

# HNLs introduction

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Albert De Roeck and **Federico** Leo Redi

LLP workshop - 26 V 2020

# LHC LLP WG and HNLs

- Discussion forum tailored to analyses and needs of the LHC, but useful for LLP in general
- HNL is a subgroup:
  - Meetings regularly planned in between LLP workshops
- **Output** of the series of meeting(s) should be a **set of documents of recommendations and the organization of useful common tools**
- **First task** shaped by the input and requests from LHC experiments and interested theorists. We certainly like to hear your opinion & your work
  - We have so far concentrated on trying not to reinvent the wheel every time we **simulate HNLs**
  - **Simulating HNLs is also the topic of today's meeting**
  - Perfect place to feature your model that might go unnoticed by large collaborations
- As we say every time, if interested, get in contact! Your input is very welcome!

# Today's meeting <sup>1/1</sup>

- Timetable [here](#).

## 14:00 → 15:00 Heavy neutral leptons (HNLs) session

**Conveners:** Albert De Roeck (CERN), Federico Leo Redi (EPFL - Ecole Polytechnique Federale Lausanne (CH))

### 14:00 Introduction

**Speakers:** Albert De Roeck (CERN), Federico Leo Redi (EPFL - Ecole Polytechnique Federale Lausanne (CH))

⌚ 5m

### 14:05 HNLs in MadGraph

**Speakers:** Richard Ruiz (Institute of Nuclear Physics (IFJ) PAN), Richard Ruiz (Fermi National Accelerator Lab. (US))

⌚ 20m

### 14:25 HNL production from mesons

**Speaker:** Philip Ilten (University of Cincinnati (US))

⌚ 20m

### 14:45 Discussion

⌚ 15m

# LHC LLP WG HNLs topic of interests

- Please tell us what you think should be discussed under the umbrella of the LHC LLP WG related to HNLs [here](#)
- You can also share your feedback and thoughts today or in the above document or via email
- Past meetings:
  - <https://indico.cern.ch/event/977707/>
  - <https://indico.cern.ch/event/922632/timetable/#b-397427-heavy-neutral-leptons>

# Directions

- The WG home page, including the mandate and convenership, is available:
  - <https://lpc.web.cern.ch/lhc-llp-wg>
- A mailing list for the WG has been created. You can join it by clicking on this url:
  - <https://simba3.web.cern.ch/simba3/SelfSubscription.aspx?groupName=lhc-llpwg>
- You should also subscribe to the mailing list dedicated to HNLs
  - <https://simba3.web.cern.ch/simba3/SelfSubscription.aspx?groupName=llp-hnl>