

# Snowmass 2021

## EF09 - BSM

More general explorations

Tulika Bose, Zhen Liu, Simone Pagan Griso

[https://snowmass21.org/energy/bsm\\_general](https://snowmass21.org/energy/bsm_general)



**WISCONSIN**  
UNIVERSITY OF WISCONSIN-MADISON



Jun 26<sup>th</sup> 2020



# EF09 Twiki & slack

- Feel free to use our slack channels for informal or overflow discussions!
  - **#ef09-bsm\_generic**
- For useful links / topics, including list of projects that are ongoing (and agreed to be advertised), see our [twiki page](#):

**SnowMass2021**

- WELCOME PAGE
- ANNOUNCEMENTS
- SNOWMASS CALENDAR
- ETHICS GUIDELINES
- Organization
  - SNOWMASS ADVISORY GROUP
  - SNOWMASS STEERING GROUP
  - FRONTIER CONVENERS
  - APS DPF SNOWMASS PAGE
  - SNOWMASS EARLY CAREER
- Snowmass Frontiers
  - ENERGY FRONTIER

## EF09 - BSM: More general explorations

**Table of Contents**

- EF09 - BSM: More general explorations
  - Group Topics
  - Meetings
  - Contacts

Conveners	<a href="#">Tulika Bose, Zhen Liu, Simone Pagan Griso (more contact info)</a>
Mailing-list	<a href="mailto:SNOWMASS-EF-09-BSM_GENERIC@FNAL.GOV">SNOWMASS-EF-09-BSM_GENERIC@FNAL.GOV (instructions)</a>
Slack channel	<a href="#">ef09-bsm_generic (instructions)</a>
Next Event	June 12th 12pm (noon) ET, <a href="#">General Long-Lived Particles</a>
Expression of Interests (EOI) form	<a href="https://forms.gle/1freqMHfTjAobga86">https://forms.gle/1freqMHfTjAobga86</a>
Current EOI	<a href="#">List of Active Proposals agreed to share, comments welcome</a>

# MC Taskforce: how to get started

- MC taskforce twiki page ([link](#)) contains information on:
  - samples from collaborations/study-groups publicly accessible
  - simulation frameworks for various collider options
- Twiki page quickly evolving, watch out for updates coming up soon
  - Reminder: report during upcoming EF workshop in July
- You should have received an email requesting to **fill in information on possible common backgrounds** that can be centrally simulated (large-stat)
  - <https://docs.google.com/forms/d/e/1FAIpQLSfBDI8fy08uli35gLPFYAL2vGRF9YtkApm5i27Z6MCS9FDNXg/viewform?pli=1>
  - This is very important even if you only have a rough idea of what could be useful for you, since it allows us to plan for resources needed to generate and store such samples

# Upcoming events

- **General Energy-Frontier workshop: July 20 - July 22**
  - First community workshop to discuss open questions and new ideas
  - Developing agenda at <https://indico.fnal.gov/event/43963>
- **Preparatory joint topical group meetings: July 7 - July 8**
  - BSM session (EF02, EF07, EF08, EF09, EF10) on July 7th afternoon
  - Call for contributions is open
  - Developing agenda at <https://indico.fnal.gov/event/43959/overview>
- **Cross-frontier meeting with EF10, RF6 and AF5: July 15 - July 16**
  - Will focus on dark sectors and light long-lived particles
    - Generally speaking, light is intended as roughly  $m < m(B)$
  - Will also cover dedicated “external experiments” dedicated to LLP searches in this regime
  - Agenda will be available at <https://indico.fnal.gov/event/44030/timetable>

All EF meetings calendar can be see here:  
[https://snowmass21.org/energy\\_meetings](https://snowmass21.org/energy_meetings)

# Additional events

- Joint EF-AF discussion on energy frontier accelerators
  - Two 3-hours sessions: June 24th, July 1st; both 10:00AM US Eastern time
  - Focus: go over the machine parameters that will become baseline for Snowmass studies
  - June 24th session: <https://indico.fnal.gov/event/43871/>
    - Covered established collider options: FCCee, CepC, ILC, CLIC, EIC, LHeC, HE-LHC, SppC, & FCCh
  - July 1st session: <https://indico.fnal.gov/event/43872/>
    - Future machines at initial stages of development: Cold NC-Linear Collider, ERL based FCCee, Gamma-Gamma Higgs factories, Plasma-Laser WFA 1 TeV +, Plasma-Beam WFA 1 TeV +, Structure-beam WFA 1 TeV +, and Muon Colliders: Higgs Factory and 3-14 TeV.

All EF meetings calendar can be see here:  
[https://snowmass21.org/energy\\_meetings](https://snowmass21.org/energy_meetings)

# EF09 meetings

- Today's meeting: June 26th
  - Dedicated to New Fermions but also featuring general exploration methods
- No EF09 meeting on July 10th and July 24th
  - several other general or joint Snowmass meetings being organized in July
- Next EF09 meeting on Friday, Aug 7th at 11 EDT
  - We would welcome presentations on topics not covered so far - for example heavy sterile neutrinos and heavy neutral leptons
  - Please let us know if you are interested in presenting on these topics (or others)
  - Generally, we'll try to have some focus topic for most of our meetings but we welcome volunteers on ongoing studies and ideas on any EF09 topic to report in the meetings