



Run Number: 294184, Event Number: 424201-1210  
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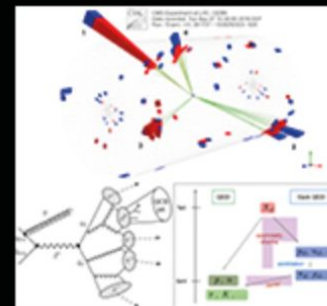
# Colours in Darkness:

Towards Improved Modelling of Strongly Interacting Dark-Sector Showers

October 17 – 20, 2023



<https://indico.mitp.uni-mainz.de/event/377>



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18/10/2023



European Research Council  
Established by the European Commission

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# Scope of the workshop

Aim to build collaboration and motivate cross-talk between the experimental and theory community dedicated towards developing and understanding the strongly interacting dark sector.

→ understanding the current status of the dark showering module within Monte Carlo generators like Pythia and Herwig, as well as establishing a set of realistic benchmark models that will drive future search strategies.

*Link to a live google doc [here](#).*

*→ to be used as rolling minutes after each talk*

*→ also for guiding the open discussion sessions that are planned at the end of each day.*

**At the end of the workshop, we plan to have a Workshop summary report, which will then be uploaded on Zenodo. If you are interested in helping with even a small subset of the summary report, please reach out to me. Any help will be appreciated!**

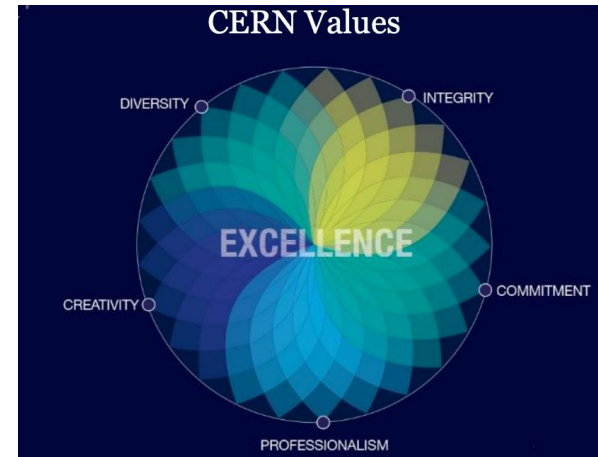
# Programme of the Workshop

Day1: Dark showers: Theory and Generator perspective

Day2: Dark showers: Experimental perspective (Run-2 results, lessons learnt, tools/analysis techniques developed)









Day3: Dark showers: Reinterpretability/reproducibility of experimental results, and new final-state signatures

Day4: Plans for ways forward



# Programme of the Workshop

## Day2: Dark showers: Experimental perspective (Run-2 results, lessons learnt, tools/analysis techniques developed)

	<b>Semi-visible jets phenomenology</b> <i>Tim Cohen</i> 	13:05 - 13:20	15:00	<b>HEPData for dark jet resonances</b> <i>Danielle Joan Wilson-Edwards</i> 	14:55 - 15:02
	<b>CMS: Emerging Jets</b> <i>Jannicke Pearkes</i> 	13:25 - 13:40		<b>Simulating near-conformal Hidden Valleys</b> <i>Joshua Lockyer</i> 	15:05 - 15:12
	<b>CMS: Semi-visible jets s-channel</b> <i>Aran Garcia-Bellido</i> 	13:45 - 14:00		<b>New experimental techniques for dark sectors</b> <i>Angelica Aira Araw Ayalin</i> 	15:15 - 15:22
14:00	<b>Coffee break</b>	14:05 - 14:15		<b>Coffee break</b>	15:25 - 15:35
	<b>ATLAS: semi-visible jets t-channel</b> <i>Deepak Kar</i> 	14:15 - 14:30		<b>Open discussion session</b> 	
	<b>ATLAS: dark jet resonance</b> <i>Dilia Maria Portillo Quintero</i>	14:35 - 14:50	16:00		