Snowmass BSM@v Workshop

<u>Goals</u>

- Highlight and advance opportunities for BSM searches at neutrino experiments in the context of the Snowmass community planning exercise
- The focus is on the activities of the NF03 topical group (Neutrinos and BSM) and the overlapping physics interests of NF01, NF02, NF03, RF06 and TF11
- Provide status update, make progress, and finalize NF03 sub-topical group white papers, which will inform the NF03 final report

<u>Organization</u>

- <u>Plenary sessions</u> Thursday-Saturday focused on NF03 Sub-topical group reports, cross-frontier synergies and complementarity
- Parallel sessions (Friday) highlighting a variety of topics on neutrinos and BSM physics
- Working / Writing sessions on NF03 whitepapers to discuss remaining issues and work needed on the whitepapers, make progress on writing editing, craft executive summaries,

• •

Thursday Program

<u>Plenary</u>

- NF03 Sub-topical group reports
- Discussion/Questions encouraged

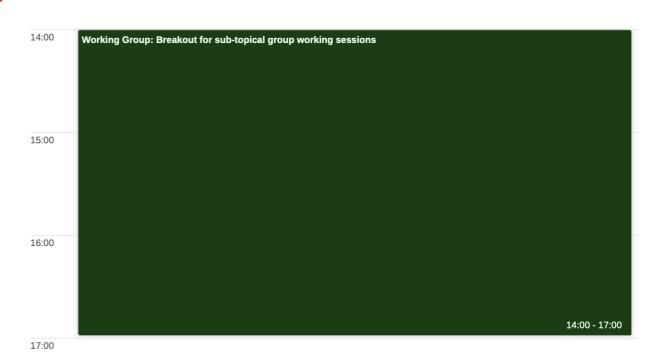
Working/Writing Sessions

 Note: Writing sessions will take place in breakout rooms within the plenary zoom room

Breakout rooms

- I. BSM with neutrino oscillations
- 2. Heavy neutral leptons
- 3. Baryon number violation
- 4. CEvNS
- 5. Cosmogenic Dark Matter and Exotic Particle Searches
- 6. Dark Sector Studies with Neutrino Beams

10:00	Welcome & Logistics	Brian Thomas Batell
		10:00 - 10:05
	Workshop Overview	Jae Yu
		10:05 - 10:25
	NF03 Subtopical Group Report 1 - BSM Searches withing Neutrino Oscillations	Pilar Coloma
		10:25 - 10:50
	NF03 Subtopical Group Report 2 - Heavy Neutral Leptons	Ian Shoemaker et al.
11:00		10:50 - 11:15
	Break	
		11:15 - 11:35
	NF03 Subtopical Group Report 4 - CEvNS	Louis Strigari et al.
		11:35 - 12:00
12:00	NF03 Subtopical Group Report 5 - Cosmogenic Dark Matter and Exotic Particle Searches	Yun-Tse Tsai et al.
		12:00 - 12:25
	NF03 Subtopical Group Report 6 - Dark Sector Studies with Neutrino Beams	Brian Thomas Batell
		12:25 - 12:50
	NF03 Subtopical Group Report 3 - Baryon Number Violation	Bhupal Dev et al.
L3:00		12:50 - 13:15



Friday Program

Plenary

- Cross frontier overview
- Discussion

Parallel Sessions

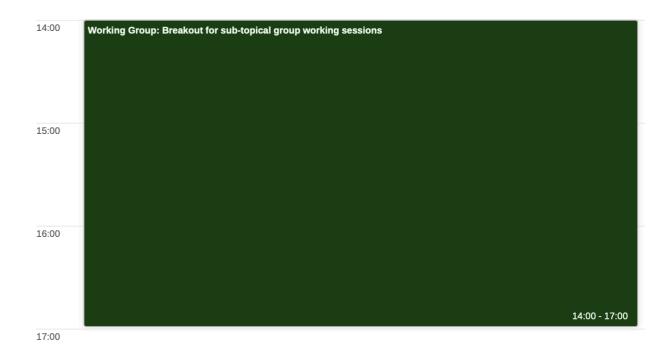
Working/Writing Sessions

 Note: Writing sessions will take place in breakout rooms within the plenary zoom room

Writing Session Breakout rooms

- I. BSM with neutrino oscillations
- 2. Heavy neutral leptons
- 3. Baryon number violation
- 4. CEvNS
- 5. Cosmogenic Dark Matter & Exotic Particle Searches
- 6. Dark Sector Studies with Neutrino Beams





Saturday Program

<u>Plenary</u>

- Overview of nu-N interactions
- Summary and closing discussion

Working/Writing Sessions

 Further working group sessions depending on need / interest

10:00	Summary on nu-N Interactions Workshop in BSM@nu Context	Noemi Rocco et al.
		10:00 - 10:25
	Summary of the workshop	Prof. Jae Yu
		10:25 - 10:45
	Closing discussions and further feedback from the community	Lisa Koerner et al
11:00		
		10:45 - 11:30
	Break	
		11:30 - 12:00
L3:00		
L4:00		

Other Notes

- Zoom connection information for plenary/writing sessions and parallel sessions have been sent to all registered participants
- We will take a workshop photo at the end of the first session today (around 11:15am EST)
- Please remain professional, courteous, and welcoming to all participants, and follow the Code of Conduct, available on indico page.

Acknowledgements and Thanks!

Program Committee

• Brian Batell, Pilar Coloma, Arnab Dasgupta, Peter Denton, André de Gouvêa, Lisa Koerner, Donna Naples, Mark Messier, Ian Shoemaker, Alex Sousa, Jaehoon Yu

Local Organizers

• Joni George, Gracie Gollinger, Donna Naples, Vittorio Paolone, Arnab Dasgupta, Keping Xie, Matt Low, Akshay Ghalsasi