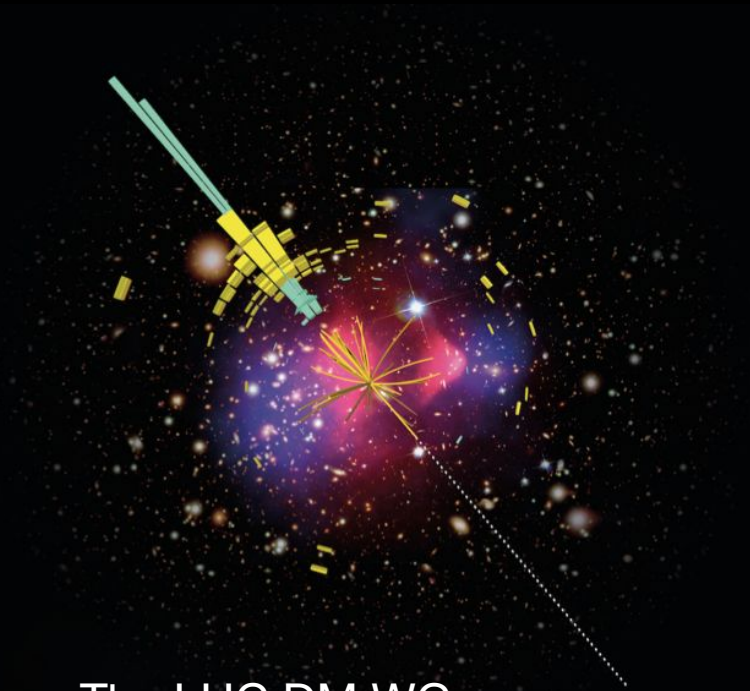


Welcome

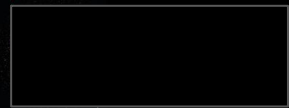
LHC DM WG meeting, 30th November 2021



The LHC DM WG convenors
lhc-dmwg-admin@cern.ch

- Defines DM search benchmarks and interpretations.
- Publishes white papers codifying these.
- Encourages and facilitate discussion across the LHC experiments and theory.
- Develop and follow relevant tools, and precision calculations for signals and backgrounds.
- Interfaces with theory and other experimental dark matter searches.
- Mailing lists:
 - lhc-dmwg-contributors@cern.ch - open for all subscribers to post
 - lhc-dmwg-admin@cern.ch - reach out to the convenors (ATLAS: Oleg Brandt, James Frost, Priscilla Pani; CMS: Phil Harris, Matteo Cremonesi; LHCb: Xabier Cid Vidal; Theory: Uli Haisch, Tim Tait)

Today's Agenda I



14:05 → 16:40 Higgs invisible decays

14:05	ATLAS results (15'+10') Speaker: Luigi Sabetta (Sapienza Università e INFN, Roma I (IT))	🕒 25m
14:30	CMS results (15'+10') Speaker: Alp Akpinar (Boston University (US))	🕒 25m
14:55	The Higgs-portal for vector Dark Matter and the Effective Field Theory approach: a reappraisal (arXiv:2001.10750) Speakers: Giorgio Arcadi, Giorgio Arcadi	🕒 25m
15:15	Vector Dark Matter through a Radiative Higgs Portal (arXiv:1512.06853) Speaker: Patrick James Fox	🕒 25m
15:35	Higgs portal vector dark matter interpretation (arXiv:2107.01252) Speaker: Mohamed Zaazoua (Universite Mohammed V (MA))	🕒 20m
15:55	Comments on the Higgs portal VDM : EFT vs. UV completions Speaker: pyungwon ko	🕒 20m
16:15	Discussion	🕒 25m

Review recent invisible Higgs results - and a more theoretical focus on the vector WIMP interpretation

Today's Agenda II

16:55 → 18:00 Dark sector / dark QCD

16:55 **CMS results (10'+10')**

Speaker: Thomas Klijnsma (Fermi National Accelerator Lab. (US))

🕒 20m

17:15 **Overview of the theory landscape for dark QCD models with focus on viable DM candidates (15'+10')**

Speaker: Suchita Kulkarni (University of Graz)

🕒 25m

17:40 **Overview of the dark shower Snowmass project (10'+10')**

Speaker: Marie-Helene Genest (LPSC-Grenoble, CNRS/UGA (FR))

🕒 20m

18:00 → 18:20 t-channel effort

18:00 **Impact of Sommerfeld enhancement and bound state formation in simplified t-channel models**

Speaker: Julia Harz (Technical University of Munich (TUM))

🕒 20m

- Introductory discussion of dark sector/QCD models
- New result on t-channel models
- **Enjoy the meeting! Best wishes for the Christmas break!**