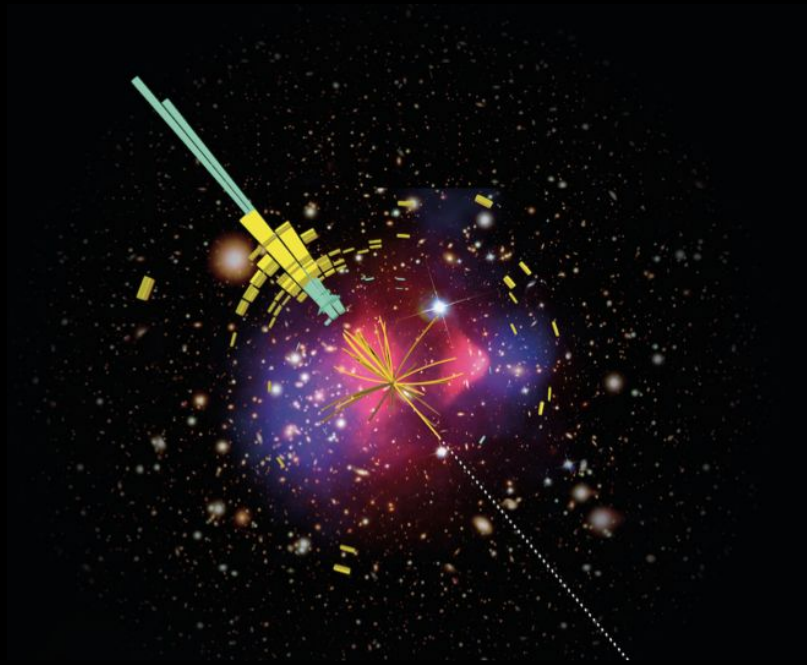


Introduction

LHC DM WG meeting, 16 May 2023



LHC DM WG organisers

General

- [LHC DM WG](#)
 - defines benchmarks for DM interpretations at the LHC
 - publishes white papers with recommendations on DM benchmarks
 - facilitates discussions across experiments and theory
- Communication channels
 - lhc-dmwig@cern.ch - general list for announcements
 - lhc-dmwig-contributors@cern.ch - more technical discussion (all subscribers can post)
 - lhc-dmwig-admin@cern.ch - reach the LHC DM WG organisers:
 - ATLAS: Spyros Argyropoulos, James Frost, Zirui Wang
 - CMS: Matteo Cremonesi,
 - LHCb: Xabier Cid Vidal
 - Theory: Uli Haisch, Tim Tait

- We now have a **twiki page**: <https://twiki.cern.ch/twiki/bin/view/LHCPhysics/LHCDM>
- Goal is to collect
 - recommendations for benchmarks
 - technical recipes where needed (e.g. MC generation)
 - documentation
 - logistics
- Have a look and provide feedback

Discussion about SVJ effort

- Large part of [previous LHCDMWG](#) meeting dedicated to **SVJ**
- Common realisation between experiments & theorists: **concrete benchmarks needed** in order to compare results between experiments
- Interest expressed towards a SVJ white paper
- Will follow up with experiments and theorists in order to kick this off in the next months




Endorsement of coupling rescaling tool

- **Coupling rescaling tool** discussed by Kate in an [earlier LHCDMWG meeting](#)
- Preprint available at [2206.03456](#)
- We want to endorse this as LHCDMWG and **publish in an open access journal** (tentatively J. Phys. G)
- **Draft will be circulated this week** - circulation 2-3 weeks (close-out meeting in June if needed)
 - details will follow in circulation email (endorser list, where comments will be collected etc)

Future meetings of this group or of general interest

- **Next general LHCDMWG meeting**
 - tentatively scheduled for **September**
 - doodle will be circulated before the summer break (June/July)
- [DM 2023](#) @ Santander 29 May - 2 June
- [LLP community workshop](#) 19-23 June @ CERN
- [EPS-HEP2023](#) @ Hamburg, 21–25 Aug - Abstract submission open (deadline 2 June), dedicated Dark Matter track.

Today's agenda

14:00	→ 14:15	Introduction	🕒 15m
Speakers: James Frost (University of Oxford (GB)), Matteo Cremonesi (Carnegie-Mellon University (US)), Spyros Argyropoulos (Albert Ludwigs Universitaet Freiburg (DE)), Tim Tait (University of California, Irvine), Uli Haisch, Xabier Cid Vidal (Instituto Galego de Fisica de Altas Enerxias), Zirui Wang (University of Michigan (US))			
14:15	→ 14:50	Update on DM t-Channel Signatures [25+10]	🕒 35m
Speaker: Luca Panizzi (Uppsala University)			
			
14:50	→ 15:10	Dark Higgs	
14:50		ATLAS Dark Higgs Search in the WW Channel [15+5]	🕒 20m
Speaker: Mr Changqiao Li (Shanghai Jiao Tong University (CN))			
15:10	→ 17:10	Dark Photons	
15:10		ATLAS Dark Photon Results [20+10]	🕒 30m
Speaker: Hassnae El Jarrari (Universite Mohammed V (MA))			
15:40		CMS Dark Photon Results [20+10]	🕒 30m
Speaker: Elisa Fontanesi (Boston University (US))			
			
16:10		LHCb Dark Photon Results [20+10]	🕒 30m
Speaker: Blaise Raheem Delaney (Massachusetts Inst. of Technology (US))			
			
16:40		Dark Photon Theory [20+10]	🕒 30m
Speaker: Hugues Beauchesne			
