



# Searching for long-lived particles at the LHC: Seventh workshop of the LHC LLP Community

## Monday, 25 May 2020

**Plenary talks: Session 1 -- Intro, dedicated detectors at the LHC, and new theory developments - Virtual only (13:00 - 15:15)**

-Conveners: Nishita Desai; James Beacham

time	[id] title	presenter
13:00	[8] Introduction and welcome	BEACHAM, James
13:15	[9] CODEX- $\beta$ : opening the book for CODEX-b	ILTEN, Philip
13:30	[10] MATHUSLA	PROFFITT, Mason
13:45	[11] The MoEDAL experiment and MAPP & MALL extensions	Dr MITSOU, Vasiliki
14:00	[12] Discussion	
14:15	[13] Collider probes of real triplet scalar dark matter	DU, Yong
14:30	[5] Displaced physics at colliders and pre-BBN cosmology	JUNIUS, Sam
14:45	[57] Light hidden mesons inspired by neutral naturalness	VERHAAREN, Christopher SALVIONI, Ennio CHENG, Hsin-Chia LI, LINGFENG LI, Lingfeng
15:00	[14] Discussion	

**Plenary talks: Session 2 -- Theoretical overview, PBC & FIPs, HL-LHC, new theory/pheno ideas - Virtual only (15:45 - 18:45)**

-Conveners: Matthew Daniel Citron; Federico Leo Redi

time	[id] title	presenter
15:45	[15] Physics Beyond Colliders initiative & preview of FIPs 2020	JAECKEL, Joerg
16:15	[16] Discussion	
16:25	[17] Bigger picture and new theoretical perspectives on LLPs	CRAIG, Nathaniel
16:55	[18] Discussion	
17:05	[19] Prospects for an LLP search in a CMS Forward Spectrometer	ALBROW, Michael
17:20	[7] Long-lived particle searches with the CMS High Granularity Calorimeter	LIU, Jia
17:35	[20] Discussion	
17:45	[21] Baryogenesis and dark matter from freeze-in	SHUVE, Brian TUCKER-SMITH, David
18:00	[2] Using white dwarfs to constrain atomic dark matter	Dr SETFORD, Jack
18:15	[22] Soft displaced leptons at the LHC	SAHASRANSU, Abanti Ranadhir
18:30	[23] Discussion	

## Tuesday, 26 May 2020

### Plenary talks: Session 3 -- More dedicated LLP detectors at the LHC and other LLPs at CERN - Virtual only (13:00 - 15:55)

-Conveners: Ryu Sawada; Albert De Roeck

time	[id] title	presenter
13:00	[24] Heavy neutral leptons at ANUBIS	WANG, Zeren Simon
13:15	[25] Producing and detecting long-lived particles at different experiments at the LHC	ZHAO, Yue
13:30	[26] Discussion	
13:45	[27] CLIC	BRONDOLIN, Erica
14:00	[28] NA64	CRIVELLI, Paolo
14:25	[29] Status and prospects for $\text{Br}(K^+ \rightarrow \pi^+ \nu \bar{\nu})$ measurement at NA62	BRIZIOLI, Francesco
14:40	[30] Discussion	
14:55	[31] FASER	ANTEL, Claire
15:10	[32] The SHiP-SND experiment at the LHC	DE LELLIS, Giovanni
15:25	[33] Search results from the milliQan demonstrator	SCHMITZ, Ryan
15:40	[34] Discussion	

### Plenary talks: Session 4 -- New results from ATLAS and CMS, dark shower / dark QCD phenomenology - Virtual only (16:25 - 19:05)

-Conveners: José Francisco Zurita; Juliette Alimena

time	[id] title	presenter
16:25	[35] ATLAS search for a displaced vertex and a muon	DI PETRILLO, Karri Folan
16:40	[36] ATLAS displaced jets: Solving the LLP re-interpretation challenge using RECAST	MORRIS, Alice
16:55	[37] CMS search for disappearing tracks	FRANCIS, Brian
17:10	[38] Discussion	
17:25	[39] Casting a ParticleNet to catch dark showers	BERNREUTHER, Elias
17:40	[40] Challenges of searching for low mass LLPs from strongly interacting dark sectors	TUNNEY, Patrick
17:55	[41] Discussion	
18:10	[42] Dark showers with jet substructure	Dr FREYTSIS, Marat
18:25	[43] A robust measure of event isotropy at colliders	CESAROTTI, Cari
18:50	[44] Discussion	

# Wednesday, 27 May 2020

## Plenary talks: Session 5 -- Triggering ideas for ATLAS and CMS and a new result from CMS - Virtual only (13:00 - 14:40)

-Conveners: Rebeca Gonzalez Suarez; Carlos Vazquez Sierra

time	[id] title	presenter
13:00	[1] Search for long-lived heavy neutrinos at the LHC with a VBF trigger	Dr JONES-PEREZ, Joel
13:15	[3] A displaced vertex trigger following the CMS Phase II upgrade	KNAPEN, Simon
13:30	[6] Muon shower L1 trigger: Expanding CMS's long-lived particle lifetime coverage	DILDICK, Sven
13:45	[46] Discussion	
14:00	[47] CMS search for displaced jets	LUO, Jingyu
14:15	[45] Triggering long-lived particles in HL-LHC at level-1	SENGUPTA, Rhitaja
14:30	[50] Discussion	