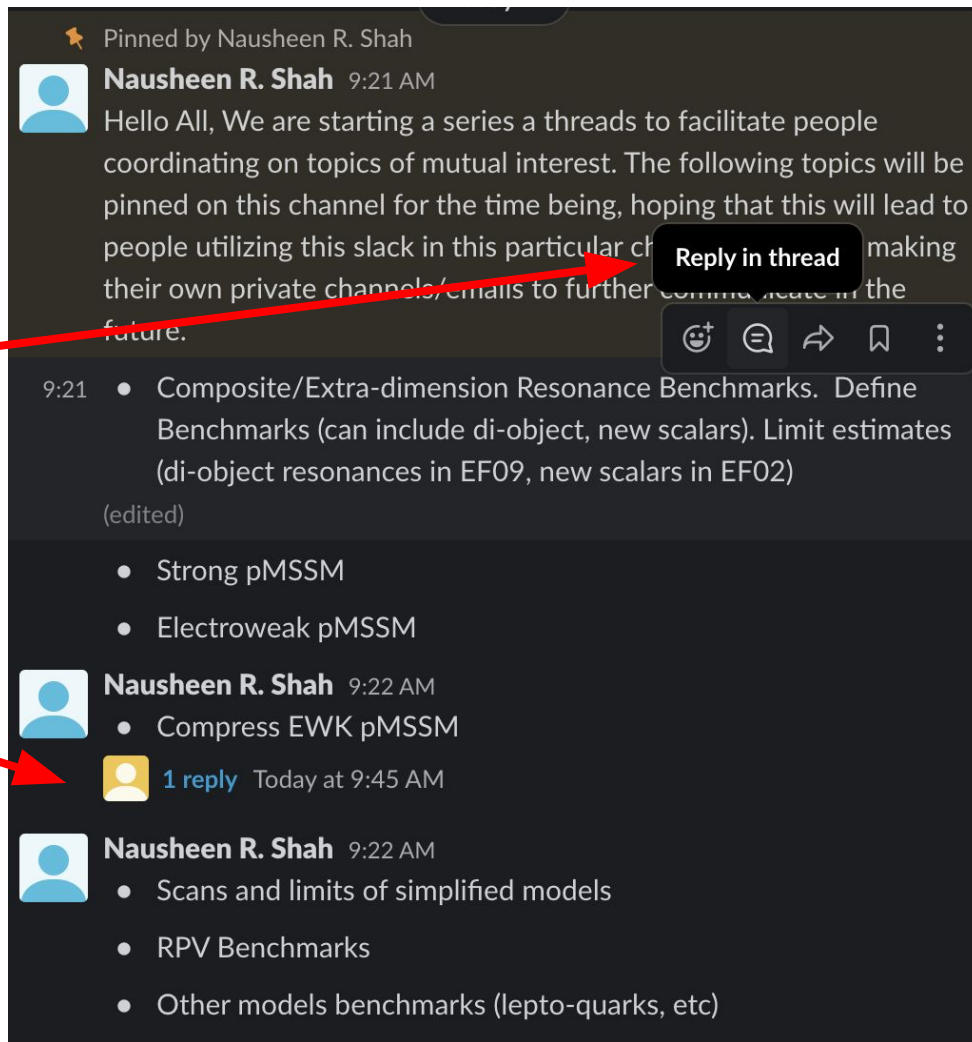
Working groups

- Need to start some small topical working groups to keep and coordinate activities between EF08 meetings and facilitate detailed discussion
 - Groups could be small, but we'd like it to clear where people are working and how a new person can join an existing effort
- Example groups (not a complete list you need to propose topics as well)
 - Composite/Extra-dimension Resonance Benchmarks
 - Define Benchmarks (can include di-object, new scalars)
 - Limit estimates (di-object resonances in EF09, new scalars in EF02)
 - Strong pMSSM
 - Electroweak pMSSM
 - Compress EWK pMSSM
 - Scans and limits of simplified models
 - RPV Benchmarks
 - Other models benchmarks (lepto-quarks, etc)

Slack organization

Create a new thread to discuss this topic

Example thread created



Pinned by Nausheen R. Shah

Nausheen R. Shah 9:21 AM
Hello All, We are starting a series a threads to facilitate people coordinating on topics of mutual interest. The following topics will be pinned on this channel for the time being, hoping that this will lead to people utilizing this slack in this particular channel. We are also making their own private channels/emails to further communicate in the future.

Reply in thread

9:21

- Composite/Extra-dimension Resonance Benchmarks. Define Benchmarks (can include di-object, new scalars). Limit estimates (di-object resonances in EF09, new scalars in EF02)

(edited)

- Strong pMSSM
- Electroweak pMSSM

Nausheen R. Shah 9:22 AM

- Compress EWK pMSSM

1 reply Today at 9:45 AM

Nausheen R. Shah 9:22 AM

- Scans and limits of simplified models
- RPV Benchmarks
- Other models benchmarks (lepto-quarks, etc)

Collider Options

- There has been significant discussion on extending the collider options considered, specifically
 - ~75 TeV pp machine (magnet technology ~ in hand)
 - ~150 TeV and beyond pp machine (no clear path, more as input of accelerator frontier priorities)
 - 3, 14, 30 TeV Muon collider
 - Is 3 TeV similar to linear collider? Do large muon collider beam backgrounds change things? (do we have the expertise on this?)
 - Anything special with mu vs e collisions?
 - What are the reaches for higher energies?

Input to MC task force

- We should start generating a list of required samples of analysis we know we want to do
- Understand the cost of several different simulation energies
 - Think about when we can extrapolate instead

Today's Agenda

11:10 AM

→ 11:30 AM

SUSY with R-parity violation (RPV)

Speaker: Chris Kolda (University of Notre Dame)

11:30 AM

→ 11:50 AM

Searches for RPV SUSY with $dB=1$ (UDD operator) at the LHC and beyond

Speaker: Nadja Strobbe (University of Minnesota)

11:50 AM

→ 12:10 PM

Searches for RPV SUSY with $dL=1$ (LLE and LQD operators) at the LHC and beyond

Speaker: Ian Dyckes (University of Pennsylvania)



lipeles 10:01 AM

Here is a set of threads for discussion of today's RPV meeting (just hover over bullet below and choose "reply in thread") (edited)

- Chris Kolda: **Theory Introduction: SUSY with R-parity violation**
- Nadja Strobbe: **Searches for RPV SUSY with $dB=1$ (UDD operator) at the LHC and beyond**
- Ian Dyckes: **Searches for RPV SUSY with $dL=1$ (LLE and LQD operators) at the LHC and beyond**