**ICHEP 2022** 



Contribution ID: 724

Type: Parallel Talk

## Probing Flavor at High- $p_T$ in LHC

Saturday, 9 July 2022 17:51 (17 minutes)

The Drell-Yan processes  $pp \rightarrow \ell\nu$  and  $pp \rightarrow \ell\ell$  at high transverse momentum can provide important probes of semileptonic transitions relevant to flavor physics and complementary to the commonly used low energy observables. We parametrize generic New Physics (NP) contributions to these processes and derive the corresponding bounds by recasting the latest ATLAS and CMS (run 2) searches for mono- and di-lepton resonances. We focus in particular on the validity of the Effective Field Theory (EFT) approach in this regime by comparing the limits obtained for specific tree-level mediators and their EFT equivalents. Analyses presented in this talk are performed using {\tt HighPT}, a new {\tt Mathematica} package for automatic extraction of high- $p_T$ bounds.

## **In-person participation**

No

**Primary authors:** Mr FAROUGHY, Darius (Physik-Institut, Universitat Zurich); JAFFREDO, Florentin (IJ-CLab); WILSCH, Felix (University of Zurich); ALLWICHER, Lukas (University of Zurich); SUMENSARI, Olcyr (IJCLab (Orsay))

Presenter: JAFFREDO, Florentin (IJCLab)

Session Classification: Quark and Lepton Flavour Physics

Track Classification: Quark and Lepton Flavour Physics